NEXCOM

ICS

Kiosk
5.25"
ETX
Self Service
3.5"
Com Express
MiniITX
Traffic

IntelligentWorks
EmbeddedPro & AutomationPro

2013
Industrial Computing Solutions

- Industrial Fanless Computer
- Machine & Factory Automation
- Industrial Wireless
- Applied Panel PC
- Embedded Computing & Customization Services

ICS
Industrial Computing Solutions

Marine Computer

Fanless Computer

MA Series

Industrial Wireless Solution

Heavy Industrial Panel PC

Applied Panel PC & Touch Monitor

Multi-Media Panel PC

Open Frame Panel PC

NexPOS

PICMG Single Board Computer

Computer-on-Modules

Embedded Computing

About NEXCOM

Reliable Partner for Building the Digital Infrastructure

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being your trustworthy partner in building the digital infrastructure. To surpass customers' expectations, NEXCOM makes the difference by utilizing its decades of industrial computing experience, a highly talented R&D team, and by providing exceptional levels of customer service. With these core strengths, NEXCOM has enabled its customers to win key projects in a diverse range of industries.

With its focus on delivering these core values to better serve customers, NEXCOM integrates its capabilities and operates four global businesses, which are Multi-Media Solutions (MMS), Mobile Computing Solutions (MCS), Industrial Computing Solutions (ICS), Network and Communication Solutions (NCS), and Intelligent Digital Security (IDS). This strategic deployment enables NEXCOM to offer time-to-market, time-to-solution products and service without compromising cost.

In addition, the service-to-market business model gives NEXCOM core competence to build a strong world-class service network by providing customized service, global logistics, local access, and real-time support. Operating seven subsidiaries, from China, France, Germany, Italy, Japan, the United States, to the United Kingdom, NEXCOM is able to better facilitate customers' requirements as well as closely work with global partners in different regions.

Partners should also be assured that NEXCOM's Taiwan based Headquarters and subsidiary offices in China, UK and USA have obtained ISO 9001:2008 Certification.

ICS	EmbeddedPro Solutions: Embedded Computer, Single Board Computer, Computer-on-Module Panel PC: Industrial PPC, Applied PPC, Multimedia PPC, Factory PPC, Medical PPC, Industrial PPC, In-Wall PPC Industrial Fanless Controller (NISE) Point of Services Industrial Wireless Machine Automation (MA) Factory Automation (FA)
IDS	Intelligent Digital Security: IP Cam, NVR, Mobile Server Platform
MCS	Mobile Computing Solutions: Rugged Computer Devices, Rugged Mobile Computer Vehicle Telematics Computer: Car PC, Train PC
MMS	Multimedia Solutions: Digital Signage
NCS	Network and Communication Solutions: Network Security, VoIP, HPC, Telecommunication, Storage, Industrial Firewall

Corporate Mission

- An Innovative Supplier in Vertical Application Markets
- A Quality Partner in Engineering, Manufacturing, and Services

Corporate Vision

To become the industrial leader in building the digital infrastructure, NEXCOM utilizes its industry leading technology, localized customer support and worldwide logistics services. This will be achieved by

- Great Team Work
- Cooperation with trusted partners
- Growth through innovation.

Business Strategy

Aim to better support the activities of all its partners, NEXCOM divides its sales force into four dedicated business units to target rapidly expanding vertical markets. This enhances each business unit concentrating on strategic channel accounts and on repeat order business. Moreover, NEXCOM's business units have been set up to serve the requirements of key project accounts, where product ODM and project support are frequently required.

NEXCOM is working with embedded computing solution providers to envision new opportunities for growth. We'll help you deliver reliable vertical industry platform (VIP) solutions, optimized for the next wave of low power, small footprint embedded applications.

Research and Development

Speed, Quality, Innovation and One-stop Service

Over a decade ago, NEXCOM successfully launched the PEAK series of Single Board Computers onto the IPC market, and in doing so, gained a solid reputation for product quality and innovation. In subsequent years, NEXCOM has enhanced its reputation for R&D excellence with a multitude of high-end technology products, which has cemented NEXCOM as one of the industry leaders for R&D and innovation.
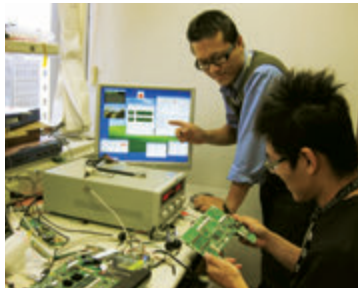
The mission of NEXCOM R&D team is to design exceptional products that meet the stringent requirements of today's global markets. In order to achieve this goal, we have recruited hundreds of talented engineers who have the knowledge and expertise to make NEXCOM's products stand out in this highly competitive market.

In 2012, NEXCOM R&D will develop solutions within the following categories, fanless computers, Panel PCs, video analytic, self-service platform, vehicle telematics computers, rugged mobile tablet computers, digital signage platform solutions, and ATCA platforms for telecommunications. The team is encouraged to "Think with New Ideas" and "Know how to make it and do it right first time". In addition, the size of NEXCOM's R&D team has been expanded to over 130 members and remains as one of core competences of the company.

Versatile Design Capabilities

- Leading industrial fanless computer
- High availability network security platform, blade, and cPCI

- Rugged tablet computer and car PC
- Ultra small footprint computer-on-module
- High speed networking
- Isolated and non-isolated power system
- Isolated and non-isolated industrial I/O
- Wide range of operating temperature

24/7 Production Line

Optimal Manufacturing Efficiency

The manufacturing of delicate products requires a high-level technology, craftsmanship, standards and time-to-market efficiency. Over years continual investment in advanced manufacturing equipment and systemic training programs has enabled NEXCOM to obtain optimal manufacturing efficiency.

To fulfill the increasing market demand for NEXCOM's products, the company has opened a 24/7 production line. This investment not only furthers the quality of products, but also reduces production lead-time for all global customers.

Quality Assurance

Under a strict Quality Assurance System, product design and reliability are controlled to support all critical solutions, and ensure Total Quality Assurance (TQA) implementation for all NEXCOM products and service. Furthermore, NEXCOM technical support team aims to provide feedback within 24 hours to ensure technical issues are resolved in the shortest possible time.
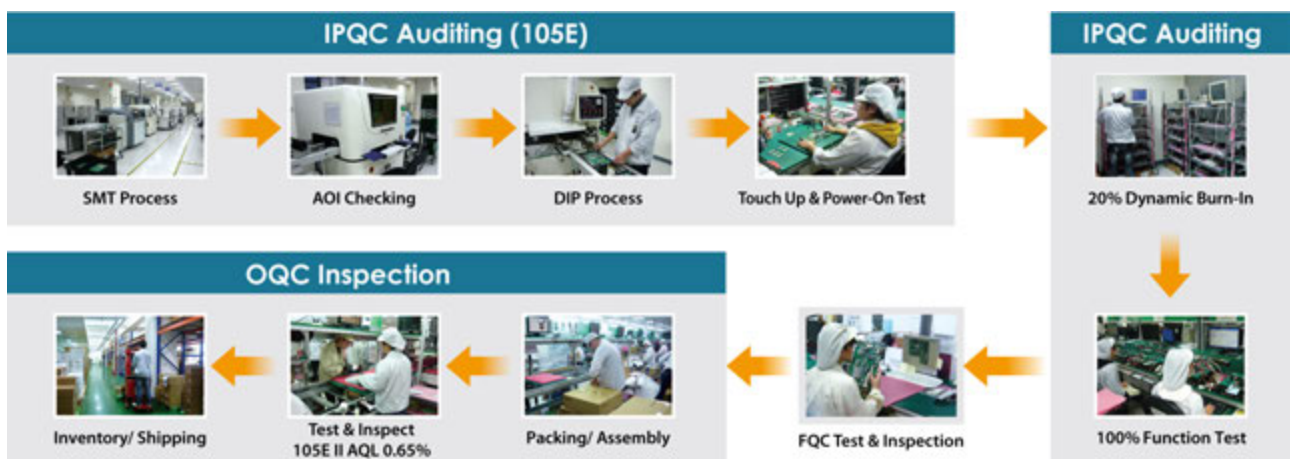
Closed-Loop Quality Assurance System

Green Policy

As a global citizen, NEXCOM is committed to providing green products and services, which are compliant with WEEE and RoHS legislation. NEXCOM continues to proactively work with industry peers and suppliers, to clarify standards, and identify compatible technologies and practices that help reduce hazardous substances from our products and manufacturing processes.

Global Fulfillment Service

Product delivery and customer support are always more effective when delivered locally. NEXCOM localizes support and provides a global customer service network to handle all aspects of global business, from presales, order taking, and system assembly to logistics. For expeditious product delivery, NEXCOM has established four regional service centers: Taiwan (for Asia), USA (for North America and South America), the United Kingdom (for Europe) and China. Therefore, NEXCOM customers benefit from quality assured product assembly and four service centers.

NEXCOM has invested heavily to establish operational infrastructures, including advanced equipment and facilities, not only at its global headquarters but also at subsidiary offices. Today, each of our service centers, with ISO 9001:2008 certification, has a purpose built assembly line, RMA/ DOA center and warehouse storage capability.

NEXCOM Global Service Network

Assembly Line Operation

NEXCOM offers custom-built products based on customers' specific requirements through the build-to-order services. A dedicated 24/7 assembly line and Quality Assurance System are installed in the services center to ensure exceptional production efficiency and superb product performance and reliability.

Service Pledge and Connection

As a reliable industrial computing platform provider for vertical markets, NEXCOM provides the very best products and the most expeditious service to help customers build the digital infrastructure. Comprehensive types of service are provided to promptly satisfy varying requirements. In addition to the headquarters in Taiwan, seven subsidiaries and distributors in strategic worldwide locations are at your service.

Service Types

| Quotation | Project Consultant | Technical Support | Solution Alliance | RMA/DOA | Assembly/ Test | Global Logistics | Customization | ODM Original Design Manufacturing |

Your Truly Global Information Resource

www.nexcom.com

www.nexcom.com is your one-stop platform for the latest information on all NEXCOM products and services. The rejuvenated website not only contains product relevant information and data, solutions/ products demo, up-to-date news, but incorporates online downloads, publications, and technical service supports, such as RMA/ DOA centre. Furthermore to localize service and support, seven NEXCOM sister websites remain to serve visitors in diverse geographical regions.

Get the Latest Updates Anytime, Anywhere

m.nexcom.com

At the end of the year 2011, NEXCOM launches its mobile site, m.nexcom.com. The site aims to cross time and space boundaries by allowing users to access the latest innovation and information of NEXCOM via smartphones. On this website, users will easily find our latest products, news, application stories, white papers, and videos. The mobile site now supports iOS and Android system. Please visit us at m.nexcom.com.

Design and Manufacturing Services (DMS)

Customized Service for Tailor-Made Solutions

NEXCOM provides cost-effective and time-to-market Design and Manufacturing Services (DMS). The DMS offers product customization from core modular designs to finished products based on customers' specifications in all kinds of industrial field. The levels of the service include manufacturing new CPU boards and system based products to fulfill customers' unique applications.

Unique DMS Features

With vast experience, the know-how, leading technology and innovative design capabilities, NEXCOM DMS incorporates the following features:

Prompt Time-to-Market

NEXCOM posses a dedicated project management team to monitor and ensure each DMS project is delivered on schedule. Thus, a quick time-to-market solution can be offered with time-scales varying from one-three months for the design phase, with an average six month period from design to market.

Flexible Design and Manufacturing

NEXCOM posses a complete R&D team to design and engineer the latest industrial grade products. As R&D engineers grouped into small cross-functional teams, they can develop more reliable products with flexible designs and quicker response to customers' requirements. In addition to our R&D capabilities, the state of art manufacturing facility and production lines enables NEXCOM to offer a flexible manufacturing with highly skilled factory staff.

Rigid Quality Control

NEXCOM is pledged to deliver high quality products, from design to manufacture, and safeguard against defective products by implementing a rigid Quality Assurance System. In this system, at the end of each process, NEXCOM performs various tests to ensure that the product passes the industrial standard before it enters into next stage. Finally, additional tests are performed to ensure all board and system level products function correctly. Tests include "Failure Mode and Effects Analysis", "Vibration test", "Burn-in Chambers", "Drop test", and "AC power source test".

Extensive DMS Experience

We set higher standards! NEXCOM surpasses your tailor-made product requirements with extensive DMS experiences. We are specialized in X86 architecture and have accumulated invaluable experience and know-how in real working environments. Moreover, with a superb reputation, NEXCOM has under its belt many ODM projects in diverse fields, such as gaming, medical, POS, network security, transportation, marine, blade servers, and Linux BIOS etc.

Scope of DMS Work

■ Original Design Manufacturing Service (ODMS)

NEXCOM offers a complete ODM Service starting from the brand new product design right through to the finished product. We can design products based on the customer's unique specifications and application requirements.

■ Customization to Order Service (CTOS)

NEXCOM also provides CTOS, which is a quick-to-market solution by modifying the existing products to fit your business requirements, such as BIOS setting, component change by using current PCM layout, chassis color change, and packing accessories etc.

New System Design (new board/chassis)

BIOS Default Setting

DMS
Design and Manufacturing Services

Change of Chassis Color

LCD Module Initial String Setting

Customized Membrane

Customized Package & Accessory
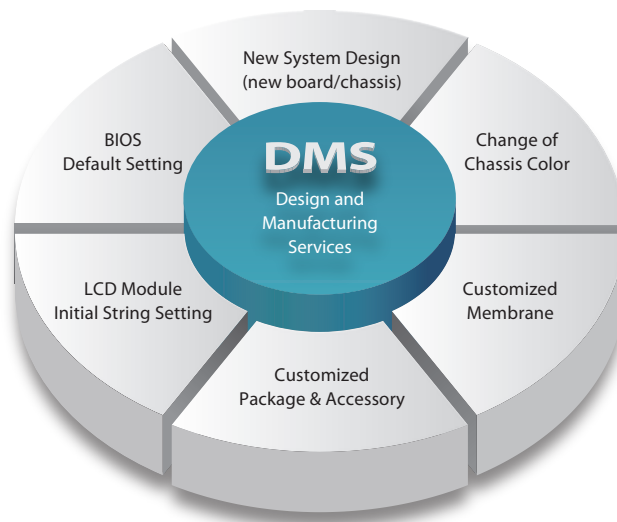
Service of DMS

With decades of industrial computing experience, NEXCOM has the capability to provide different levels of customized service to manufacture innovative products with exceptional high quality. We can assist you to differentiate from competitors, and save significant time and efforts.

Level 1	Logo Re-brand	We provide the service to change the membrane to re-brand the company logo on the front panel. Customers need to provide Membrane drawing with all color pantone number. There is a service charge involved.
Level 2	Customerized Build	Customers can change the membrane and chassis color to re-brand the packing. NEXCOM can offer dedicated part numbers and BOM. MOQ and service charge are required.
Level 3	Manufacturing Service	Contract manufacturing. The service scope includes system assembly & burn-in, software loading & testing. MOQ and manufacturing service charge are required.
Level 4	New Project	The design of new board & system is available. NRE and quantity commitment are required.

Professional Conformal Coating Solution

Get Ruggedized with NEXCOM Cost-Effective Conformal Coating Service for Hash Environment Protection

Prompt Time-to-Market

NEXCOM recognizes the harsh reality that many embedded systems find themselves operating in unusual hostile environments. When conformal coating is required to protect your application against substantial humidity, dust, chemicals or temperature extremes, we can help!

Cost Effective Service to Apply Coating Solution in Vertical Market Segments

In addition to the usual military and harsh industrial environments that demand conformal coating, NEXCOM expand our conformal coating to Vehicle Telematic Computing, outdoor traffic control/surveillance, and off-shore Marine applications. These applications demand embedded computing performance with increased reliability through conformal coating process.

To support a wide range of applications in vertical markets, NEXCOM has engineered a diverse range of platforms, which incorporate the latest.

"State of the Art" Conformal Coating Line

NEXCOM uses automated Conformal Coater equipment for applications that require a high level of accuracy and repeatability in moderate to high volume manufacturing environments. "State of the Art" coating line is a closed-loop robotic platform featuring optical encoder feedback on all axes.

Smart Masking Technology

Our smart masking technology can pin point specific area on the PCBA for coating. The green, programmable conformal coater equipment allow user to only coat the area selected, which save labor/ material costs.

De-Flux Cleaning

To prepare a PCB for conformal coating, the circuits need to be cleaned. NEXCOM uses automatic defluxing and cleanliness testing systems. The deflux system is equipped with an automatic chemical management system that automatically doses and mixes defluxing chemicals at the turn of a keyed switch.
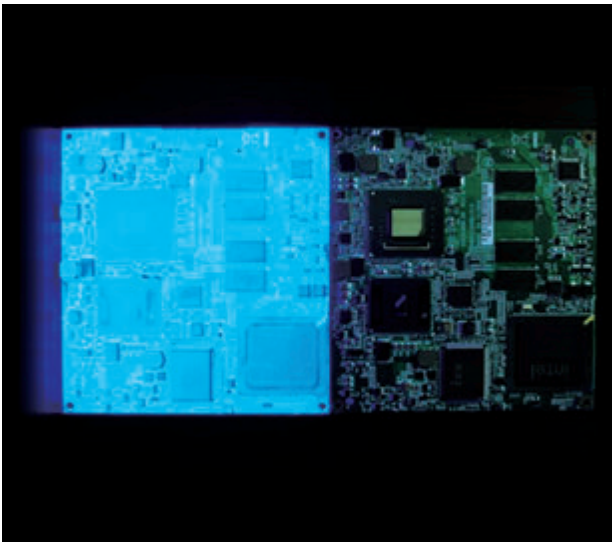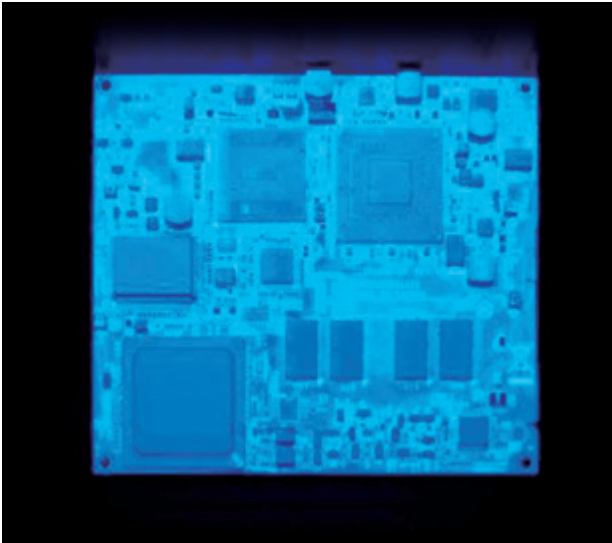
Real Time Cleanliness Testing

NEXCOM's deflux cleaning system is also equipped with an onboard cleanliness testing system which allows a user to program a desired cleanliness level. This assures that cleanliness levels will be consistent batch after batch.

De-Coating RMA Service

NEXCOM offer De-Coating RMA service upon request. This new service allows you to further cost down and generate higher ROI.

Quality Assurance Policy and Consistency Guarantee

Conformal coating inspection is a critical factor in determining successful coating application and long term reliability of PCBs. Using the IPC standards allows the coating operator to monitor the coating application performance. NEXCOM offers 100% manual screening by examining the PCB under white and UVA light and Thickness Gauge.
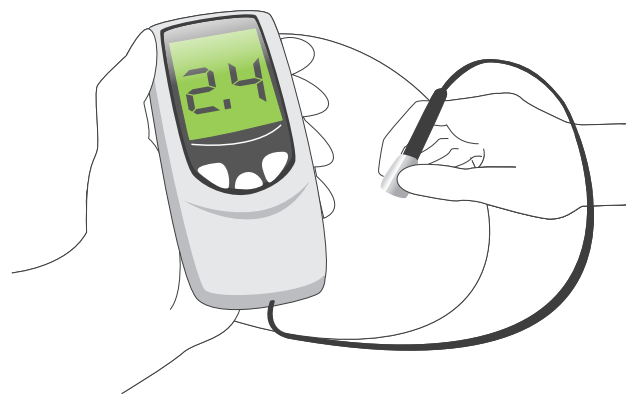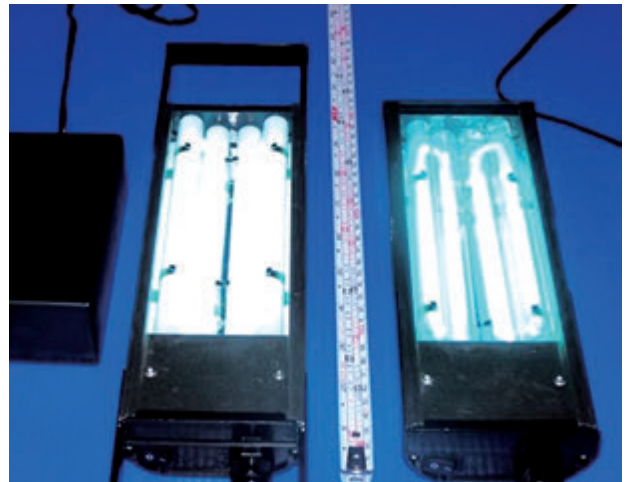
NEXCOM follows IPC-A 610, IPC-CC-830, IPC J-STD-001E regulations to generate consistent, adjustable coating thickness and cleanliness.

The Rise of SoC Technology

SoC is a concept that appeared in the early 1990s. SoC stands for system-on-chip, the packaging of all the necessary electronic circuits and parts for a "complete system" on a single integrated circuit. It includes on-chip memory (RAM and ROM), one or more microprocessors, DSP, peripheral interfaces, I/O logic control, data converters, and other components that comprise a complete computer system. With the technology enhancement of foundry, from the SSI, MSI, LSI, VLSI, to 025 μm, 0.18 μm, 0.13 μm process, the logic gate count may be larger than 100 millions today. We can integrate more mature and reusable IP, like digital circuit, analog circuit, digital-analog mixed-signal circuit, and on-chip programmable logic into one SoC. The trend of SoC technology is to integrate MEMS, and SiP cores together to meet the complex single chip requirments.

The advantages of SoC are compact and simple system design, lighter weight, high performance with lower power consumption, multiple functions and cost-competitive. SoC are widely adopted in computers, communications, consumer, industrial, transportation, and other products. According to the forecast, the CAGR of SoC sales is expected to grow by more than 20% still in the coming 5 years.

The SoC industry has developed rapidly over the last 20 years from producing VLSI devices that integrated a processor and a few memory and peripheral components onto a single chip to today's high-performance SoCs that incorporate hundreds of IP blocks. This progress is a consequence of Moore's Law:
"The performance of an IC, including the number components on it, doubles every 18-24 months with the same chip price ..." - Gordon Moore – 1960
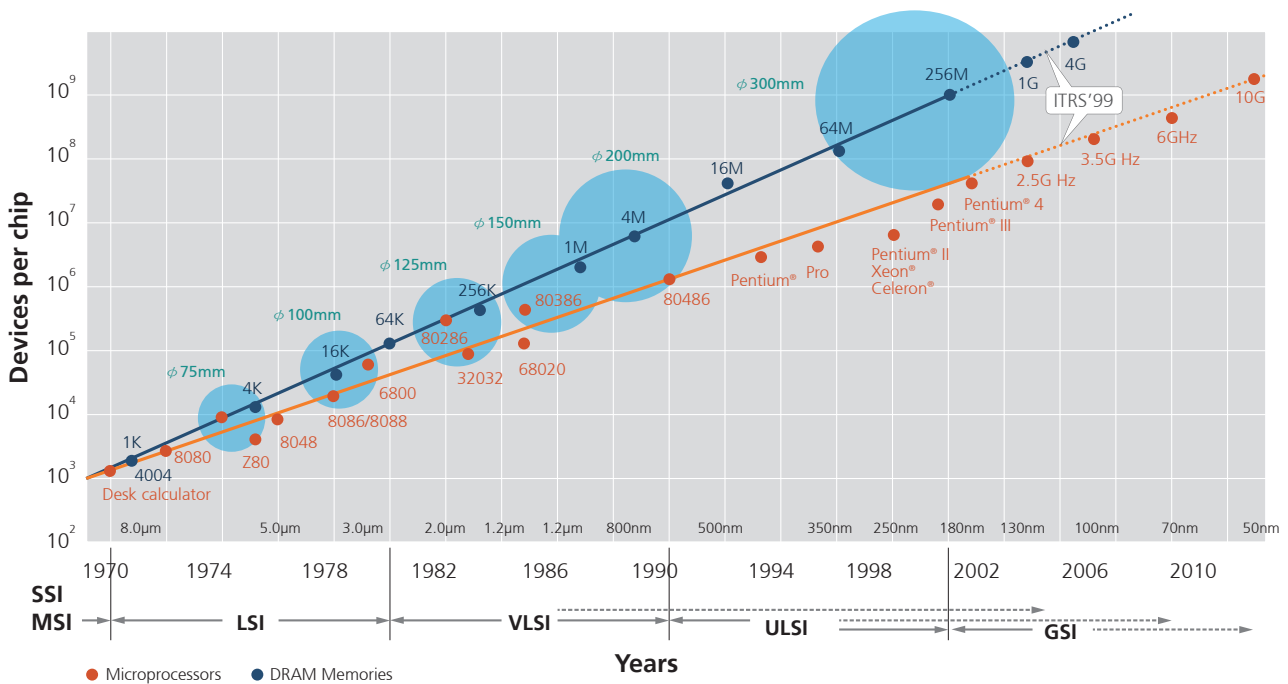
The SoC is usually divided into three categories according to the implementation technology adopted: CSoC (Configurable SoC), SoPC (System-on-a-Programmable-Chip), and ASIC SoC for final mass-production.

It is a trend to integrate multiple processor IP in recent SoC design. It increases the complexity of system verification, especially when multiple software running on the processors concurrently. To build prototype on the FPGA prototype is widely adopted to verify these IP. Many IC vendors have provided well-integrated SoPC (FPGA, EPGA), which includes processor, memory, bus logic, IO logic, and

programmable logic. The Engineer can therefore verify high level software application on such platform. This solution can reduce the risk of new SoC development, offer high flexibility, and shorten the development cycle.

The SoC may adopt any kind of instruction set, Intel X86 core (e.g. NS SC2200, SiS550), MIPS core (e.g. AMD AU1500), PowerPC core (e.g. IBM PPC405), ARM 7/9/11 cores, or new ARM Cortex-M/A series.

In addition to the reusable IP modules, the most important feature of SoC is its bus architecture for the inter-connection between IP modules.

Each vendor adopt their own bus architectures, such as the AMBA bus (ARM), AXI bus (AMBA extension), EC bus (MIPS), CoreFram bus (MIPS), CoreConnect bus (IBM), Wishbone bus (Silicore). It is almost impossible to interconnect IP cores based on different bus architecture. Today, some companies devote efforts to establish a common on-chip bus architecture VSIA (Virtual Socket Interface Association). It needs an efficient routing algorithm as basis.

Demands of SoC in Intelligent Industrial Control

Some demands make the SoC widely adopted in the industrial control,

1. Higher computing power: the SOA (Service Oriented Architecture) is widely adopted. Comparing to the traditional server/client architecture, the thin device needs higher computing power.

2. Wireless communication: because ubiquitous WIFI network, GSM network, the cloud computing becomes necessary. We need a system integrating network connection capability, security protection. The SoC is the better choice.

3. Compact size: no matter how many functions integrated, smaller size is a always need. It's reasonable to choose SoC.

4. Everything portable: to realize this feature, we need lower power consumption, reliable battery support.

5. Rapid response (real-time response): most precise equipments, or critical devices, need very rapid response after data analysis. The SoC is the most reliable solution in such application.

6. Multi-cores (distributed, or pipeline) computing: in complex system, it may need individual processor (or DSP) for each application. Like a GPU is dedicated for graphic operations, graphic accelerator, video codec, a RTU for data acquisition. Finally, there are 5 processors in ST's DVD recorder, 8 processors in HDTV, more than 10 processors in a mobile handset. To integrate these processors as one SoC is a necessary solution.

NEXCOM SoC-based Platforms and Customizing Services

Since the mobile device application is becoming popular, the technology for SoC platform is enhancing fast. The performance of SoC based CPU is much higher than before and it is still with the benefits of low energy, compact size, easy to design. These features are also beneficial for industrial application. As the features of ARM based CPU, it can be designed as small form factor devices like box PC, panel PC, embedded board, vehicle computer, and even in network security appliance. The focus market can be industrial automation, POS/KIOSK, M2M and so on. NEXCOM provides the service for standard models, OEM/ODM service for system and board products. By leveraging our strong designing experience in versatile industrial applications, we can offer the complete service for meeting customers' requirements in SoC based platform.

Features and Benefits

Low Power Consumption

Compact size form factor

Cost Effective

Flexible Design and Manufacturing

Application and Market Focus

- Factory Automation Controller
- Machine Automation Controller
- Data Acquisition Server
- Communication Gateway
- HMI platform for Industrial Automation
- POS/ KIOSK Application
- Hardware device for M2M application
- Digital signage appliance
- In vehicle computing appliance
- Network security appliance
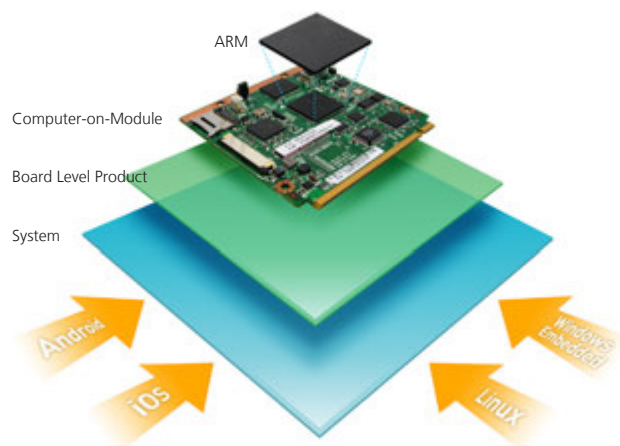
Industrial Automation and Computer

Moving towards Intelligence

The industrial automaton sector relies on industrial computers more than ever as it is being rapidly reshaped by an intelligent framework. For the past decades, the industrial automation systems have been well-developed and used as discrete control systems for human labor replacement. Nevertheless, an industrial automation system within the rising intelligent framework can achieve more.

Nowadays an industrial automation system is evolving to carry out various control schemes and complex collaborative control; to address the need for multifunctionality and multitasking; to process high resolution images and videos for Human Machine Interface (HMI) and Surveillance applications; to provide Ethernet communication for remote data access; and to support wireless connection to boost mobility and to be integrated in the Internet of Thing (IoT).

As a result, industrial computers are widely deployed at all levels of the industrial automation sector. To fulfill different computing needs at individual levels, NEXCOM has offered a comprehensive range of products.

NEXCOM Automation Solutions

NEXCOM rackmout computer PBOX series and fanless computer NISE series are designed for Manufacturing Execution Systems at the management level and provide scalable computing power, ranging from Intel® Atom™ to 3rd generation Intel® Core™ Processors.

For the Operation and monitoring level, the fanless computer NISE series is ideal for use in Supervisory Control and Data Acquisition (SCADA) and Distributed Control System (DCS). Meanwhile, NEXCOM Applied Panel PC and Industrial Panel PC series are dedicated IP-rated HMI hardware to allow for reliable human machine interaction on the manufacturing shopfloor and in hazardous facilities.

As for PC-based controllers at the field level, the fanless computer NISE series is designed to support Fieldbus Protocol (CANopen, DeviceNet, PROFIBUS, Modbus and CANbus), Ethernet Protocol (EtherNet/IP, PROFINET and Ethernet Modbus/ TCP) and other Serial Protocol (RS232/422/485 with isolated ESD protection), enabling data exchange between PLC, Distributed I/O and Process Instrumentation. The NISE series comes with scalable computing

NEXCOM Industrial Automation Product Diagram
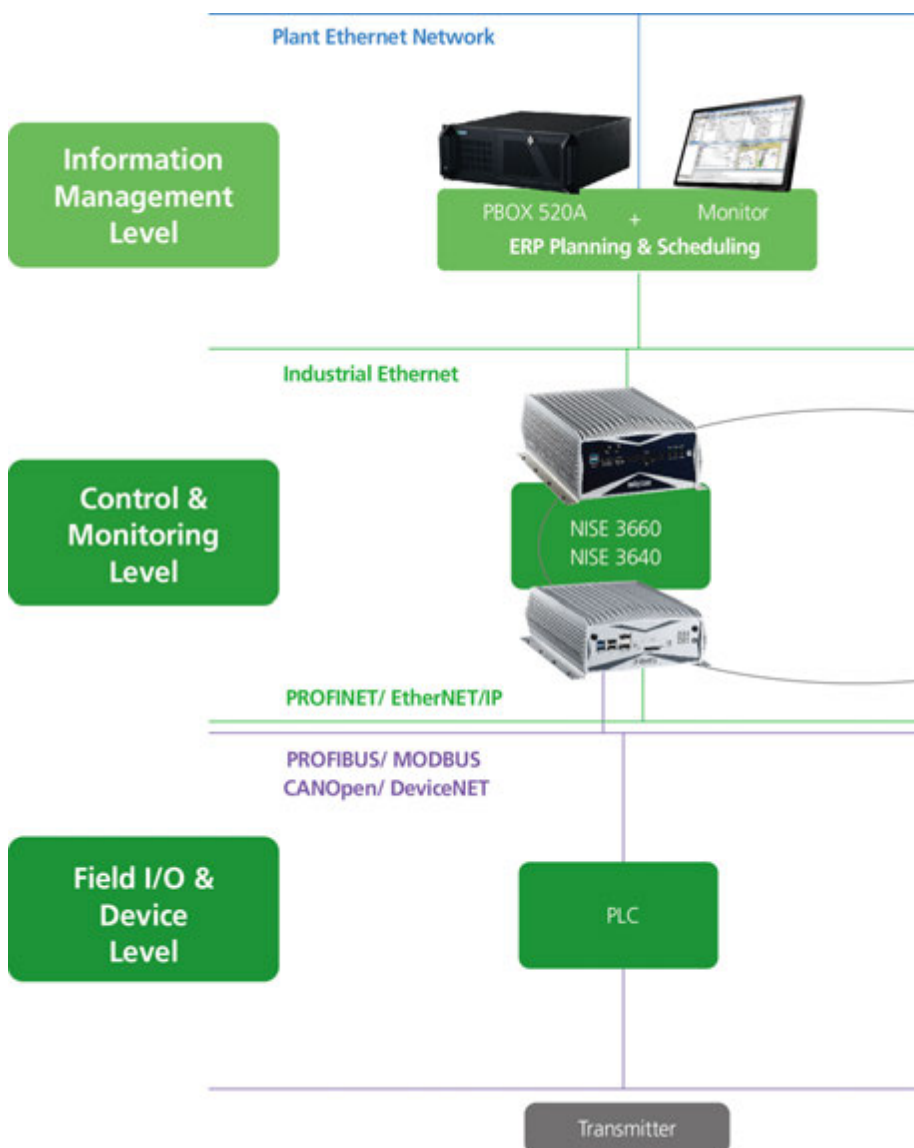
power based on Intel® Atom™ to 3rd generation Intel® Core™ Processors.

To maximize the mobility in a facility, NEXCOM Industrial Wi-Fi IWF series can wirelessly link every node with industrial Access Point (AP), outdoor AP and industrial secure WLAN controller. By helping users establishing a reliable, secure and easy-to-manage wireless network, the series can integrate an industrial automation system in a large scale deployment.

Intelligent Future under Digital Infrastructure

Dedicated to an intelligent future, NEXCOM offers a full range of products to help lay the groundwork for a digital infrastructure. Within this infrastructure,

timely raw data generated from a field site will flow to a backend system where it can to be monitored and translated into valuable information, allowing executives to make insightful decisions and therefore to increase competeness in industry.

Applications

Factory Automation

- ERP Planning & Scheduling
- MES
- SCADA/ HMI
- Process Control

Machinery Automation

- PCB Drilling Machine
- Wire Bonding Machine
- Laser Cutting Machine
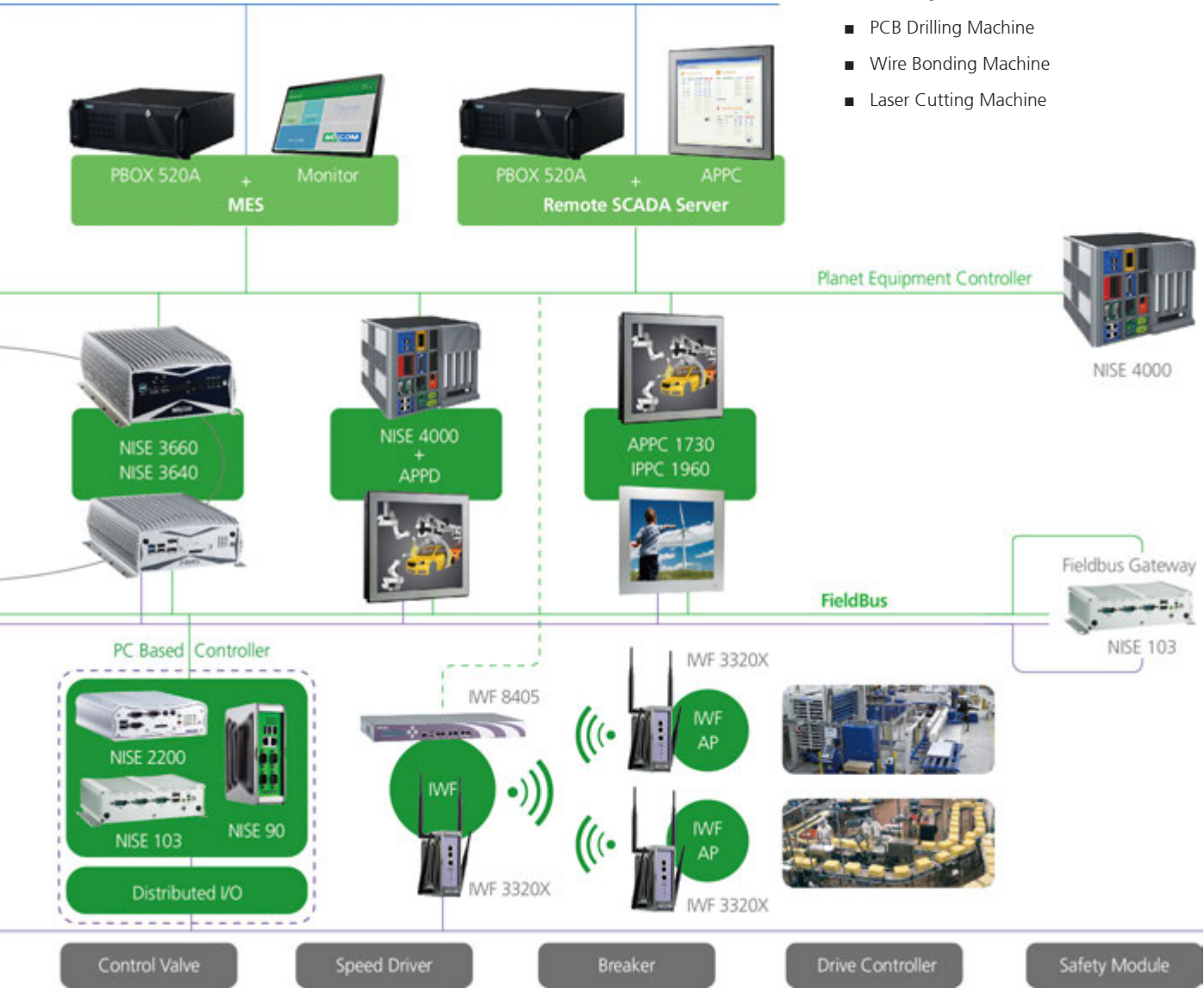
Factory Automation

High Flexibility and Fieldbus Enabled Automation Platform

The features of rich communication, high flexibility, widely performance range are for the current trend of factory automation hardware. It can satisfy the requirements for industrial network connection, system integration, easy expansion, high computing capability in factory automation controllers and SCADA/ HMI stations. NEXCOM NISE series platform provides the high reliability fanless PC platform for fulfilling these demands. The rich communication I/Os for 2~6 LANs, 2~6 COM ports can meet the different options for networking integration. The Fieldbus communication interface can be installed in the built-in Mini-PCIe socket to enable the Fieldbus communication capability for ProfiNET, Profibus, EtherNET/IP, DeviceNET, EtherCAT, CC-Link, CANopen and so on. NISE series can perform the task of "Control & Communication" server to link with the existing factory automation control system through these protocols.
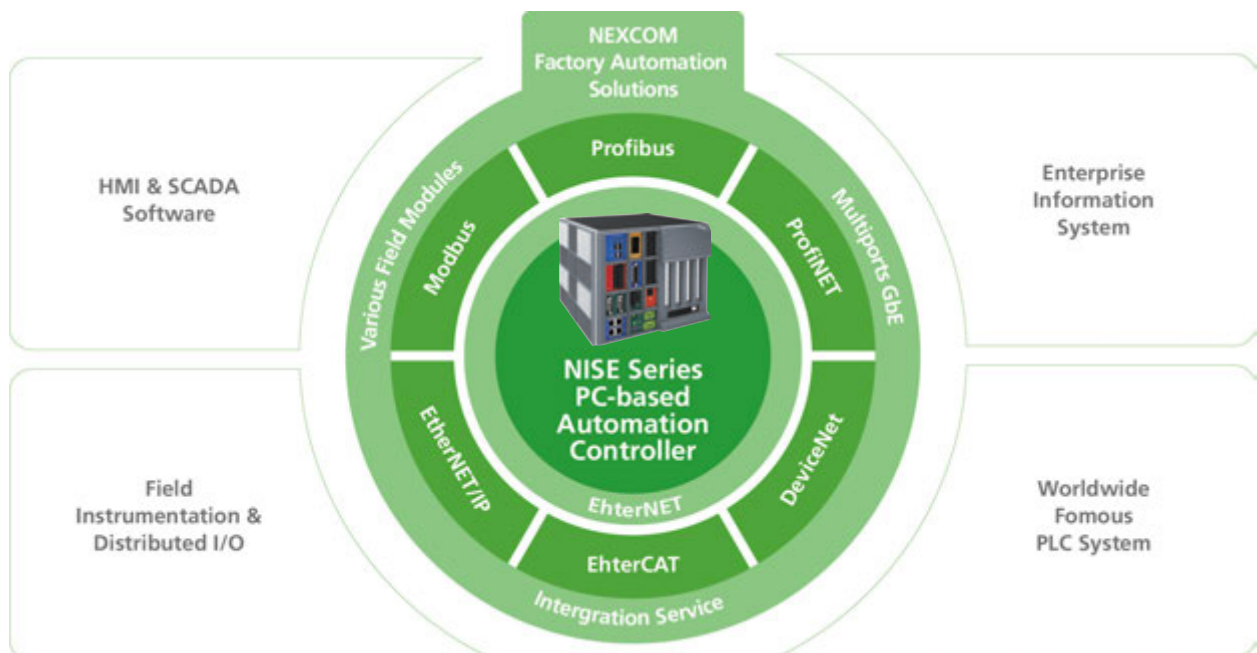
Features and Benefits

- Fanless design for high reliability
- Widely range CPU performance options
- Rich communication Interface: 2~6 GbE LANs, 2~6 COM Ports
- Mini-PCIe modules for Fieldbus communication
- Rich I/Os: up to 6 USB, VGA/ DVI/ Display ports, Audio-in/out
- Easy expansion by Mini-PCIe, PCIe, PCI sockets
- Wide operating temperature options for various industrial environments
- Compact size for limited space installation
- Options for Wi-Fi/ 3.5G interface for wireless/ M2M applications
- CFast, SATA DOM, HDD & SSD for media storage options

Application and Market Focus

- Factory Automation PC-based Controller
- SCADA/ HMI Server and Client stations
- Data acquisition server
- Fieldbus communication gateway

Product Selection

NISE 90/91
Intel® Atom™ E620/640
with 2x LANs, 3x COM,
1x CANbus, 3x USB

NISE 2200
Intel® Atom™ D2550 with
2x LANs, 6x COM, 6x USB
and Mini-PCIe socket

NISE 3660
3rd Gen. Intel® Core™
i7-3517UE Onboard with
6x LANs, 2x COM, Mini-PCIe
and PCI expansion

NISE 4000
3rd Generation Intel® Core™
i3/i5/i7 rPGA Fanless System
with PCI/PCIe expansion

Management Control Platform — Fieldbus Comm. Gateway (ProfiNET, Profibus, EtherNet/IP, DeviceNet, EtherCAT interface)

- PLC I/O Controller
- PC-based Local Control System
- 3rd Party Devices
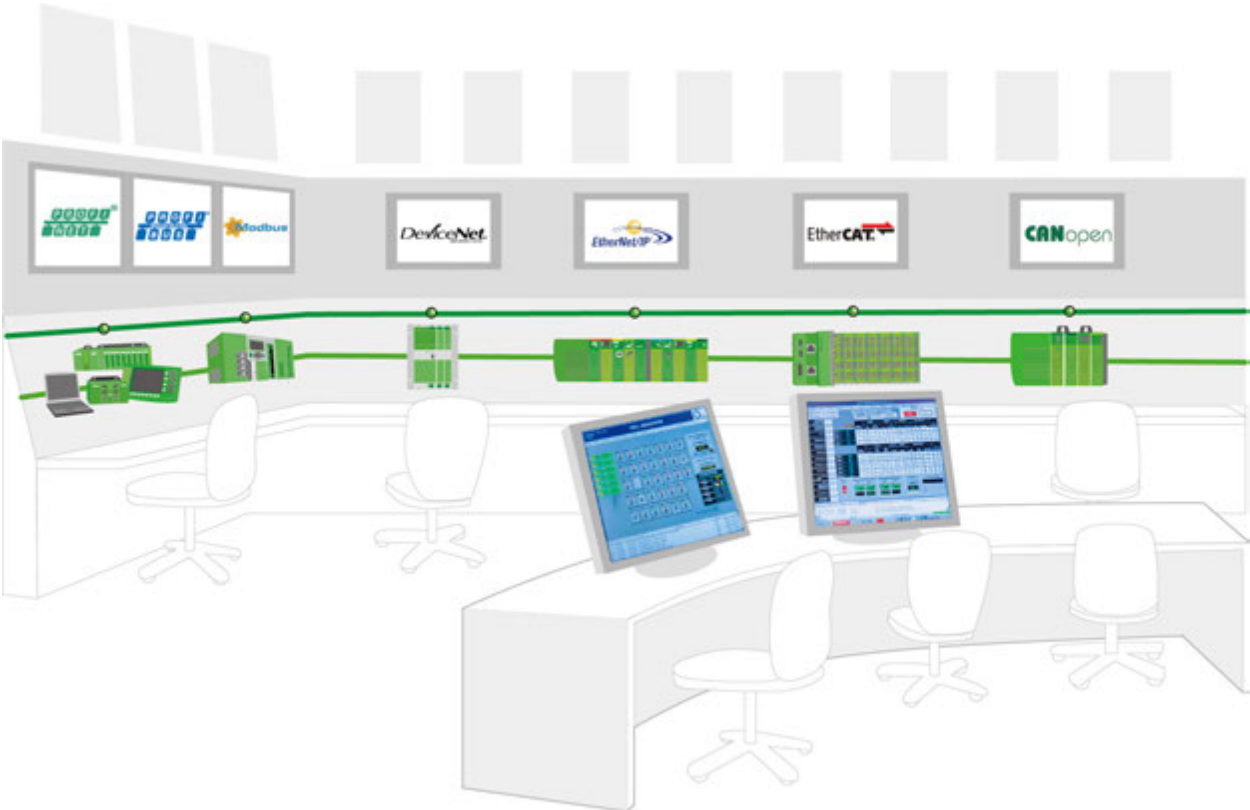
Machine Automation
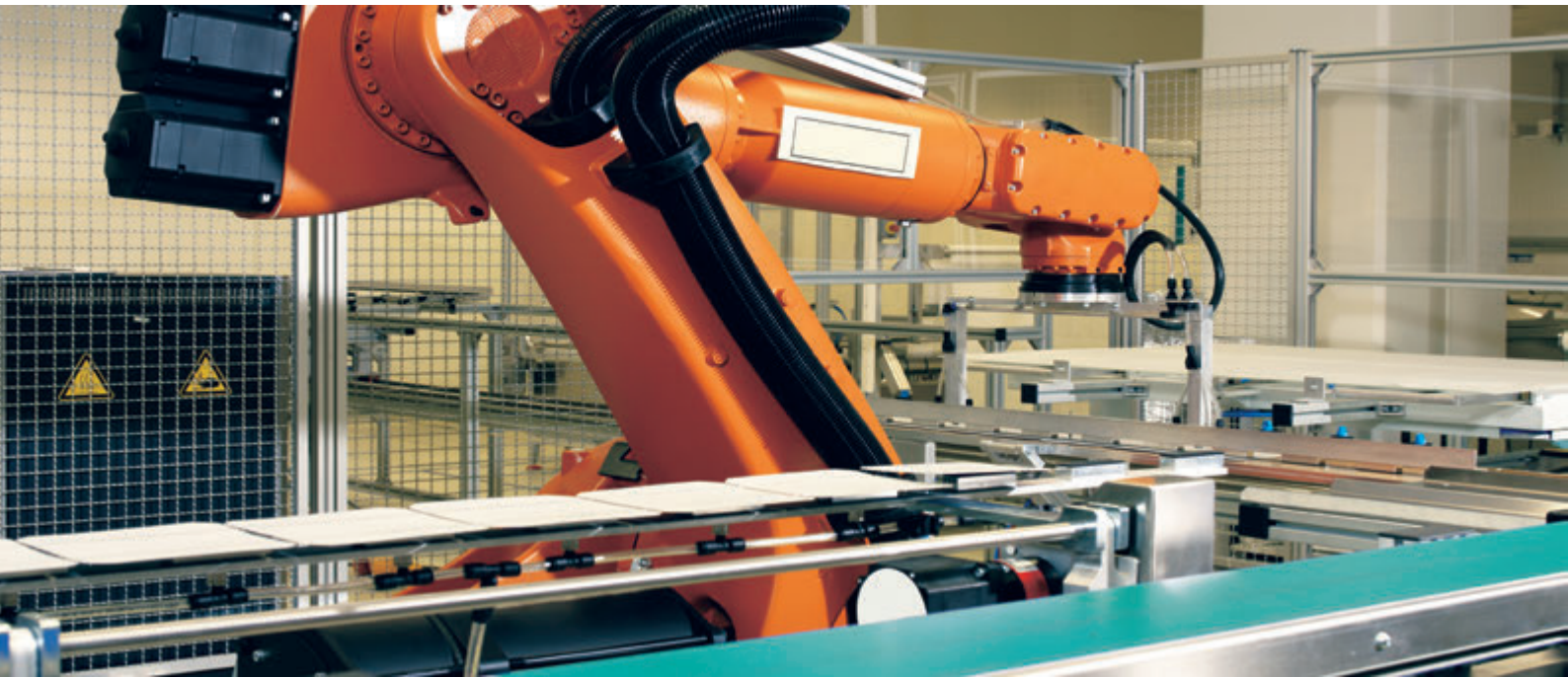
NexMotion – The Next Generation Motion Control Solution

Cooperated with the best machine automation partners all over the world, NEXCOM keeps track of the automation trend. To meet the requirement of top-ranked experienced customers, NEXCOM provides the leading products, NET series, PAC series and MAC series. Along with products, the exceptional customization and integration service makes NexMotion the unparalleled machine automation solution. NexMotion is always targeting advanced MA solution and ensures the success of cusomters' application.

NexMotion NET Series

NexMotion NET series, leverages industrial grade Ethernet technology and provides the networking solution, where the functional modules locates out of the controller and are controlled with EtherCAT protocol. The legacy high speed signals are "digitalized" by the built-in controller, also known as the fieldbus master, into commands and broadcasted to the corresponding I/O modules, or slaves, closed to the actuators or sensors which may be located several meters away from the controller. The communication technology ensures the successful delivery of commands over long distance and reduces the possible distortion and the possibility of disturbance to the signals.

NET 3600RTA

PAC 1000

MAC 3502GTS
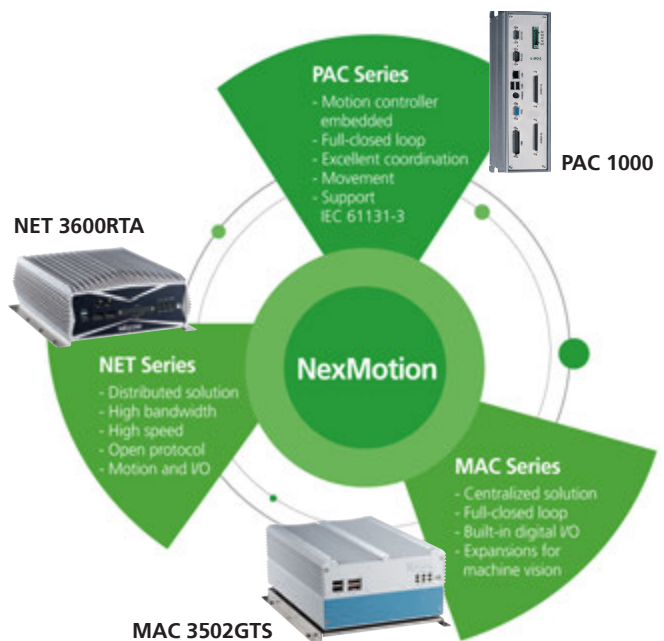
Also benefited from the digitalized commands, it's possible for users to configure or monitor the slaves directly from the master without disassembling the machine and operating via the front panels of the slave devices. For certain slaves, such as servo drivers, this technology also upgrades the performance of slaves by eliminating the limitation of input pulse rate.

NET 3600RTA is one of the NexMotion NET series products. Powered by the real-time extension technology, NET 3600RTA

shows the deterMinistic characteristics and can response timely to events even if operating with Windows XP or Windows 7. The built-in EtherCAT master is compatible with most certified EtherCAT slaves, including EtherCAT servo drivers.

NexMotion PAC Series

NexMotion PAC Series features a built-in motion controller. The embedded design of the motion controller results in the unparalleled behavior under strong vibration and shock condition. Also featuring the compliance with IEC 61131-3 standard, NexMotion PAC Series supports six programming languages, including LD, FBD, SFC, IL, ST and CFC, as well as PLCopen Function Blocks for Motion Control, which largely shortens the development time of applications.
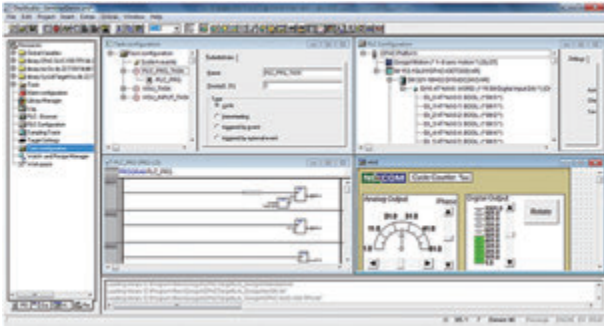
Besides support of various graphical, texture and mixed programming syntax, PAC series also supports HMI editor and remote HMI, which enables the display located as far as 50 meters away from the controller.

PAC 1083 is an 8-axis full-closed loop motion control PAC with integrated IEC 61131-3 Soft-PLC and HMI. Pre-installed with Windows CE and the runtime software, PAC 1083 is ready-to-run after booting up. Users can implement the application with graphical languages, such as ladder diagram, and download the application to PAC 1083. After the application downloaded, PAC 1083 can be configured to run the application automatically and can act as a specialized standalone controller for diverse fields.

NexMotion MAC Series

NexMotion MAC Series is composed of motion control add-on cards and various industrial computers, such as MAC, NISE and PBOX. The general add-on design makes MAC series processes expansion capability and is scalable to control large amount of control axes and channels of input and output devices, such as isolated digital input and output devices.

MAC series is able to handle the servo driver with full-closed control loop, which results in the excellent coordinated movement among each single servo driver. The coordinated movement is fundamental requirement in many industrial applications, such as CNC, gantry, flying-saw and so on. Not only good at the complicated trajectory planning, MAC also supports point-to-point movement which is commonly implemented in PCB and semiconductor manufacturing machines, such as screen printing machine, die-bonding machine and so on.

MAC 4013GTS8 is an 8-axis full-closed loop motion controller featuring the excellent coordinated movement and SPA, Standalone Procedure Access. Users can download up to 32 procedures into the motion controller. Due to the direct access to the resources, SPA shares the loading of platform CPU, and increases the possibility for more application requiring high computing power, such as on-line vision analysis.

Customization and Integration Service

In addition to controllers, NEXCOM provides solutions of different levels ranging from COM express modules, RISC-based platform and industrial display panel to CNC turn-key solution, which consists of the main controller, HMI, operating panel and CNC control program.

As a leading solution in automation, NexMotion provides not only the products but also integration service to speed up the prototyping of products and ensure the success of applications. Customization can be required to create a unique model to build up company image, to differentiate the product or to meet the special requirements. NEXCOM has provided integration and customization service to users all over the world for many years and is the best partner in automation applications.
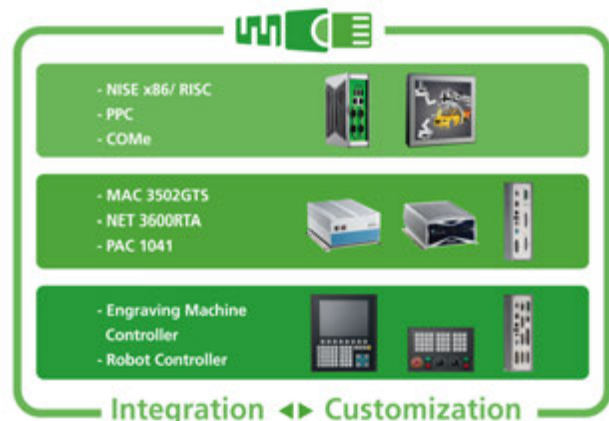
Applications

- PCB Drilling Machine
- Wire Bonding Machine
- Food Packing Machine

- PCB Milling Machine
- Laser Cutting Machine
- Tube Bending Machine
- Dispensing Machine

Self-Service Kiosk Solutions

The Easy and Comprehensive Platform to Optimize Your Self-service Kiosk Machine

With the increase of Cloud service and IoT (Internet of Things) demand, it is driving the industrial automation machines toward wider operating temperature support and Internet-connectivity ready in order to approach outdoor applications. Even in heavy industrial automation applications, the need of wider temperature range product portfolio is never less. Response to this increasing demand, NEXCOM offers several industrial grade fanless systems supporting from -20℃ up to 65℃ or even 70℃ extended operating temperature and having Mini-PCIe socket ready for wireless connection to ensure the machines working steadily in open-air applications.

To achieve the system operating stably at the temperature range of -20℃ to

	NISE 104	NISE 2200	NISE 2300	NISE 3600E	NISE 3640E
Intel® GbE LAN	2	2	4	2	4
Mini-PCIe	1	1	1	1	1
Support 3.5G Wireless	Yes	Yes	Yes	Yes	Yes
Support Wi-Fi	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-5℃ to +55 ℃	-20℃ to +65 ℃	-20℃ to +65℃	-5℃ to +55 ℃	-20℃ to +60 ℃

+70℃ , NEXCOM devotes to the product design and product development from component selection, passive cooling design, mechanical design and product validation to ensure the system reliability. All NISE product design follows the concept of design-to-production. Thus, choose the optimal components, then, optimize the system architecture both in mechanical and in electronic design. All NISE products will be tested in chamber for Environmental tests, including Low Temperature, High Temperature, High-Low Cycling temperature, Humidity continuous, power on/off tests, vibration test and shock tests during product development stage.

Most of NISE systems have one Mini-PCIe socket Onboard, ready to support wireless communication no matter it is Wi-Fi or 3.5G connection. This flexibility helps the system to be managed over internet including display content update for outdoor applications where is hard to have physical LAN connection. In some applications, more than two LAN connectivity is necessary. Then, NISE 2300 and NISE 3640 will be the best choice to have multiple LAN connections.

NEXCOM also provides the embedded service to provide the Board-Support-Package (BSP) and Image for Microsoft embedded OS. All this

BSP and Image will be ready for the use once the product launch. In short, NISE fanless product portfolio in Self-Service Kiosk covers from NISE 104 compact size, NISE 2200/2300 with optimized Atom system and NISE 3600E/3640E with Core™ i7/i5 processors Fanless System to meet the needs.

Embedded OS Service

Win CE	WES 2009	WIN 7
BSP		Image

Product Selection

NISE 104
Intel® Atom™ D2550 with 2x LANs, 4x COM, 6x USB and Dual Display

NISE 2100A
Intel® Atom™ D525 with 2x LANs, 6x COM, 4x USB and PCIe/ PCI Expansion

NISE 2300
Intel® Atom™ D2550 with 4x LANs, 4x COM, 6x USB and PCIe/ PCI Expansion

NISE 2200
Intel® Atom™ D2550 with 2x LANs, 6x COM, 6x USB and PCIe/ PCI Expansion

NISE 3600E
3rd Gen. Intel® Core™ i5/i3 with 2x LANs, 6x COM and PCIe x4/ PCI Expansion

NISE 3640E
3rd Gen. Intel® Core™ i7-3517UE Onboard with 4x LANs, 6x COM, PCIe x4 or PCI Expansion

Main Features

- Open Architecture: Be flexible to support various add-on cards, storage, and wireless connection.

- Rich Product Portfolio: Plenty of choices from NISE 100 series palm size, NISE 2000 series up to NISE 3000 series high performance level.

- Strong Connectivity: Rich I/O connection in one system to Minimize the complexity of system integration and cost.

- Ready-to-Go Solution: Embedded OS BSP and image ready to shorten development timeframe.

- Robust and Low Maintenance: Faness and robust design reduce the system down-time.

Solution Diagram

Vending Machine with NISE 2100

Cash Machine (RS232)   Receipt Printer (RS232)   Coin Machine (RS232)   Storage (SSD)

Display (VGA)   Touch (USB)   Management Center (RJ45)   Wireless Connection
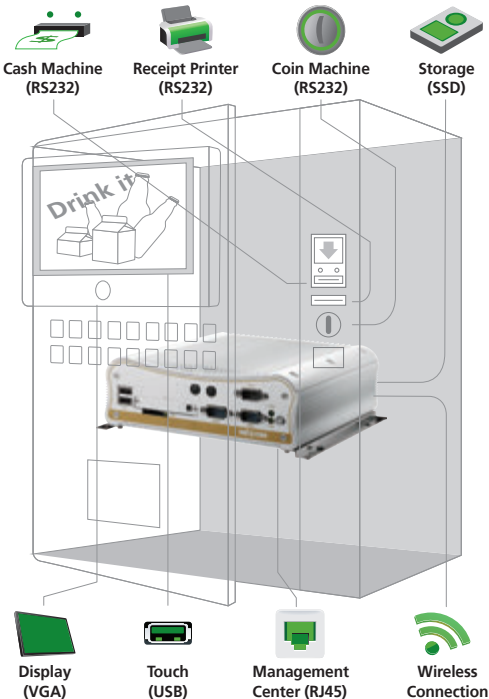
Car Rental Kiosk with NISE 2100A

Keyboard   Printer

USB   LAN

Monitor/ Touch   RFID

Internet

IPBX

Intelligent Transportation Solutions

Present High Resolution Image Solution in ITS Application, Marine Bridge Room, ePolice Application Including nTUF 600/610, NISE 3640, NISE 2300

With more than 10 years of experience in Intelligent Transportation Solution, NEXCOM offers full range of industrial fanless computer which can be deployed in Intelligent Transportation application which covers roadside traffic solution, harbor equipments, and also the Marine computer related to ECDIS (Electronic Chart Display and Information System) application. Most mentioned equipments above are mainly operating in heavy industries under harsh conditions, for example, dynamic temperature and dusty locations. NISE fanless computer is designed as single units without FAN module or ventilation hole which will be the best choice to against dust and less maintenance cost caused by FAN design. NISE fanless system also features with Gigabit Ethernet interfaces available for network-intensive or vision-intensive application, for example, roadside traffic surveillance and ePolice.

The design philosophy of NEXCOM fanless computer follows single unit design and easy maintenance concept. Based on this philosophy, all NISE products keep the flexibility to support various add-on cards but

also to have the simplicity to Minimize the engineering efforts:

- Wide-Range DC Input from +9 to 30V: Easy adaptation on power source
- Flexible Expansion Ability: support all kinds of cards from PCI, PCIe, PCIe x4 and Mini-PCIe cards.

- Extended Temperature Range: Less consideration to system locations
- Fanless Design: Less maintenance and risk. Less dust.
- Cabless Design: More reliability, less trouble shooting effort and human error.

Above design features are crucial to heavy industrial applications where may have no technician around. Minimize the down-time is the most important mission. Thus, the NISE always features the optimal and maximum interfaces for easy connection. Enrich the product portfolio for easy adaptation, for example, 2~4 Gigabit LAN ports, 1~2 HDD spaces, 1~2 expansion slots, palm-sized to high-performance system. For Marine Computers, nTUF 600/610 is

also certified by DNV EN60945 standards not only in EMC but also in environmental tests. UL certified is also available on selected models, like NISE 3600E and NISE 3500 series.
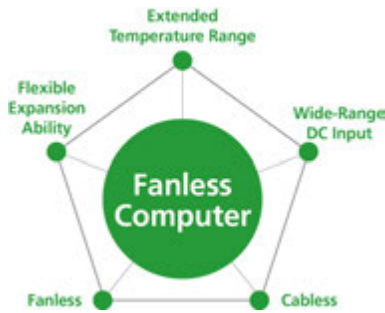
Main Features

- Built for tough environments with dusty and dynamic temperatures applications
- Easy to install
- Minimum size, maximum features
- Easy to maintain and low service cost

Applications

Image processing system

- e-Police
  (speeding/illegal turn)
- Traffic light control
- Automatic optical inspection

Traffic system

- School bus
- Train station control
- Access control
- Marine

Product Selection

NISE 104
Intel® Atom™ D2550 with 2x LANs, 4x COM, 6x USB and Dual Display

NISE 2100A
Intel® Atom™ D525 with 2 LANs, 6x COM, 4x USB and PCIe/ PCI Expansion

NISE 2300
Intel® Atom™ D2550 with 4x LANs, 4x COM, 6x USB and PCIe/ PCI Expansion

NISE 3640E
3rd Gen. Intel® Core™ i7-3517UE Onboard with 4x LANs, 6x COM, PCIe x4 or PCI Expansion

nTUF 600
Intel® Atom™ Dual Core D525 Marine Computer with 4x NMEA, 2x M12 GbE LAN, 24VDC Input with 1.5KV Isolation

nTUF 610
Intel® Core™ i7-2610UE Marine Computer with 4x NMEA, 2x M12 GbE LAN, 24VDC Input with 1.5KV Isolation

Solution Diagram

ePolice with NISE 3640VR

ePolice with NISE 2110A
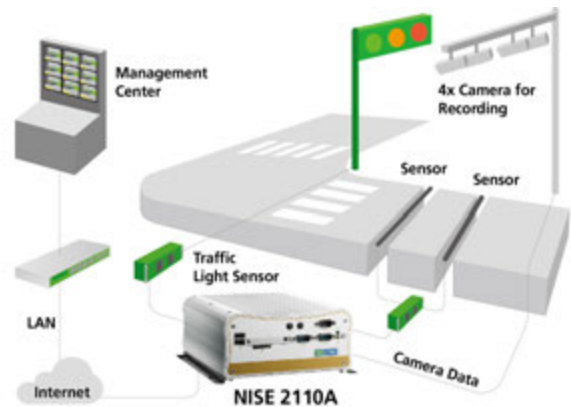
ECDIS with nTUF 610 in Bridge Room

Thermal Image with NISE 2110A in Aqua Farm

Maritime Computing Solutions
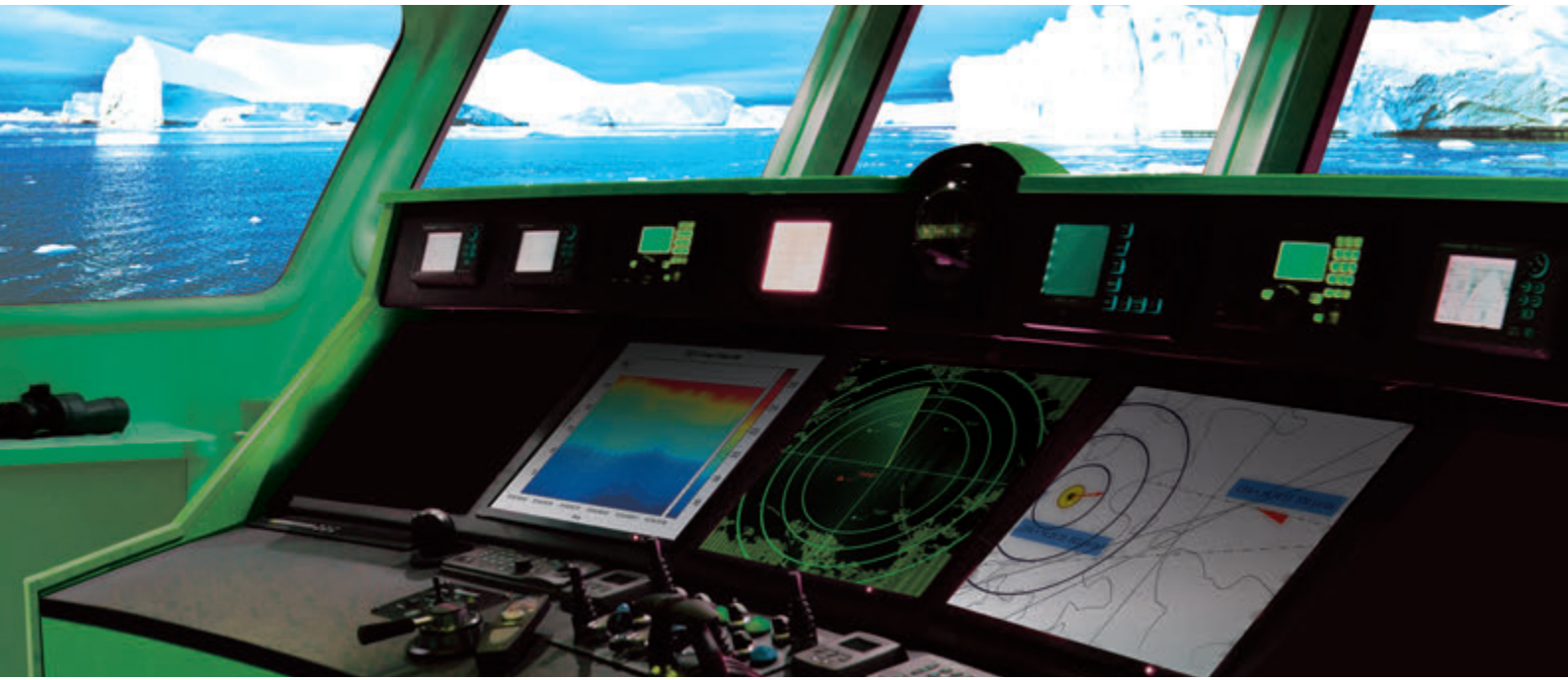
nTUF Series, Maritime Computer for Vessel Operations Application

NEXCOM nTUF products are one of typical tough fanless marine computer designed to sail through the infinite sea to success. Since nTUF is targeted at maritime applications, the mechanical and electrical design of the computer conforms to IEC 60945, IACS-E10 and DNV 2.4 standards, so nTUF can meet the requirements of most environmental and electromagnetic challenges. The mechanical design of nTUF makes for quick setup and easy maintenance and is therefore perfect for a wide variety of marine applications onboard ferries, leisure craft, fishing vessels, cruise ships and freight vessels.

To counter tough challenges on the rough sea, fanless nTUF not only is impervious to water, salt mist and dust particles; it can directly dissipate heat and resist shock and vibrations. The fanless marine computer can also adapt to temperature changes from -25°C to 55°C (-13°F to 131°F). As regards electromagnetic compatibility, 1.5KV isolation protection is applied to 24VDC input and NMEA 0183 ports protected by 2KV optical isolation design to reduce electromagnetic disturbances and enable the nTUF to work properly at the bridge of a ship, such as ECDIS, GPS, AIS, Gyro, Radar and Rudder Angle Indicator.

Powered by Intel® processor, nTUF delivers optimal computing performance with graphics capability and thermal dispassion. To counter the effects of shock and vibration, nTUF employs a screw type connector for example screw terminal, NMEA, and M12 GbE connection. It's crystal clear that nTUF is the perfect tailor-made solution for applications.

Keep Maintenance Simple

The SSD trays and CFast card socket located at the front of the computer offer easy access to storage units. It increases efficient for crew staff to replace storage units without dissembling the computer. The fanless design also has a beneficial effect on system maintenance.

nTUF has a multitude of I/O options including USB, PS/2, GbE M2 LAN, VGA and RS232 with DB9 and 24VDC, all of which come with locks to ensure cables are securely fastened. To simplify system deployment, the Windows® Embedded OS pre-installation service provided for ease-of-use.

Main Features

- Fanless and rugged design
- Rich I/O interface with secure lock
- Built-in Intel® Core™ i7 high performance processor
- Compliance IEC 60945, IACS-E10 and DNV 2.4 standards
- Support +24VDC power input with 1.5KV isolation protection
- Supports ATX power mode, WoL, LAN teaming and PXE function
- NMEA interface: 4x RS422/485, TX & RX signal, with 2KV optical isolation design

Solution Diagram

nTUF 600 at Marine Bridge Computer
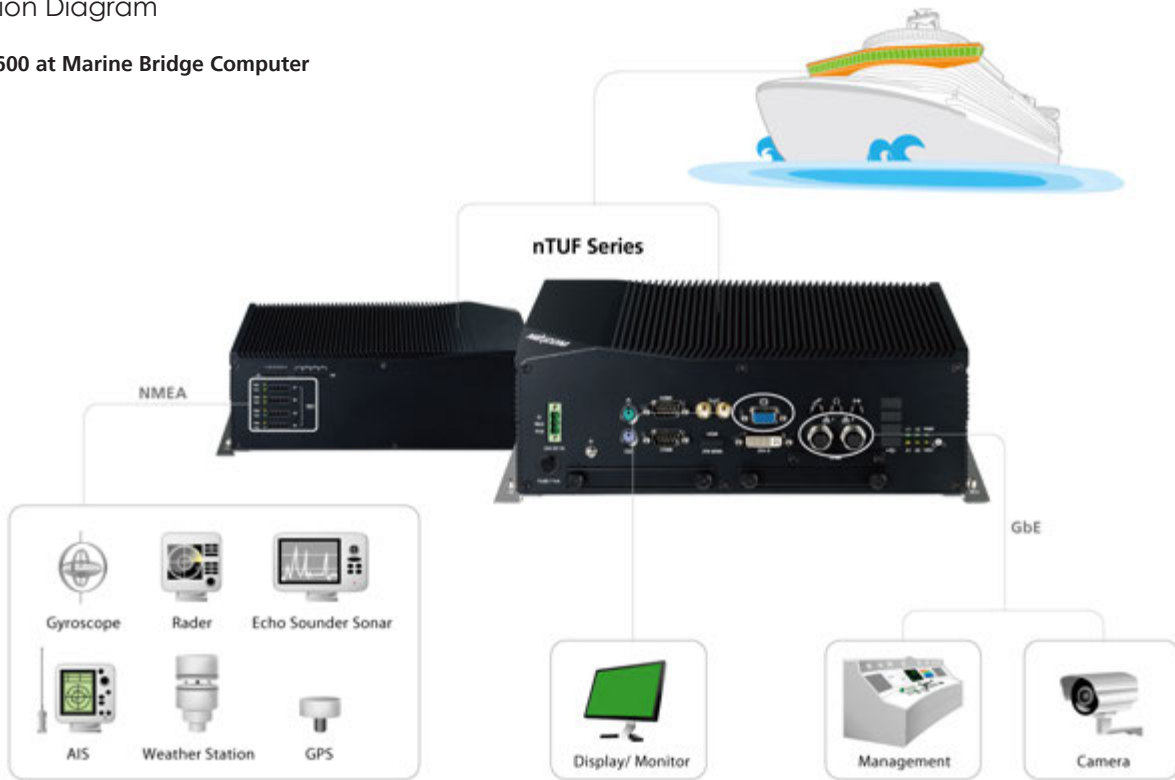
nTUF 600/610 Marine Certification

Retail/ Hospitality

NexPOS, Transform Your Business

NexPOS Point of Sale (POS) terminals are designed to extend the life of your hospitality or retail POS systems, Minimize downtime and cut training time, all while enriching the customer experience. NexPOS terminals embody an unrivaled history of innovation and a solid commitment to providing the optimum combination of performance and value. NexPOS differentiator, is the "End to End" hardware solution which covers POS, SIGNAGE (Digital Boards) and SURVEILLANCE (POS CCTV).

Digital Signage

NEXPOS
End to End Solutions

Point of Sale   **POS CCTV**

Application

- Retail/ CVS
- QSR (Quick Service Restaurant)
- KVS (Kitchen Video System)
- Hospitality
- Kiosk Engine
- POI (Point of Infotainment)
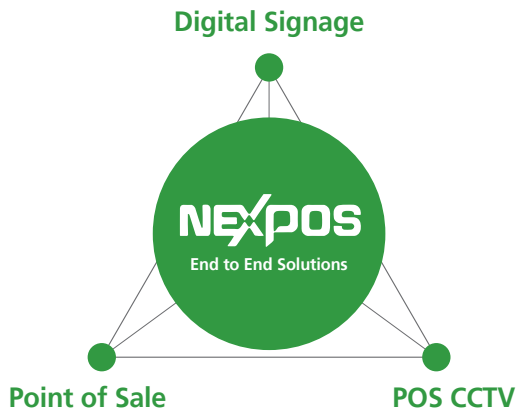
END to END H/W Solution

Drive Thru Order Confirmation Board
MPPC 2120T ; OPPC 1520T/ 1720T

Headquarters (Call Center)

Beverages

Beverages

eMenu Board
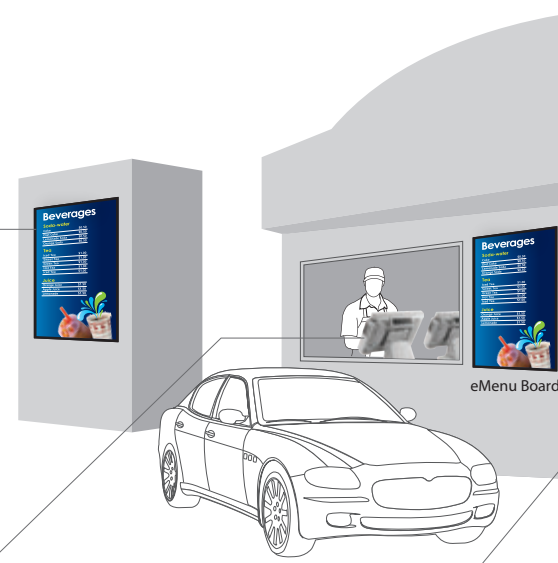
QSR Drive Thru/ Delivery
KPPC 1550/1551/1552

POS Local Server & Terminal
NPT 5850/ NPT 5851

Expect More Affordability in a Bundled Solution

Point of Sales (POS)

NexPOS terminals offer retailers unrivaled innovation, performance and value. Whether you run stores, restaurants, operate cinemas or manage a stadium or venue, NexPOS H/W solutions are built specifically to match the demands of your environment. While our technology is function-rich, innovative, and durable, our goal is to always provide the right combination of solutions that benefit your business.

POS Surveillance

Surveillance cameras can be integrated with NexPOS, POS CCTV systems so that sales data is captured on video images for additional internal security and control.

eMenu Display System
MPPC 3220T/ 2220T

eMenu Player
NDiS 125-L

Digital Signage Player
NDiS 166

Central Management Server
CMS 2100/ CMS1100

eMenu Board

Surveillance Server
NViS 6210/ NViS 5240

Local Restaurant

POS Terminal
NPT 1550/ NPT 1551

Kitchen Display System
KPPC 1550/1551/1552
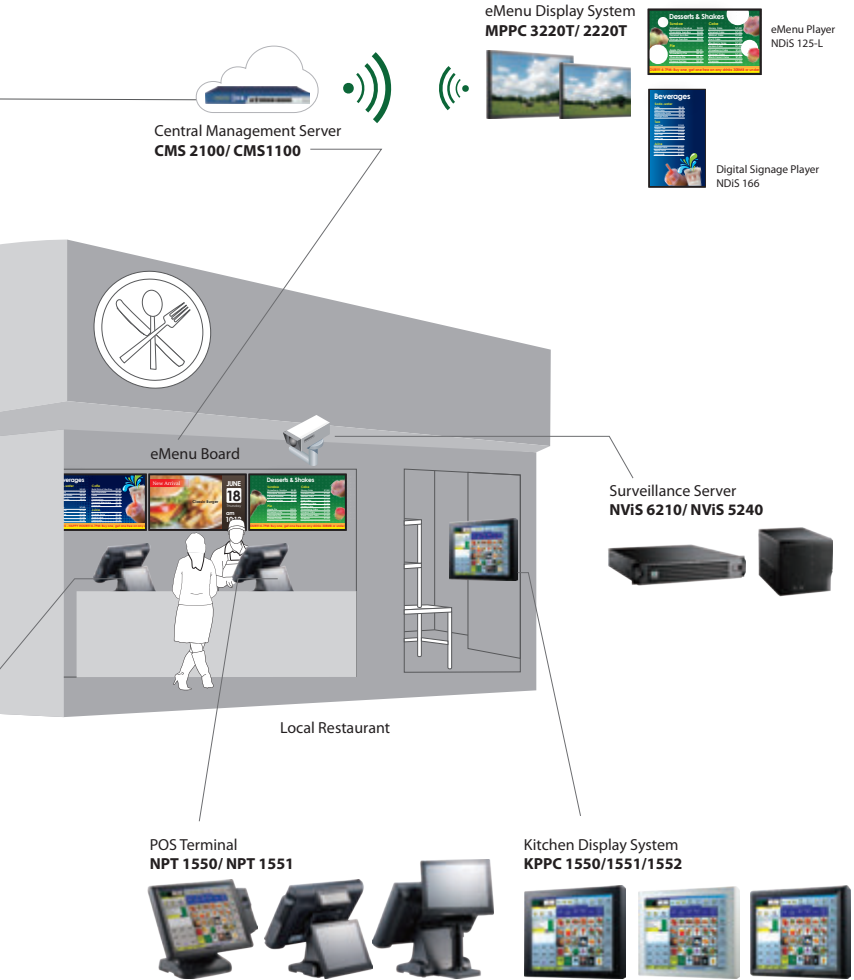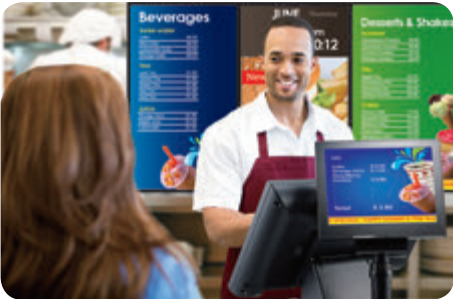
Digital Signage

Digital menu boards and signage have transformed customer communications in hospitality environments – providing order confirmations, promoting new product items or combos, improving wayfinding and communicating show times and wait times. NexPOS offers a full range of indoor/outdoor digital signage and menu boards, drive-thru timers and drive-thru order confirmation displays. The PDiS/ NDiS digital signage box pc, interfaces with multiple POS systems, enabling easy management of price and menu changes. Improving the customer experience where in dynaMIC-information is provided throughout your restaurant or venue.

Applied Panel PC Solution

Rich Variety of Panel PC Solution

NEXCOM industrial-grade Panel PCs are ideal PC-based Human Machine Interfaces (HMI), designed for reliable and high efficient operations in industrial computing applications and workstations. Drawing on considerable design and production experience, NEXCOM has developed a wide range of products, comprised of Heavy Industrial Panel PC(IPPC), Applied Panel PC(APPC), Applied Panel Display(APPD), Multi-media Panel PC(MPPC) and Open Frame Panel PCs(OPPC), which are used in diverse industries, including Heavy Industrial, Factory, Machinery and Retail.

Heavy Industrial Panel PC (IPPC)

The Heavy Industrial Panel PC (IPPC) is based on the powerful 2nd/3rd generation Intel® Core™ processors and equipped with a user-friendly LED backlight TFT LCD touch panel. It provides two Mini-PCIe sockets and two expansion slots to support EtherCat, PROFINET, Modbus/ TCP modules. The NEMA4/IP66 rated heavy-duty aluminum Front Bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. The IPPC is ideal for use in oil and gas rigs, wind farms, chemical plants, pharmaceutical factories and other hazardous workplaces.

IPPC 1960T

Applied Panel PC (APPC) & Applied Panel Display (APPD)

Designed for light industry, the all-in-one APPC is built with a proprietary motherboard based on low power Intel® Atom™ processor. The APPC integrates a LED backlight TFT LCD panel, user-friendly flush touch screen and NEMA4/ IP65 plastic Front Bezel and is encased in a ruggedized vibration-resistant yet fanless ultra-slim light chassis. The APPC allows multiple configurations and can guarantee noise-free ultra-reliable operation when paired with a low voltage single board computer and super slim bezel. The APPC is offered in 5 different screen sizes, including 8", 12", 15", 17" and 19". The APPD is an industrial-grade touch display which looks identical to the APPC.

APPC 1930T

Multi-media Panel PC (MPPC)

Aimed at multi-media applications, the fanless MPPC computer incorporating a 16:9 LCD touch screen panel is suited to digital signage and self-service kiosks. The MPPC combines the latest Intel® Atom™ processors and the brilliant displays sized from 8.9" to 32" with resolutions up to Full HD 1920 x 1020. It has extraordinary responsiveness to immerse its audience in a visual feast. In addition, the MPPC features the rugged attribute, fanless design, built-in dual Ethernet and optional Wi-Fi connectivity and the extremely slim form factor, extending its applicability for different scenarios, for example Interactive Information terminal.

MPPC 2120T

Open Frame Panel PCs (OPPC)

The Open Frame Panel PC features the bezel-less display, ultra slim design and various innovative mounting options including open frame mount from both rear and front sides. The OPPC is ideal for space critical applications and can be easily integrated into a custom enclosure, offering great flexibility to system integrators. The applications of OPPC include ATMs, vending machines at transportation stations or entertainment venues. The OPPC is available with 12", 15", 17" and 19" LCD panel and multiple configurations.

OPPC 1730T

Main Features

- Fanless
- Thin bezel and slim; small cutout dimensions
- Rich I/O and flexible expansion
- Cable-less embedded board
- Industrial-grade LED backlight panel

- IP65 or IP66 complaint front panel
- Wide range of power input: AC/ DC
- Mounting options: open frame/ panel/ wall/ VESA
- Flexible customization options
- Easy to install and upgrade
- Touchscreen: 5-wire resistive/ projected capacitive/ surface capacitive/ SAW

Applications

- Manufacturing
- Power plant
- Retail

- Entertainment
- Banking
- Transportation

Industrial Wireless Solution

NEXCOM Brings Central Management to Advanced Industrial Wireless Networking

To response the growing business and the expansion of work area, Wi-Fi solution is always a priority consideration to expand the current IT infrastructure due to the benefit of high flexibility and less infrastructure spending. Especially the advanced Wi-Fi communication technology is continually empowered the performance to be as close as the current wired network. However, with the rising numbers of Wi-Fi Clients deployed, the complication of management in access and security control becomes big challenges to every MIS, even to every company.

Besides management, redundancy, roaming and reliability are key major concern for industrial vertical markets. NEXCOM IWF series

is central controlled base WLAN solution with versatile front-end rugged industrial grade access points that ensure to serve the WLAN work 7 x 24 non-stop operation in critical environment.

Setup a Reliable, Secure & Easy-to-manage Wireless Network

The IWF Series industrial Secure WLAN Controller is an ideal central security solution for medium-scale industrial WLAN deployments. The IWF WLAN controller integrates "Access control security management", "User account provisioning & management", "QoS Policy management", into one box to provide simplified manageability and instant mobility. The WLAN controller can also be used for hot spot deploy with the features of "flexible accounting and billing".

Industrial Access Point – IWF 3320X

Key Features

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbps
- Redundant power input supporting 802.3af PoE and +9 to 36VDC Input
- Industrial grade conformal coating for harsh environment
- Rugged Die-casting housing with -30 to + 80°C wide-temperature
- The layer-2 Wireless Firewall gives protection from wireless attacks
- Press-n-Connect to enable auto WDS/ mesh network
- Comprehensive WLAN security encryption with WEP, WPA/ WPA2, IEEE 802.1X or PSK
- Multiple-SSID Virtual APs for grouping policy management
- Tunnel-based AP management by backend AP controller

Front-end Rugged Industrial Access Points

Incorporate with back-end secure WLAN controller, the front-end Access Points deployed for industrial applications are expected to offer a trusted connectivity all the time, therefore, some of characteristics are important for front-end industrial access point that have been designed in NEXCOM Industrial Wi-Fi (IWF) solution:

Wide Operating Temperature & Anti-corrosion Protection

To survive in tough environmental condition, NEXCOM IWF Access Points is design with capability for -30 to +80°C operating temperature & Conformal coating to enhance the MTBF (Mean Time Before Failure) that is essential for industries like chemical facility, steel factories, outdoor open-site.

Fast Roaming & Redundancy

Since the mobility communication is getting popular in remote warehouses, factories, logistics, a reliable fast roaming is required for always- connect seamless & real-time data transmission. NEXCOM IWF series Access Points offers Layer 2 and Layer 3 fast roaming in 20ms that is not only to establish the roaming connectivity, but also can cross between subnets. Moreover, the Dual RF, Dual band, Dual power input provide always-on WLAN service operation as trusted WLAN solution.

Flexible Easy WDS Mesh Network by "Press-n-Connect"

By simply pressing a WES button to easily enable WDS features, IT staff can flexible setup their wireless coverage in remote site and benefits the cost-saving without physical cabling between wireless APs.

Outdoor Access Point
- IP68 rated metal-inside housing
- Industrial conformal coating
- Daul RF, Daul band

Industrial Wi-Fi Solution

Secure WLAN Controller
- Centralized AP management
- Dual WAN load balancing, fail-over mechanism
- Secure data tunnel between ontroller and AP

Industrial Access Point
- Dual RF, Daul band
- Redundancy power supply
- Industrail grade xonformal coating
- -30 to +80°C wide temperature supprted

Secure Networking under Central Management – IWF 8405

- Multi-level connections & management up to 150 IWF series APs (Access points)
- Virtual service zone management by user group, security profile and etc.
- Authentication, Authorization, Accounting (AAA) support
- Dual-WAN load balance and failover
- Data tunnel security by Intranet local IPSec VPN, Internet Remote
- Client PPTP VPN, Site-to-Site VPN
- QoS and WMM traffic types support for voice, video, best effort

Outdoor Access Point – IWF 5320

Key Features

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbp
- Dual Gigabit Ethernet with one standard IEEE 802.3af PoE
- Weatherproof IP68 rated metal-inside housing with -20 to +70°C operating wide-temperature
- Multiple Virtual APs for grouping policy management
- Industrial grade conformal coating for harsh environment
- The layer-2 Wireless Firewall gives protection from wireless attacks
- Comprehensive WLAN security encryption with WEP, WPA/ WPA2, IEEE 802.1X or PSK
- Tunnel-based AP management by backend AP controller

EmbeddedPro Services
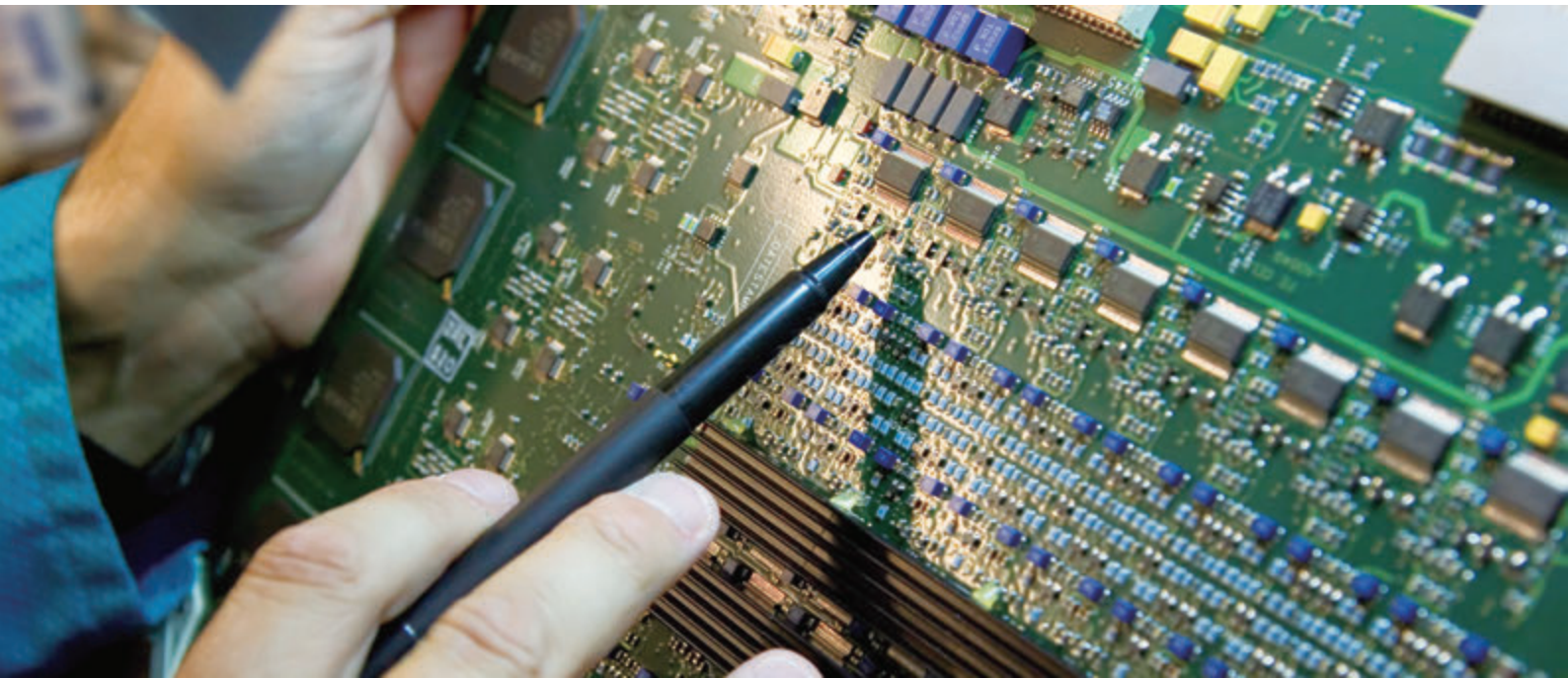
Make Your Embedded Dreams Work

NEXCOM is leading the technology in the Embedded Computing Platforms by providing a one-stop solution for diversified vertical markets. We provide off-the shelf or tailor-made embedded hardware platform which could integrate completed Board-Support-Package (BSP-ready) of Embedded OS, Real-time OS. To fulfill environmental critical applications, NEXCOM also provide wide- temperature design and conformal coating high-value services. The mission of EmbeddedPro services is to make your embedded dream work by one-stop solution.

Leading Intelligent Embedded System

Dedicating the leading embedded solution development, NEXCOM offers most advanced x86 architecture and SOC ARM-based platforms to industries. More than double decades partnership with Intel® Intelligent Systems Alliance. NEXCOM is invited to join Intel® early access program for every innovated platform and has recognized and well known as one of the most leading and reliable embedded solution providers endorsed by plenty of successful application story in vertical markets. NEXCOM is the first one to announce all series embedded boards to support -15℃ to 60℃ operating temperatures.

To fulfill diversify industrial requirements, NEXCOM offers complete line-up off-the-shelf, standardized industrial form-factor ranging COM Computer-on-Modules (ETX/ COM Express), Embedded board (3.5", 5.25") , Industrial motherboards (Mini-ITX, micro-ATX, ATX) as well as PICMG (1.0/1.3) full-size single board computers, from ultra-low power to high-performance quad-cores processors.

Industrial Applications

- x86 and SoC/ ARM
- Platform Add-on Services
- Embedded Software Service
- One Stop Service

Off-the-Shelf ◀ ▶ Tailor-made
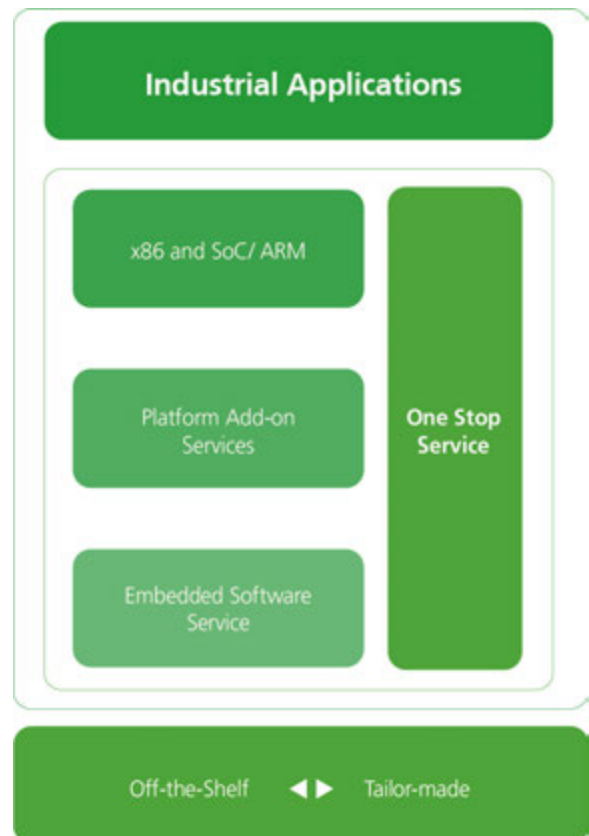
Embedded Hardware Platform Solution

| Ultra Low Power ARM SoC | Intel® Low Power Intel® Atom™ | AMD G-Series R-Series | Intel® High performance 2nd Gen. Core™ i7 3rd Gen. Core™ i7 | Intel® Haswell/ Shark bay 4th. Gen. Core™ i7 |

| ARM SoC COM Q7/ UCP | 3.5"/ 5.25" Embedded Boards | Mini-ITX Micro-ATX, ATX | Modules (COM) Type 2/ Type 6 | PICMG 1.0/ 1.3, SBC |

A Full Range of Embedded Boards Coming in Various Form Factors

Deep Embedded ← Embedded Board → Embedded System

Unique Platform Added-on Service

To ruggedize embedded platform for environmental critical application, NEXCOM heavily invest and cost-effective offer high-value, unique hardware add-on service to ensure the surviving and duration of customer solution in field.

Extended Temperature Design Service

Aim to survey in extremely tough environmental condition, NEXCOM develops solution for IEC-68-2-14 standard in 72hours & cold boot condition that is intent to ensure operates stably and reliably within temperature ranges of -40°C to 85°C. The solution is not only to pass the 100% production screening, but also design by the restrictedly design & validation process including key industrial grade components like CPU processors, memory down, transformers, LAN controller, crystal and power components. Again NEXCOM designs the quality, not screen for the quality!

Conformal Coating/ De-Flux Cleaning Process

Conformal Coating is heavily demanded for extra protection from hazardous substances such as dust, chemicals, moisture, corrosion, and intense temperatures for embedded applications. With the intensive investment in first-class most advanced auto conformal coating equipment, NEXCOM conformal coating and cleaning services conform to IPC-A610, IPC-CC-820 and IPC J-STD-001E regulations that is much more precisely & stable quality than common hand-spray cheap process in coating layer control.

COM Competence Center Services (CCC)

NEXCOM EmbedddedPro specially provide COM Competence Center (CCC) Services to help customers win the business with fastest time-to-market & fastest product line-up in lowest development risk & cost. NEXCOM CCC service is designed as consolidated service portal to assist COM (Computer-on-Modules) users to develop easily for their own solution that is plans as one-stop-service covering Spec-in, Design-in, Validation and extra value added four phases. NEXCOM also offer unique Engineer to Engineer (E2E) service mechanism for direct & efficient engineering consultancy & co-development. (NEXCOM web: http://www.nexcom.com/Support/ComputerOnModule)

Professional Embedded Software Service

Comprehensive BSP-ready Platform offer

NEXCOM Professional Embedded Software Service is to optimize & simplify hardware & software application implementation which is to solve the common headache between hardware vendor and Solution developers.

Being a long-term Partnership with Microsoft, as an official member of Microsoft Embedded Partner, NEXCOM develops and offers complete BSP-ready (Board Support Package) platform solution based series of Microsoft Embedded OS, like Windows Compact, XP Embedded, and Windows 7/ WES7, even the newest Windows 8/ RT. For advanced features of Real-time OS, NEXCOM offerS RTX, QNX and VxWorks BSP porting service as its focus market applications as follow:

- RTX is the real-time extension of Windows XP/ Windows 7, widely used in machine automation.

- QNX is an ultra-reliable OS for life-critical systems such as air traffic control systems, medical equipment, and embedded real-time system.

- VxWorks is another real-time OS used for devices ranging from aerospace and defense, telematics, and small-footprint consumer devices to industrial devices.
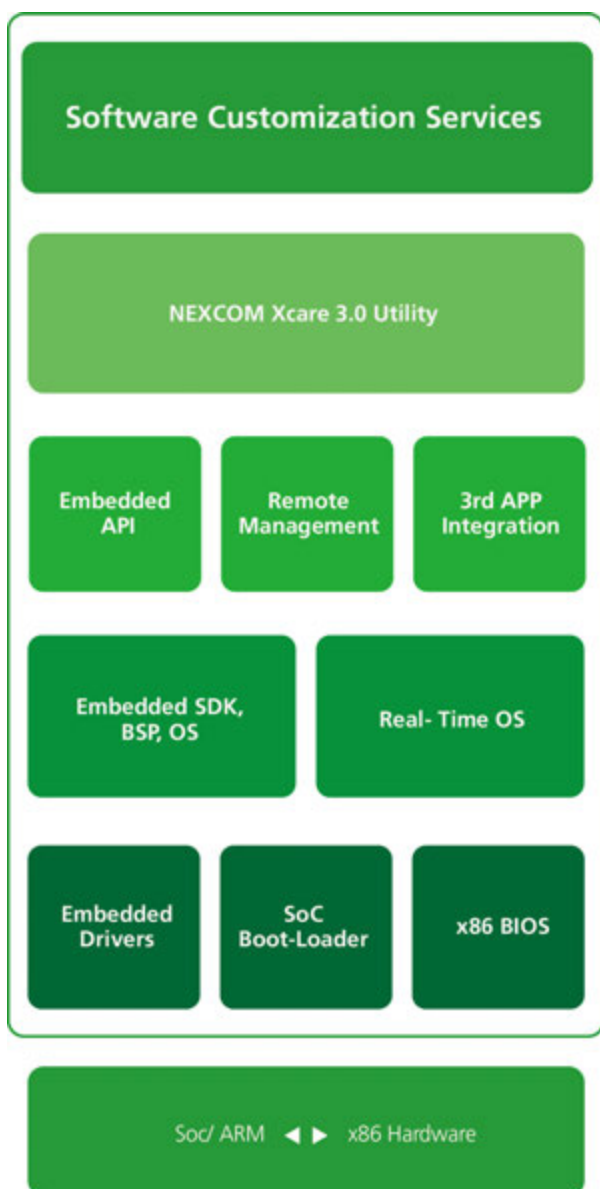
Professional Software Customization Support

NEXCOM commits to offer customer embedded software customization service in order to optimize or enable customers dedicated application features. The customization covers low level BIOS, boot-loader, device drivers to middle level Embedded API, to high level platform management utility Xcare, even 3rd party application software integration.

BIOS

NEXCOM modularized BIOS architecture allows customers to configure BIOS features for specific vertical market demands. Customers can easily install or remove specific BIOS features to create unique and stable BIOS.

Embedded API

On top of embedded OS, we offer embedded API for application programmer, which speeds development, enhances security and offers the unified interface for accessing Nexcom hardware. NEXCOM follows PICMG common API (eAPI) standard to unify the software control of the features:

- System information
- Watchdog timer
- I2C Bus
- Flat panel brightness control
- User storage area
- GPIO
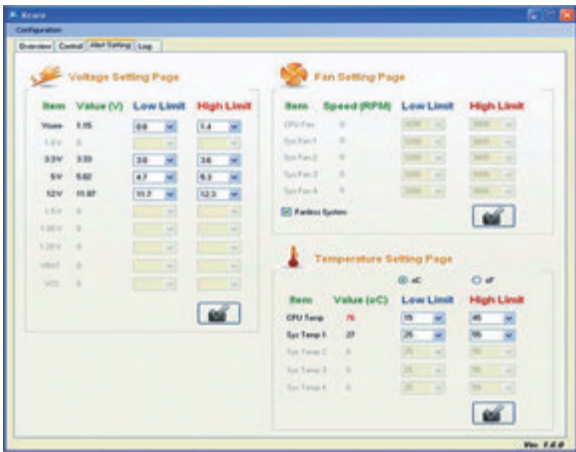
Remote Management XCare™ 3.0 Platform utility

NEXCOM XCare™ 3.0 platform management utility is designed for remote monitoring, control, and recovery, from device-client to remote console, embedded security even integrate 3rd party Apps which certified by NEXCOM.

One–click Data Recovery Solution for Embedded Devices

Partnership with the leading backup & Recovery solution provider, Acornis, NEXCOM offers Simple one-click solution for Embedded Devices which can apply to wide range OS platforms for wide range of applications.

The unique one-click Acronis features can support the following data backup & system recovery thru intuitive user interface (GUI)

- Full Backup
  Data backup & recover for OS, applications and Files.

- Startup Recovery Manager
  Recovery OS at boot time.
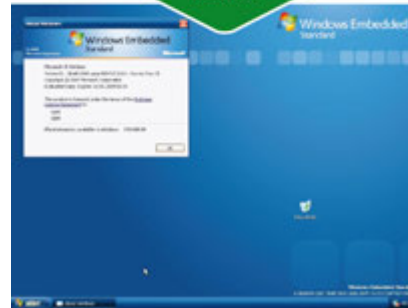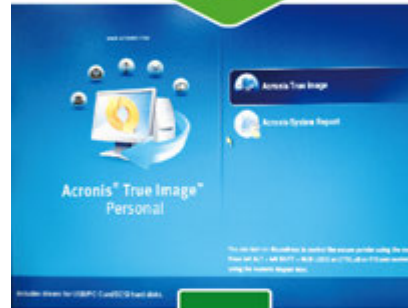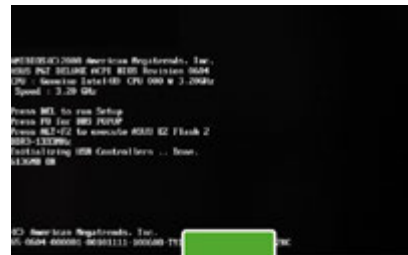
- One-Click Recovery
  Restore whole system in 1-click.

- Hot Backup
  Live backup your data without reboot the machine.

The Core Technology for the Digital World

NEXCOM provides versatile embedded form-factors with the best of breed product value and competitive cost. Ranged from modular Computer-on-Modules (EXT, COM Express) to off-the-helf embedded standard 3.5", PICMG 1.0/1.3 full-size SBC, Mini-ITX, micro-ATX and industrial ATX to embedded system boards.

NEXCOM offer complete one-stop solution services from x86 to SoC/ ARM-based Hardware Platforms to unique value added extended temperature design, conformal coating services. Besides Hardware Platform services, NEXCOM build-up professional software service, BSP-ready of embedded OS, Real-time OS and customization service of BIOS, boot-loader, drivers as our core-competence of professional embedded solution service for your join-successes with NEXCOM in the new era of digital infrastructure.

Computer-on-Modules
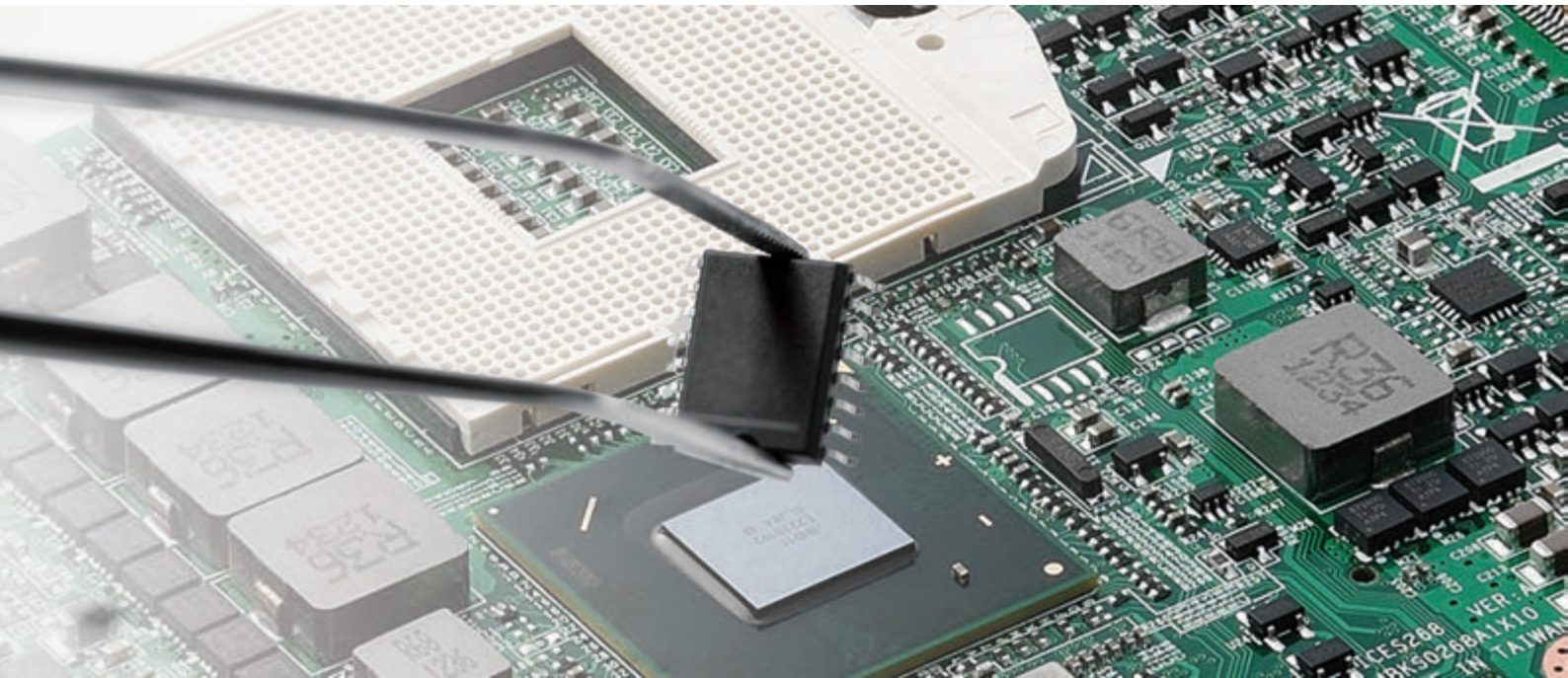
COM (Computer-on-Modules) Competence Center Services

The CCC Service provides clients full engineering design support, no matter if they have their own carrier board or design expertise. To gain a head start, the CCC Service has prepared the COM Starter Kit to help clients evaluate and verify full computing capability, peripheral and communication interfaces of the selected NEXCOM COM Express modules. Along with complete design reference documentation and expert advice from NEXCOM engineers, clients can simply customize a reference carrier board to application needs while ensuring the changes are both practical and feasible.

Going beyond to system level, the CCC Service further takes part in on-site co-debugging, thermal and environmental validation and the following mass production. In addition, COM Express board products are offered with value-added features and extended warranty so that systems can operate in even harsh operating environments.

By providing full tech support at every step of COM Express solution development cycle, the CCC service ensures end systems built on NEXCOM COM Express modules operate the way they are designed to. As a result, clients can easily speed COM Express solutions to market while reaping the benefit of future-proof COM Express architecture.

Business Model	NEXCOM's COM + Customer Designed Carrier Board	NEXCOM's COM + Existing Base Board	NEXCOM's COM + Customer's Designed Base Board

NEXCOM CCC Services	Spec-In Service	Design-In Assistance	Validation Service	Value Added Service

	• COMe Solution
	• Starter Kit
	• Document
	  - Design Guide
	  - CRB's Schematic
	  - ME Drawing
	  - QVL List
		• Schematic Review
		• Placement/ Layout Review
		• Design Training
		• Customized BIOS
		• eOS Customization
		• FAQ
			• On-site-co-Debug
			• Thermal Validation
			• Environmental Validation
			• EMC/ Safety
			• Compatibility Test
			• Design Database
				• CTOS
				• Wide Temperature
				• Conformal Coating
				• Extended Warrantee
				• Global Marketing

ICES 668-COM Express Type 6 Basic module with ECC

NEXCOM COM Express Type 6 Basic module ICES 668 features the 3rd generation Intel® Core™ processor family paired with mobile Intel® QM77 Express Chipset. It supports from dual-core Intel® Core™ i3-3217UE to quad-core Intel® Core™ i7-3615QE processor and up to 16GB DDR3 1333/1600MHz SDRAM with error correction code (ECC) function.

With the integrated Intel® HD Graphics 4000 and DirectX 11 support, the COM Express ICES 668 can simultaneously drive three independent displays. This computer on module also integrates USB 3.0, SATA 3.0 and PCIe 3.0 interfaces, all living up to the latest industrial standards to allow for high speed communication with peripherals. Thanks to the Intel® 22nm technology, ICES 668 is powerful yet energy-efficient.

ICES 667-COM Express Type 6 Basic Module, rPGA 988

NEXCOM COM Express Type 6 Basic module ICES 667 features the 3rd generation Intel® Core™ processor family paired with mobile Intel® QM77 Express Chipset. It supports socket-type processors ranging from dual-core Celeron® Processor B810 to quad-core i7-3610QE processor and up to 16GB DDR3 1333/1600MHz SDRAM.

CCC Service with Starter Kits

The success of COM Express design-in project depends on intensive technical support. By offering a series of Starter Kit and professional assistance at every step of the product development lifecycle, NEXCOM Computer-on-Module Competence Center Service (CCC Service) can make every design-in a design-win.

	ICES 668	ICES 667	ICES 268
COM Express Type	Type 6, Basic 95 x 125mm	Type 6, Basic 95 x 125mm	Type 2, Basic 95 x 125mm
Processors	BGA type onboard i7-3615QE/ i7-612QE i7-3555LE/ i7-3517UE i5-3610ME/ i3-217UE	PGA type socket i7-3610QE i5-3610ME Celeron® B810	PGA type socket i7-3610QE i5-3610ME Celeron® B810
PCH Chipset	QM77	QM77 (option HM76)	QM77 (option HM76)
Memory, 2x SO-DIMMs	ECC-DDR3 up to 16GB	DDR3 up to 16GB	DDR3 up to 16GB
LVDS	Dual Channels	Dual Channels	Dual Channels
VGA	1	1	1
Digital Display Interfaces	3x DDI (1x DP/ HDMI/ DVI/ SDVO, 2x DP/ HDMI/ DVI)	3x DDI (1x DP/ HDMI/ DVI/ SDVO, 2x DP/ HDMI/ DVI)	No
Networking	GbE (PCIe)	GbE (PCIe)	GbE (PCIe)
PCI/ IDE	No	No	PCI (v2.3)/ Yes
PCI Express	7x PCIex1, 1x Plex16	7x PCIex1, 1x Plex16	6x PCIe x1, 1x PCIe x16
USB 2.0/ 3.0	8/ 4	8/ 4	8/ 0
SATA 2.0/ 3.0	4/ 2	4/ 2	4/ 0
Operating Temperature	-15℃ to + 60℃	-15℃ to + 60℃	-15℃ to + 60℃
CRB, Carrier	ICEB 8060 (Type 6)	ICEB 8060 (Type 6)	ICEB 8050C (Type 2)
ICES Starter-Kit Type 2/ Type 6	ICEK 668-T6	ICEK 667-T6	ICEK268-T2

Customers Benefit from the CCC Service

Choosing NEXCOM CCC service, we provide Computer-on-Modules Evaluation Starter-kit as proof-of-design ready for customer got fast customization solution in short time and saved cost and resources from validation, development to production. Moreover, the customer could carry out upgrade simply by swapping COM Express modules. NEXCOM also helped the customer with customized BIOS and Embedded Linux in same project scope. With the leading platform solution, the customer is allowed to enjoy more market advantages.

2013 New Products

nTUF 600

Intel® Atom™ Dual Core D525, 1.8GHz Marine Computer for ECDIS Application in Bridge Control

- Onboard Intel® Atom™ Dual Core D525 Processor, 1.8GHz
- 4x USB ports
- Dual M12 connector for Intel® 82574L GbE LAN ports
- 1x VGA display output
- 2x RS232; 2x PS/2 for keyboard and mouse
- 1x external CFast socket
- 1x Mini-PCIe with two Antenna Holes
- Support +24VDC power input with 1.5KV isolation protection
- Dual cold swappable 2.5" SSD tray
- Supports ATX Power Mode, WoL, LAN Teaming and PXE function

nTUF 610

Intel® 2nd Generation Core™ i7-2610UE, 1.5GHz Marine Computer for ECDIS Application in Bridge Control

- Onboard Intel® 2nd Generation Core™ i7-2610UE Processor, 1.5GHz
- Dual M12 connector for Intel® 82574L GbE LAN ports
- 1x VGA and 1x DVI-D display output
- 2x RS232, 4x USB ports, 2x PS/2 for keyboard and mouse
- 1x external CFast socket
- Support +24VDC input with 1.5KV isolation protection
- Dual Cold Swappable 2.5" SSD Tray
- Supports ATX Power Mode, WoL, LAN Teaming and PXE function

NISE 60

ARM® Cortex™ A8 3352M 720MHz CPU DIN Rail Fanless System with 512MB RAM Onboard

- ARM® Cortex™ A8 TI 3352M 720MHz CPU
- Onboard 512MB DDR3 RAM
- 1x GbE LAN ports, 2x RS232/422/485, 2x USB
- 1x VGA, 1x SD socket (support up to 2GB)
- 5x Digital Input, 5x Digital

NISE 2200

Intel® Atom™ Dual Core D2550, 1.86 GHz
Fanless System with 6x COM ports,
6x USB 2.0, 2x LANs

- Onboard Intel® Atom™ Dual Core D2550 Processor, 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x HDMI display output
- Dual Intel® 82574IT GbE LAN ports, Support WoL, Teaming & PXE
- 6x COM (2x RS232/422/485 w/ isolation protection)
- 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC Input; Support ATX power mode

NISE 2210/ NISE 2210E

Intel® Atom™ Dual Core D2550, 1.86 GHz
Fanless System with 6x COM ports, 6x USB 2.0
and 1x PCI/PCIe expansion

- Onboard Intel® Atom™ Dual Core D2550 Processor, 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x HDMI display output
- Dual Intel® 82574IT GbE LAN ports; Support WoL, Teaming & PXE
- 6x COM (2x RS232/422/485 w/ isolation protection)
- 4x GPI & 4x GPO, 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC input; Support ATX power mode
- 1x PCI or PCIe expansion

NISE 2300

Intel® Atom™ Dual Core D2550, 1.86 GHz
Fanless System with 4x LAN ports, 6x USB 2.0
and 4x COM ports

- Onboard Intel® Atom™ Dual Core D2550 Processor, 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x DVI-D display output
- 4x Intel® 82574IT GbE LAN ports; Support WoL, Teaming and PXE
- 4x RS232/422/485; 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC input; Support ATX power mode

NISE 2310/NISE 2310E

Intel® Atom™ Dual Core D2550 1.86 GHz
Fanless System w/ 4x LAN ports, 4x COM ports
and one PCI/PCIe expansion

- Onboard Intel® Atom™ Dual Core D2550 Processor, 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x DVI-D display output
- 4x Intel® 82574IT GbE LAN ports, Support WoL, Teaming and PXE
- 4x RS232/422/485 ; 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC input; Support ATX power mode
- 1x PCI or PCIe expansion

NISE 3600E

3rd Generation Intel® Core™ i5/i3
Fanless System with one PCIe x4 Expansion

- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type Processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 1x VGA, 1x DVI-D and 2x Display port with Independent Display support
- Dual Intel® GbE LAN ports, Support WoL, Teaming & PXE
- 4x USB 3.0, 2x USB 2.0, 5x RS232 and 1x RS232/422/485
- 1x internal Mini-PCIe socket support optional Wi-Fi or 3.5G module
- 1x external CFast socket & 1x SIM card socketSupport
- Support +9V to 30VDC input; Support ATX power mode
- One PCIe x4 expansion

NISE 3600E2/P2/P2E

3rd Generation Intel® Core™ i3/i5 rPGA
Fanless System with Expansion

- Support 3rd generation Intel® Core™ i5/ i3 rPGA socket type Processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 1x VGA, 1x DVI-D and 2x Display port with Independent Display support
- Dual Intel® GbE LAN ports, Support WoL, Teaming & PXE
- 4x USB 3.0, 2x USB 2.0, 5x RS232 and 1x RS232/422/485
- 1x internal Mini-PCIe socket support optional Wi-Fi or 3.5G module
- 1x external CFast socket & 1x SIM card socket
- Support +9V to 30VDC input; Support ATX power mode
- Two PCI or PCIe x4 expansion

NISE 3640E

3rd Generation Intel® Core™ i7 Fanless System with 4x LANs, 6x COMs and 3x Independent Display

- Onboard 3rd generation Intel® Core™ i7-3517UE Processor, (6M Cache, 1.7GHz)
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 2x Display Port; 1x VGA; 1x DVI-D; 2x USB3.0; 2x USB2.0
- 4x Intel® 82574IT GbE LAN ports; Support WoL, Teaming and PXE
- 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- 1x internal Mini-PCIe socket supports optional Wi-Fi or 3.5G module
- 1x CFast socket; 1x SIM card socket
- Support +24VDC input; Support ATX Power mode
- 1x PCIe x4 expansion

NISE 3640E2/P2/P2E

3rd Generation Intel® Core™ i7 Fanless System with 4x LANs, 6x COMs and 3x Independent Display

- Onboard 3rd generation Intel® Core™ i7-3517UE Processor, (6M Cache, 1.7GHz)
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 2x Display Port; 1x VGA; 1x DVI-D; 2x USB3.0; 2x USB2.0
- 4x Intel® 82574IT GbE LAN ports; Support WoL, Teaming and PXE
- 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- 1x internal Mini-PCIe socket supports optional Wi-Fi or 3.5G module
- 1x CFast socket; 1x SIM card socket
- Support +24VDC input; Support ATX Power mode
- Two PCI or Two PCIe x4 expansion

NISE 3640VR

3rd Generation Intel® Core™ i7 Fanless System with 2x 3.5" SATA HDD, 4x LAN, and 3x Independent Display

- Onboard 3rd generation Intel® Core™ i7-3517UE Processor, (6M Cache, 1.7GHz)
- Mobile Intel® QM77 PCH
- Support 2x 3.5" SATA HDD
- 2x Display Port; 1x VGA; 1x DVI-D
- 4x Intel® 82574IT GbE LAN ports; Support WoL, Teaming and PXE
- 2x USB3.0; 2x USB2.0
- 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- 1x internal Mini-PCIe socket supports optional Wi-Fi or 3.5G module
- 1x CFast socket; 1x SIM card socket
- Support +24VDC input; Support ATX Power mode
- Support 2x 3.5" HDD with ventilation holes

NISE 3660

3rd Generation Intel® Core™ i7
Fanless System with 6x LANs, 2x COMs and
3x Independent Display

- Support 3rd Generation Intel® Core™ i7 17W BGA type Processor
- Mobile Intel® QM77 PCH
- Support 2x Swappable 2.5" HDD
- 2x Display Port; 1x VGA; 1x DVI-D
- 5x Intel® 82574L GbE/ 1x Intel® 82579LM GbE LAN port; 2x USB3.0; 2x USB2.0
- 2x DB9 for RS232/422/485
- 1x CFast socket; 1x SIM card socket
- Support ATX Power mode, WoL, LAN Teaming and PXE function
- Support +9 to 30VDC Input
- Support MVsRAM up to 4Mbit

NISE 4000

3rd Generation Intel® Core™ i3/i5/i7 rPGA
Fanless System without Expansion

- Support 3rd generation Intel® Core™ i3/i5/i7 rPGA socket type Processor
- Intel® QM77 PCH
- 2x USB3.0 & 2x USB2.0 ; 4x Intel® GbE LAN Ports
- 1x DVI-I & 1x DVI-D
- 2x RS232/422/485
- 1x CFast socket
- Two Mini-PCIe sockets
- Support +9 to 36VDC power input
- Support ATX power mode, WoL and PXE function

NISE 4000P2/PE

3rd Generation Intel® Core™ i3/i5/i7 rPGA
Fanless System with 2 Expansion

- Support 3rd generation Intel® Core™ i3/i5/i7 rPGA socket type Processor
- Intel® QM77 PCH
- 2x USB3.0 & 2x USB2.0
- 4x Intel® GbE LAN Ports
- 1x DVI-I & 1x DVI-D
- 2x RS232/422/485
- 1x CFast socket
- 2x PCI expansion for NISE 4000P2/ 1x PCI & PCIe expansion for NISE 4000PE
- Two Mini-PCIe sockets
- Support +9 to 36VDC power input
- Support ATX power mode, WoL and PXE function

Coming Soon

MAC 4000

3rd Generation Intel® Core™ i3/i5/i7 rPGA
Fanless System with 4x PCI/PCIe slots

- 4x PCI/PCIe slots
- Three independent displays
- Built-in optical isolated DI/O
- Built-in 1Mb NVRAM
- 2x Mini-PCIe sockets
- 2x USB3.0 & 2x USB2.0
- 4x Intel® GbE LAN ports
- 2x 2.5" HDD bay supporting RAID 0/1

NET 3600RTA

3rd Generation Intel® Core™ i5-3610ME
Fanless Distributed Machine Automation
Controller with Built-in EtherCAT Master

- Support hard-realtime down to 1ms
- Built-in EtherCAT master protocol
- 3rd generation Intel® Core™ i5-3610ME and Intel® QM77 PCH
- Supporting three individual displays
- 2x Intel® GbE LAN Ports
- 1x CFast socket
- 5x RS232 & 1x RS232/422/485 with Auto Flow Control
- One PCIe x1 slot

PAC 1000

Motion Embedded PAC with
Integrated IEC 61131-3 Soft-PLC and HMI

- One platform with Soft-PLC, motion control and HMI integrated
- Single development environment for all functionalities
- Support IEC 61131-3 standard, providing LD, SFC, ST, IL, FBD, and CFC syntax
- Dedicated motion control DI/O for every single axis
- Support E-CAM, E-Gear, PT and PVT control
- 16 channels digital inputs and 16 channels digital outputs
- Support distributed I/O modules

NPB 3550

High Value Fanless Point-of-Sales Box System

- Fanless POS box system
- Slim and compact enclosure design
- Intel® Atom™ processor D2550, 1.86GHz
- Support DDR3 1066 SO-DIMM memory
- 2.5" removable SATA HDD
- Powered COM x4/ USB x6/ 1x printer port/ 1x VGA/ 1x DVI/ 1x GbE LAN/ 1x cash drawer/ 1x PS/2
- Optional wall-mount kit for compact space accommodation

NPD 1050

15" POS Touch Monitor

- Front Bezel IP65 Stand Compliant
- Slim and compact enclosure design
- stand accommodate Power Brick
- Zero Bezel Touch (P Cap/Resistive Option)
- Modular MSR/FingerPrint(Option)
- Optional wall-mount kit for compact space accommodation

KPPC 1552

High Value Fanless Kiosk Panel PC 15" TFT LCD Projected Capacitive True Flat Touch

- 15" 4:3 XGA (1024 x 768) TFT LCD panel
- 15" projected capacitive true flat touch screen
- Fanless Kiosk Panel PC
- Intel® Atom™ D525 Dual Core processor, 1.8GHz
- Support DDR3 SO-DIMM memory
- 2.5" removable SATA HDD
- Powered COM x4/ USB x4/ 1x printer port/ 1x VGA/ 1x GbE LAN/ 1x cash drawer
- Front Bezel complies with IP65 protection standard
- VESA 100mm x 100mm mounting for wall-mount application
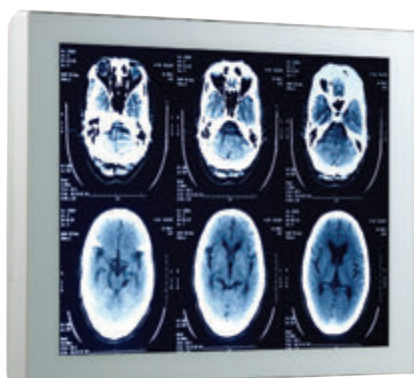
KPPC 5852

High Performance Kiosk Panel PC 15" TFT LCD Projected Capacitive True Flat Touch

- 15" 4:3 XGA (1024x 768) TFT LCD panel
- 15" projected capacitive true flat touch screen
- 2nd/3rd Generation Intel® Core™ i3/i5/i7 Processor
- Support DDR3 1333 SO-DIMM memory
- 2.5" removable SATA HDD
- Powered COM x4/ USB x4/ 1x printer port/ 1x VGA/ 1x GbE LAN/ 1x Cash drawer
- Front Bezel complies with IP-65 protection standard
- VESA 100mm x 100mm mounting for wall-mount application

IWF 3320X

Industrial Wi-Fi Access Point Dual RF,
Dual band, 802.11 a/b/g/n

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbps
- Redundant power input supporting 802.3af PoE and +9 to 36VDC Input
- Industrial grade conformal coating for harsh environment
- Rugged Die-casting housing with -30℃ to +80°C wide-temperature
- The layer-2 Wireless Firewall gives protection from wireless attacks
- Press-n-Connect to enable auto WDS/mesh network
- Comprehensive WLAN security encryption with WEP, WPA/WPA2, IEEE 802.1X or PSK
- Multiple-SSID Virtual APs for grouping policy management
- Tunnel-based AP management by backend AP controller

IWF 5320

Industrial IP68 Outdoor Access Point Dual RF,
Dual Band, 802.11 a/b/g/n

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbp
- Dual Gigabit Ethernet with standard IEEE 802.3af PoE
- Weatherproof IP68 rated metal-inside housing with -20℃ to +70°C operating wide-temperature
- Multiple Virtual APs for grouping policy management
- Industrial grade conformal coating for harsh environment
- The layer-2 Wireless Firewall gives protection from wireless attacks
- Comprehensive WLAN security encryption with WEP, WPA/WPA2, IEEE 802.1X or PSK
- Tunnel-based AP management by backend AP controller

IWF 8405

Industrial Secure WLAN Controller Centralized
medium-scale AP management

- Centralized AP management and multi-level connections up to 150 manageable access points
- Virtual service zone management by user group, security profile and etc.
- Authentication, Authorization, Accounting (AAA) support
- Dual-WAN Load Balance and Failover
- Data tunnel security by Intranet local IPSec VPN, Internet Remote Client PPTP VPN, Site-to-Site VPN
- QoS and WMM Traffic Types support for Voice, Video, Best Effort and Background

IWF 3320C

Industrial Wi-Fi Access Point Dual RF, Dual band,
802.11 a/b/g/n

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbps
- Redundant power input supporting 802.3af PoE and +9 to 36VDC Input
- I ndustrial grade conformal coating for harsh environment
- Rugged Die-casting housing with -30℃ to +80℃ wide-temperature
- The layer-2 Wireless Firewall gives protection from wireless attacks
- Press-n-Connect to enable auto WDS/mesh network
- Comprehensive WLAN security encryption with WEP, WPA/WPA2, IEEE 802.1X or PSK
- Multiple-SSID Virtual APs for grouping policy management
- Tunnel-based AP management by backend AP controller

IPPC 1960T

19" TFT SXGA 4:3 Heavy Industrial Panel PC with 2nd Generation Intel® Core™ i5, 2.5GHz

- 4:3 19" SXGA Fanless Panel Computer
- Powerful 2nd/3rd generation Intel® Core™ processor
- Two expansion slots for add-on PCI or/ and PCIe cards
- Optional 3.5G/ Wi-Fi module/ 2.5"HDD/ 3x Coms/ GPIO/ DIO/ Dimming Control Button
- Front accessible USB2.0 for easy of field maintenance
- Metal housing with robust aluminum Front Bezel for harsh environment
- IP66 compliant front panel
- Optional: AC power input model/ DC power input model

APPC 1235T

12.1" TFT XGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen

- 4:3 12.1" XGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/ MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ 2x COMs/ GPIO /DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input +12V to 30VDC

APPC 1930T

19" TFT SXGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen

- 4:3 19" SXGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/ MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD /2 x COMs /GPIO /DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input +12V to 30VDC

APPD 1700T

17" IP65 Industrial 4:3 SXGA LCD Flush Touch Monitor

- IP65 compliant plastic Front Bezel with flush panel by 5-wire touch screen
- Dual display input interface: analog VGA and DVI-D
- Shares identical appearance with APPC series
- Dual touch screen interface: RS232 and USB
- Ultra slim in depth
- OSD Multilanguage function

MPPC 2130T

21.5" TFT Full HD 16:9 Fanless Panel PC with Intel® Atom™ D2550, 1.86 GHz, Touch Screen

- 16:9 21.5" Fanless Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4x USB/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485
- DDR3 1GB/ 2.5" HDD Bracket/ two Speakers
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ Panel Mount Kit
- Panel Mount/ VESA Mount Compliance
- Wide Range Power Input +12V to 30VDC

OPPC 1930T

19" TFT SXGA 4:3 Fanless Open Frame PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen,

- 4:3 19" SXGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd Display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4x USB/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485
- DDR3 1GB/ 2.5" HDD Bracket
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ Panel Mount Kit
- Open Frame and Panel Mount/ VESA Mount Compliance
- Wide Range Power Input +12V to 30VDC

PEAK 886VL2

PICMG 1.3 Full-size SBC with Intel® Q77 Support
Intel® 3rd Generation Core™ i7/i5/i3 Processor

- Scalable platform Intel® 3rd Generation Core™ i7/i5/i3 processor, Ivy Bridge + Non-ECC
- Intel® Q77 PCH chipset support PICMG 1.3 specification
- Support Dual channel DDR3 with NON-ECC DIMMs 1333/1600MHz up to 16GB
- Support PCIe x16, 4x PCIe x1, 4x USB3.0/ 4x USB2.0, 4x SATA3.0/ 2x SATA2.0 and GbE
- Display support for VGA, DVI, HDMI, DosplayPort
- Dimension 338.58mm (W) x 126,39mm (L) (8 Layers Single side)

ICES 268

COM Express Type 2, Basic Module with QM77
Intel® 3rd Generation Core™ i7/i5/i3 rPGA988

- Intel® 3rd Generation Intel® Embedded Core™ rPGA988 embedded processors family
- Intel® QM77 PCH (HM76) chipset support PICMG COM.0 Rev. 2.0 Type 2, pin-outs
- Support two DDR3 SO-DIMMs 1333/1600 non-ECC up to 16GB
- Support PCIe x16 (Gen3.0), 5x PCIe x1, 12x USB2.0, 2x SATA 3.0/ 2x SATA2.0 and 1x GbE
- Support VGA, dual channels 18/24-bit LVDS and optional 1xDDI/ SDVO by PEG
- Dimension: 95mm (W) x 125mm (L)
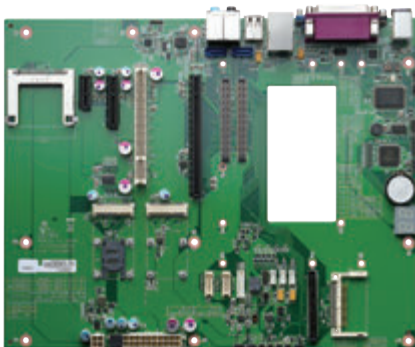
ICES 8050C

COM Express Type 2 Carrier EvaluatiOnboard

- COM Express COM.0, Rev2.0 Evaluation carrier, ATX form-factor
- Support Type 2 pin-outs, COMe Extended/ Basic/ Compact Module
- Display: VGA & dual channels 18/24-bit LVDS
- Bootable CFAST or Mini-SATA, CF and shared IDE
- PCIe x16, PCIe x4, PCIe x1, PCI x1 and Mini-PCIe for Wi-Fi
- PS2/KB/Mouse, LPT/ RS232/422/485, VGA/ GbE/ 4USB/ 5.1, S/ PDIF

ICES 8050C-T2

COM Express Type 2 Starter Kit

- COM Express Type 2, COM.0, Rev2.0 Evaluation Starter Kit
- COM Express Compact or Basic Modules with passive or active fan-sink
- Bootable Mini-SATA/ CFast-SSD with 10.4" LCD/ 18-bit LVDS Display
- PCIe x16, PCIe x4, PCIe x1, PCI x1 (v2.3) and Mini-PCIe for Wi-Fi
- PS2/KB/Mouse, LPT/ RS232/422/485, VGA/ GbE/ 4x USB/ 5.1 Audio S/ PDIF
- Integrated Flex-ATX PSU for AC 110/ 220V Input

ICES 667

COM Express Type 6 Basic Module with QM77 Intel® 3rd Generation Core™ i7/i5/i3 rPGA988

- 3rd Generation Intel® Embedded Core™ rPGA988 embedded processors family
- Intel® QM77 PCH (HM76) chipset support PICMG COM.0 Rev. 2.0 Type 6 pin-outs
- Support two DDR3 SO-DIMMs 1333/1600 non-ECC up to 16GB
- Support PCIe x16 (Gen. 3.0) 7x PCIe x1, 4x USB3.0/ 8x USB2.0, 2x SATA3.0/ 2x SATA2.0 and GbE
- Up to 3x DDI (DP/ HDMI/ DVI) multiple displays, VGA, dual channels 18/ 24-bit LVDS
- Dimension: 95mm (W) x 125mm (L)

ICES 668

COM Express Type 6 Basic Module with QM77 Intel® 3rd Generation Core™ i7/i5/i3 BGA1023, ECC

- Embedded Intel® 3rd Generation Core™ i7/i5/i3 processor, Ivy Bridge Mbl + ECC
- Intel® QM77 PCH chipset support PICMG COM.0 Rev. 2.0 Type 6 pin-outs
- Support Dual channel DDR3 with ECC SO-DIMMs 1333/1600MHz up to 16GB
- Support PCIe x16, 7x PCIe x1, 4x USB3.0/ 8x USB 2.0, 2x SATA 3.0/ 2x SATA 2.0 and GbE
- Up to 3x Independent Displays, VGA, Dual Channels 18/24-bit LVDS, DVI, HDMI, DisplayPort
- Dimension 95mm (W) x 125mm (L)
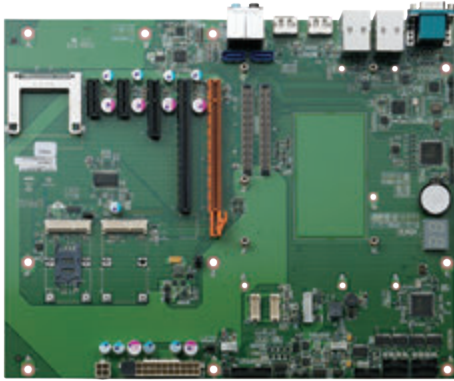
ICEB 8060

COM Express Type 2 Carrier EvaluatiOnboard

- COM Express COM.0, Rev 2.0 Evaluation CRB, ATX form-factor
- Support Type 6 pin-out, COMe Extended/ Basic/ Compact Module
- Display: 3 x DDI (2DP/HDMI), VGA & dual channels 18/24-bit LVDS
- 4x USB 3.0/ 2x SATA3.0, PCIe Gen 3.0, Bootable CFAST or Mini-SATA
- PCIe x16, DDI (PCIe x16), PCIe x4, PCIe x1 and Mini-PCIe for Wi-Fi
- VGA/ RS232/422/485/ 5COM, Dual GbE/ 12USB/ 5.1, S/PDIF

ICEB 8060-T6

COM Express Type 6 Starter Kit

- COM Express Type 6, COM.0, Rev 2.0 Evaluation Starter Kit
- COM Express Compact or Basic Modules with passive or active fan-sink
- Bootable Mini-SATA/ CFast-SSD with 10.4" LCD/ 18-bit LVDS Display
- PCIe x16, PCIe x4, 2x PCIe x1, 1x PEG/ DDI/ SDVO and Mini-PCIe for Wi-Fi
- 3x DDI/ 4x USB3.0/ 2x SATA3.0/ 6x COM/ VGA/ LVDS/ 2x GbE/ 5.1 Audio S/ PDIF
- Integrated Flex-ATX PSU for AC 110/ 220V Input

EBC 354DL

3.5" Embedded D525/ NM10 with dual 24-/48-bit LVDS

- Onboard Intel® Atom™ D2550 processor, 1.86GHz
- Intel® NM10 Express chipset
- One 204-pin SO-DIMM socket supports up to 4GB DDR3 800/1066 MHz SDRAM
- Display: VGA & LVDS1 (1x DF13 20-pin 18/24-bit Single channel) & LVDS2 (2x DF13 20-pin 24/48-bit Single channel)
- 2x Mini-PCIe/ 2x SATA
- 2x Intel® 82574L PCI Express Gigabit Ethernet
- 6x USB, 4-in/4-out GPIO, MIC-in , Speak out
- Serial port: 3x RS232, 1x RS232/422/485 port
- Support AT/ATX mode and Single +12VDC input

NEX 609

Mini-ITX, Embedded QM77, Intel® 3rd Generation
Core™ i7/i5/i3 rPGA988, PCIe x16/ PCIe x1

- 3nd Generation Intel® Core™ Processor family
- Intel® HM76 chipset (QM77 option)
- Two 204-pin SO-DIMM socket supports up to 16GB DDR3 1333/1600 MHz SDRAM
- Display: DVI-I/ HDMI/ Dual 48bit LVDS (Option LVDS2)
- 1x Mini-PCIe support mSATA or 3G/ SIM, and optionl TPM
- 4x SATA with RAID 0,1,5,10/ 2x Intel® Gbe Ethernet
- 10x USB, 4-in/ 4-out GPIO, MIC-in, Line-out
- Serial port: 5x RS232, 1x RS232/422/485 port
- Support AT/ ATX mode and Dual +12VDC/ +24VDC input
- 1x PCIe x16 slot 2x PCIe x1 on edge golden finger

NEX 883

Micro-ATX, Embedded Q77, Intel® 3rd/ 2nd
Generation Core™ i7/i5/i3 LGA1155,
PCIe x16/ PCIe x4/ 2x PCI

- Support Socket 1155 for 3rd/2nd Generation Intel® Core™ i7/i5/i3, Celeron® Processors
- 4x DDR3 DIMM Socket up to 32 GB
- Support HDMI/ DVI-I (VGA)/ DisplayPort (LVDS) multiple displays
- 2x Intel® GbE, 4x SATA 3.0/2.0, mSATA, 12x USB 3.0/ 2.0, 6x COM, 8x GPIO
- 1x PCIe x16, 1x PCIe x4, 1x mPCIe, 2x PCI (v2.3)
- Support AT/ATX mode by ATX Power Input

NEX 980

ATX, Embedded Q77, Intel® 3rd/ 2nd
Generation Core™ i7/i5/i3 LGA1155,
PCIe x16/ PCIe x4/ PCIe x1/ 4PCI

- Support Socket LGA 1155 for 3rd/2nd Generation Intel® Core™ i7/i5/i3, Celeron® Processors
- 4x DDR3 DIMM Socket up to 32 GB
- Support DisplayPort/ HDMI/ VGA multiple displays
- 2x Intel® GbE, 4x SATA3.0/2.0, mSATA, CFast, 12x USB3.0/ 2.0, 6x COM, 8 x GPIO
- 1x PCIe x16, 1x PCIe x4, 1x PCIe x1, 1x mPCIe, 4x PCI (v2.3)
- Support AT/ ATX mode by ATX Power Input
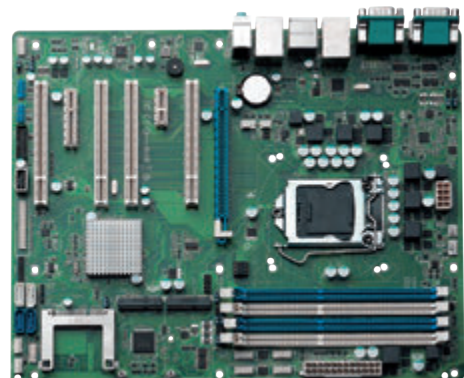
Fanless Computer

Model	NISE 60	NISE 90	NISE 91	NISE 103
CPU	TI AM3352	Intel® Atom™ E620 0.6GHz	Intel® Atom™ E640 1.0GHz	Intel® Atom ™ D425 1.8GHz
Chipset	-	Intel® EG20T	Intel® EG20T	Intel® ICH8M
Max. Memory	512MB DDR3 Onboard	512MB DDR2 Onboard	1G DDR2 Onboard	2GB DDR3
HDD Space	SD Card (up to 2GB)	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
CF Socket	-	-	-	1
SD Card	up to 2GB	-	-	-
CD-ROM/DVD-ROM	-	-	-	-
VGA	1	1	1	1
LVDS	-	-	Single, 18/24bit (Internal)	Single, 18bit (Internal)
DVI	-	-	-	-
TV-out	-	-	-	-
HDMI	-	-	-	-
Display Port	-	-	-	-
eSATA	-	-	-	-
IEEE1394	-	-	-	-
USB	2	3	3	4
PS/2	-	-	-	-
Parallel Port	-	-	-	-
Serial Port	2	3	3	4
RS422/485	-	1	1	1
RS422/485 Isolation	2	-	-	-
CANbus	-	1	1	-
Digital I/O	5-in/5-out	-	-	4-in/4-out (External)
Mini-PCIe	-	-	1	1
SIM Card Holder	-	-	1 (Internal)	1 (Internal)
GPIO	-	8-in/8-out	8-in/8-out	-
LAN Ports	1x GbE	2x GbE	2x GbE	2x GbE
Audio	-	-	-	MIC-in & Line-out
Power Input Range	+12VDC/ +24VDC	+12VDC/ +24VDC	+12VDC/ +24VDC	ATX, 12VDC
Power Supply Adapter	Optional	Optional	Optional	Optional
Expansion	-	-	-	-
Operating temp. (w/HDD) Based on IEC 60068 STD	-20 to 70 °C	-5 to 55°C	-5 to 55°C	-5 to 55°C
System Dimension (W x D x H)	51.8 x 140 x 167 mm	59 x 140 x 167 mm	59 x 140 x 167 mm	185x 131 x 54 mm
Carton Dimension (W x D x H)	288 x 252 x 181 mm	288 x 252 x 181 mm	288 x 252 x 181 mm	259 x 233 x 129 mm

NISE 104	NISE 2000	NISE 2010	NISE 2020
Intel® Atom™ D2550 1.86GHz	Intel® Atom™ N270 1.6GHz	Intel® Atom™ N270 1.6GHz	Intel® Atom™ N270 1.6GHz
Intel® NM10	Intel® 945GSE/ICH7M	Intel® 945GSE/ICH7M	Intel® 945GSE/ICH7M
4G DDR3	2GB DDR2	2GB DDR2	2GB DDR2
1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
1 (External, CFast)	1 (External)	1 (External)	1 (External)
-	-	-	-
-	-	-	-
-	1	1	1
-	Single, 18bit (Internal)	Single, 18bit (Internal)	Single, 18bit (Internal)
1 (DVI-I)	-	-	-
-	-	-	-
1	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
6	4	4	4
-	1	1	1
-	1 (Internal)	1	1
4	4	4	4
2	2	2	2
-	-	-	-
-	-	-	-
-	-	-	-
1	1	1	1
1 (Internal)	-	-	-
-	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
2x GbE	2x GbE	2x GbE	2x GbE
MIC-in & Line-out	Line-out	Line-out	Line-out
ATX, +9 to 36VDC	ATX, +16V to 30VDC	ATX, +16V to 30VDC	ATX, +16V to 30VDC
Optional	Optional	Optional	Optional
-	-	1x PCI (176mm max)	2x PCI (176mm max.)
-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
185 x 131 x 54 mm	195 x 200 x 65 mm	195 x 200 x 81 mm	195 x 200 x 107 mm
259 x 233 x 129 mm	324 x 303 x 193 mm	324 x 303 x 193 mm	350 x 321 x 217 mm

Fanless Computer

Model	NISE 2100	NISE 2100A	NISE 2110	NISE 2110A	NISE 2200
CPU	Intel® Atom™ D525 1.8GHz	Intel® Atom™ D525 1.8GHz	Intel® Atom™ D525 1.8GHz	Intel® Atom™ D525 1.8GHz	Intel® Atom™ D2550 1.86GHz
Chipset	Intel® ICH8M PCH	Intel® ICH8M PCH	Intel® ICH8M PCH	Intel® ICH8M PCH	Intel® ICH10 RAID
Max. Memory	2GB DDR3	2GB DDR3	2GB DDR3	2GB DDR3	4G DDR3
HDD Space	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
CF Socket	1 (External)	1 (External)	1 (External)	1 (External)	1 (External, CFast)
SD Card	-	-	-	-	-
CD-ROM/DVD-ROM	-	-	-	-	-
VGA	1	1	1	1	-
LVDS	Single, 18bit (Internal)	Single, 18bit (Internal)	Single, 18bit (Internal)	Single, 18bit (Internal)	Single, 24bit (Internal)
DVI	-	-	-	-	1 (DVI-I)
TV-out	-	-	-	-	-
HDMI	-	-	-	-	1
Display Port	-	-	-	-	-
eSATA	-	-	-	-	-
IEEE 1394	-	-	-	-	-
USB	4	4	4	4	6
PS/2	-	-	-	-	-
Parallel Port	-	-	-	-	-
Serial Port	6	6	6	6	6
RS422/485	2	-	2	-	2
RS422/485 Isolation	-	2 (2KV Isolation)	-	2 (2KV)	2 (2KV Isolation)
CANbus	-	-	-	-	-
Digital I/O	-	-	-	-	-
Mini-PCIe	1	1	1	1	1
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (External)	4-in/4-out (External)	4-in/4-out (External)	4-in/4-out (External)	4-in/4-out (External)
LAN Ports	3x GbE	2x GbE	3x GbE	2x GbE	2x GbE
Audio	Line-out	Line-out	Line-out	Line-out	MIC-in & Line-out
Power Input Range	ATX, +9V to 36VDC	ATX, +9V to 36VDC	ATX, +9V to 36VDC	ATX, +9V to 36VDC	ATX, +9V to 36VDC
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	-	-	1x PCI or 1x PCIe (Option)	1x PCI or 1x PCIe (Option)	-
Operating temp. (w/HDD) Based on IEC 60068 STD	-5 to 55°C	-20 to 70°C	-5 to 55°C	-20 to 70°C	-20 to 65°C
System Dimension (W x D x H)	195 x 200 x 65 mm	195 x 200 x 65 mm	195 x 200 x 90 mm	195 x 200 x 90 mm	195 x 200 x 65 mm
Carton Dimension (W x D x H)	335 x 294 x 193 mm	335 x 294 x 193 mm	335 x 294 x 193 mm	335 x 294 x 193 mm	335 x 294 x 193 mm

NISE 2210	NISE 2210E	NISE 2300	NISE 2310	NISE 2310E
Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz
Intel® ICH10 RAID	Intel® ICH10 RAID	Intel® ICH10 RAID	Intel® ICH10 RAID	Intel® ICH10 RAID
4G DDR3	4G DDR3	4G DDR3	4G DDR3	4G DDR3
1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
Single, 24bit (Internal)	Single, 24bit (Internal)	-	-	-
1 (DVI-I)	1 (DVI-I)	1 (DVI-I) / 1 (DVI-D)	1 (DVI-I) / 1 (DVI-D)	1 (DVI-I) / 1 (DVI-D)
-	-	-	-	-
1	1	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
6	6	6	6	6
-	-	-	-	-
-	-	-	-	-
6	6	4	4	4
2	2	2	2	2
2 (2KV Isolation)	2 (2KV Isolation)	2 (2KV Isolation)	2 (2KV Isolation)	2 (2KV Isolation)
-	-	-	-	-
-	-	-	-	-
1	1	1	1	1
1	1	1	1	1
4-in/4-out (External)	4-in/4-out (External)	4-in/4-out (External)	4-in/4-out (External)	4-in/4-out (External)
2x GbE	2x GbE	4x GbE	4x GbE	4x GbE
MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
ATX, +9V to 36VDC	ATX, +9V to 36VDC	ATX, +9V to 36VDC	ATX, +9V to 36VDC	ATX, +9V to 36VDC
Optional	Optional	Optional	Optional	Optional
1x PCI	1x PCIe x4 or 1x PCIe x1	-	1x PCI	1x PCIe x1
-20 to 65°C	-20 to 65°C	-20 to 65°C	-20 to 65°C	-20 to 65°C
195 x 200 x 90 mm	195 x 200 x 90 mm	195 x 200 x 65 mm	195 x 200 x 90 mm	195 x 200 x 90 mm
335 x 294 x 193 mm	335 x 294 x 193 mm	335 x 294 x 193 mm	335 x 294 x 193 mm	335 x 294 x 193 mm

Fanless Computer

Model	NISE 3100e	NISE 3100eP2	NISE 3150e	NISE 3110	NISE 3110P2
CPU	Intel® Pentium® M/ Celeron® M	Intel® Pentium® M/ Celeron® M	Intel® Pentium® M/ Celeron® M	Intel® Core™ 2 Duo/ Core™ Duo	Intel Core 2 Duo/ Core 2 Duo
Chipset	Intel® 910GMLE/ ICH6M	Intel® 910GMLE/ ICH6M	Intel® 910GMLE/ ICH6M	Intel® 945GME/ ICH7M	Intel® 945GME/ ICH7M
Max. Memory	2GB DDR2	2GB DDR2	2GB DDR2	4GB DDR2	4GB DDR2
HDD Space	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
CF Socket	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)
SD Card	-	-	-	-	-
CD-ROM/ DVD-ROM	-	-	Slim DVD Combo x1	-	-
VGA	1	1	1	1	1
LVDS	Dual, 18bit (Internal)	Dual, 18bit (Internal)	Dual, 18bit (Internal)	Dual, 18bit (Internal)	Dual, 18bit (Internal)
DVI	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)
TV-out	-	-	-	-	-
HDMI	-	-	-	-	-
Display Port	-	-	-	-	-
eSATA	-	-	-	-	-
IEEE1394	-	-	-	-	-
USB	6	6	6	6	6
PS/2	2	2	2	2	2
Parallel Port	1 (Internal)	1 (Internal)	1	1 (Internal)	1 (Internal)
Serial Port	4	4	4	4	4
RS422/ 485	1	1	1	1	1
RS422/ 485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
Digital I/O	-	-	-	-	-
Mini-PCIe	-	-	-	-	-
SIM Card Holder	-	-	-	-	-
GPIO	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
LAN Ports	2x GbE	2x GbE	2x GbE	2x GbE	2x GbE
Audio	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
Power Input Range	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +12 to 30VDC	ATX, +12 to 30VDC
Power Supply Adapter	Optional	Optional	Optional	19V, 120W	19V, 120W
Expansion	1x PCI (169mm max.)	2x PCI (169mm max.)	-	1x PCI (160mm max.)	2x PCI (160mm/ 240mm max.)
Operating temp. (w/HDD) Based on IEC 60068 STD	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
System Dimension (WxDxH)	195 x 268 x 80 mm	195 x 268 x 101 mm	195 x 268 x 80 mm	195 x 268 x 80 mm	195 x 268 x 101 mm
Carton Dimension (WxDxH)	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm

NISE 3140	NISE 3140E	NISE 3140P2	NISE 3140P2E	NISE 3140M
Intel® Core™ 2 Duo	Intel® Core 2™ Duo	Intel® Core™ 2 Duo	Intel® Core™ 2 Duo	Intel® Core™ 2 Duo
GM45/ ICH9M	GM45/ ICH9M	GM45/ ICH9M	GM45/ ICH9M	GM45/ ICH9M Enhance
4GB DDR3	4GB DDR3	4GB DDR3	4GB DDR3	4GB DDR3
1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
1 (External)	1 (External)	1 (External)	1 (External)	1 (External)
-	-	-	-	-
-	-	-	-	-
1	1	1	1	1
Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)
1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	2 (IEEE1394b)
6	6	6	6	6
1	1	1	1	1
1	1	1	1	1
4	4	4	4	4
1	1	1	1	1
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
2x GbE	2x GbE	2x GbE	2x GbE	2x GbE
MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC
Optinal	Optinal	Optinal	Optinal	Optinal
1x PCI	1x PCIe x1	2x PCI	1x PCI or 1x PCIe x1	1x PCI
-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
195 x 268 x 80 mm	195 x 268 x 80 mm	195 x 268 x 101 mm	195 x 268 x 101 mm	195 x 268 x 80 mm
367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm

Fanless Computer

Model	NISE 3140M2E	NISE 3142	NISE 3142P2	NISE 3142M	NISE 3142M2E
CPU	Intel® Core™ 2 Duo	Intel® Core™ 2 Duo	Intel® Core™ 2 Duo	Intel® Core™ 2 Duo	Intel® Core™ 2 Duo
Chipset	GM45/ ICH9M Enhance	GM45/ ICH9M	GM45 / ICH9M	GM45 / ICH9M Enhance	GM45 / ICH9M Enhance
Max. Memory	4GB DDR3	4GB DDR3	4GB DDR3	4GB DDR3	4GB DDR3
HDD Space	2x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay
CF Socket	1 (External)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-	-
CD-ROM/ DVD-ROM	-	-	-	-	-
VGA	1	-	-	-	-
LVDS	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)
DVI	1 (DVI-I)	2 (DVI-D)	2 (DVI-D)	2 (DVI-D)	2 (DVI-D)
TV-out	-	-	-	-	-
HDMI	-	-	-	-	-
Display Port	-	-	-	-	-
eSATA	-	-	-	-	-
IEEE1394	2 (IEEE1394b)	-	-	2	2
USB	6	6	6	6	6
PS/2	1	-	-	-	-
Parallel Port	1	-	-	-	-
Serial Port	4	6	6	6	6
RS422/ 485	1	1	1	1	1
RS422/ 485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
Digital I/O	-	-	-	-	-
Mini-PCIe	-	-	-	-	-
SIM Card Holder	-	-	-	-	-
GPIO	4-in/4-out (Internal)	4-in/4-out (internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
LAN Ports	2x GbE	2x GbE	2x GbE	2x GbE	2x GbE
Audio	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
Power Input Range	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC	ATX, +16 to 30VDC
Power Supply Adapter	Optinal	Optional	Optional	Optional	Optional
Expansion	1x PCI or 1x PCIe x1	1x PCI	2x PCI	1x PCI	1x PCI or 1x PCIe x1
Operating temp. (w/HDD) Based on IEC 60068 STD	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
System Dimension (WxDxH)	195 x 268 x 101 mm	195 x 268 x 80 mm	195 x 268 x 101 mm	195 x 268 x 80 mm	195 x 268 x 101 mm
Carton Dimension (WxDxH)	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm

NISE 3145	NISE 3500	NISE 3500P2	NISE 3500M	NISE 3500M2E
Intel® Core™ 2 Duo	Intel® Core™ i7/i5 socket	Intel® Core™ i7/i5 socket	Intel® Core™ i7/i5 socket	Intel® Core™ i7/i5 socket
GM45 / ICH9M	Intel® QM57	Intel® QM57	Intel® QM57	Intel® QM57
4GB DDR3	4GB DDR3	4GB DDR3	4GB DDR3	4GB DDR3
1x 2.5" SATA HDD bay	1x 2.5" HDD driver bay	1x 2.5" HDD driver bay	1x 2.5" HDD driver bay	2x 2.5" HDD driver bay
1 (External)	-	-	-	-
-	-	-	-	-
Slim DVD Combo	-	-	-	-
1	1	1	1	1
Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)
1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)
-	-	-	-	-
-	-	-	1	1
-	-	-	-	-
-	2	2	2	2
-	-	-	3 (IEEE1394b)	3 (IEEE1394b)
6	6	6	6	6
1	1	1	1	1
1	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)
4	4	4	4	4
1	1	1	1	1
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
2x GbE	2x GbE	2x GbE	2x GbE	2 x GbE
MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
ATX, +16 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC
Optinal	Optinal	Optinal	Optinal	Optinal
-	1x PCI	2x PCI	1x PCI	1x PCI or 1x PCIe x1
-5 to 50°C	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
195 x 268 x 80 mm	195 x 268 x 80 mm	195 x 268 x 101 mm	195 x 268 x 80 mm	195 x 268 x 101 mm
367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm

Fanless Computer

Model	NISE 3520	NISE 3520P2	NISE 3520P2E	NISE 3600E	NISE 3600E2
CPU	Intel® Core™ i7/i5 socket	Intel® Core™ i7/i5 socket	Intel® Core™ i7/i5 socket	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)
Chipset	QM57	QM57	QM57	QM77	QM77
Max. Memory	4GB DDR3	4GB DDR3	4GB DDR3	8GB DDR3	8GB DDR3
HDD Space	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
CF Socket	-	-	-	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-	-
CD-ROM/ DVD-ROM	-	-	-	-	-
VGA	1	1	1	1	1
LVDS	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)
DVI	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-D)	1 (DVI-D)
TV-out	-	-	-	-	-
HDMI	1	1	1	-	-
Display Port	-	-	-	2	2
eSATA	-	-	-	-	-
IEEE1394	-	-	-	-	-
USB	6	6	6	2x USB 2.0 4x USB 3.0	2x USB 2.0 4x USB 3.0
PS/2	1	1	1	-	-
Parallel Port	-	-	-	-	-
Serial Port	4	4	4	6	6
RS422/ 485	1	1	1	1	1
RS422/ 485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
Digital I/O	-	-	-	-	-
Mini-PCIe	1	1	1	1	1
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
LAN Ports	2x GbE	2x GbE	2x GbE	2x GbE	2x GbE
Audio	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
Power Input Range	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	1x PCI	2x PCI	1x PCI or 1x PCIe x1	1x PCIe x4	2x PCIex4
Operating temp. (w/HDD) Based on IEC 60068 STD	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
System Dimension (WxDxH)	195 x 268 x 80 mm	195 x 268 x 101 mm	195 x 268 x 101 mm	215 x 272 x 93 mm	215 x 272 x 114 mm
Carton Dimension (WxDxH)	367 x 309 x 234 mm	367 x 309 x 234 mm	367 x 309 x 234 mm	378 x 342 x 269 mm	378 x 342 x 269 mm

	NISE 3600P2	NISE 3600P2E	NISE 3640E	NISE 3640E2	NISE 3640P2
	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA
	QM77	QM77	QM77	QM77	QM77
	8GB DDR3	8GB DDR3	8GB DDR3	8GB DDR3	8GB DDR3
	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
	-	-	-	-	-
	-	-	-	-	-
	1	1	1	1	1
	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)
	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)
	-	-	-	-	-
	-	-	-	-	-
	2	2	2	2	2
	-	-	-	-	-
	-	-	-	-	-
	2x USB 2.0 4x USB 3.0	2x USB 2.0 4x USB 3.0	2x USB 2.0 2x USB 3.0	2x USB 2.0 2x USB 3.0	2x USB 2.0 2x USB 3.0
	-	-	-	-	-
	-	-	-	-	-
	6	6	6	6	6
	1	1	2	2	2
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	1	1	2	2	2
	1	1	1	1	1
	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)	4-in/4-out (Internal)
	2x GbE	2x GbE	4x GbE	4x GbE	4x GbE
	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +24VDC	ATX, +24VDC	ATX, +24VDC
	Optional	Optional	Optional	Optional	Optional
	2x PCI	1x PCI and 1x PCIe x4	1x PCIe x4	2x PCIe x4	2x PCI
	-5 to 55°C	-5 to 55°C	-20 to 60°C	-20 to 60°C	-20 to 60°C
	215 x 272 x 114 mm	215 x 272 x 114 mm	215 x 272 x 93 mm	215 x 272 x 114 mm	215 x 272 x 114 mm
	378 x 342 x 269 mm	378 x 342 x 269 mm	378 x 342 x 269 mm	378 x 342 x 269 mm	378 x 342 x 269 mm

Fanless Computer

	NISE 3640P2E	NISE 3640VR	NISE 3660	NISE 4000	NISE 4000P2
Model				Coming Soon	Coming Soon
CPU	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i5/ i3 rPGA	3rd Gen. Intel® Core™ i5/ i3 rPGA
Chipset	QM77	QM77	QM77	QM77	QM77
Max. Memory	8GB DDR3	8GB DDR3	8GB DDR3	8GB DDR3	8GB DDR3
HDD Space	1x 2.5" SATA HDD bay	2x 3.5" SATA HDD bay	2x 2.5" Swappable HDD	2x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay
CF Socket	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-	-
CD-ROM/ DVD-ROM	-	-	-	-	-
VGA	1	1	1	1	1
LVDS	Dual, 24bit (Internal)	Dual, 24bit (Internal)	-	-	-
DVI	1 (DVI-D)	1 (DVI-D)	2 (1x DVI-I + 1 X DVI-D)	1x VGA + 1x DVI-I	1x VGA + 1x DVI-I
TV-out	-	-	-	-	-
HDMI	-	-	-	-	-
Display Port	2	2	-	-	-
eSATA	-	-	2	-	-
IEEE1394	-	-	-	-	-
USB	2x USB 2.0 2x USB 3.0	2x USB 2.0 2x USB 3.0	2x USB 2.0 2x USB 3.0	2x USB 2.0 2x USB 3.0	2x USB 2.0 2x USB 3.0
PS/2	-	-	1	1	1
Parallel Port	-	-	-	-	-
Serial Port	6	6	2	2	2
RS422/ 485	2	2	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)
RS422/ 485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
Digital I/O	-	-	-	16-in/16-out (internal)	16-in/16-out (internal)
Mini-PCIe	2	2	1	2	2
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (internal)	4-in/4-out (Internal)	2-in/2-out (Internal)	-	-
LAN Ports	4x GbE	4x GbE	6x GbE	4x GbE	4x GbE
Audio	MIC-in & Line-out	MIC-in & Line-out	-	-	-
Power Input Range	ATX, +24VDC	ATX, +24VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC	ATX, +9 to 30VDC
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	1x PCI and 1x PCIe x4	-	1x PCI	-	2x PCI
Operating temp. (w/HDD) Based on IEC 60068 STD	-20 to 60 °C	-5 to 55°C	-5 to 60°C	0 to 55°C	0 to 55°C
System Dimension (WxDxH)	215 x 272 x 114 mm	TBD	215 x 272 x 114 mm	TBD	TBD
Carton Dimension (WxDxH)	378 x 342 x 269 mm	TBD	378 x 342 x 269 mm	TBD	TBD

Coming Soon	nTUF 600	nTU F605	nTUF610	nTUF 615
NISE 4000PE	**nTUF 600**	**nTU F605**	**nTUF610**	**nTUF 615**
3rd Gen. Intel® Core™ i5/i3 rPGA	Intel® Atom™ D525 1.8 GHz	Intel® Atom™ D525 1.8 GHz	2nd Gen. Intel® Core™ i7-2610UE 1.5 GHz	2nd Gen. Intel® Core™ i7-2610UE 1.5 GHz
QM77	Intel ICH8M	Intel ICH8M	QM67	QM67
8GB DDR3	2GB DDR2 (Pre-install)	2GB DDR2 (Pre-install)	2GB DDR3 (Pre-install)	2GB DDR3 (Pre-install)
2x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay	1x 2.5" SATA HDD bay
1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-
-	-	1	-	1
1	1	1	1	1
-	-	-	-	-
1 x VGA + 1 x DVI-I	N/A (Active by MXM)	N/A (Active by MXM)	1 (DVI-D)	1 (DVI-D)
-	-	-	-	-
-	N/A (Active by MXM)	N/A (Active by MXM)	N/A (Active by MXM)	N/A (Active by MXM)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
2x USB 2.0 2x USB 3.0	4	4	4	4
1	2	2	2	2
-	-	-	-	-
2	6	6	6	6
2 (RS232/422/485)	4 (NMEA)	4 (NMEA)	4 (NMEA)	4 (NMEA)
-	2KV Isolation	2KV Isolation	2KV Isolation	2KV Isolation
-	-	-	-	-
16-in/16-out (internal)	4-in/4-out	4-in/4-out	4-in/4-out	4-in/4-out
2	1	1	1	1
1	1	1	1	1
-	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
4x GbE	2x GbE (M12)	2x GbE (M12)	2x GbE (M12)	2x GbE (M12)
-	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out	MIC-in & Line-out
ATX, +9 to 30VDC	ATX, DC 24V (1.5KV Isolation)	ATX, DC 24V (1.5KV Isolation)	ATX, DC 24V (1.5KV Isolation)	ATX, DC 24V (1.5KV Isolation)
Optional	-	-	-	-
1x PCI and 1x PCIex8	-	-	-	-
0 to 55°C	-25 to 55°C	-25 to 55°C	-25 to 55°C	-25 to 55°C
TBD	294 x 200 x 100 mm	294 x 200 x 100 mm	294 x 200 x 100 mm	294 x 200 x 100 mm
TBD	399 x 303 x 194 mm	399 x 303 x 194 mm	399 x 303 x 194 mm	399 x 303 x 194 mm

Machine Automation

Model		Coming Soon	Coming Soon	Coming Soon	Coming Soon
	NET 3600RTA	**MAC 4031**	**MAC 4013**	**MAC 4013GTS**	**MAC 4013GTS8**
CPU	Intel® Core™ i5-3610ME Processor	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Celeron® B810)	3rd Gen Intel® Core™ i5/i3 socket (2nd Gen. Intel® Celeron® B810)	Intel® Core™ i5-3610ME Processor	Intel® Core™ i5-3610ME Processor
Chipset	Intel® QM77	Intel® QM77	Intel® QM77	Intel® QM77	Intel® QM77
Max. Memory	8G DDR3	8G DDR3	8G DDR3	8G DDR3	8G DDR3
Storage	-	1Mb NVRAM	1Mb NVRAM	1Mb NVRAM	1Mb NVRAM
HDD bay	1x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay	2x 2.5" SATA HDD bay
CFast	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
VGA	1	1	1	1	1
HMI Ports	-	-	-	-	-
LVDS	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)	Dual, 24bit (Internal)
DVI	1 (DVI-D)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)
USB	2	2	2	2	2
USB 3.0	4	2	2	2	2
PS/2	-	1	1	1	1
Serial Port	6	2	2	2	2
Uncommited Digital I/O	-	16-in/16-out	16-in/16-out	16-in/16-out 16-in/16-out on terminal board	16-in/16-out 16-in/16-out on terminal board
Mini PCIe	1	2	2	2	2
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (internal)	-	-	-	-
LAN Ports	2x GbE	4x GbE	4x GbE	4x GbE	4x GbE
Audio	MIC-in & Spk-out	MIC-in & Spk-out	MIC-in & Spk-out	MIC-in & Spk-out	MIC-in & Spk-out
Power Input Range	ATX, +9 to 30VDC	ATX, +9 to 36VDC	ATX, +9 to 36VDC	ATX, +9 to 36VDC	ATX, +9 to 36VDC
PCI	-	1	3	2	1
PCIe x1	-	2	-	-	-
PCIe x4	1	-	1	1	1
PCIe x16	-	1	-	-	-
Operation Temperature	-5˚C to 55˚C	0˚C to 55˚C	0˚C to 55˚C	0˚C to 55˚C	0˚C to 55˚C
System Dimension	216 x 270 x 114 mm	TBC	TBC	TBC	TBC
Control Axis	16	-	-	4	8
Spindle	-	-	-	-	-
Control Type	Serial, EtherCAT	-	-	Analog	Analog
Programming Language	C/C++	C/C++	C/C++	C/C++	C/C++
Remote I/O Support	Yes	-	-	Yes	Yes
Handwheel Support	-	-	-	Yes	Yes

	MAC 3502GTS	MAC 3052GTS8	PAC 1041	PAC 1043	PAC 1081	PAC 1083	PAC 1040EM
	Intel® Core™ i5-520M Processor	Intel® Core™ i5-520M Processor	Intel® Celeron® M Processor	Intel® Celeron® M Processor	Intel® Celeron® M Processor	Intel® Celeron® M Processor	Intel® Celeron® M Processor
	Intel® QM57	Intel® QM57	Intel® 910GML ICH6-M	Intel® 910GML ICH6-M	Intel® 910GML ICH6-M	Intel® 910GML ICH6-M	Intel® 910GML ICH6-M
	4G DDR3	4G DDR3	256M RAM	256M RAM	256M RAM	256M RAM	256M RAM
	-	-	1G DOM	1G DOM	1G DOM	1G DOM	1G DOM
	1x 2.5" HDD bay	1x 2.5" HDD bay	-	-	-	-	-
	-	-	-	-	-	-	-
	1	1	1	1	1	1	1
	-	-	1	1	1	1	1
	Dual, 24bit (Internal)	Dual, 24bit (Internal)	-	-	-	-	-
	1 (DVI-I)	1 (DVI-I)	-	-	-	-	-
	6	6	2	2	2	2	2
	-	-	-	-	-	-	-
	1	1	1	1	1	1	1
	4	4	1	1	1	1	1
	16-in/16-out on terminal board	16-in/16-out on terminal board	16-in/16-out on terminal board	16-in/16-out on terminal board	16-in/16-out on terminal board	16-in/16-out on terminal board	16-in/16-out on terminal board
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	4-in/4-out (internal)	4-in/4-out (internal)	-	-	-	-	-
	2x GbE	2x GbE	1x 10/100M	1x 10/100M	1x 10/100M	1x 10/100M	1x 10/100M
	MIC-in & Spk-out	MIC-in & Spk-out	-	-	-	-	-
	ATX, +9 to 30VDC	ATX, +9 to 30VDC	+24VDC	+24VDC	+24VDC	+24VDC	+24VDC
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-5°C to 55°C	-5°C to 55°C	0°C to 55°C	0°C to 55°C	0°C to 55°C	0°C to 55°C	0°C to 55°C
	195 x 268 x 101mm	195 x 268 x 101mm	296 x 75 x 160 mm	296 x 75 x 160 mm	296 x 75 x 160 mm	296 x 75 x 160 mm	296 x 75 x 160 mm
	4	8	4	4	8	8	3
	-	-	-	-	-	-	1
	Analog	Analog	Pulse	Analog	Pulse	Analog	Analog
	C/C++	C/C++	IEC 61131-3	IEC 61131-3	IEC 61131-3	IEC 61131-3	G/M Code
	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Industrial Panel PC

Model		
	IPPC 1960T-AC	**IPPC 1960T-DC**
LCD Size	19" 4:3	19" 4:3
Max Resolution	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m^2)	350	350
Contrast Ratio	1000	1000
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED
LCD Color	16.7M	16.7M
Touch Screen	Resistive 5-wire	Resistive 5-wire
Touch Light Transmission	80%	80%
CPU	2nd Gen. Intel® Core™ i5-2510E 2.5GHz	2nd Gen. Intel® Core™ i5-2510E 2.5GHz
Chipset	Intel® QM67	Intel® QM67
Memory	2GB DDR3 SO-DIMM module	2GB DDR3 SO-DIMM module
CFast socket	1	1
2nd Display Output	VGA	VGA
PS2 KB/MS	2	2
Ethernet (10/100/1000)	2	2
Line-out	Line-out	Line-out
Line-in	Line-in	Line-in
MIC-in	MIC-in	MIC-in
USB 2.0	5 (1 in front)	5 (1 in front)
COM Port	Isolation 2x RS232/422/485, 4x RS232	2x RS232/422/485, 1x RS232
Power Switch	1 Power; 1 ATX	1
Reset Button	1	1
Power Jack	AC Inlet (IEC60320 C14)	Terminal Blocks 3-Pin Phoenix Connector
GPIO	4-in/4-out	-
CANbus	-	-
Digital I/O	4-in/4-out	-
Expansion	2x Mini-PCIe	2x Mini-PCIe
Construction Front Panel	Aluminum Front Bezel	Aluminum Front Bezel
Mounting	Panel	Panel
Power Input	90~260 AC@47~~63Hz, 1.7~1A	+9 to 30VDC
Power Supply Adapter	Internal	Optional
Operating Temp.	-5°C to 55°C	-5°C to 55°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP66	Front Frame IP66
Dimension (WxHxD)	477.64 x 399.24 x 97.49 mm	477.64 x 399.24 x 97.49 mm
Weight	13Kg	12.4Kg

Applied Panel PC

Model		
	APPC 0820T/0820TC	**APPC 1220T/1221T**
LCD Size	8.0" 4:3	12.1" 4:3
Max Resolution	SVGA, 800 x 600	SVGA, 800 x 600
Luminance (cd/m^2)	400	450
Contrast Ratio	500	700
Viewing Angle (H-V)	50(U), 70(D), 70(L), 70(R)	65(U), 75(D), 80(L), 80(R)
Backlight	LED	LED
LCD Color	262K	262K
Touch Screen	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)
Touch Light Transmission	82%	80%
CPU	Intel® Atom™ D525 Dual Core 1.8GHz	Intel® Atom™ D525 Dual Core 1.8GHz
Chipset	Intel® ICH8M	Intel® ICH8M
Memory	1GB DDR3 SO-DIMM module	1GB DDR3 SO-DIMM module
CF socket	1/1 (Optional)	1
2nd Display Output	VGA	VGA
PS2 KB/MS	1/0	1
Ethernet (10/100/1000)	2	2
Line-out	Line-out/1	Line-out
Line-in	Line-in/0	Line-in
MIC-in	MIC-in/0	MIC-in
USB 2.0	4/2	4
COM Port	1x RS232, 1x RS232/422/485/ 1x RS232	2x RS232/422/485/ Isolation 2x RS232/422/485, 2x RS232
Power Switch	1	1
Reset Button	1	1
Power Jack	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°
GPIO	- / 4-in; 4-out	- /4-in; 4-out
CANbus	-	- /1(Optional)
Digital I/O	-	-
Expansion	1x Mini-PCIe	2x Mini-PCIe
Construction Front Panel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100 mm	Panel/Wall/Stand/VESA 100 x 100 mm
Power Input	+12VDC	+12 to 30VDC
Power Supply Adapter	Optional	Optional
Operating Temp.	-5°C to 50°C	-5°C to 50°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65
Dimension (WxHxD)	217.4 x 176.4 x 61.9/ 46.7 mm	317 x 243 x 65 mm
Weight	2Kg / 1.7Kg	3.8Kg

Applied Panel PC

Model	APPC 1520T/1521T	APPC 1720T/1721T
LCD Size	15" 4:3	17" 4:3
Max Resolution	XGA, 1024 x 768	SXGA, 1280 x 1024
Luminance (cd/m^2)	400	380
Contrast Ratio	700	1000
Viewing Angle (H-V)	60(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	CCFL
LCD Color	16.2M	16.7M
Touch Screen	Resistive 5-wire	Resistive 5-wire (Flush Panel Type)
Touch Light Transmission	79%	81%
CPU	Intel® Atom™ D525 Dual Core 1.8GHz	Intel® Atom™ D525 Dual Core 1.8GHz
Chipset	Intel® ICH8M	Intel® ICH8M
Memory	1GB DDR3 SO-DIMM Module	1GB DDR3 SO-DIMM Module
CF socket	1	1
2nd Display Output	VGA	VGA
PS2 KB/MS	1	1
Ethernet (10/100/1000)	2	2
Line-out	Line-out	Line-out
Line-in	Line-in	Line-in
MIC-in	MIC-in	MIC-in
USB 2.0	4	4
COM Port	2x RS232/422/485/ Isolation 2x RS232/422/485, 2x RS232	2x RS232/422/485/ Isolation 2x RS232/422/485, 2x RS232
Power Switch	1	1
Reset Button	1	1
Power Jack	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°
GPIO	- /4-in; 4-out	- /4-in; 4-out
CANbus	- /1(Optional)	- /1(Optional)
Digital I/O	-	-
Expansion	2x Mini-PCIe	2x Mini-PCIe
Construction Front Panel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100 mm	Panel/Wall/Stand/VESA 100 x 100 mm
Power Input	+12 to 30VDC	+12 to 30VDC
Power Supply Adapter	Optional	Optional
Operating Temp.	-5°C to 50°C	-5°C to 50°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65
Dimension (WxHxD)	409 x 309 x 62.5 mm	410.4 x 340.4 x 75.79 mm
Weight	5.3Kg	6.3Kg

Model	APPC 1230T/1231T	APPC 1235T
LCD Size	12.1" 4:3	12.1" 4:3
Max Resolution	SVGA, 800 x 600	XGA, 1024 x 768
Luminance(cd/m2)	450	500
Contrast Ratio	700	700
Viewing Angle(H-V)	65(U), 75(D), 80(L), 80(R)	80(U), 80(D), 80(L), 80(R)
Backlight	LED	LED
LCD Color	16.2M	16.2M
Touch Screen	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)
Touch Light Transmission	80%	80%
CPU	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz
Chipset	Intel® NM10 Express	Intel® NM10 Express
Memory	1GB DDR3 SO-DIMM module	1GB DDR3 SO-DIMM module
CFast socket	1	1
2nd Display Output	VGA	VGA
PS2 KB/MS	1	1
Ethernet (10/100/1000)	2	2
Line-out	Line-out	Line-out
Line-in	Line-in	Line-in
MIC-in	MIC-in	MIC-in
USB 2.0	4	4
COM Port	2x RS232/422/485/ Isolation 2x RS232/422/485, 2x RS232	2x RS232/422/485/ Isolation 2x RS232/422/485, 2x RS232
Power Switch	1	1
Reset Button	1	1
Power Jack	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°
GPIO	- / 2-in; 2-out	- / 2-in; 2-out
CANbus	-	-
Digital I/O	- / 4-in; 4-out	N/A / 4-in; 4-out
Expansion	2x Mini-PCIe	2x Mini-PCIe
Construction Front Panel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100 mm	Panel/Wall/Stand/VESA 100 x 100 mm
Power Input	+12 to 30VDC	+12 to 30VDC
Power Supply Adapter	Optional	Optional
Operating Temp.	-5°C to 60°C	-5°C to 60°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65
Dimension	317 x 243 x 65.89 mm	317 x 243 x 65.89 mm
Weight	3.9Kg	3.9Kg

Applied Panel PC

Model	APPC 1530T/1531T	APPC 1730T/1731T	APPC 1930T/1931T
LCD Size	15" 4:3	17" 4:3	19" 4:3
Max Resolution	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m^2)	400	380	350
Contrast Ratio	700	1000	1000
Viewing Angle (H-V)	60(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	CCFL	LED
LCD Color	16.2M	16.7M	16.7M
Touch Screen	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)
Touch Light Transmission	80%	81%	81%
CPU	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz
Chipset	Intel® NM10 Express	Intel® NM10 Express	Intel® NM10 Express
Memory	1GB DDR3 SO-DIMM module	1GB DDR3 SO-DIMM module	1GB DDR3 SO-DIMM module
CFast socket	1	1	1
2nd display output	VGA	VGA	VGA
PS2 KB/MS	1	1	1
Ethernet (10/100/1000)	2	2	2
Line-out	Line-out	Line-out	Line-out
Line-in	Line-in	Line-in	Line-in
MIC-in	MIC-in	MIC-in	MIC-in
USB 2.0	4	4	4
COM port	2x RS232/422/485/Isolation 2x RS232/422/485, 2x RS232	2x RS232/422/485/Isolation 2x RS232/422/485, 2x RS232	2x RS232/422/485/Isolation 2x RS232/422/485, 2x RS232
Power Switch	1	1	1
Reset Button	1	1	1
Power Jack	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°
GPIO	- /2-in; 2-out	- /2-in; 2-out	- /2-in; 2-out
CANbus	- / -	- / -	- / -
Digital I/O	- / 4-in; 4-out	- / 4-in; 4-out	- / 4-in; 4-out
Expansion	2x Mini-PCIe	2x Mini-PCIe	2x Mini-PCIe
Construction Front Panel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel
Mounting	Panel/ Wall/ Stand/ VESA 100 x 100 mm	Panel/ Wall/ Stand/ VESA 100 x 100 mm	Panel/ Wall/ Stand/ VESA 100 x 100 mm
Power Input	+12 to 30VDC	+12 to 30VDC	+12 to 30VDC
Power Supply Adapter	Optional	Optional	Optional
Operating Temp.	-5°C to 60°C	-5°C to 50°C	-5°C to 50°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65	Front Frame IP65
Dimension	384.37 x 309.95 x 63.2 mm	410.4 x 340.4 x 75.79 mm	457.64 x 379.24 x 61.25 mm
Weight	5Kg	6.6Kg	6.5Kg

Applied Panel PC

Model	APPD 1200T	APPD 1500T	APPD 1700T	APPD 1900T
LCD Size	12.1" 4:3	15" 4:3	17" 4:3	19" 4:3
Max Resolution	SVGA, 800 x 600	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance(cd/m2)	450	400	380	350
Contrast Ratio	700	700	1000	1000
Viewing Angle(H-V)	65(U), 75(D), 80(L), 80(R)	60(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED	CCFL	LED
LCD Color	16.2M	16.2M	16.7M	16.7M
Touch Screen	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)	Resistive 5-wire (Flush Panel Type)
Touch Light Transmission	80%	80%	81%	81%
OSD Function	OSD Keypad	OSD Keypad	OSD Keypad	OSD Keypad
Touch Screen I/F	RS232; USB	RS232; USB	RS232; USB	RS232; USB
Video Input	VGA; DVI-D	VGA; DVI-D	VGA; DVI-D	VGA; DVI-D
Construction Front Panel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel	ABS+PC Plastic Front Bezel
Mounting	Panel/ Wall/ Stand/ VESA 100x100 mm	Panel/ Wall/ Stand/ VESA 100x100 mm	Panel/ Wall/ Stand/ VESA 100x100 mm	Panel/ Wall/ Stand/ VESA 100x100 mm
Power Input	+12 to 30VDC	+12 to 30VDC	+12 to 30VDC	+12 to 30VDC
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	-5℃ to 60℃	-5℃ to 60℃	-5℃ to 50℃	-5℃ to 50℃
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65	Front Frame IP65	Front Frame IP65
Dimension	317 x 243 x 53.5 mm	384.37 x 310 x 51.2 mm	410.4 x 340.4 x 43.7 mm	457.64 x 379.24 x 49.25 mm
Weight	2.9Kg	3.8Kg	5.3Kg	5.2Kg

Multi-Media Panel PC

Model	MPPC 0810T	MPPC 2120T	MPPC 2130T	MPPC 3220T
LCD Size	8.9" 16:9	21.5" 16:9	21.5" 16:9	32" 16:9
Max Resolution	WSVGA, 1024 x 600	Full HD, 1920 x 1080	Full HD, 1920 x 1080	Full HD, 1920 x 1080
Luminance (cd/m^2)	220	420	420	400
Contrast Ratio	500	3000	3000	4000
Viewing Angle (H-V)	50(U), 60(D), 70(L), 70(R)	89(U), 89(D), 89(L), 89(R)	89(U), 89(D), 89(L), 89(R)	89(U), 89(D), 89(L), 89(R)
Backlight	LED	LED	LED	LED
LCD Color	256K	16.7M	16.7M	1073.7M
Touch Screen	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire	SAW (Surface Acoustic Wave)
Touch Light Transmission	80%	80%	80%	92%
CPU	Intel® Atom™ N270 1.6GHz	Intel® Atom™ D525 Dual Core 1.8GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D525 Dual Core 1.8GHz
Chipset	Intel® 945GSE/ ICH7M	Intel® ICH8M	Intel® NM10 Express	Intel® ICH8M
Memory	1GB DDR2 SO-DIMM Module	1GB DDR3 SO-DIMM Module	1GB DDR3 SO-DIMM Module	1GB DDR3 SO-DIMM Module
CF socket	1	1	1	1
2nd Display Output	VGA	Clone VGA (Optional)	VGA; HDMI	Clone VGA (Optional)
PS2 KB/MS	0	1	0	1
Ethernet (10/100/1000)	2	2	2	2
Line-out	Line-out	Line-out	Line-out	Line-out
Line-in	0	Line-in	Line-in	Line-in
MIC-in	MIC-in	MIC-in	MIC-in	MIC-in
USB 2.0	4	4	4	4
COM port	1x RS232, 1x RS232/422/485	2x RS232/422/485	2x RS232/422/485	2x RS232/422/485
Power Switch	1	1	1	1
Reset Button	0	1	1	1
Power Jack	DC Jack	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°
2.5" Hard Driver Bay	Yes	Yes	Yes	Yes
Expansion	0	2x Mini-PCIe	2x Mini-PCIe	2x Mini-PCIe
Audio Speaker	N/A	AMP 2W+2W	AMP 2W+2W	AMP 2W+2W
Construction Front Panel	Metal	Metal	Metal	Metal
Mounting	Panel/ Wall/ VESA 75 x 75 mm	Panel/ Wall/ Stand/ VESA 75 x 75/ 100 x 100/ 400 x 100 mm	Panel/ Wall/ Stand/ VESA 75 x 75/ 100 x 100 mm	Panel/ Wall/ Stand/ VESA 75 x 75/ 100 x 100/ 400 x 200 mm
Power Input	+12VDC	+12 to 30VDC	+12 to 30VDC	+24VDC
Power Supply Adapter	Yes	Yes	Yes	Yes
Operating Temp.	0°C to 40°C	0°C to 45°C	0°C to 45°C	0°C to 45°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	5%~90%, Non-condensing	20%~80%, Non-condensing	20%~80%, Non-condensing	10%~90%, Non-condensing
Dimension (WxHxD)	225 x 139 x 55.4 mm	506.4 x 300.6 x 64.7 mm	506.4 x 302.4 x 63.3 mm	753 x 442.6 x 86.1 mm
Weight	1.41Kg	8Kg	7.2Kg	18.2Kg

Open Frame Panel PC

Model	OPPC 1230T	OPPC 1530T	OPPC 1730T	OPPC 1930T
LCD Size	12.1" 4:3	15" 4:3	17" 4:3	19" 4:3
Max Resolution	SVGA, 800 x 600	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m^2)	450	400	380	350
Contrast Ratio	700	700	1000	1000
Viewing Angle (H-V)	65(U), 75(D), 80(L), 80(R)	60(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED	CCFL	LED
LCD Color	16.2M	16.2M	16.7M	16.7M
Touch Screen	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire
Touch Light Transmission	80%	81%	80%	80%
CPU	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz
Chipset	Intel® NM10 Express	Intel® NM10 Express	Intel® NM10 Express	Intel® NM10 Express
Memory	1GB DDR3 SO-DIMM Module	1GB DDR3 SO-DIMM Module	1GB DDR3 SO-DIMM Module	1GB DDR3 SO-DIMM Module
CFast socket	1	1	1	1
2nd Display Output	VGA	VGA	VGA	VGA
PS2 KB/MS	Yes	Yes	Yes	Yes
Ethernet (10/100/1000)	2	2	2	2
Line-out	Line-out	Line-out	Line-out	Line-out
Line-in	Line-in	Line-in	Line-in	Line-in
MIC-in	MIC-in	MIC-in	MIC-in	MIC-in
USB 2.0	4	4	4	4
COM port	2x RS232/422/485	2x RS232/422/485	2x RS232/422/485	2x RS232/422/485
Power Switch	1	1	1	1
Reset Button	1	1	1	1
Power Jack	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°	DC 4 pin DIN Power Jack with shield, 90°
2.5" Hard Driver Bay	Yes	Yes	Yes	Yes
Expansion	2x Mini-PCIe	2x Mini-PCIe	2x Mini-PCIe	2x Mini-PCIe
Construction Front Panel	ABS + PC Plastic Front Bezel	ABS + PC Plastic Front Bezel	ABS + PC Plastic Front Bezel	ABS + PC Plastic Front Bezel
Mounting	Panel/ Wall/ Stand/ VESA 75 x 75, 100 x 100 mm	Panel/ Wall/ Stand/ VESA 75 x 75, 100 x 100 mm	Panel/ Wall/ Stand/ VESA 75 x 75, 100 x 100 mm	Panel/ Wall/ Stand/ VESA 75 x 75, 100 x 100mm
Power Input	+12 to 30VDC	+12 to 30VDC	+12 to 30VDC	+12 to 30VDC
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	-5℃ to 50℃	-5℃ to 50℃	-5℃ to 50℃	-5℃ to 50℃
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	20%~80%, Non-condensing	10%~90%, Non-condensing
Dimension	307 x 240 x 61.8 mm	329 x 280 x 69.3 mm	387 x 323.2 x 73.6 mm	422.6 x 350.6 x 75.8 mm
Weight	3.8Kg	4Kg	5.6Kg	6.15Kg

POS

Model	NPT 1550	NPT 1551	NPT 1552	NPT 5850	NPT 5851	NPT 5852
LCD Size	15" 4:3	15" 4:3	15" 4:3	15" 4:3	15" 4:3	15" 4:3
Max Resolution	XGA, 1280 x 768	XGA, 1280 x 768	XGA, 1280 x 768	XGA, 1280 x 768	XGA, 1280 x 768	XGA, 1280 x 768
Luminance (cd/m^2)	250	250	250	250	250	250
Contrast Ratio	700	700	700	700	700	700
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	CCFL	CCFL	CCFL	CCFL	CCFL	CCFL
LCD Color	16.2M	16.2M	16.2M	16.2M	16.2M	16.2M
Touch Screen	15" 5-wire Resistive Touch Panel	15" 5-wire Resistive Zero Bezel Touch Panel	15" Zero Bezel Projected Capacitive Touch Panel	15" 5-wire Resistive Touch Panel	15" 5-wire Resistive Zero Bezel Touch Panel	15" Zero Bezel Projected Capacitive Touch Panel
CPU	Intel® Atom™ D525 Dual Core Processor, 1.8GHz, 1M L2 Cache;	Intel® Atom™ D525 Dual Core Processor, 1.8GHz, 1M L2 Cache;	Intel® Atom™ D525 Dual Core Processor, 1.8GHz, 1M L2 Cache;	2nd Generation Intel® Core™ Processor, FCBGA 989	2nd Generation Intel® Core™ Processor, FCBGA 989	2nd Generation Intel® Core™ Processor, FCBGA 989
Chipset	Intel® ICH8M, NH82801HBM I/O Control Hub	Intel® ICH8M, NH82801HBM I/O Control Hub	Intel® ICH8M, NH82801HBM I/O Control Hub	Intel® BD82HM65 Platform Controller Hub, BD82HM65	Intel® BD82HM65 Platform Controller Hub, BD82HM65	Intel® BD82HM65 Platform Controller Hub, BD82HM65
Memory	2GB DDR3 SO-DIMM Module	2GB DDR3 SO-DIMM Module	2GB DDR3 SO-DIMM Module	2GB DDR3 SO-DIMM Module	2GB DDR3 SO-DIMM Module	2GB DDR3 SO-DIMM Module
Storage Device	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD	1 x 2.5" SATA HDD
2nd Display Output	VGA	VGA	VGA	VGA	VGA	VGA
Ethernet (10/100/1000)	1	1	1	1	1	1
Line-out	1	1	1	1	1	1
USB 2.0	4	4	4	4	4	4
Cash Drawer Port	1	1	1	1	1	1
Parallel Port	1	1	1	1	1	1
COM Port	4x DB-9 Powered RS232	4x DB-9 Powered RS232	4x DB-9 Powered RS232	4x DB-9 Powered RS232	4x DB-9 Powered RS232	4x DB-9 Powered RS232
+12VDC-OUT Jack	1	1	1	1	1	1
+12VDC Jack	1	1	1	1	1	1
Power Switch	1	1	1	1	1	1
Internal Speaker	1	1	1	1	1	1
Expansion	1x Mini-PCIe	1x Mini-PCIe	1x Mini-PCIe	1x Mini-PCIe	1x Mini-PCIe	1x Mini-PCIe
Power Supply Adapter	External AC DC 12V/ 8.33A 100W Power Brick	External AC DC 12V/ 8.33A 100W Power Brick	External AC DC 12V/ 8.33A 100W Power Brick	External AC DC 19V/ 6.31A 120W Power Brick	External AC DC 19V/ 6.31A 120W Power Brick	External AC DC 19V/ 6.31A 120W Power Brick
Operating Temp.	0℃ to 40℃	0℃ to 40℃	0℃ to 40℃	0℃ to 40℃	0℃ to 40℃	0℃ to 40℃
Storage Temp.	-20˚C to 60˚C	-20˚C to 60˚C	-20˚C to 60˚C	-20˚C to 60˚C	-20˚C to 60˚C	-20˚C to 60˚C
Operating Humidity	20%~80%, Non-condensing	20%~80%, Non-condensing	20%~80%, Non-condensing	20%~80%, Non-condensing	20%~80%, Non-condensing	20%~80%, Non-condensing
IP Level	Front Bezel IP65	Front Bezel IP65	Front Bezel IP65	Front Frame IP65	Front Frame IP65	Front Frame IP65
Dimension	368(W) x 331(H) x 210(D) mm (No MSR)/ 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR)/ 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR)/ 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR)/ 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR)/ 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR)/ 410(W) x 331(H) x 210(D) mm (w/ MSR)
Weight	8.0kg (17.6lbs)	8.0kg (17.6lbs)	8.0kg (17.6lbs)	8.0kg (17.6lbs)	8.0kg (17.6lbs)	8.0kg (17.6lbs)

Model	NPB 3550
CPU	Intel® Atom™ D2550 Dual Core 1.86GHz
Chipset	Intel® NM10 Express
Memory	2GB DDR3 SO-DIMM Module
Storage Device	1x 2.5" SATA HDD; optionall: 1x 2.5" STAT HDD
PS2 KB/MS	1
Ethernet (10/100/1000)	1 optional: 1x RJ45 (10/100/1000Mbps Ethernet)
Headset Jack (Speaker-out & MIC)	1
VGA	1 optional: 1x DB-15 2nd VGA share D-shape hole with COM5.
DVI-D	1
USB 2.0	6
COM Port	4x DB-9 Powered RS232
Powered USB Port	1x +12VDC Powered USB 2.0 (USB5)
Parallel Port	1
Cash Drawer Port	1
Power Switch	1
Power Jack	DC 4 pin DIN Power Jack with shield
Expansion	2x Mini-PCIe, 1x SIM Card Socket
Power Supply Adapter	External AC DC 12V/ 8.33A 100W Power Brick
Operating Temp.	0°C to 40°C
Storage Temp.	-20°C to 60°C
Operating Humidity	20%~80%, Non-condensing
Dimension	296 (W) x 210 (D) x 46(H) mm
Weight	2.6kg (5.3lbs)

Model	NPD 1550	NPD 1551	NPD 1552
LCD Size	15" 4:3	15" 4:3	15" 4:3
Max Resolution	XGA, 1280 x 768	XGA, 1280 x 768	XGA, 1280 x 768
Luminance (cd/m^2)	250	250	250
Contrast Ratio	700	700	700
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	CCFL	CCFL	CCFL
LCD Color	16.2M	16.2M	16.2M
Touch Screen	15" 5-wire Resistive Touch Panel	15" 5-wire Resistive Zero Bezel Touch Panel	15" Zero Bezel Projected Capacitive Touch Panel
VGA	1	1	1
DVI-D	1	1	1
Display Port	1	1	1
OSD Function	1x AUTO button for Auto Adjust	1x AUTO button for Auto Adjust	1x AUTO button for Auto Adjust
Touch Screen I/F	RS232; USB	RS232; USB	RS232; USB
Construction Front Panel	ABS + PC Plastic Front Bezel	ABS + PC Plastic Front Bezel	ABS + PC Plastic Front Bezel
Mounting	Panel/ Wall/ Stand/ VESA 100 x 100 mm	Panel/ Wall/ Stand/ VESA 100 x 100mm	Panel/ Wall/ Stand/ VESA 100 x 100mm
Power Supply Adapter	External AC DC 12V/ 5A 60W Power Brick	External AC DC 12V/ 5A 60W Power Brick	External AC DC 12V/ 5A 60W Power Brick
Operating Temp.	0°C to 40°C	0°C to 40°C	0°C to 40°C
Storage Temp.	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
Operating Humidity	20%~80%, Non-condensing	20%~80%, Non-condensing	20%~80%, Non-condensing
IP Level	Front Bezel IP65	Front Bezel IP65	Front Bezel IP65
Dimension	368(W) x 331(H) x 210(D) mm (No MSR) / 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR) / 410(W) x 331(H) x 210(D) mm (w/ MSR)	368(W) x 331(H) x 210(D) mm (No MSR) / 410(W) x 331(H) x 210(D) mm (w/ MSR)
Weight	7.0kg (15.43lbs)	7.0kg (15.43lbs)	7.0kg (15.43lbs)

EmbeddedPro

Model	EBC 310	EBC 342	EBC 352	EBC 353
PCB Size (L/W)	146 x 105 mm	146 x 105 mm	146 x 105 mm	146 x 105 mm
CPU	Intel® Atom™ E640 ultra Low power Consumption SoC	Intel® Atom™ N270	Intel® Atom™ Dual-core D525	Intel® Atom™ D2550
Chipset (NB/SB)	Intel® EG20T (PCH)	Intel® 945GSE ICH7-M	Intel® ICH8M	Intel® NM10 Express Chipset
CPU FSB (MHz)	800	533/667	800	–
Max. Memory	1 GB DDR2 Onboard	2 GB DDR2 (1x SO-DIMM)	2 GB DDR3 (1x SO-DIMM)	4GB DDR3 (1x SO-DIMM)
VGA Interface	Intel Atom™ E600 series integrated graphic engine, support video decode (MPEG2, MPEG4, 264, VC1, WMV9)/ encode (MPEG4, H.264)	Intel® GMA950	Intel® D525 Integrated Graphic Engine	Intel® Atom™ D2700 integrated Graphic Engine
LCD Interface (LVDS LCD)	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Nverter Power)
DVI/ HDMI	N/A	N/A	N/A	1/0
Ethernet (10/ 100)	N/A	N/A	N/A	N/A
Ethernet (10/ 100/ 1000)	1x Intel® 82574L 1x Realtek 8211CL	2x Realtek 8111C-GR	2x Intel® 82574L	2x Intel® 82574L
Wake on LAN	Yes	Yes	Yes	Yes
Audio	Realtek ALC888 CODEC	Realtek ALC888 CODEC	Realtek ALC888 CODEC	Realtek ALC886 CODEC
CF	N/A	1	1	N/A
IDE Interface	N/A	N/A	N/A	N/A
Mini-PCIe	N/A	N/A	N/A	N/A
SATA	2	1	2	2
USB 2.0	6	6	6	6
Serial Port	3	3	4	4
RS422/485 Support	Yes	Yes	Yes	Yes
Parallel Port	N/A	1	N/A	N/A
Power Supply	AT/ATX	AT/ATX	AT/ATX	AT/ATX
5VSB Input	N/A	N/A	N/A	N/A
Expansion	1x Mini-PCIe	1x Mini-PCIe	1x Mini-PCIe 1x PCI-104 Slot	1x Mini-PCIe, 1x PCI-014
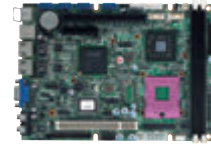
EBC 354	EBC 354DL	EBC 540	EBC 545	EBC 550
	Coming Soon			
146 x 105 mm	106 x 105 mm	203 x146 mm	203 x146 mm	203 x146 mm
Intel® Atom™ D2550	Intel® Atom™ D2550	Intel® Atom™ N270	Intel® Core™ 2 Duo Celeron® M	Intel® Core™ 2 Duo Celeron® M
Intel® NM10 Express chipset	Intel® NM10/ 2.1W	Intel® 945GSE ICH7-M	Intel® GM45 ICH9-M	Intel® GM45 ICH9-M
–	–	533	667/800/1066	667/800/1066
4GB DDR3 (1x SO-DIMM)	4GB DDR3 (1x SO-DIMM)	2 GB DDR2 (1x DIMM)	8 GB DDR3 (2x DIMM)	8 GB DDR3 (2x DIMM)
Intel® Atom™ D2700 Integrated Graphic Engine	Intel® D2550 Integrated Graphics	Intel® 945GME GMCH Integrated	Intel® 945GME GMCH Integrated	Intel® 945GME GMCH Integrated
Yes (1 CCFL for Inverter Power)	N/A	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Inverter Power)
1/1	0 / 0	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
2x Intel® 82574L	2x Intel®82574L	2x Realtek 8111C-GR	2x Intel® 82574L	2x Intel® 82574L
Yes	Yes	Yes	Yes	Yes
Realtek ALC886 CODEC	Realtek ALC886 CODEC	Realtek ALC888 CODEC	Realtek ALC888 CODEC	Realtek ALC888 CODEC
N/A	N/A	1	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	Yes	N/A	N/A	N/A
2	6x SATA 2.0	2	2	4
6	10	6	6	6
4	4	6	4	4
Yes	Yes	Yes	Yes	No
N/A	No	1	1	1
AT/ATX	AT/ATX	AT/ATX	AT/ATX	AT/ATX
N/A	YES	Yes	Yes	Yes
2x Mini-PCIe	2x mPCIe lots (1x for Wi-Fi/ half 1x for 3G/ SIM/ Full-size)	1x PCI Slot 1x PCI-104 Slot	1x PCI Slot 1x PC/104+ Slot	1x PCIe x16 Slot 1x PCIe x4 Slot 1x PCI Slot

EmbeddedPro

Model	NEX 604	NEX 605	NEX 607
PCB size(Lx W)	170 x 170 mm	170 x 170 mm	170 x 170 mm
Processors	Intel® Atom™ D2550	Intel® Atom™ D2550	Intel® 2nd. Generation Core™ i7/i5/i3, Celeron® Socket rPGA 988
CPU/ Speed Cores/ Cache/ TDP	D2550/ 1.86GHz 2C/ 1MB/ 10W	D2550/ 1.86GHz 2C/ 1MB/ 10W	i7-2710QE/4x 2.10GHz/45W i5-2510E/ 2x 2.5GHz/35W i3-2330E/ 2x 2.2GHz/35W Celeron® B810/ 2x 1.6G/35W
Chipset	Intel® NM10/ 2.1W	Intel® ICH10R/ 4.5W	Intel® QM67 PCH/ 3.9W
Max.Memory	4GB DDR3 (2x SO-DIMM)	4GB DDR3 (2x SO-DIMM)	8GB DDR3 (2x SO-DIMM)
Grapgics Engine	Intel®	Intel® D2550 Integrated Graphics	Intel® HD Graphics 3000
VGA Interface	Yes	Yes	Yes
LCD Interface (TTL LCD)	N/A	N/A	N/A
LCD Interface (LVDS LCD)	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Inverter Power)	Yes (1 CCFL for Inverter Power)
DVI/HDMI	0/1	0/1	1/1
	N/A	N/A	N/A
Ethernet (10/100/1000)	2x Realtek RTL8111E	2x Intel® 82574L	1x Intel®82574L, 1x Intel®82579LM PHY
Wake on Lan	Yes	Yes	Yes
Audio	Realtek ALC886 CODEC	Realtek ALC886 CODEC	Realtek ALC886 CODEC
CF	N/A	N/A	N/A
IDE Interface	N/A	N/A	N/A
Mini-PCIe	2	1	1
SATA 2.0/3.0	2	4x SATA 2.0, 2x e-SATA	4x SATA 2.0
USB 2.0/3.0	6/0	6/0	10/0
Serial Port	4	4	4
RS422/485 Support	N/A	N/A	Yes
Parallel Port	Yes	Yes	N/A
Power Input / Mode	AT/ATX	AT/ATX	AT/ATX
5VSB Input	N/A	Yes	N/A
Expansion	2x Mini-PCIe 1x PCI (v2.3)	1x Mini-PCIe 1x PCIe x4	1x Mini-PCIe 1x PCIe x4
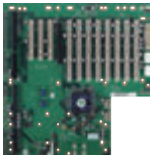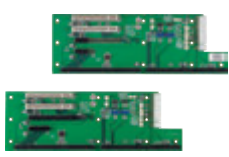
NEX 608	NEX 609	NEX 611	NEX 880
170 x 170mm	170 x 170mm	170 x 170mm	244 x 244mm
Intel® Atom™ D525	Intel® 3rd/2nd Generation Core™ i7/i5/i3, Celeron® Socket rPGA 988	AMD Embedded G-Series APU T48E (option T56N/ T40E, 413 Pins uBGA)	2nd Generation Intel® Core™ LGA1155 processors family
D525/ 1.8GHz 2C/ 1MB/ 13W	i7-3610QE/ 4x 2.3GHz/ 45W i5-3610ME/ 2x 2.7GHz/ 35W Celeron® B810/ 2x 1.6G/ 35W	T48E: 2x 1.4GHz/ 512M/ 18W T56N: 2x 1.65GHz/ 512M/ 18W T40E: 2x 1GHz/ 512M/ 6.4W	i7-2600/ 4x 3.4GHz/ 95W i5-2400/ 4x 3.1GHz/ 95W i3-2120/ 2x 3.3GHz/ 65W
Intel® ICH8M/ 4.5W	Intel® QM77 PCH/ 3.9W	AMD A55E/ 2.7~5.9W	Intel® Q67/ 6.1W
2GB DDR3 (1x SO-DIMM)	16GB DDR3 (2x SO-DIMM)	8GB DDR3 (2x SO-DIMM)	32GB DDR3 (4x non-ECC)
Intel® D525 integrated Graphics	Intel® HD Graphics 4000	AMD Radeon™ HD 6250/ 280MHz	CPU integrated HD Graphics
Yes	Yes	Yes	Yes
N/A	N/A	N/A	N/A
Yes (1 CCFL for Inverter Power)	Dual 48-bit LVDS (2x CCFL for Inverter Power)	Optional (DF-13-40P) Shared with 2nd HDMI	N/A
0 / 0	DVI-I/ HDMI	0/2	1/0
N/A	N/A	N/A	N/A
3x Realtek RTL8111E	1x Intel®82574L, 1x Intel®82579LM PHY	2x Realtek RTL8111E	1x Intel®82583V, 1x Intel®82579LM PHY
Yes	Yes	Yes	Yes
Realtek ALC888 CODEC	Realtek ALC888 CODEC	Realtek ALC662 CODEC	Realtek ALC886 CODEC
1	N/A	N/A	N/A
1x 44pins IDE UDMA 100/66/33	N/A	N/A	N/A
1	1	N/A	N/A
2x SATA 2.0	4x SATA 3.0	4x SATA3.0	6x SATA 2.0
10/0	6/4	14x USB 2.0	10
6	6	6	2
Yes	Yes	Yes	No
N/A	N/A	N/A	No
AT/ATX	AT/ATX	AT/ ATX	ATX
N/A	N/A	N/A	Yes
1x Mini-PCIe 1x PCI (v2.3)	1x PCIex16 1x Mini-PCIe 2x PCIe x1(by Golden Finger)	1x Mini-PCIe (half) 1x PCIe x4	1x PCIe x8 (PCIe x16 Slot) 1x PCIe x4 Slot (Q67) 1x PCIe x1 (PCIe x4 Sslot) 1x PCIe x1

EmbeddedPro

Model	NEX 883	NEX 890	NEX 980
PCB size(Lx W)	244 x 244 mm	244 x 244 mm	305 x 244 mm
Processors	3rd/ 2nd Generation Intel® Core™ LGA1155 processors family	2nd Generation Intel® Core™ workstation processors	3rd/ 2nd Generation Intel® Core™ LGA1155 processors family
CPU/ Speed Cores/ Cache/ TDP	i7-3770/ 4x 3.4GHz/ 77W i5-3550S/4x 3.0Ghz/ 65W i3-3220/ 2x 3.3GHz/ 65W	E3-1225/ 4x 3.10GHz/ 95W E3-1275/ 4x 3.40GHz/ 95W i3-2120/ 2x 3.3GHz/ 65W	i7-3770/ 4x 3.4GHz/ 77W i5-3550S/4x 3.0Ghz/ 65W i3-3220/ 2x 3.3GHz/ 65W
Chipset	Intel® Q77 PCH/ 6.7W	Intel® C206 Chipset	Intel® Q77 PCH/ 6.7W
Max. Memory	32GB DDR3 (4x non-ECC)	32GB DDR3 (4x ECC)	32GB DDR3 (4x non-ECC)
Grapgics Engine	Intel® HD Graphics 4000	CPU integrated HD Graphics	Intel® HD Graphics 4000
VGA Interface	Yes (Shared with DVI-I)	Yes	Yes
LCD Interface (TTL LCD)	N/A	N/A	N/A
LCD Interface (LVDS LCD)	Dual Channel 24bits by DF13-30P (Shared with DP)	N/A	N/A
DVI/HDMI	1 / 1	1/0	N/A
Ethernet (10/100)	N/A	N/A	N/A
Ethernet (10/100/1000)	1x Intel® 82579LM/V PHY, 1x Intel® 82583V	1x Intel® 82583V, 1x Intel® 82579LM PHY	1x Intel® 82579LM/V PHY, 1x Intel® 82583V
Wake on LAN	Yes	Yes	Yes
Audio	MIC-in/ Lin-in/ Line-out	Realtek ALC886 CODEC	MIC-in/ Lin-in/ Line-out
CF	N/A	N/A	N/A
IDE Interface	N/A	N/A	N/A
Mini-PCIe	1	N/A	1
SATA 2.0/3.0	2x SATA2.0/ 2x SATA3.0	6	2x SATA 2.0 /2x SATA 3.0
USB 2.0/3.0	8/4	10x USB 2.0	8 / 4
Serial Port	6	2	6
RS422/485 Support	Yes	No	Yes
Parallel Port	1x LPT by 26x pins Header	No	1x LPT by 26x pins Header
Power Input/ Mode	AT/ATX	ATX	AT/ATX
5VSB Input	N/A	Yes	N/A
Expansion	1x PCIe x16 (Gen. 3.0/ Ivy) 1x PCIe x4 2x PCI (v2.3)	1x PCIe x8 (PCIe x16 Slot) 1x PCIe x8 Slot (Q67) 2x PCIe x4 Slots	1x PCIe x16 (Gen. 3.0/ Ivy) 1x PCIe x4 4x PCI (v2.3) 1x PCIe x1
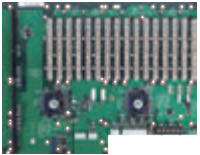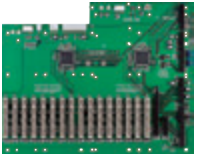
PICMG Single Board Computer

Model			
	PEAK 872VL2	**PEAK 876VL2**	**PEAK 877VL2**
Form Factor	Full-size PICMG 1.3	Full-size PICMG 1.3	Full-size PICMG 1.3
CPU Type	Intel® LGA775 Core™ 2 Duo/ Pentium® 4/ Pentium® D/ Celeron® D Processors with 533/800/1066/1333 MHz	Intel® LGA1156/ Core™ i3/i5/i7/Pentium®	Intel® LGA1156, Core™ i7/i5/i3/Pentium® Intel® Quad Core™ i5/ i7
Chipset	Intel® 82Q45 Intel® ICH 10DO	Intel® Q57 Express Chipset PCH	Intel® Q57 Express Chipset PCH
CPU FSB (MHz)	800/1066/1333	1066/1333	1066/1333
Expansive	PCI, PCI Express	PCI, PCI Express	PCI, PCI Express
Max. Memory	4 GB DDR3, Dual Channel (2x DIMM)	8 GB DDR3, Dual Channel (2x DIMM)	8 GB DDR3, Dual Channel (2x DIMM)
VGA	Intel® Q45 GMCH Integrated Intel® GMA 4500	Intel® Core™ i5/i3/ Pentium® Processors Integrated Graphics	Integrated Graphic Engine by XGI Volari Z11 GPU with DDR2 SDRAM through PCIe 1x Interface
Ethernet (10/100)	0	0	0
Ethernet (10/100/100)	2x Intel® 82574L	1x Intel® 82578DM PHY for AMT 6.0 1x Intel® 82574L PCI Express Gigabit Ethernet	1x Intel® 82578DMPHY for AMT 6.0 1x Intel® 82574LPCI Express Gigabit Ethernet
SATA	6	6	6
IDE Interface	N/A	N/A	N/A
USB	8 ports (USB 2.0)	8 ports (USB 2.0)	8 ports (USB 2.0)
Serial Ports	2	2	2
RS422/ 485 support	N/A	N/A	N/A

Model PICMG 1.3				
	NBP 14111	**NBP 14210**	**NBP 14570-BX**	**NBP 0522/A**
PCI Bridge	1 x Intel® QG6700PX	1x Pericom 8150	1x Pericom 8152	N/A
PCI	3	10	7	2
PICMG	1	1	1	1
PCIe x1	0	0	4	2/0
PCIe x4	0	1	0	0/1
PCIe x8	0	0	0	0
PCIe x16	1	1	1	0/1
PCI-X	8	0	0	0
SATA	2	2	2	2
USB 2.0	4	2	4	2

PICMG Single Board Computer

Model			
	PEAK 8920VL2	**PEAK 765VL2**	**PEAK 777VL2**
Form Factor	Full-Size PICMG 1.3	Full-Size PICMG 1.0	Full-Size PICMG 1.0
CPU Type	Dual Core Intel® Xeon® Processor 5000 Series and Quad Core Intel® Xeon® Processor 5300 Series(80W)	Intel® LGA775 Core™ 2 Duo/ Pentium® 4/ Pentium® D/ Celeron® D/ Celeron® 440 Processors with 533/800/1066 MHz	Intel® LGA775 Core™ 2 Duo/ Pentium® 4®/ Pentium® D/ Celeron® D Processors with 533/800/1066/1333 MHz
Chipset	Intel® 5000P Intel® 6321ESB	Intel® Q965 Intel®ICH8	Intel® G41 Intel® ICH7
CPU FSB (MHz)	1066/1333	533/800/1066	800/1066/1333
Expansive	PCI, PCI Express	PCI/ ISA	(32-bit/33 HMz) PCI/ ISA
Max. Memory	8 GB DDR2 FB-DIMM Four Channel (4x DIMM)	4 GB DDR2 Dual Channel (2x DIMM)	4 GB DDR3 (2x DIMM)
VGA	ATI ES1000PCI Graphic Controller	Intel® Q965 GMCH integrated Intel® GMA 300	Intergated
Ethernet(10/ 100)	0	0	0
Ethernet(10/ 100/ 100)	2x Intel® 82573L	2x Intel® 82573L	2x Intel® 82574L
SATA	2	4	4
IDE Interface	1x 40 pin IDE	0	1x 40 pin IDE
USB	8 ports (USB 2.0)	8 ports (USB 2.0)	8 ports (USB 2.0)
Serial Ports	2	2	2
RS422/ 485 support	N/A	N/A	N/A

Model PICMG 1.3				
	NBP 20016	**NBP 202A6**	**NBP 2U040**	**NBP 2U220**
PCI Bridge	1x Intel® QG6700PXH	2x Pericom8150	N/A	N/A
PCI	0	20	4	2
PICMG	1	1	1	1
PCIe x1	0	1	0	0
PCIe x4	0	0	0	1
PCIe x8	0	0	0	0
PCIe x16	0	1	0	1
PCI-X	16	0	0	0
SATA	2	2	2	2
USB 2.0	4	4	4	2

Model PICMG 1.3	PBOX 100	PBOX 362	PBOX 240P-872	PBOX 440P-872	PBOX 460P-8920
Form Factor	Compact box	Desktop	2U	4U	4U
Dimension	300 x 194 x 51 mm	239 x 200 x 126 mm	483 x 450 x 88 mm	483 x 450 x 177 mm	483 x 671 x 177 mm
CPU	Intel® Atom™ N270 1.6GHz	Intel® Celeron® 575 Core™ 2 Duo T9400 Core™ 2 Quad Q9100	Intel® Pentium® 4 Celeron® D Core™ 2 Due Core™2 Quad	Intel® Pentium® 4 Celeron® D Core™ 2 Due Core™ 2 Quad	Intel® Quad Core Dual core Dual Xeon®
Chipset	Intel® 945GSE ICH7M	Intel® GM45 ICH9M	Intel® Q45 ICH10DO	Intel® Q45 ICH10DO	Intel® 5000Pm 6321ESB
RAM	Up to 2GB DDR2	Up to 4GB DDR3	Up to 4GB DDR3	Up to 4GB DDR3	Up to 8GB DDR2
RAM Type	DDR2	DDR3	DDR3	DDR3	FB-DIMM
Gbe (10/100/100)	1	2	2	2	2
COM	1	4	2 (Internal)	2 (Internal)	2 (Internal)
PS/2 KB	N/A	1 (Y-cable)	1 (Y-cable)	1 (Y-cable)	1 (Y-cable)
PS/2 MS	N/A	1 (Y-cable)	1 (Y-cable)	1 (Y-cable)	1 (Y-cable)
VGA	1	1	1	1	1
DVI	1	N/A	N/A	N/A	N/A
USB	4	2 (Front), 2 (Rear)	8 (Internal)	8 (Internal)	6 (Internal)
Line-in	N/A	N/A	N/A	N/A	N/A
Line-out	1	1	1	1	N/A
MIC-in	1	1	1	1	N/A
SATA	2 Ports	4 Ports	6 Ports	6 Ports	2 Ports
Parallel	N/A	N/A	1 (Internal)	1 (Internal)	1 (Internal)
FDD Port	N/A	N/A	1 (Internal)	1 (Internal)	N/A
CF Socket	N/A	1	1	1	N/A
HDD Drive	2.5" SATA	2.5" SATA	5.25" HDD x 1	5.25" HDD x 3	5.25" HDD x 3
Mini-PCIe	1	1	N/A	N/A	N/A
PCI	1	1	2/4	7/ 10/ 0	N/A
PCI-X	N/A	N/A	N/A	0/ 0/ 16	16
PCIe x4	N/A	N/A	1/0	4/ 1/ 0	N/A
PCIe x16	N/A	N/A	1/0	1/ 1/ 0	N/A
Power	60W Power Adaptor +12VDC/5A	270W	400W	400W	500W
Operating Temp.	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C
Storage Temp.	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
Operating Humidity	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%

COMexp

Model					
	ICES 170	**ICES 253**	**ICES 254**	**ICES 267**	**ICES 267S**
Form Factor	ETX	COM Express	COM Express	COM Express	COM Express
Dimension (L x W)	114 x 95 mm	95 x 95 mm	95 x 95 mm	125 x 95mm	125 x 95 mm
Type Pin-outs	4x (FX8-100S)	Type 2	Type 2	Type 2	Type 2
Processors	Intel® Atom™	Intel® Atom™	Intel® Atom™	Intel® 2nd Generation Core™ i7/ i5/ i3	Intel® 2nd Generation Core™ i7/ i5/ i3
CPU/ Speed Cores/ Cache/ TDP	N270/ 1.6GHz 1C/ 512KB/ 2.5W	D525/ 1.8GHz 2C/ 1MB/ 13W	D2550/ 1.86GHz 2C/ 1MB/ 10W	i5-2510E/ 2x 2.5GHz i3-2330E/ 2x 2.2GHz Celeron® B810/ 2x 1.6G	i7-2715QE/ 4x 2.1GHz i7-2610UE/ 2x 1.5GHz i5-2515E/ 2x 2.5GHz Celeron® B810E/ 2x 1.6GHz Celeron® 847E/ 2x 1.1GHz
Chipset	945GSE/ICH7M	ICH8M	ICH10R	QM67	QM67
Memory Type	DDR/ SO-DIMM	DDR2/ SO-DIMM	DDR3/ SO-DIMM	DDR3/ SO-DIMM	DDR3/ SO-DIMM
SO-DIMM Slot	1	1	1	1	1
Max. Capacity/ Speed	2GB, 400/533MHz	2GB, 667/800MHz	4GB, 800/1066MHz	8GB, 1066/1333MHz	8GB, 1066/1333MHz
VGA, Resolution	up to 1600 x 1200	up to 2048 x 1536	up to 1920 x 1200 (N2800/ 1920 x 1080)	up to 2048 x 1536	up to 2048 x 1536
	1ch-/2ch. 18-bit	1x 18-bit 1366 x 768	1x ch. 18-/24-bit LVDS (1440x900/ 1366x768)	2x ch. 18-/24-bit LVDS (up to 1920 x 1200)	2x ch. 18-/24-bit LVDS (up to 1920 x 1200)
Digital Display I/F	N/A	N/A	Option EBK-A2HDMI	N/A	PEG/ SDVO
SDVO	1	N/A	Option PEG/ SDVO	N/A	by EBK-A2HDMI
Networking	RTL8111C/ FE	Intel® 82574L/ GbE	Intel® 82574L/ GbE	Intel® 82579LM/ GbE	Intel® 82579LM/ GbE
ISA	1	N/A	N/A	N/A	N/A
PCI	4	4	4	4	4
PCI Express	N/A	5x PCIe x1	5x PCIe x1	5x PCIe x1	5x PCIe x1
PCIe x16	N/A	N/A	Option PEG/ SVDO	1x PCIe x16	N/A
USB2.0/3.0	4/0	8/0	8/0	8/0	8/0
IDE/CF	1/ 0	1 or 1	1 or 1	1 or 1	1 or 1
SATA 2.0/ 3.0	2/ 0	3/ 0	4/ 0	1 or 1	1 or 1
Mini-SATA	N/A	SATA 2.0/ ICEB 8050C	SATA2.0/ ICEB 8050C	SATA2.0/ ICEB 8050C	SATA2.0/ ICEB 8050C
CFast	N/A	SATA 2.0/ ICEB 8050C	SATA2.0/ ICEB 8050C	SATA2.0/ ICEB 8050C	SATA2.0/ ICEB 8050C
Hardware Monitor	N/A	W83792G	W83792G	NCT 7802Y	NCT 7802Y
Super I/O	W83627	LPC to ICEB 8050C	LPC to ICEB 8050C	LPC to ICEB 8050C	LPC to ICEB 8050C
LPC	1	1	1	1	1
SM/I2C Bus	1 or 1	1 or 1	1 or 1	1 or 1	1 or 1
Serial Ports	2	2x COM/ ICEB 8050C	2x COM/ ICEB 8050C	2x COM/ ICEB 8050C	2x COM/ ICEB 8050C
SPI	0	1	1	1	1
Audio	HD, MIC-in/ Line-in/Lin-Out	SPDIF/ ICEB 8050C	SPDIF/ ICEB 8050C	SPDIF/ ICEB 8050C	SPDIF/ ICEB 8050C
LPT/FDD	1 or 1	N/A	N/A	N/A	N/A
Power Requirement	+5V and +5VSB(ATX)	+12V, +5VSB, +3.3V (RTC)	+12V, +5VSB, +3.3V (RTC)	+12V, +5VSB, +3.3V (RTC)	+12V, +5VSB, +3.3V (RTC)
Power Mode	AT/ATX	AT/ATX	AT/ATX	AT/ATX	AT/ATX
Operating Temp.	0℃ to 60℃	-15℃ to 60℃	-15℃ to 60℃	-15℃ to 60℃	-15℃ to 60℃
Conformal Coating	by requested	by requested	by requested	by requested	by requested
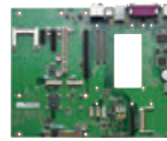
ICE 268	ICES 667	ICES 668	ICEB 8050C	ICEB 8060
COM Express	COM Express	COM Express	COM Express	COM Express
125 x 95 mm	125 x 95 mm	125 x 95 mm	305 x 244 mm	305 x 244 mm
Type 2	Type 6	Type 6	Type 2	Type 6
Intel® 3rd Generation Core™ i7/i5/i3, Celeron® Mobile	Intel® 3rd Generation Core™ i7/i5/i3, Celeron® Mobile	Intel® 3rd Generation Core™ i7/i5/i3	N/A	N/A
i7-3610QE/ 4x 2.3GHz i5-3610ME/ 2x 2.7GHz Celeron® B810/ 2x 1.6G	i7-3610QE/ 4x 2.3GHz i5-3610ME/ 2x 2.7GHz Celeron® B810/ 2x 1.6G	i7-3615QE/ 4x 2.3GHz i7-3555LE/ 2x 2.5GHz i7-3517UE/ 2x 1.7GHz i5-3610ME/ 2x 2.7GHz i3-3217UE/ 2x 1.6GHz	N/A	N/A
QM77/ HM76	QM77/ HM76	QM77	N/A	N/A
DDR3/ SO-DIMM	DDR3/ SO-DIMM	ECC-DDR3/ SO-DIMM	N/A	N/A
2	2	2	N/A	N/A
16GB, 1333/1600MHz	16GB, 1333/1600MHz	16GB, 1333/1600MHz	N/A	N/A
up to 2048 x 1536	up to 2048 x 1536	up to 2048 x 1536	D-SUB	D-SUB
2x ch. 18-/24-bit LVDS (up to 1920 x 1200)	2x ch. 18-/24-bit LVDS (up to 1920 x 1200)	2x ch. 18-/24-bit LVDS (up to 1920 x 1200)	2x DF13-20P	2x DF13-20P
Option 1x DDI#1 (B)	3x DDI (DP/ HDMI/ DVI)	3x DDI (DP/ HDMI/ DVI)	N/A	2x DP/ HDMI
Option EBK-A2HDMI	Only DDI#1 (B)	Only DDI#1 (B)	Option EBK-A2HDMI	Option EBK-A2HDMI
Intel® 82579LM/ GbE	Intel® 82579LM/ GbE	Intel® 82579LM/ GbE	1x GbE/ RJ45	2x GbE/ 2x RJ45
N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	4	N/A
5x PCIe x1	7x PCIe x1	7x PCIe x1	5x PCIe x1	7x PCIe x1
1x PCIe x16 (Gen. 3.0)	1x PCIe x16 (Gen. 3.0)	1x PCIe x16 (Gen. 3.0)	1x PCIe x16 (Gen. 3.0)	1x PCIe x16 (Gen. 3.0)
8/ 0	8/ 4	8/ 4	8/ 0	8/ 4
1/ 1	N/A	N/A	1/ 1	N/A
4/ 0	2/ 2	2/ 2	2/ 0	2/ 2
SATA2.0/ ICEB 8050C	SATA2.0/ ICEB 8060	SATA2.0/ ICEB 8060	1	1
SATA2.0/ ICEB 8050C	SATA2.0/ ICEB 8060	SATA2.0/ ICEB 8050C	1	1
NCT 7802Y	NCT 7802Y	NCT 7802Y	N/A	N/A
LPC to ICEB 8050C	LPC to ICEB 8060	F81216	W82627DHG-PT	iTE8783
1	1	1	1	1
1 or 1	1 or 1	1 or 1	1 or 1	1 or 1
2x COM/ ICEB 8050C	6x COM/ ICEB 8060	Optional 2x COM + 6x COM/ ICEB 8060	2x COM	6x COM (incl. 1x RS232/422/485)
1	1	1	1	1
SPDIF/ ICEB8050C	SPDIF/ ICEB8060	SPDIF/ ICEB8060	HD Audio, SPDIF	HD Audio, SPDIF
N/A	N/A	N/A	N/A	N/A
+12V, +5VSB, +3.3V (RTC)	+12V, +5VSB, +3.3V (RTC)	+12V, +5VSB, +3.3V (RTC)	ATX	ATX
AT/ATX	AT/ATX	AT/ATX	AT/ATX	AT/ATX
-15°C to 60°C	-15°C to 60°C	-15°C to 60°C	-15°C to 60°C	-15°C to 60°C
by requested	by requested	by requested	by requested	by requested

nTUF 600

Main Features

- Onboard Intel® Atom™ Dual Core D525 processor, 1.8 GHz
- 4x USB ports
- Dual M12 connector for Intel® 82574L GbE LAN ports
- 1x VGA display output
- 2x RS232
- 2x PS/2 for keyboard and mouse

- 1x external CFast socket
- 1x Mini-PCIe with two Antenna Holes
- Support +24V DC power input
- Dual cold swappable 2.5" SSD tray
- Supports ATX Power Mode, WoL, LAN teaming and PXE function

Product Overview

nTUF Series stands for NEXCOM Tough Computer mainly applied to ECDIS, Radar and Positioning system applications in Marine Bridge and Control Room. The nTUF 600 Marine Fanless Computer is based on Intel® Atom™ Dual Core D525 platform providing optimized graphic and computing performance with rich interfaces for Marine peripherals connection. The nTUF 600 features with 4x USB2.0, 2x M12 GbE LAN port, 1x VGA, 2x DB9 RS232, 2x PS/2, 1x CFast socket and two cold swappable 2.5" SSD trays on the front panel. In the rear side, the nTUF 600 offers 4x Digital Input, 4x Digital Output and 4x NMEA ports with 2KV optical protection. The 1.5KV isolation protection design on nTUF 600 enhance the system operation reliability in marinetime application.

The nTUF 600 and nTUF 610 have been certified by DNV, compliant to DNV 2.4, IACS-E10 and IEC60945 standards. With DNV certification, nTUF system can be easily applied to integrated bridge system, vessel automation system, ECDIS application for all vessels like bulk carriers, workboat, cruise, sea patrol..etc.

Specifications

CPU Support
- Onboard Intel® Atom™ Dual Core processor D525,
  (1M cache 1.8 GHz),
- Intel® ICH8M PCHs chipset

Main Memory
- 1x DDR2 SO-DIMM sockets, support up to 2 GB DDR2 667/ 800 SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX power on/off switch
- HDD access/ power status LEDs
- LAN1 & LAN2 status LEDs
- 4x USB2.0 ports
- 2x M12 GbE LAN ports
  Intel® 82574L GbE LAN controller on board with1.5KV surge protection
- 1x VGA output
- 1x DVI-D & 1x HDMI (only work when optional MXM 3.0 graphic module is installed)
- Audio jack (speaker-out & Mic-in & Line-in)
- 2x antenna holes

- 2x DB9, RS232
- 2x PS/2 for keyboard & mouse
- 2x cold swappable 2.5" HDD tray
- 1x external screwed type CFast socket
- 3-pin +24VDC input
- 1x external fuse;10A

I/O Interface-Rear
- 4x Digital Input: 6-pin screw terminals
  Voltage level: 5V, TTL-level
- 4x Digital Output: 8-pin screw terminals
  +36VDC with 100mA relay
- 4x NMEA interfaces
  Signal: TX/ RX signals
  2KV optical isolation protection

Device
- 2x 2.5" SSD driver bay
- 1x external CFast socket
- 1 x Mini-PCIe socket
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

Dimension Drawing

Power Requirements
- DC input range: +16V to 30VDC input
- Nominal DC input: +24VDC input with 1.5KV isolation protection
- Pin definition: Positive, Negative and Chassis Ground

Dimensions
- 294mm (W) x 200mm (D) x 100mm (H) (11.6"x 7.9"x 3.94")

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -25°C to 55°C
  (Follow Protected b device type in IEC60945, E10 and DNV Standards)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)

Certifications
- IEC60945 4th
- IACS E10
- DNV 2.4

Ordering Information

Barebone

- **nTUF 600 (P/N: 10M00060000X2)**
  Intel® Atom™ Dual Core D525 Marine Fanless Computer

nTUF 610

Intel® 2nd Generation Core™ i7-2610UE Processer, 1.5GHz

Marine Computer for ECDIS Application in Bridge Control

Main Features

- Onboard Intel® 2nd Generation Core™ i7-2610UE, 1.5 Ghz
- 4x USB ports
- Dual M12 connector for Intel® 82574L GbE LAN ports
- 1x VGA display output
- 2x RS232
- 2x PS/2 for keyboard and mouse

- 1x external CFast socket
- 1x Mini-PCIe with two antenna holes
- Support +24VDC power input
- Dual Cold Swappable 2.5" SSD tray
- Supports ATX power mode, WoL, LAN teaming and PXE function

Product Overview

nTUF Series stands for NEXCOM Tough Computer mainly applied to ECDIS, Radar and Positioning system applications in Marine Bridge and Control Room. The nTUF 610 Marine Fanless Computer is based on Intel® 2nd Generation Core™ i7 platform providing the highest graphic and computing performance with versatile interfaces for Marine peripherals connection. The nTUF 610 features with 4x USB2.0, 2x M12 GbE LAN port, 1x VGA, 1x DVI-D, 2x DB9 RS232, 2x PS/2, 1x CFast socket and two cold swappable 2.5" SSD trays on the front panel. In the rear side, the nTUF 600 offers 4x Digital Input, 4x Digital Output and 4x NMEA ports with 2KV optical isolation protection. The isolated +24VDC input in nTUF 600 is designed for Marine applications followed by IEC60945 regulations.

Powered by Intel® Core™ i7 platform, the superior computing and graphic performance enable the nTUF 610 an ideal solution for Marine ECDIS Navigation applications. The nTUF 600 and nTUF 610 have been certified by DNV, compliant to DNV 2.4, IACS-E10 and IEC60945 standards. With DNV certification, nTUF system can be easily applied to integrated bridge system, vessel automation system, ECDIS application for all vessels like bulk carriers, workboat, cruise, sea patrol..etc.

Specifications

CPU Support
- Onboard Intel® 2nd Generation Core™ i7-2610UE (4M Cache 1.5 Ghz)
- Intel® QM67 PCH

Main Memory
- 1x DDR3 SO-DIMM sockets, support up to 2 GB DDR3 1066/ 1333 SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX power on/off switch
- HDD access/power status LEDs
- LAN1 & LAN2 Status LEDs
- 4x USB2.0 ports
- 2x M12 GbE LAN ports
- Intel® 82574L GbE LAN controller on board
- 1.5KV ESD/ surge protection
- 1x VGA output & 1x DVI-D display output
- 1x HDMI (only work when optional MXM 3.0 graphic module is installed)
- Audio jack (speaker-out & Mic-in)

- 2x antenna holes
- 2x DB9, RS232
- 2x PS/2 for keyboard & mouse
- 2x cold swappable 2.5" HDD tray
- 1x external screwed type CFast socket
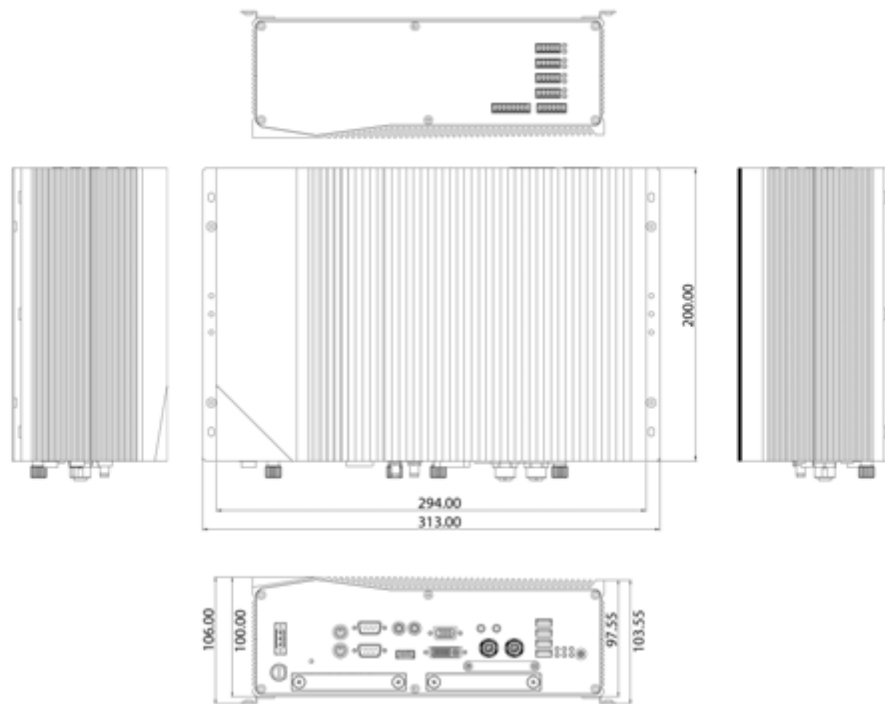- 3-pin +24VDC input
- 1x external fuse

I/O Interface-Rear
- 4x Digital Input: 6-pin screw terminals
  Voltage level: 5V, TTL-level digital input
- 4x Digital Output: 8-pin screw terminals
  +36VDC with 100mA relay
- 4x NMEA interfaces
  Signal: TX/RX signals
  2KV optical isolation protection

NEXCOM

Dimension Drawing
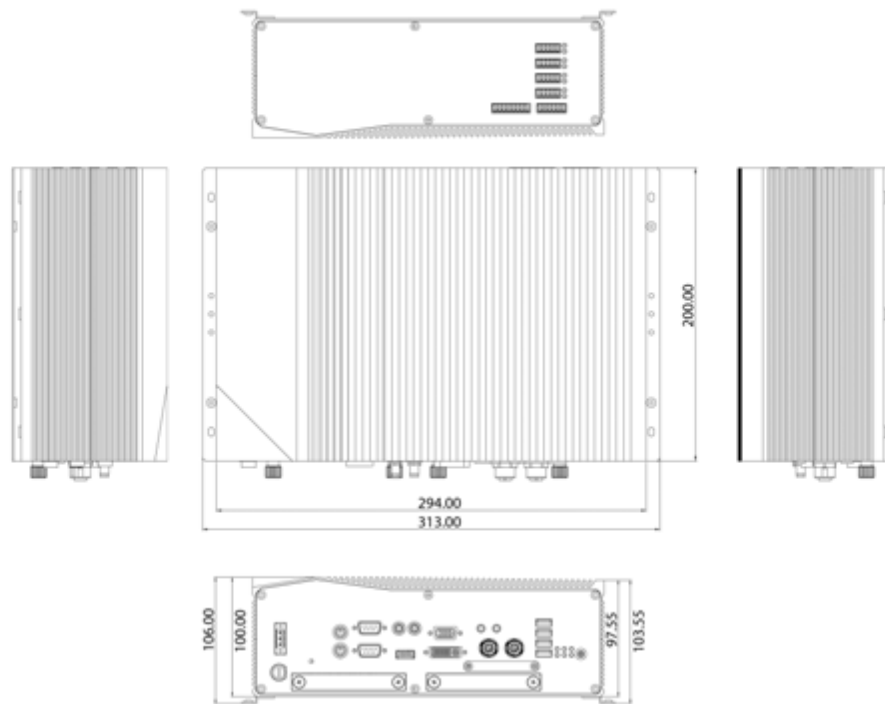
Device
- 2x 2.5" SSD driver bay
- 1x external CFast socket
- 1x Mini-PCIe socket
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

Power Requirements
- DC input range: +16V to 30VDC input
- Nominal DC input: +24VDC input with 1.5KV isolation protection
- Pin definition: Positive, Negative and Chassis Ground

Dimensions
- 294mm (W) x 200mm (D) x 100mm (H) (11.6"x 7.9"x 3.94")

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -25°C to 55°C
  (Follow Protected b device type in IEC60945, E10 and DNV Standards)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)

Certifications
- IEC60945 4th
- IACS E10
- DNV 2.4

Ordering Information

Barebone

- **nTUF 610 (P/N: 10M00061000X2)**
  Intel® 2nd generation Core™ i7-2610UE 1.5GHz Marine Fanless Computer

NISE 60

Main Features

- ARM® Cortex™ A8 TI 3352M 720MHz CPU
- OnBoard 512MB DDR3 RAM
- 1x GbE LAN ports, 2x RS232/422/485, 2x USB

- 1x VGA, 1x SD socket (support up to 2GB)
- 5x Digital Input, 5x Digital Output
- Support +12/ +24VDC Input

Product Overview

NISE 60 feature the ARM® based Cortex™ A8 TI 3352M 720MHz CPU platform. NISE 60 series inherits low power consumption, front access I/O, fanless and DIN rail mounting design from NISE family for industrial automation applications.

NISE 60 designed with low power consumption ARM based CPU which can support the wide operating temperature as -20℃ to 70℃. The DIN rail mounting bracket can easily install the NISE 60. The front access I/O design can be easily wiring the I/O cable for NISE 60 inside the cabinet. And the built-in 5x digital input and 5x digital output can be used for onboard control I/Os.

Specifications

CPU Support
- ARM® Cortex™ A8 TI 3352M 720MHz CPU

Main Memory
- 1x 512MB/303MHz DDR3 RAM

Display Option
- 1x VGA Port

I/O Interface-Front
- 1x RJ45 for GbE LAN
- 2x USB2.0
- 1x SD socket
- Phoenix connectors for 2x RS232/422/485
- 3 pins Phoenix connector for +12/+24VDC Power input

I/O Interface-Bottom
- 1x VGA Port
- Phoenix connector for 5x digital input and 5x digital output

Storage Device
- 1x SD socket (support up to 2GB)

Power Requirements
- AT Power mode
- Support +12/ +24VDC Input

Dimensions
- 51.8mm (W) x 140mm (D) x 167mm (H)

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  - Ambient with air flow: -20℃ to 70℃
  - (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -40℃ to 85℃
- Relative humidity: 95% at 40℃
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-6
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC

Dimension Drawing

Coming Soon

Ordering Information

System

* **NISE 60 (P/N: TBD)**
  ARM® based Cortex™ A8 TI3352M 720MHz CPU DIN Rail Fanless
  System with 512MB RAM onBoard

NISE 90

Main Features

- OnBoard Intel® Atom™ E620 processor, 0.6GHz
- OnBoard DDR2 512MB memory chip
- 2x Intel® GbE LANs
- 3x USB2.0 / 1x VGA / 3x Serial Ports / 1x CAN bus

- 8CH GPI and 8CH GPO
- Support 1x 2.5" HDD Drive Bay
- Support 12V and 24VDC input

Product Overview

Equipped with Intel® Atom™ E620 0.6GHz processor and Intel® Platform Controller Hub EG20T, the NISE 90 fanless computer features low power consumption of only 15W and an abundance of I/O options to meet the requirements of factory and industrial automation control.

Featuring fanless design, the NISE 90 is able to offer optimum reliability and performance. In addition, the NISE 90 is equipped with an abundance of I/O interfaces, such as GPIO, CAN BUS, 3x COM ports, two Intel GbE LAN and DC Input (either 12V or 24VDC) that provide flexibility for various application designs.

Specifications

Main Board
- OnBoard Intel® Atom™ Tunnel Creek E620 processor, 0.6GHz 512K Cache
- OnBoard Chipset: Intel® EG20T

Main Memory
- OnBoard DDR2 512MB memory chip, unbuffered and non-ECC support

Storage Device
- 1x 2.5" SATA HDD drive bay for optional SSD or HDD
- Support optional SATA DOM, Horizontal type only

I/O Interface-Front
- 3x USB ports
- 2x RJ45 GbE LAN ports, Intel 82574L controller onBoard Support LAN teaming function
- 3x DB9 Serial ports
  COM1: Support RS232/422/485 (Selected on BIOS menu)
  COM2: Support RS232 only
  COM3: Support RS232 only

- 1x DB9 CAN Bus
  - Support CAN 2.0b protocol
  - Support both 11-bit and 26-bit identifiers
  - Support bit rates up to 1Mbps
  - Clock frequency of 40MHz

I/O Interface-Bottom
- 1x DB15 VGA port
- 1x DB15 male connector for 8CH General Purpose Input
- 1x DB15 male connector for 8CH General Purpose Output
- 3-pin DC input, support 12VDC input and 24VDC input
- 1x Power on/off switch

Supported OS
- Windows XP
- Windows Embedded Standard 2009
- Fedora 14 (Kernnel 2.6)

System Dimension
- 59mm (W) x 140mm (D) x167mm (H)

Dimension Drawing
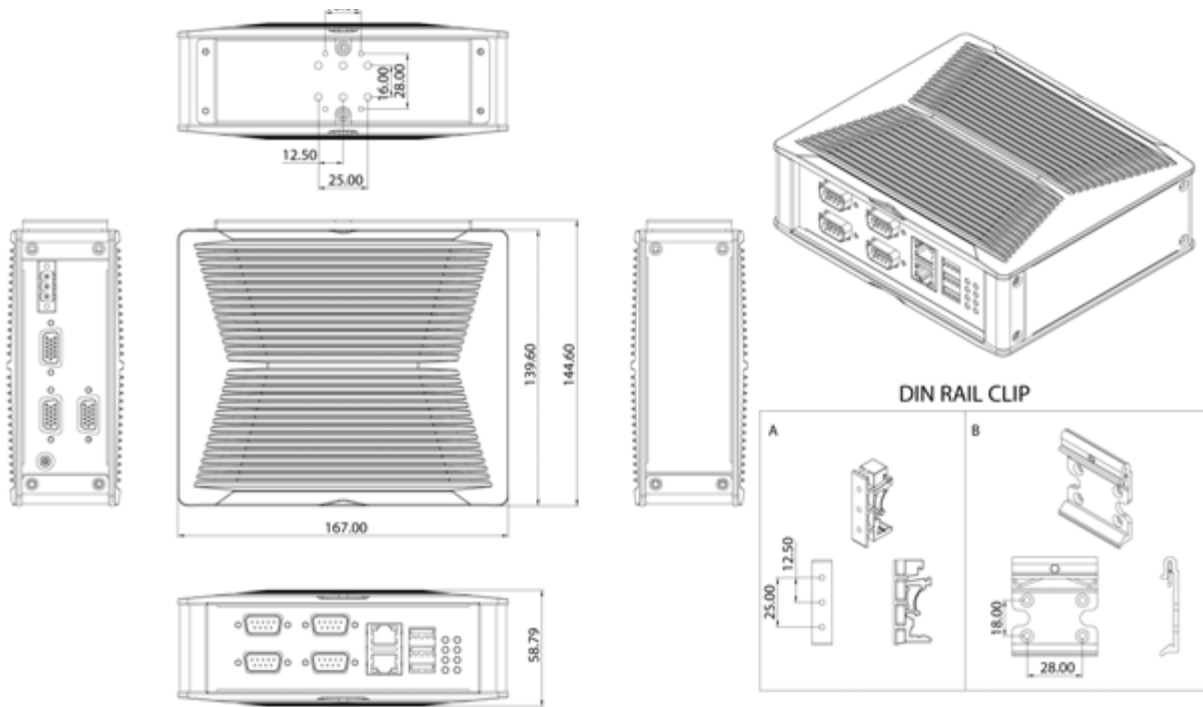
DIN RAIL CLIP

Construction
◆ Aluminum chassis with fanless design

Environment
◆ Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
◆ Storage temperature: -20°C to 80°C
◆ Relative humidity: 10% to 93% (non-condensing)
◆ Shock protection: 20G, half sine, 11ms, IEC60068-2-27
◆ Vibration protection
  - Random: 0.3Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.3Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
◆ CE
◆ FCC Class A

Ordering Information

◆ **NISE 90 (P/N: 10J00009000X0)**
  DIN Rail fanless system with Intel® Atom™ E620 0.6GHz processor
  and DDR2 512MB memory onBoard

◆ **12V, 60W AC/DC power adapter w/o power core
  (P/N: 7400060014X00)**

◆ **Aluminum DIN Rail mounting kit (P/N: 88J00009001X0)**

◆ **Wallmount kit (P/N: 88J00009002X0)**

NISE 91

Main Features

- OnBoard Intel® Atom™ E640 Processor, 1.0 GHz
- OnBoard DDR2 1G Memory Chip
- 2x Intel® 82574L GbE LANs
- 3x USB2.0 / 1x VGA / 3x Serial Ports / 1x CAN bus

- 8CH GPI and 8CH GPO
- Support 1x 2.5" HDD Drive Bay
- Support 12V and 24VDC Input

Product Overview

Equipped with Intel® Atom™ E640 1.0 GHz processor and Intel® Platform Controller Hub EG20T, the NISE 91 fanless computer features low power consumption of only 15W and an abundance of I/O options to meet the requirements of factory and industrial automation control.

Featuring fanless design, the NISE 91 is able to offer optimum reliability and performance. In addition, the NISE 91 is equipped with an abundance of I/O interfaces, such as 2x antennas, GPIO, CAN BUS, 3x COM ports, two Intel® GbE LAN and DC Input (either 12VDC or 24VDC) that provide flexibility for various application designs.

Specifications

Main Board
- OnBoard Intel® Atom™ E640 1.0GHz processor, 512K Cache
- OnBoard chipset: Intel® EG20T

Main Memory
- OnBoard DDR2 1G memory chip, unbuffered and non-ECC support

Storage Device
- 1x 2.5" SATA HDD drive bay for optional SSD or HDD
- Support optional SATA DOM, horizontal type only

I/O Interface-Front
- 3x USB ports
- 2x RJ45 GbE LAN ports, Intel® 82574L controller onBoard, Support LAN teaming
- 3x DB9 serial ports
  COM1: support RS232/422/485 (selected on BIOS menu)
  COM2: support RS232 only
  COM3: support RS232 only
- 1x DB9 CAN bus
  - Support CAN 2.0b protocol (support both 11-bit and 26-bit identifiers)
  - Support bit rates up to 1Mbps
  - Clock frequency of 40MHz

I/O Interface-Bottom
- 1x DB15 VGA port
- 1x DB15 male connector for 8CH General Purpose Input
- 1x DB15 male connector for 8CH General Purpose output
- 3-pin DC input, support 12VDC input and 24VDC input
- 1x power on/off switch

I/O Interface-Top
- 1x internal Mini-PCIe socket onBoard
- 2x antennas for optional Wi-Fi module

Supported OS
- Windows XP
- Windows Embedded Standard 2009
- Fedora 14 (Kernnel 2.6)

System Dimension
- 59mm(W)x 140mm(D)x 167mm(H)

Construction
- Aluminum chassis with fanless design

Dimension Drawing
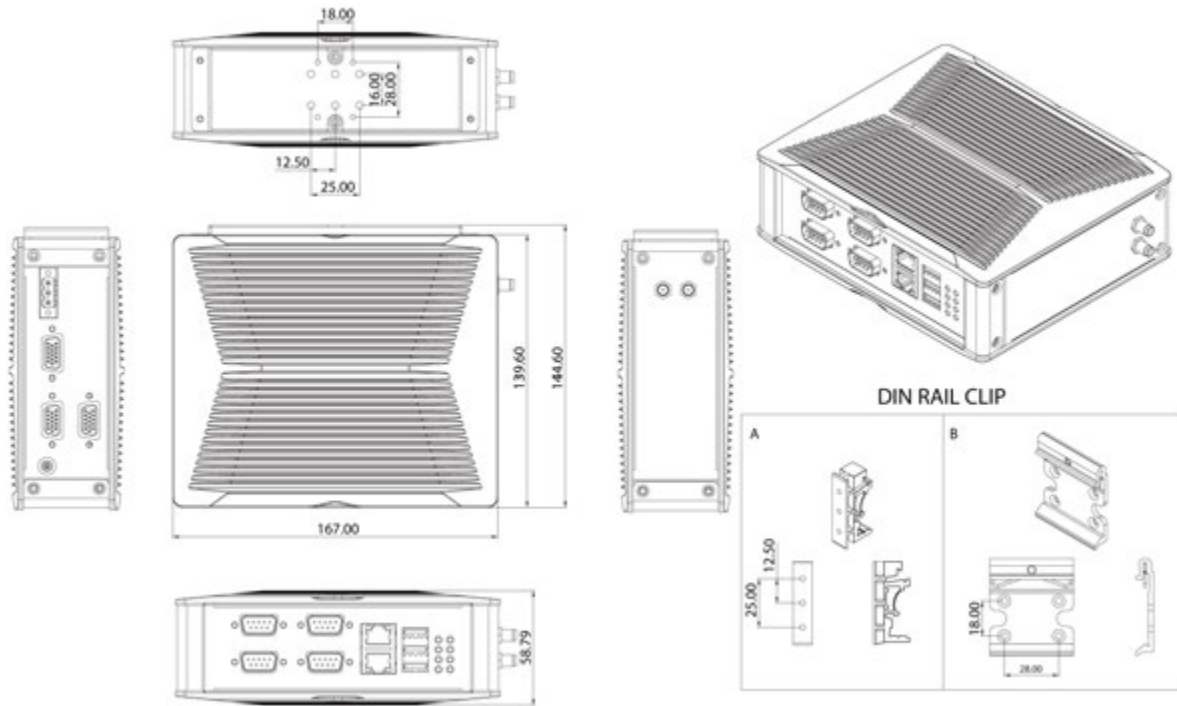
Environment

* Operating temperature:
  Ambient with air flow: -5 to 55°C (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
* Storage temperature: -20°C to 80°C
* Relative humidity: 10% to 93% (non-condensing)
* Shock protection: 20G, half sine, 11ms, IEC60068-2-27
* Vibration protection
  - Random: 0.3Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.3Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

* CE
* FCC Class A

Ordering Information

* **NISE 91 (P/N: 10J00009100X0)**
  DIN Rail fanless system with Intel® Atom™ E640 1.0 GHz processor and DDR2 1G memory onBoard

* **12V, 60W AC/DC power adapter w/o power core (P/N: 7400060014X00)**

* **Aluminum DIN Rail mounting kit (P/N: 88J00009001X0)**

* **Wallmount kit (P/N: 88J00009002X0)**

NISE 103

Main Features

- OnBoard Intel® Atom™ D425 Processor, 1.8 GHz
- Intel® ICH8M chipsets
- Dual Intel® 10/100/1000 Mbps LAN Ports; Support WoL, teaming, PXE
- 4x USB2.0

- 1x RS232/422/485 and 3x RS232
- 1x Mini-PCIe with Two Antenna Holes and One SIM Card Holder
- 1x DB15 Digital Input & Output
- Support +12VDC Input; Support ATX power mode

Product Overview

Designed with Intel® D425 1.8 GHZ processor and ICH8M embedded chipset and 12VDC input to take a low power consumption advantage, NISE 103 is a compact fanless industrial computing housed in a size of 185mm x 131mm x 54mm. The NISE 103 supports three RS232, one RS232/422/485, two 10/100/1000 LAN port, four USB ports, one digital I/O, one VGA display, audio jack (speaker-out, Mic-in) and one external CF card socket. It is also a wireless-ready platform which has Mini-PCIe socket and SIM card holder onBoard to support optional GSM wireless module or Wi-Fi module (default). EZ Controller, NISE 103 has a digital I/O port which offers 8X isolated digital input/output channels.

With isolation protection of 2,500VDC, and dry contact support, NISE103 can be applied to industrial and building automation applications. With rich IO connection in palm-sized system, NISE103 is an ideal fanless system for gate control, public information, self-service system, POS, Kiosk, low-power budget devices, and transportation applications etc.

Specifications

CPU Support
- OnBoard Intel® Atom™ D425 processor, 1.8 GHz
- Intel® ICH8M chipsets

Main Memory
- 1x DDR3 SO-DIMM sockets, single channel, support up to 2GB DDR3 667/800 SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX power on/off switch
- HDD access/ power status LEDs
- 3x COM ports
  COM2: RS232/422/485
  COM3& COM4: RS232
- 2x USB2.0 pocrt
- Audio jack (Line-out, Mic-in)
- 2x Antenna holes

I/O Interface-Rear
- 1x VGA
- COM1: 1x RS232
- 2x Intel® GbE LAN port; Support WoL, teaming and PXE
- 2x USB2.0 port

- +12VDC power input
- 1x DB15 male digital input & output

Digital Input & Output
- 4x Digital Input (Source type)
  - Input Voltage (Dry Contact):
    Logic 0: Close to GND
    Logic 1: Open
  - Input Voltage:
    Logic 0: 3V max
    Logic 1: +5V to +30V
- 4x Digital Output
  - Supply voltage: 5~30VDC
  - Sink current: 200 mA max. per channel

Device
- 1x 2.5" HDD driver bay
- 1x External CF Socket
- 1x SATA DOM
- 1x Mini-PCIe socket
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

Dimension Drawing
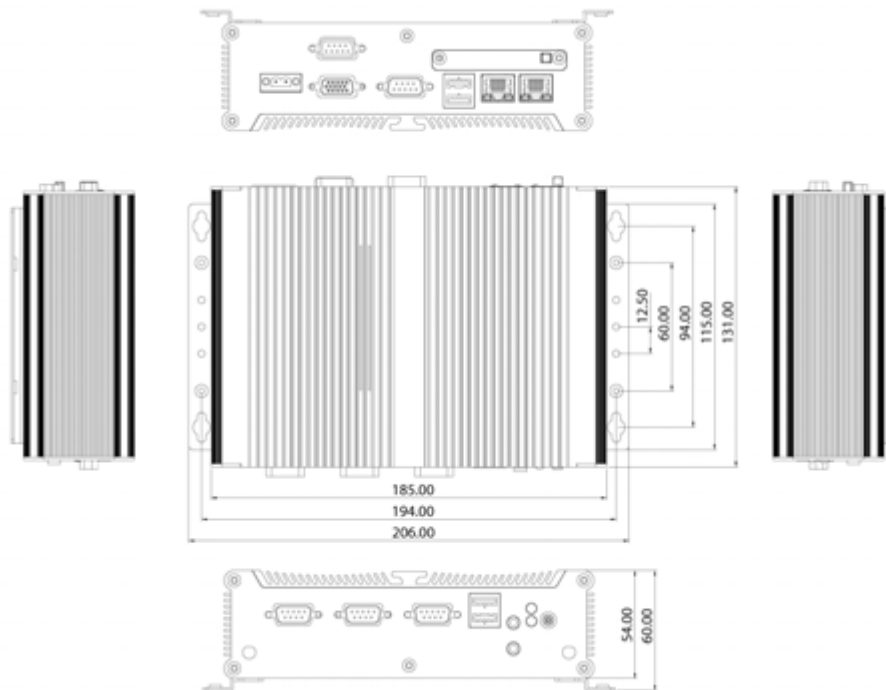
Power Requirements
- DC to DC power designed for onBoard support of +12VDC
- 1x optional 12V, 60W power adapter

Dimensions
- 185mm (W) x 131mm (D) x 54mm (H) (7.28" x 5.2" x 2.13")

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-Condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 103 (P/N: 10J00010300X0)**
  Intel® Atom™ D425 Fanless System

- **12V, 60W AC/ DC power adapter w/o power cord
  (P/N: 7400060013X00)**

NISE 104

Intel® Atom™ Dual Core D2550 1.86 GHz Fanless System

Main Features

- OnBoard Intel® Atom™ Dual Core D2550 processor, 1.86GHz
- Intel® NM10 Express chipset
- 1x DVI-I & 1x HDMI display output
- Dual Intel® 82574L GbE LAN ports; Support WoL, teaming and PXE
- 2x RS232/422/485 and 2x RS232

- 6x USB2.0
- 1x external CFast socket
- 1x Mini-PCIe with two antenna holes
- Support +9 to 36VDC input; Support ATX power mode

Product Overview

Powered by Intel® Atom™ Dual Core D2550 1.86GHz and NM10 PCH, NISE104 has higher graphic and computing performance, but 3 Watts less power consumption compared with previous Atom platform! With performance enhance, NISE104 still follow NISE guideline with fanless and cables-less concept housed in a compact chassis, 185mm (W) x 131mm (D) x 54mm (H). The NISE104 offers dual independent display capability through DVI-I and HDMI connectors, Dual Intel GbE LAN ports, 6x USB2.0, 2x RS232, 2x RS232/422/485, CFast socket and Mini-PCIe socket for optional wireless module connection, either WiFi or 3.5G module.

NISE 104's support for 9 to 36VDC input enhances its reliability in different power condition in factory automation or machinery automation. With Dual independent display and super graphic performance, the NISE104 is an idea choice for public information, self-service Kiosk, access control or data acquisition controller…etc.

Specifications

CPU Support
- OnBoard Intel® Atom™ Dual Core D2550 processor, 1.86GHz, 1M L2 cache
- Intel® NM10 Express chipset

Main Memory
- 1x DDR3 SO-DIMM sockets, support up to 4G DDR3 800/1066 SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX power on/off switch
- HDD access/ power status LEDs
- 4x COM ports (COM2& 3: RS232/422/485)
- 2x USB2.0 port
- Audio jack (Line-out and Mic-in)
- 2x antenna holes

I/O Interface-Rear
- Dual Intel® 82574L GbE LAN ports; Support WoL, teaming and PXE
- 4x USB2.0 port
- 1x HDMI
- 1x DVI-I (support VGA & DVI-D display via cable)

- 1x 2-pin DC input, Support +9 to 36VDC input
- 1x external screwed type CFast socket

Device
- 1x 2.5" HDD driver bay
- 1x External CFast Socket
- 1x Mini-PCIe socket (support optional Wi-Fi or 3.5G module)

Power Requirements
- Support +9 to 36VDC input
- 1x optional 12V, 60W power adapter

Dimensions
- 185mm(W) x 131mm(D) x 54mm(H) (7.28"x 5.2"x 2.13")

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature:
  - Ambient with air flow: -5°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-Condensing)

Dimension Drawing
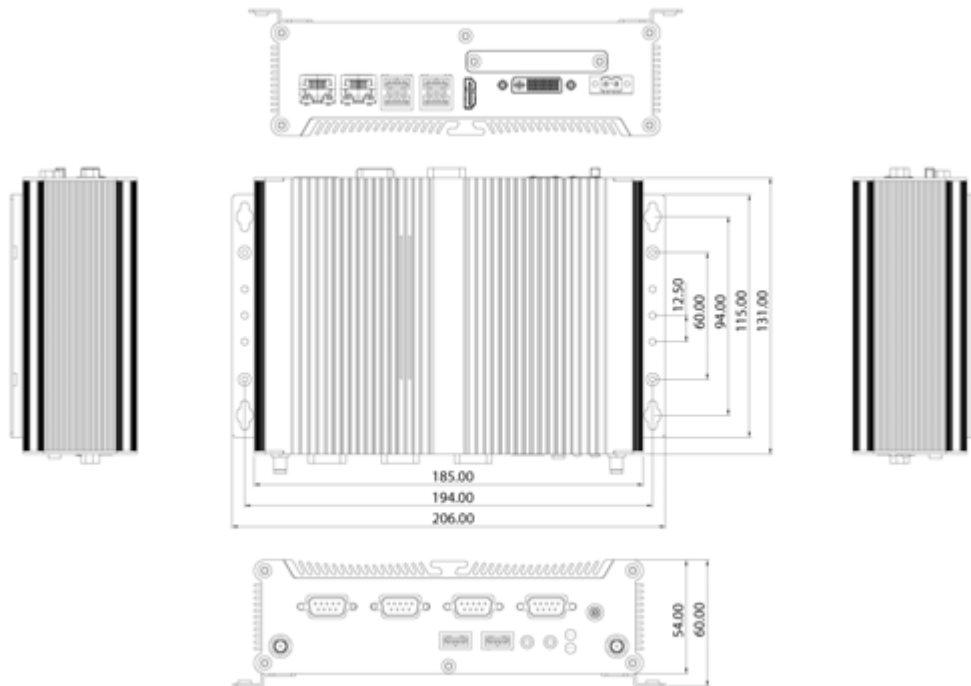
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 104 (P/N: 10J00010400X2)**
  Intel® Atom™ Dual Core D2550 fanless systemm

- **12V, 60W AC/ DC power adapter w/o power cord (P/N: 7400060013X00)**

NISE 2100

Intel® Atom™ D525 1.8GHz Fanless System with
DDR3 SO-DIMM Socket

Main Features

- OnBoard Intel® Atom™ Dual Core D525 (1.8GHz, 1M Cache) processor
- One DDR3 SO-DIMM socket, DDR3 800 2G memory module support max.
- 3x Intel® 1000/100/10 Mbps LAN ports; Support WoL, teaming, PXE
- 4x USB2.0; 1x VGA

- 1x DB15 GPIO connector
- 4x RS232 and 2 x RS232/422/485 with auto flow control
- One external CF Socket and one external SIM card holder
- Support +9V to 36VDC input; Support ATX power mode

Product Overview

NISE 2100 series are based on the cutting edge technology of the Intel® Atom™ Dual Core D525 processor. With Atom™ Dual Core D525 CPU, DDR3 667/800 SO-DIMM and multiple I/O ports, NISE 2100 series can be utilized within industrial automation, self-service machines like KIOSK check-in machines, recycling machines as well as factory automation etc. Other features of this versatile series include three Intel® Gigabit LAN ports, four RS232 COM ports, two RS232/422/485 COM ports, four USB2.0, one VGA port, one GPIO port, and one speak out. In terms of storage, SATA HDD/ SSD or front accessible CF card are available for deployment. The NISE 2100 Series has a wide DC input range which varies from +9V to 36V and is therefore designed to meet most application requirements.

Specifications

Main Board
- NISB 2100
- OnBoard Intel® Atom™ D525 Dual Core processor, 1.8GHz, 1M Cache
- Intel® ICH8M PCH

Main Memory
- 1x DDR3 SO-DIMM socket, support up to 2 GB DDR3 800 SDRAM memory module, unbuffered and non-ECC

Expansion
- 1x Mini-PCIe socket onboard
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

I/O Interface-Front
- ATX Power on/off switch
- HDD Access/ Power status LEDs
- 2x USB2.0 ports
- 2x Serial port (RS232)

- 1x external SIM card holder
- 1x DB15 GPIO connector
- 2x Antenna holes (Either optional Wi-Fi or mobile wireless module)

I/O Interface-Rear
- +9 to 36VDC input
- 1x 3-pin for remote power on/off switch
- 1x DB15 VGA port
- 3x Intel® GbE LAN ports; Support WoL, teaming and PXE
- 1x Speaker out
- 2x USB2.0 ports
- 4x Serial port (2x RS232 and 2x RS232/422/485 with auto-flow control)

Storage
- 1x 2.5" SATA HDD drive bay
- 1x external CF socket

Power Requirements
- ATX Power mode
- DC to DC power design onBoard, support from +9V to 36VDC
- Optional 19V, 65W power adapter

NEXCOM

Dimension Drawing

Dimensions
* 195 mm (W) x 200 mm (D) x 65 mm (H) (7.7" x 7.9" x 2.6")

Construction
* Aluminum Chassis with fanless design

Environment
* Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
* Storage temperature: -20°C to 80°C
* Relative humidity: 10% to 93% (Non-condensing)
* Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
* Vibration protection w/ HDD Condition
* - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
* - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
* CE approval
* FCC Class A
* e13

Ordering Information

Barebone

* **NISE 2100 (P/N: 10J00210000X0)**
  Intel® Atom™ D525 Fanless Barebone System with DDR3 SO-DIMM socket onBoard

* **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 2100A

Main Features

- OnBoard Intel® Atom™ Dual Core D525 (1.8GHz, 1M Cache) processor
- One DDR3 SO-DIMM socket, DDR3 800 2G memory module support max.
- Dual Intel® 1000/100/10 Mbps LAN ports; Support WoL & LAN teaming
- 4x USB2.0; 1x VGA

- 1x DB15 GPIO connector
- 4x RS232 and 2x RS232/422/485 with auto flow control
- One external CF Socket and one external SIM card holder
- Support +9 to 36VDC input; Support ATX power mode

Product Overview

NISE 2100 series are based on the cutting edge technology of the Intel® Atom™ Dual Core D525 processor. With Atom™ Dual Core D525 CPU, DDR3 667/800 SO-DIMM and multiple I/O ports, NISE 2100 series can be utilized within industrial automation, self-service machines like KIOSK check-in machines, recycling machines as well as factory automation etc. Other features of this versatile series include three Intel® Gigabit LAN ports, four RS232 COM ports, two RS232/422/485 COM ports, four USB2.0, one VGA port, one GPIO port, and one speak out. In terms of storage, SATA HDD/ SSD or front accessible CF card are available for deployment. The NISE 2100 Series has a wide DC input range which varies from +9V to 36V and is therefore designed to meet most application requirements.

Specifications

Main Board
- NISB 2100A
- OnBoard Intel® Atom™ D525 Dual Core processor, 1.8GHz, 1M Cache
- Intel® ICH8M PCH

Main Memory
- 1x DDR3 SO-DIMM socket, support up to 2 GB DDR3 800 SDRAM memory module, unbuffered and non-ECC

Expansion
- 1x Mini-PCIe socket onboard
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

I/O Interface-Front
- ATX Power on/ off switch
- HDD Access/ Power status LEDs
- 2x USB2.0 ports
- 2x Serial port (RS232)
- 1x external SIM card holder
- 1x DB15 GPIO connector
- 2x Antenna holes (Either optional Wi-Fi or Mobile wireless module)

I/O Interface-Rear
- +9 to 36VDC input
- 1x 3-pin for remote power on/ off switch
- 1x DB15 VGA port
- 2x Intel® 82574L GbE LAN ports (support WoL & LAN teaming)
- 1x Line out
- 2x USB2.0 ports
- 4x Serial port (2x RS232 and 2x RS232/422/485 with auto-flow control: isolation protection on COM1 and COM2)
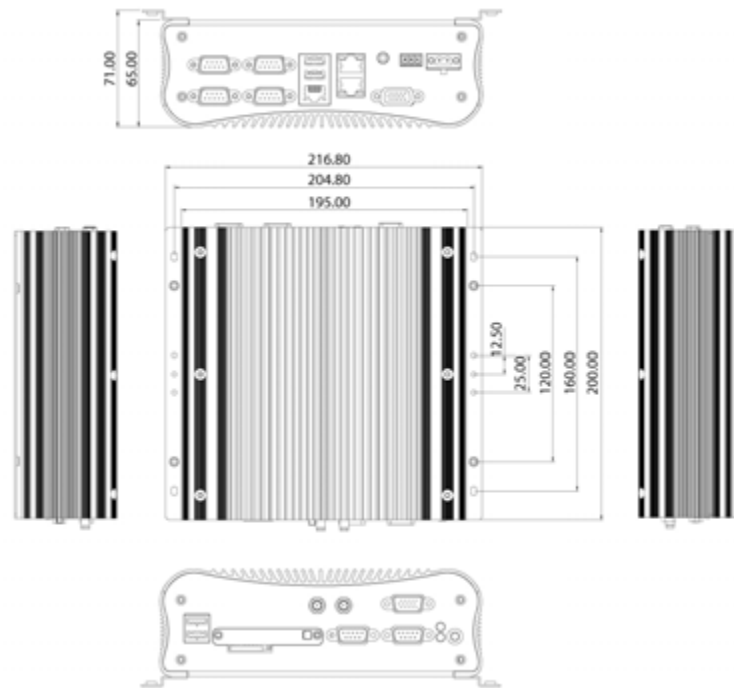
Storage
- 1x 2.5" SATA HDD drive bay
- 1x external CF socket

Power Requirements
- ATX Power mode
- DC to DC power design onBoard, support from +9 to 36VDC
- Optional 19V, 65W power adapter

Dimensions
- 195 mm (W) x 200 mm (D) x 65 mm (H) (7.7" x 7.9" x 2.6")

Construction
- Aluminum Chassis with fanless design

Dimension Drawing

Environment

- Operating temperature:
  Ambient with air flow: -20°C to 70°C (with industrial grade devices)
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- CE approval
- FCC Class A
- e13

Ordering Information

Barebone

- **NISE 2100A (P/N: 10J00210001X0)**
  Intel® Atom™ D525 fanless barebone system with DDR3 SO-DIMM
  Socket onBoard

- **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 2110

Main Features

- OnBoard Intel® Atom Dual Core D525 (1.8GHz, 1M Cache) processor
- One DDR3 SO-DIMM socket, DDR3 800 2G memory module support max.
- 3x Intel® 1000/100/10 Mbps LAN ports; Support WoL, teaming, PXE
- 4x USB2.0; 1x VGA
- 4x RS232 and 2x RS232/422/485 with auto flow control

- 1x DB15 GPIO connector
- 1x external CF Socket and one external SIM card holder
- +9 to 36VDC input; Support ATX power mode
- 1x PCI Expansion Slot

Product Overview

NISE 2100 series are based on the cutting edge technology of the Intel® Atom™ Dual Core D525 processor. With Atom™ Dual Core D525 CPU, DDR3 667/800 SO-DIMM and multiple I/O ports, NISE 2100 series can be utilized within industrial automation, self-service machines like KIOSK check-in machines, recycling machines as well as factory automation etc. Other features of this versatile series include three Intel® Gigabit LAN ports, four RS232 COM ports, two RS232/422/485 COM ports, four USB2.0, one VGA port, one GPIO port, and one speak out. In terms of storage, SATA HDD/ SSD or front accessible CF card are available for deployment. The NISE 2100 Series has a wide DC input range which varies from +9V to 36V and is therefore designed to meet most application requirements.

Specifications

Main Board
- NISB 2100
- OnBoard Intel® Atom™ D525 Dual Core processor, 1.8GHz, 1M Cache
- Intel® ICH8M PCH

Main Memory
- 1x DDR3 SO-DIMM socket, support up to 2 GB DDR3 800 SDRAM memory module, unbuffered and non-ECC

Expansion
- 1x PCI expansion
- PCI card: Max. 176mm in length
- 1x Mini-PCIe
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

I/O Interface-Front
- ATX Power on/off switch
- HDD Access/ Power status LEDs
- 2x USB2.0 ports
- 2x Serial port (RS232)

- 1x external SIM card holder
- 1x DB15 GPIO connector
- 2x Antenna holes

I/O Interface-Rear
- +9 to 36VDC input
- 1x 3-pin for remote power on/off switch
- 1x DB15 VGA port
- 3x Intel® GbE LAN ports; Support WoL, teaming, PXE
- 1x Line out
- 2x USB2.0 ports
- 4x Serial port (2x RS232 and 2x RS232/422/485 with auto-flow control)

Storage
- 1x 2.5" SATA HDD drive bay or optional SATA DOM module (Horizontal type)
- 1x external CF socket

Dimension Drawing

Power Requirements
* ATX Power mode
* DC to DC power design onBoard, support from +9 to 36VDC
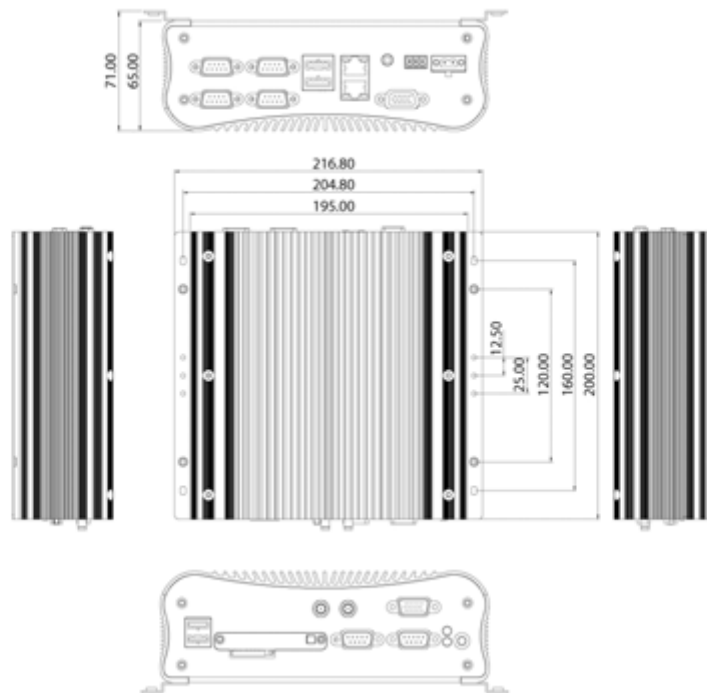* Optional 19V, 65W power adapter

Dimensions
* 195 mm (W) x 200 mm (D) x 90 mm (H) (7.7" x 7.9" x 3.5")

Construction
* Aluminum Chassis with fanless design

Environment
* Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
* Storage temperature: -20°C to 80°C
* Relative humidity: 10% to 93% (Non-condensing)
* Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
* Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
* CE approval
* FCC Class A
* e13

Ordering Information

Barebone

* **NISE 2110 (P/N: 10J00211000X0)**
  Intel® Atom™ D525 fanless barebone system with DDR3 SO-DIMM
  Socket and one PCI expansion

* **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 2110A

Intel® Atom™ D525 1.8GHz Fanless System with DDR3 SO-DIMM socket and one PCI expansion

Main Features

- OnBoard Intel® Atom™ Dual Core D525 (1.8GHz, 1M Cache) processor
- One DDR3 SO-DIMM socket, DDR3 800 2G memory module support max.
- Dual Intel® 1000/100/10 Mbps LAN ports; Support WoL & LAN teaming
- 4x USB2.0; 1x VGA
- 4x RS232 and 2 x RS232/422/485 with auto flow control
- 1x DB15 GPIO connector
- 1x external CF Socket and one external SIM card holder
- +9 to 36VDC input; Support ATX power mode
- 1x PCI Expansion Slot

Product Overview

NISE 2100 series are based on the cutting edge technology of the Intel® Atom™ Dual Core D525 processor. With Atom™ Dual Core D525 CPU, DDR3 667/800 SO-DIMM and multiple I/O ports, NISE 2100 series can be utilized within industrial automation, self-service machines like KIOSK check-in machines, recycling machines as well as factory automation etc. Other features of this versatile series include three Intel® Gigabit LAN ports, four RS232 COM ports, two RS232/422/485 COM ports, four USB2.0, one VGA port, one GPIO port, and one speak out. In terms of storage, SATA HDD/ SSD or front accessible CF card are available for deployment. The NISE 2100 Series has a wide DC input range which varies from +9V to 36V and is therefore designed to meet most application requirements.

Specifications

Main Board
- NISB 2100A
- OnBoard Intel® Atom™ D525 Dual Core processor, 1.8GHz, 1M Cache
- Intel® ICH8M PCH

Main Memory
- 1x DDR3 SO-DIMM socket, support up to 2 GB DDR3 800 SDRAM memory module, unbuffered and non-ECC

Expansion
- 1x PCI expansion
- PCI card: Max. 176mm in length
- 1x Mini-PCIe
  Default: support optional Wi-Fi module
  Option: support optional 3.5G module

I/O Interface-Front
- ATX Power on/ off switch
- HDD Access/ Power status LEDs
- 2x USB2.0 ports
- 2x Serial port (RS232)

- 1x external SIM card holder
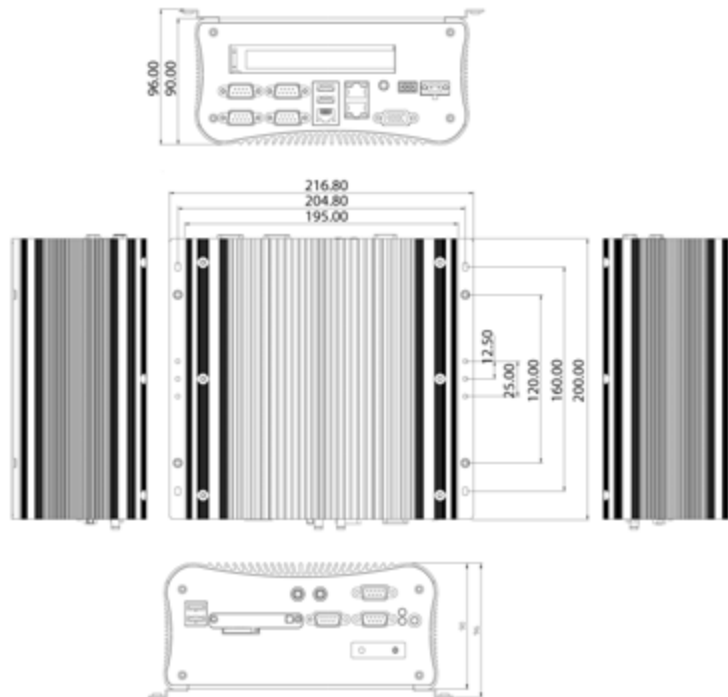- 1x DB15 GPIO connector
- 2x antenna holes

I/O Interface-Rear
- +9 to 36VDC input
- 1x 3-pin for remote power on/off switch
- 1x DB15 VGA port
- 2x Intel® 82574L GbE LAN ports (Support WoL & LAN Teaming)
- 1x Speaker out
- 2x USB2.0 ports
- 4x Serial port (2x RS232 and 2x RS232/422/485 with auto-flow control, isolation protection on COM1 & COM2)

Storage
- 1x 2.5" SATA HDD drive bay or optional SATA DOM module (horizontal type)
- 1x external CF socket

Power Requirements
- ATX Power mode
- DC to DC power design onBoard, support from +9 to 36VDC input
- Optional 19V, 65W power adapter

NEXCOM

Dimension Drawing

Dimensions
* 195 mm (W) x 200 mm (D) x 90 mm (H) (7.7 " x 7.9 " x 3.5 ")

Construction
* Aluminum Chassis with fanless design

Environment
* Operating temperature:
  Ambient with air flow: -20°C to 70°C (with industrial grade devices)
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
* Storage temperature: -20°C to 80°C
* Relative humidity: 10% to 93% (Non-condensing)
* Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
* Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
* CE approval
* FCC Class A
* e13

Ordering Information

Barebone

* **NISE 2110A (P/N: 10J00211001X0)**
  Intel® Atom™ D525 fanless barebone system with DDR3 SO-DIMM socket and one PCI expansion

* **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 2200

Main Features

- OnBoard Intel® Atom™ Dual Core D2550 processor 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x HDMI display output
- Dual Intel® 82574IT GbE LAN ports; Support WoL, teaming & PXE
- 6x COM (2x RS232/422/485 w/ isolation protection)

- 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC Input; Support ATX power mode

Product Overview

NISE 2200 series powered by Intel® Atom™ Dual Core D2550 CPU with higher graphic and computing performance. With its outstanding performance, NISE 2200 series can be utilized within industrial automation, self-service machines like KIOSK check-in machines, recycling machines as well as factory automation and etc. NISE 2200 series support multiple I/O especially contains up to 6x COM (2x RS232/422/485 w/isolation protection) and 6x USB 2.0. Other than that, NISE 2200 series has a wide DC input range from 9V to 36V and a wide operating temperature; it is therefore designed to meet most application requirements.

Specifications

CPU Support
- OnBoard Intel® Atom™ Dual Core D2550 processor, 1.86GHz, 1M L2 cache
- Intel® 82801JIR ICH10 RAID

Main Memory
- 2x DDR3 SO-DIMM sockets, support up to 4G DDR3-800/1066/1333MHz SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX Power on/off switch
- HDD access/ power status LEDs
- 2x DB9, RS232/422/485 w/ 2.5KV isolation protection
- 2x USB2.0
- 1x DB15, 4x GPI & 4x GPO
- 1x Mic-in & 1x Line out
- SIM card socket
- CFast socket
- 2x antenna holes

I/O Interface-Rear
- 1x 2-pin DC input, Support +9 to 36VDCinput
- 1x HDMI
- 1x DVI-I

- Dual Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4x USB2.0
- 2x DB9, RS232/422/485
- 2x DB9, RS232 only

Device
- 1x 2.5" SATA HDD driver bay
- 1x External CFast socket
- 1x External SIM card socket
- 1x internal Mini-PCIe socket (Support optional WiFi or 3.5G wireless module, jumper free)

Power Requirements
- Support +9 to 36VDC input; Support ATX power mode
- Optional 19V, 65W power adapter

Dimensions
- 195mm (W) x 200mm (D) x 65mm (H) (7.7" x 7.9" x 2.6")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature: Ambient with air flow: -20°C to 65°C
- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 93% (Non-condensing)

Dimension Drawing

- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 40G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE2200 (P/N: 10J00220000X0)**
  Intel® Atom™ Dual Core D2550 fanless system

- **19V 65W AC/DC power adapter w/o power cord (P/N: 7400065009X00)**

NISE 2210/2210E

Intel® Atom™ Dual Core D2550 1.86 GHz Fanless System with 6x COM ports, 6x USB2.0 and 1x PCI/PCIe expansion

Main Features

- OnBoard Intel® Atom™ Dual Core D2550 processor 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x HDMI display output
- Dual Intel® 82574IT GbE LAN ports; Support WoL, teaming & PXE
- 6x COM (2x RS232/422/485 w/ isolation protection)

- 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to +36VDC input; Support ATX power mode

Product Overview

NISE 2210/2210E powered by Intel® Atom™ Dual Core D2550 CPU with higher graphic and computing performance. With its outstanding performance, NISE 2210/2210E can be utilized within industrial automation, self-service machines like KIOSK check-in machines, recycling machines as well as factory automation and etc. NISE 2210/2210E support multiple I/O especially contains up to 6x COM (2x RS232/422/485 w/isolation protection) and 6x USB 2.0. Other than that, NISE 2200/2210E has a wide DC input range from 9V to 36V, a wide operating temperature and a PCI or PCIe expansion; it is therefore designed to meet most application requirements.

Specifications

CPU Support
- OnBoard Intel® Atom™ Dual Core D2550 processor, 1.86GHz, 1M L2 cache
- Intel® 82801JIR ICH10 RAID

Main Memory
- 2x DDR3 SO-DIMM sockets, support up to 4G DDR3-800/1066/1333MHz SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX Power on/off switch
- HDD access/ power status LEDs
- 2x DB9, RS232/422/485 w/ 2.5KV isolation protection
- 2x USB2.0
- 1x DB15, 4x GPI & 4x GPO
- 1x Mic-in & 1x Line out
- SIM card socket
- CFast socket
- 2x antenna holes

I/O Interface-Rear
- 1x 2-pin DC input, Support +9 to 36VDC input
- 1x HDMI
- 1x DVI-I

- Dual Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4x USB2.0
- 2x DB9, RS232/422/485
- 2x DB9, RS232 only

Device
- 1x 2.5" SATA HDD driver bay
- 1x External CFast socket
- 1x External SIM card socket
- 1x internal Mini-PCIe socket (Support optional WiFi or 3.5G wireless module, jumper free)

Expansion
- NISE 2210: One PCI Expansion
  - Add-on card length: 176mm max.
  - Power consumption: 10W/slot max.
- NISE 2210E: One PCIe x4 Expansion (w/o Mini-PCIe device)
  - Add-on card length: 176mm max.
  - Power consumption: 10W/slot max.
  - Note: if Mini-PCIe device is installed, only supports PCIe x1)

Power Requirements
- Support +9 to 36VDC input; Support ATX power mode
- Optional 19V, 65W power adapter

Dimension Drawing

Dimensions
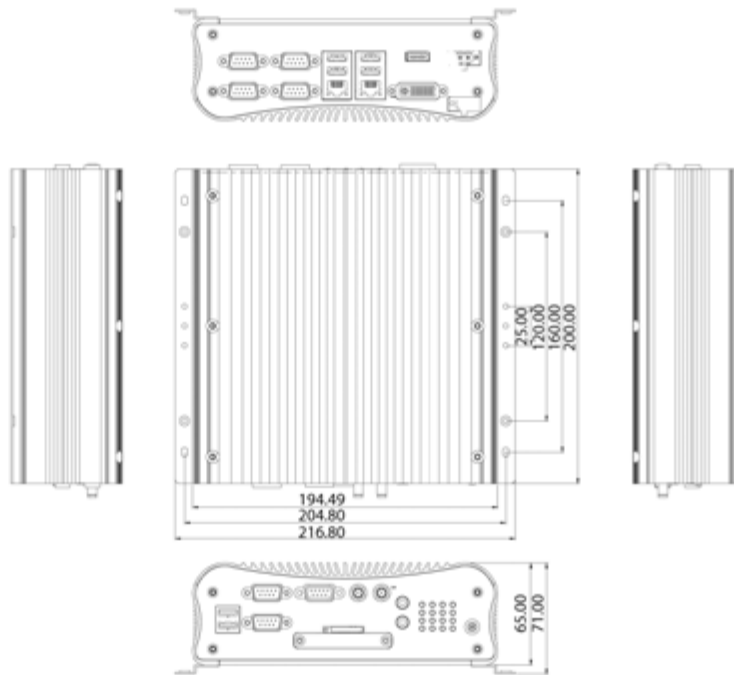- 195mm (W) x 200mm (D) x 90mm (H) (7.7" x 7.9" x 3,6")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -20°C to 65°C
- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 93% (Non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 40G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE2210 (P/N: 10J00221000X0)**
  Intel® Atom™ Dual Core D2550 fanless system with
  One PCI expansion

- **NISE2210E (P/N: 10J00221001X0)**
  Intel® Atom™ Dual Core D2550 fanless system with
  One PCIe x4 expansion

- **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 2300

Intel® Atom™ Dual Core D2550 1.86 GHz Fanless System
with 4x LAN ports, 6x USB 2.0 and 4x COM ports

Main Features

- OnBoard Intel® Atom™ Dual Core D2550 processor 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x DVI-D display output
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4x RS232/422/485

- 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC input; Support ATX power mode

Product Overview

Powered by Intel® Atom™ Dual Core D2550 Processor, NISE 2300 series is another utilized within industrial automation. It is designed with wide operating temperature and can be operated in rough environment. NISE 2300 series follows NISE guideline with fanless and cables-less concept. NISE 2300 series designed with 4x LAN ports; Support WoL and LAN teaming and PXE functions. Other than above, NISE 2300 series also provide 6x USB2.0, dual independent display and super graphic performance for variety needs. NISE 2300 series support a wide range DC input from +9V to 36V enhances its reliability in different power condition in any demand.

Specifications

CPU Support
- OnBoard Intel® Atom™ Dual Core D2550 processor, 1.86GHz, 1M L2 cache
- Intel® 82801JIR ICH10 RAID

Main Memory
- 2x DDR3 SO-DIMM sockets, support up to 4G DDR3-800/1066/1333MHz SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX Power on/off switch
- HDD access/ power status LEDs
- 2x DB9, RS232/422/485 w/ 2.5KV isolation protection
- 2x USB2.0
- 4x GPO & 4x GPI
- 1x Mic-in and 1x Line-out
- SIM card socket
- CFast socket
- 2x antenna holes

I/O Interface-Rear
- 1x 2-pin DC input, Support +9V to 36VDC input
- 1x DVI-I
- 1x DVI-D

- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4x USB2.0
- 2x DB9, RS232/422/485

Device
- 1x 2.5" SATA HDD driver bay
- 1x External CFast socket
- 1x External SIM card socket
- 1x internal Mini-PCIe socket
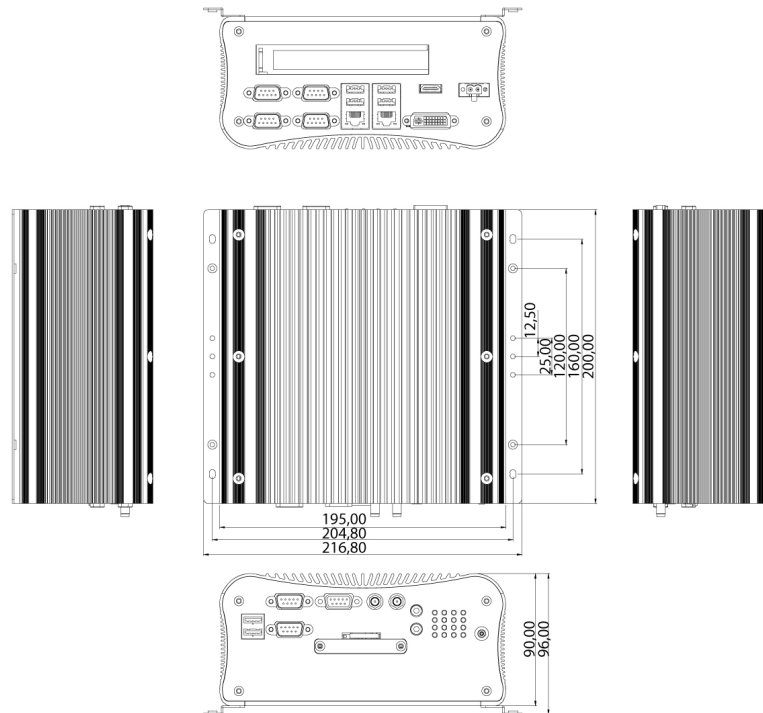 (Support optional WiFi or 3.5G wireless module, jumper free)

Power Requirements
- Support +9V to 36VDC input; Support ATX power mode

Dimensions
- 195mm (W) x 200mm (D) x 65mm (H) (7.7" x 7.9" x 2.6")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -20°C to 65°C
- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 93% (Non-condensing)
- Shock protection:

NEXCOM

Dimension Drawing

- HDD: 20G, half sine, 11ms, IEC60068-2-27
- CFast: 40G, half sine, 11ms, IEC60068-2-27
♦ Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
♦ CE approval
♦ FCC Class A

Ordering Information

Barebone

♦ **NISE 2300 (P/N: 10J00230000X0)**
  Intel® Atom™ Dual Core D2550 fanless system

♦ **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 2310/2310E

Intel® Atom™ Dual Core D2550 1.86 GHz Fanless System w/ 4x LAN Ports, 4x COM Ports and One PCI/PCIe Expansion

Main Features

- OnBoard Intel® Atom™ Dual Core D2550 processor 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1x DVI-I & 1x DVI-D display output
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4x RS232/422/485

- 4x GPI & 4x GPO
- 6x USB2.0; 1x external CFast socket; 1x SIM card socket
- 1x internal Mini-PCIe with two antenna holes
- Support +9V to 36VDC input; Support ATX power mode
- 1x PCI or PCIe expansion

Product Overview

Powered by Intel® Atom™ Dual Core D2550 Processor, NISE 2310/2310E is another utilized within industrial automation. It is designed with wide operating temperature and can be operated in rough environment. NISE 2310/2310E follows NISE guideline with fanless and cables-less concept. NISE 2310/2310E designed with 4x LAN ports; Support WoL and LAN teaming and PXE functions. Other than above, NISE 2310/2310E also provide 6x USB2.0, dual independent display and super graphic performance for variety needs and one PCI or PCIe x1 expansion is available. NISE 2310/2310E series support a wide range DC input from +9V to 36V enhances its reliability in different power condition in any demand.

Specifications

CPU Support
- OnBoard Intel® Atom™ Dual Core D2550 processor, 1.86GHz, 1M L2 cache
- Intel® 82801JIR ICH10 RAID

Main Memory
- 2x DDR3 SO-DIMM sockets, support up to 4G DDR3-800/1066/1333MHz SDRAM, un-buffered and non-ECC

I/O Interface-Front
- ATX Power on/off switch
- HDD access/ power status LEDs
- 2x DB9, RS232/422/485 w/ 2.5KV isolation protection
- 2x USB2.0
- 4x GPO & 4x GPI
- 1x Mic-in and 1x Line-out
- SIM card socket
- CFast socket
- 2x antenna holes

I/O Interface-Rear
- 1x 2-pin DC input, Support +9 to 36VDC input
- 1x DVI-I
- 1x DVI-D

- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4x USB2.0
- 2x DB9, RS232/422/485

Device
- 1x 2.5" SATA HDD driver bay
- 1x External CFast socket
- 1x External SIM card socket
- 1x internal Mini-PCIe socket
  (Support optional WiFi or 3.5G wireless module, jumper free)

Expansion
- NISE 2310: One PCI Expansion
  Add-on card length: 176mm max.
  Power consumption: 10W/slot max.
- NISE 2310E: One PCIe x1 Expansion
  Add-on card length: 176mm max.
  Power consumption: 10W/slot max.

Power Requirements
- Support +9V to 36VDC input; Support ATX power mode

Dimensions
- 195mm (W) x 200mm (D) x 90mm (H) (7.7" x 7.9" x 3,6")
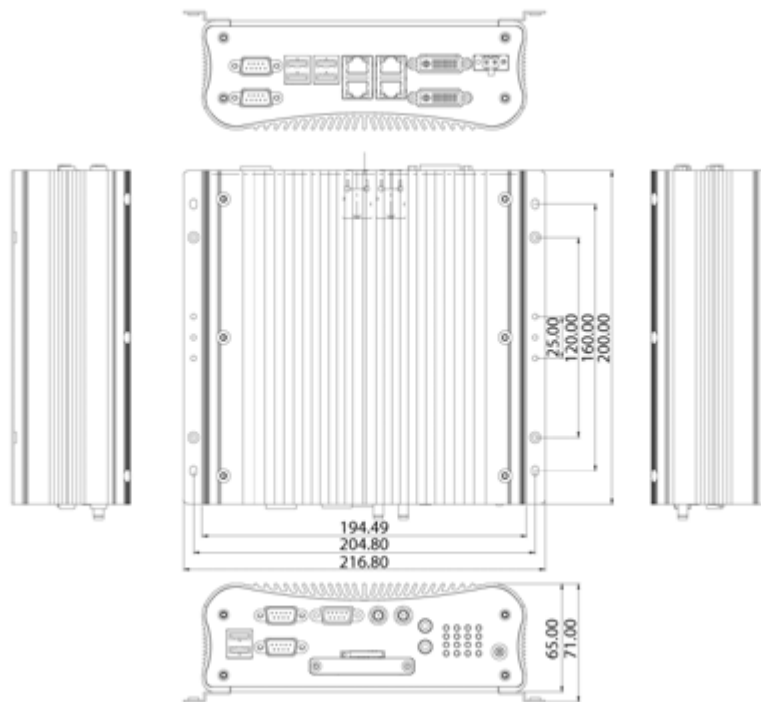
Construction
- Aluminum Chassis with fanless design

Dimension Drawing
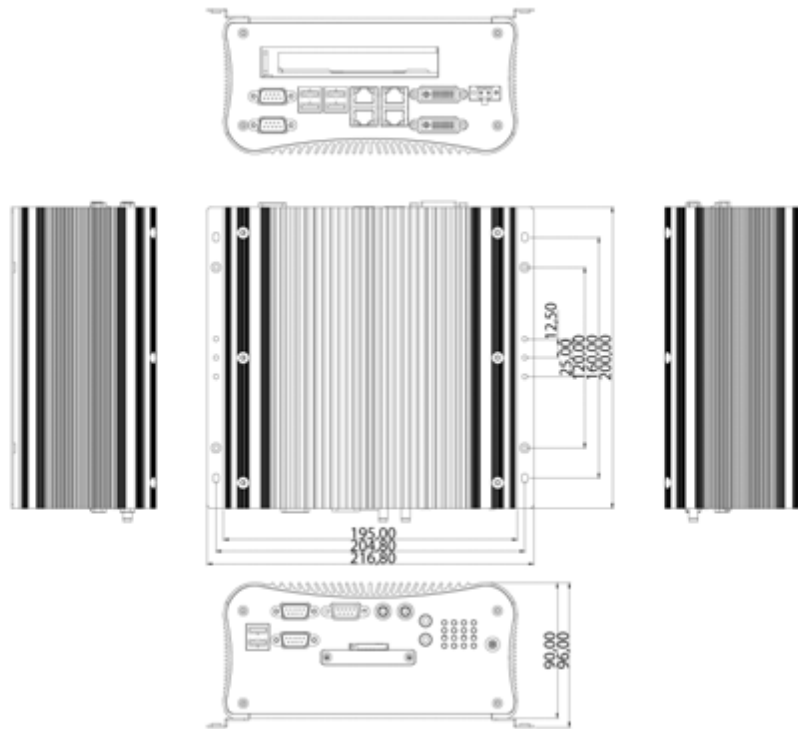
Environment

* Operating temperature:
  Ambient with air flow: -20°C to 65°C
* Storage temperature: -30°C to 85°C
* Relative humidity: 10% to 93% (Non-condensing)
* Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 40G, half sine, 11ms, IEC60068-2-27
* Vibration protection w/ HDD
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

* CE approval
* FCC Class A

Ordering Information

Barebone

* **NISE2310 (P/N: 10J00231000X0)**
  Intel® Atom™ Dual Core D2550 fanless system with
  One PCI expansion

* **NISE2310E (P/N: 10J00231001X0)**
  Intel® Atom™ Dual Core D2550 fanless system with
  One PCIex1 expansion

* **19V 65W AC/DC power adapter w/o power cord
  (P/N: 7400065009X00)**

NISE 3140/3140E

Main Features

- Support Intel® Core™ 2 Duo /Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, teaming and PXE
- Dual VGA or VGA/DVI Independent Display

- 3x RS232 and 1x RS232/422/485 with Auto Direction Control
- One external locked CF socket
- OnBoard DC to DC power design to support +16 to 30VDC power input; Support ATX power mode

Product Overview

Utilizing the Intel® GM45 chipsets, NISE 3140 is highly scalable supporting a wide variety of Intel® Core™ 2 Duo and Celeron® processors. Using the Intel® graphics media accelerator 4500MHD, the rugged NISE 3140 delivers exceptional graphics performance with notable rates of data transfer.

NISE 3140 provides a number of important features required by image processing operation, including dual-channel DDR3 memory, two Gigabit Ethernet LANs, auto-direction control on RS485 interface. On top of that, NISE 3140 supports dual independent displays through 2x VGA, DVI or LVDS outputs. Housed in a robust aluminum chassis, NISE 3140 of fanless design offers noise-free, ultra reliable operating in the most demanding of industrial environment.

The NISE 3140 series is an idea system for industrial automation, machine automation, Automated Optical Inspection (AOI), visual inspection, video surveillance, image mapping and face recognition markets.

Specifications

Main Board
- NISB 3140
- Support Intel® Core™ 2 Duo Processor P8400 (3M Cache, 2.26 GHz, 1066 MHz FSB)
- Support Intel® Celeron® Processor 575 (1M Cache, 2.00 GHz, 667 MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 Graphics and Memory Controller Hub
- Featuring the Mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IBM (ICH9M) I/O Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 1x Front Access CF Card Socket
- 2x USB2.0 ports

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- +16 to 30VDC input
- 1x PS/2 for Keyboard/Mouse
- 1x DB25 Parallel Port (Optional GPIO or LVDS interface)
- 1x DB44 Serial Port for 4x RS232 (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL & LAN teaming)
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I Port (DVI-D + VGA)
- 1x Line out and 1x Mic-in

Device
- 1x 2.5" SATA HDD drive bay
- 1x external locked CF card socket

Expansion
- One PCI expansion (NISE 3140 only, 10W max./ per slot)
- One PCIe x1 expansion (NISE 3140E only, 10W max./per slot)
- Max. Support Add-on Card Length: 169mm

Dimension Drawing

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from +16 to 30VDC
- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7" x 10.5" x 3.1")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3140 (P/N: 10J00314000X0) RoHS Compliant**
  Intel® Core™ 2 Duo/ Celeron® Fanless Bare-Bone system with one PCI Expansion

- **NISE 3140E (P/N: 10J00314001X0) RoHS Compliant**
  Intel® Core™ 2 Duo/ Celeron® Fanless Bare-Bone system with one PCIe x1 Expansion

- **19V, 120W AC/DC power adapter w/o power cord (P/N: 7410120002X00)**

NISE 3140P2/P2E

Intel® Core™ 2 Duo Fanless System

Intel® Core™ 2 Duo Fanless System

with 2x Expansion Slots

Main Features

- Support Intel® Core™ 2 Duo/ Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, teaming and PXE

- Dual VGA or VGA/DVI Independent Display
- 3x RS232 and 1x RS232/422/485 with Auto Direction Control
- One external locked CF socket
- OnBoard DC to DC power design to support +16 to 30VDC power input
- Support ATX power mode

Product Overview

Utilizing the Intel® GM45 chipsets, NISE 3140P2/P2E is highly scalable supporting a wide variety of Intel® Core™ 2 Duo and Celeron® processors. Using the Intel® graphics media accelerator 4500MHD, the rugged NISE 3140P2/P2E delivers exceptional graphics performance with notable rates of data transfer.

NISE 3140P2/P2E provides a number of important features required by image processing operation, including dual-channel DDR3 memory, two Gigabit Ethernet LANs, auto-direction control on RS485 interface. On top of that, NISE 3140P2/P2E supports dual independent displays through 2x VGA, DVI or LVDS outputs. Housed in a robust aluminum chassis, NISE 3140P2/P2E of fanless design offers noise-free, ultra reliable operating in the most demanding of industrial environment.

The NISE 3140P2/P2E series is an idea system for industrial automation, machine automation, Automated Optical Inspection (AOI), visual inspection, video surveillance, image mapping and face recognition markets.

Specifications

Main Board
- NISB 3140
- Support Intel® Core™ 2 Duo Processor P8400 (3M Cache, 2.26 GHz, 1066 MHz FSB)
- Support Intel® Celeron® Processor 575 (1M Cache, 2.00 GHz, 667 MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 Graphics and Memory Controller Hub
- Featuring the Mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IBM (ICH9M) I/O Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 1x Front Access CF Card Socket
- 2x USB2.0 ports

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- +16 to 30VDC input
- 1x PS/2 for Keyboard/Mouse
- 1x DB25 Parallel Port (Optional GPIO or LVDS interface)
- 1x DB44 Serial Port for 4x RS232 (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL & LAN teaming)
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I Port (DVI-D + VGA)
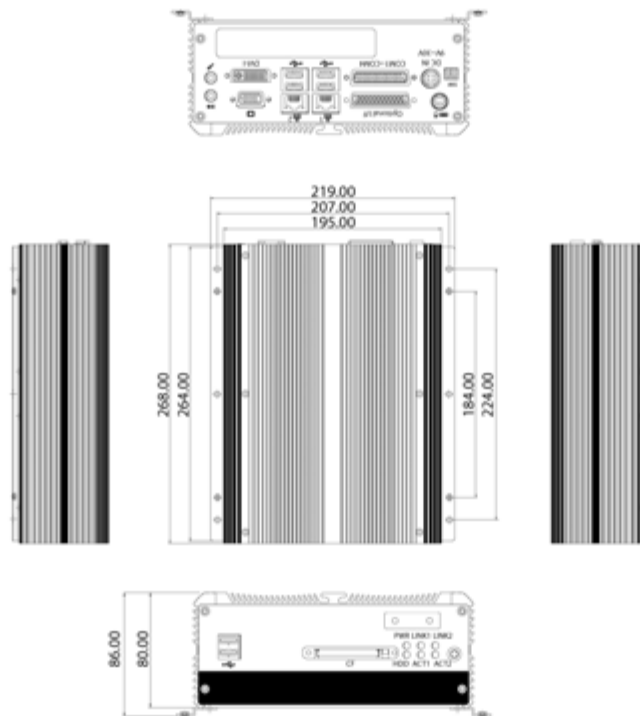- 1x Line-out and 1x Mic-in

Device
- 1x 2.5" SATA HDD drive bay
- 1x external locked CF card socket
- Optional power adapter

NEXCOM

Dimension Drawing
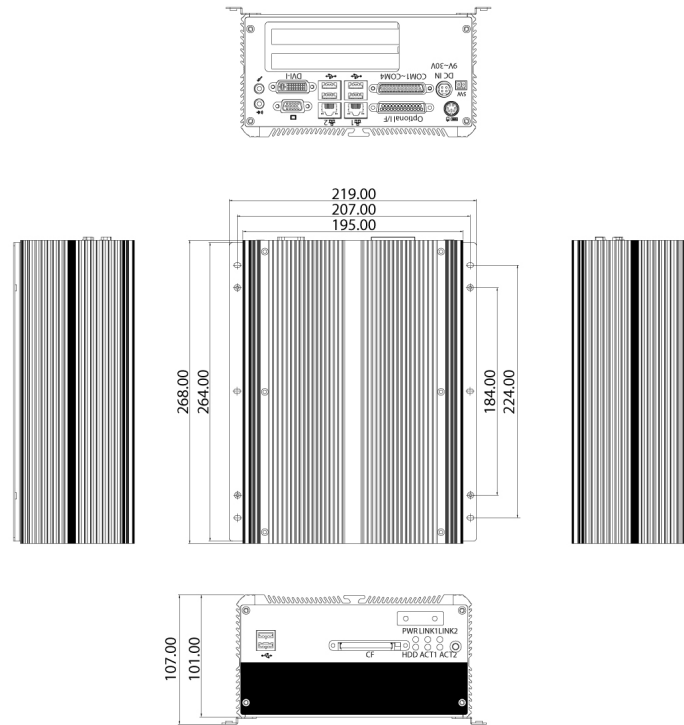
Expansion
- Two PCI expansion (NISE3140P2 only, 10W max./ per slot)
- One PCI and one PCIe x1 expansion (NISE3140P2E only, 10W max./ per slot)
- Add-on card length support:
  Max. 169mm x1 and 240mm x1 (with 2.5" HDD installed)
  Max. 240mm x2 (without 2.5" HDD installed)

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from +16 to 30VDC

Dimensions
- 195mm (W) x 268 mm (D) x 101mm (H) (7.7" x 10.5" x 3.98")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3140P2 (P/N: 10J00314002X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® Fanless Bare-Bone system with two PCI Expansion

- **NISE 3140P2E (P/N: 10J00314003X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® Fanless Bare-Bone system with one PCI and one PCIe x1 Expansions

- **19V, 120W AC/DC power adapter w/o power cord (P/N: 7410120002X00)**
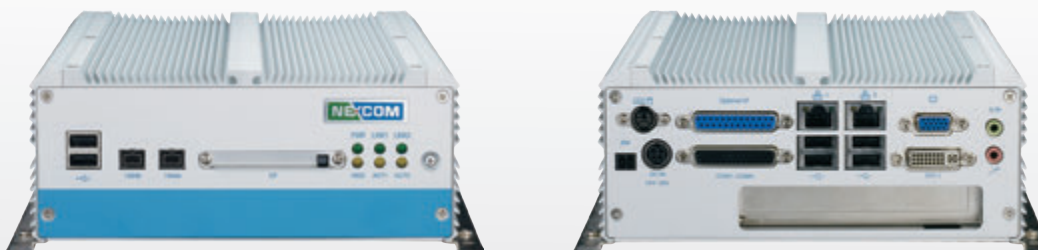
NISE 3140M

Main Features

- Support Intel® Core™ 2 Duo / Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet Ports; Support PXE, WoL and teaming
- Dual VGA or VGA/DVI Independent Display
- 3x RS232 and 1x RS232/422/485 with Auto Direction Control

- One external locked CF socket
- Dual IEEE1394b ports
- OnBoard DC to DC power design to support +16V to 30VDC power input
- Support ATX power mode

Product Overview

Utilizing the Intel® GM45 enhanced chipsets, NISE 3140M is highly scalable supporting a wide variety of Intel® Core™ 2 Duo and Celeron® processors. Using the Intel® graphics media accelerator 4500MHD, the rugged NISE 3140M delivers exceptional graphics performance with notable rates of data transfer. NISE 3140M provides a number of important features required by image processing operation, including dual-channel DDR3 memory, two Gigabit Ethernet LANs, auto-direction control on RS485 and optional IEEE1394b interface. On top of that, NISE 3140M supports dual independent displays through 2x VGA, DVI or LVDS outputs. Housed in a robust aluminum chassis, NISE 3140M of fanless design offers noise-free, ultra reliable operating in the most demanding of industrial environment.

Specifications

Main Board
- NISB 3140M
- Support Intel® Core™ 2 Duo Processor P8400 (3M Cache, 2.26 GHz, 1066 MHz FSB)
- Support Intel® Celeron® Processor 575 (1M Cache, 2.00 GHz, 667 MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 Graphics and Memory Controller Hub
- Featuring the Mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IEM (ICH9M-E) I/O Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 1x Front Access CF Card Socket
- 2x USB2.0 ports
- Dual IEEE1394b ports

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- +16 to 30VDC input
- 1x PS/2 for Keyboard/Mouse
- 1x DB25 Parallel Port (Optional GPIO or LVDS interface)
- 1x DB44 Serial Port for 4x RS232 (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports
  - LAN1: Support WoL & PXE
  - LAN2: Support LAN teaming
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I Port (DVI-D + VGA)
- 1x Line out and 1x Mic-in

Device
- 1x 2.5" SATA HDD drive bay
- 1x external locked CF card socket

Dimension Drawing

Expansion
- One PCI Expansion (10W max./ per slot)
- Add-on card length: 169mm max.

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from 16V to 30VDC
- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7 " x 10.5 " x 3.1 ")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3140M (P/N: 10J00314006X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® Fanless Bare-Bone system with one PCI Expansion

- **19V, 120W AC/DC power adapter w/o power cord (P/N: 7400120006X00)**

NISE 3140M2E

Main Features

- Support Intel® Core™ 2 Duo / Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet Ports; Support PXE, WoL and teaming
- Dual VGA or VGA/DVI Independent Display
- 3x RS232 and 1x RS232/422/485 with Auto Direction Control

- One external locked CF socket
- Dual IEEE1394b ports
- OnBoard DC to DC power design to support +16V to 30VDC power input
- Support ATX power mode

Product Overview

Utilizing the Intel® GM45 enhanced chipsets, NISE 3140M2E is highly scalable supporting a wide variety of Intel® Core™ 2 Duo and Celeron® processors. Using the Intel® graphics media accelerator 4500MHD, the rugged NISE 3140M2E delivers exceptional graphics performance with notable rates of data transfer. NISE 3140M2E provides a number of important features required by image processing operation, including dual-channel DDR3 memory, two Gigabit Ethernet LANs, auto-direction control on RS485 and optional IEEE1394b interface. On top of that, NISE 3140M2E supports dual independent displays through 2x VGA, DVI or LVDS outputs. Housed in a robust aluminum chassis, NISE 3140M2E of fanless design offers noise-free, ultra reliable operating in the most demanding of industrial environment.

Specifications

Main Board
- NISB 3140M
- Support Intel® Core™ 2 Duo Processor P8400 (3M Cache, 2.26 GHz, 1066 MHz FSB)
- Support Intel® Celeron® Processor 575 (1M Cache, 2.00 GHz, 667 MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 Graphics and Memory Controller Hub
- Featuring the Mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IEM (ICH9M-E) I/O Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 1x Front Access CF Card Socket
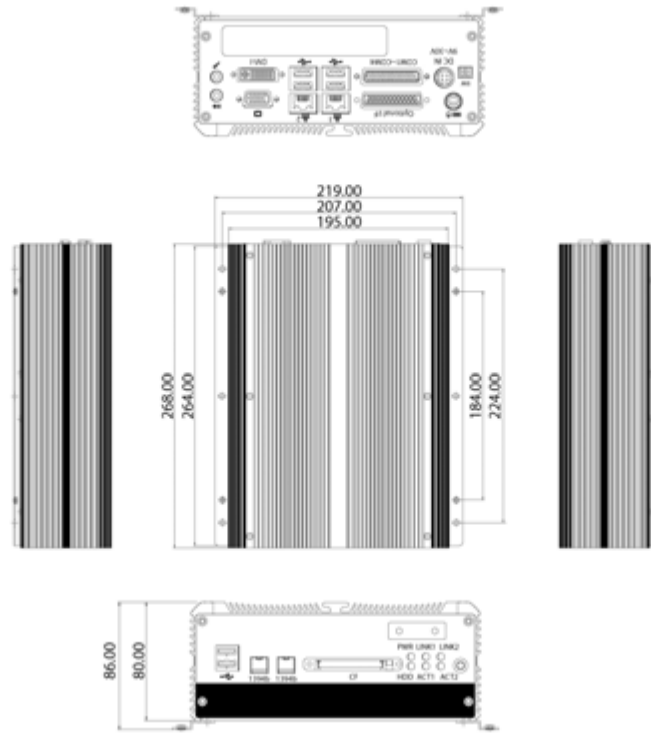- 2x USB2.0 ports
- Dual IEEE1394b ports

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- +16 to 30VDC input
- 1x PS/2 for Keyboard/Mouse
- 1x DB25 Parallel Port (Optional GPIO or LVDS interface)
- 1x DB44 Serial Port for 4x RS232 (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports
  - LAN1: Support WoL & PXE
  - LAN2: Support LAN teaming
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I Port (DVI-D + VGA)
- 1x Line out and 1x Mic-in

Device
- 2x 2.5" SATA HDD drive bay
- 1x external locked CF card socket

Dimension Drawing

Expansion

- One PCI Expansion (10W max./ per slot)
- One PCIe x1 Expansion (10W max./ per slot)
- Add-on card length: 169mm max.

Power Requirements

- ATX power mode
- OnBoard DC to DC power support from +16 to 30VDC
- Optional power adapter

Dimensions

- 195mm (W) x 268 mm (D) x 101mm (H) (7.7" x 10.5" x 3.98")

Construction

- Aluminum Chassis with fanless design

Environment

- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CF: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3140M2E (P/N: 10J00314008X0) RoHS Compliant**
  Intel® Core™ 2 Duo/ Celeron® Fanless Bare-Bone system with
  One PCI and One PCIe x1 slots

- **NISE 3140M2 (P/N: 10J00314007X0) RoHS Compliant**
  Intel® Core™ 2 Duo/ Celeron® Fanless Bare-Bone system with
  Two PCI slots

- **19V, 120W AC/DC power adapter w/o power cord
  (P/N: 7400120006X00)**

- **19V, 120W AC/DC power adapter w/o power cord
  (P/N: 7410120002X00)**

NISE 3142

Main Features

- Support Intel® Core™ 2 Duo/ Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, teaming and PXE

- Dual DVI-D Independent display
- 5x RS232 and 1x RS232/422/485 with Auto Direction Control
- One External Locked CFast Socket (SATA Interface)
- Support +16 to 30VDC Power Input and ATX power mode
- Support ATX power mode

Product Overview

NISE 3142 fanless computer supports Intel® Core™ 2 Duo and Celeron® socket type processor. Upgraded with two DVI-D and CFast SATA interfaces, NISE 3142 transfers data faster than its predecessor NISE 3140 and can present high-definition images simultaneously in dual large independent displays. The feature makes NISE 3142 apt for eSOP.

Along with fanless design, it can adapt to filthy environments rife with greasy dusts. In addition, NISE 3142 with multiple I/O options is a future proof solution, which is ideal for applications within industrial automation, factory automation, automatic optical inspection, ATMs, public infotainment, in-vehicle signage, and surveillance as well as data acquisition.

Specifications

Main Board
- NISB 3142
- Support Intel® Core™ 2 Duo processor T9400
  (6M cache, 2.53GHz, 1066MHz FSB)
- Support Intel® Core™ 2 Duo Processor P8400
  (3M Cache, 2.26 GHz, 1066MHz FSB)
- Support Intel® Celeron® Processor 575
  (1M Cache, 2.0GHz, 667MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 Graphics and Memory Controller Hub
- Featuring the Mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IBM (ICH9M) I/O Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs

- 1x Front Access CFast Card Socket (SATA interface)
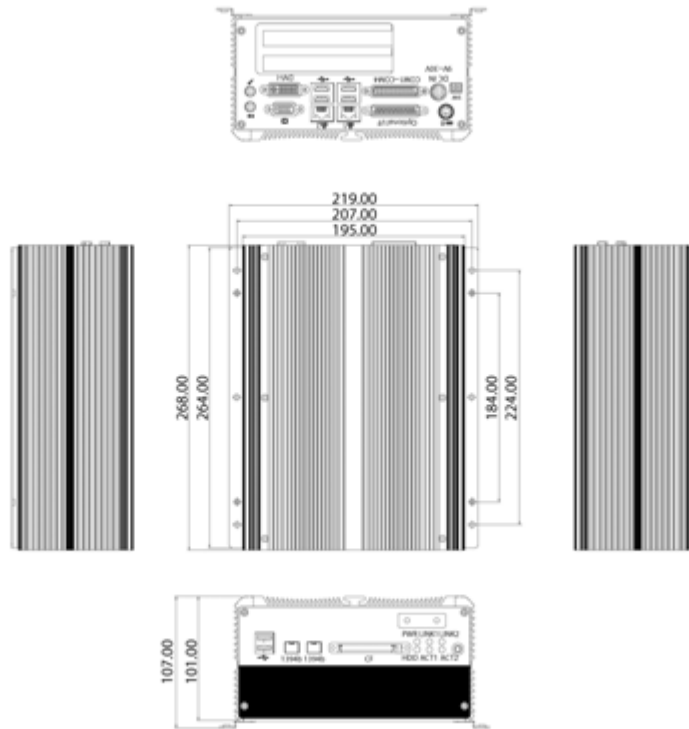- 2x USB2.0 ports

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- 2-pin System signal
- +16 to 30VDC input
- 2x DB9 COM5 & COM6, RS232
- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL, PXE & LAN teaming)
- 4x USB2.0 ports
- 2x DVI-D Port
- 1x Line out & 1x Mic-in

Storage
- 1x 2.5" SATA HDD drive bay
- 1x external locked CFast card socket (SATA interface)

NEXCOM

Dimension Drawing

Expansion Slot
- One PCI expansion (NISE3140 only, 10W max./per slot)
- Add-on card length:
  - 169 mm max. with HDD installed
  - 240 mm max. without HDD installed

Power Input
- ATX power mode
- OnBoard DC to DC power support from +16 to 30VDC
- Optional Power Adapter

Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7" x 10.5" x 3.1")

Construction
- Aluminum Chassis with fan-less design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 3142 (P/N: 10J00314200X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® fanless barebone system with dual
  DVI-D display output and one PCI expansion slot

- **19V, 120W AC/DC power adapter w/o power cord**
  (P/N: 7410120002X00)

NISE 3142P2

Intel® Core™ 2 Duo Fanless System with Dual DVI-D
Display Outputs and 2x Expansion Slots

Main Features

- Support Intel® Core™ 2 Duo/ Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, teaming and PXE

- Dual DVI-D independent display
- 5x RS232 and 1x RS232/422/485 with Auto Direction Control
- One external locked CFast socket (SATA interface)
- Support +16V to 30VDC power input and ATX power mode

Product Overview

NISE 3142P2 fanless computer supports Intel® Core™ 2 Duo and Celeron® socket type processor. Upgraded with two DVI-D and CFast SATA interfaces, NISE 3142P2 transfers data faster than its predecessor NISE 3140 and can present high-definition images simultaneously in dual large independent displays. The feature makes NISE 3142P2 apt for eSOP.

Along with fanless design, it can adapt to filthy environments rife with greasy dusts. In addition, NISE 3142P2 with multiple I/O options is a future proof solution, which is ideal for applications within industrial automation, factory automation, automatic optical inspection, ATMs, public infotainment, in-vehicle signage, and surveillance as well as data acquisition.

Specifications

Main Board
- NISB3142
- Support Intel® Core™ 2 Duo processor T9400
  (6M cache, 2.53GHz, 1066MHz FSB)
- Support Intel® Core™ 2 Duo processor P8400
  (3M cache, 2.26 GHz, 1066MHz FSB)
- Support Intel® Celeron® processor 575
  (1M cache, 2.0GHz, 667MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 graphics and Memory Controller Hub
- Featuring the ,obile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IBM I/O (ICH9M) Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD access/power status LEDs

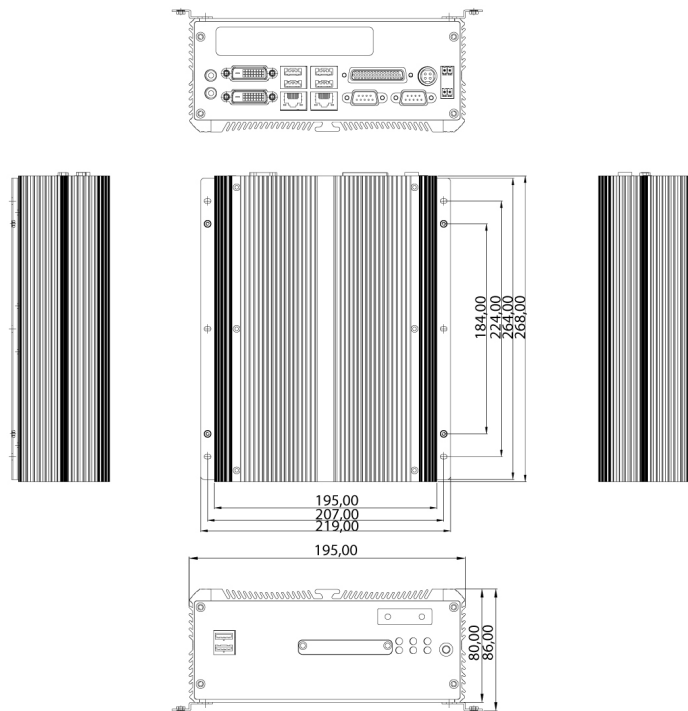- 1x front access CFast card socket (SATA interface)
- 2x USB2.0 ports

I/O Interface-Rear
- 2-pin remote power on/off switch
- 2-pin system signal
- +16V to 30VDC input
- 2x DB9, COM5 & COM6, RS232
- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL, PXE & LAN teaming)
- 4x USB2.0 ports
- 2x DVI-D port
- 1x Line-out and 1x Mic-in

Storage
- 1x 2.5" SATA HDD drive bay
- 1x external locked CFast card socket (SATA interface)

NEXCOM

Dimension Drawing
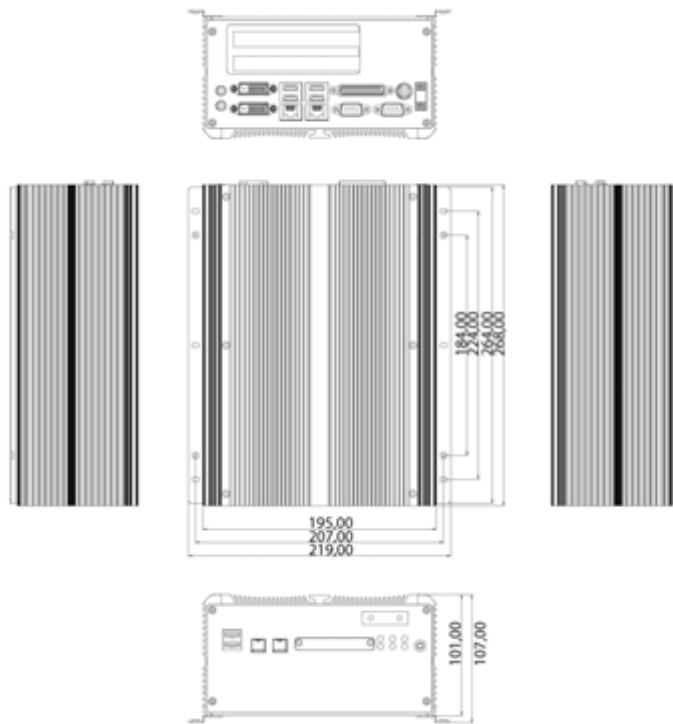
Expansion Slot
- Two PCI expansion (10W max./ per slot)
- Add-on card length:
  - 169 mm max. with HDD installed
  - 240 mm max. without HDD installed

Power Input
- ATX power mode
- OnBoard DC to DC power support from 16V to 30VDC
- Optional power adapter

Dimensions
- 195mm(W)x 268mm(D)x 101mm(H) (7.7"x 10.5"x 3.98")

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 3142P2 (P/N: 10J00314202X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® fanless barebone system with dual DVI-D display output and two PCI expansion slots

- **19V, 120W AC/DC power adapter w/o power cord (P/N: 7410120002X00)**

NISE 3142M

Intel® Core™ 2 Duo Fanless System with IEEE1394b, Dual DVI-D Display Outputs and 1x Expansion Slots

Main Features

- Support Intel® Core™ 2 Duo / Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, PXE and teaming
- Dual DVI-D Independent display

- 5x RS232 and 1x RS232/422/485 with Auto Direction Control
- One external locked CFast socket (SATA Interface)
- Dual IEEE1394b ports
- Support +16V to 30VDC power input and ATX power mode

Product Overview

NISE 3142M fanless computer supports Intel® Core™ 2 Duo and Celeron® socket type processor. Upgraded with two DVI-D and CFast SATA interfaces, NISE 3142M transfers data faster than its predecessor NISE 3140 and can present high-definition images simultaneously in dual large independent displays. The feature makes NISE 3142M apt for eSOP.

Along with fanless design, it can adapt to filthy environments rife with greasy dusts. In addition, NISE 3142M with multiple I/O options is a future proof solution, which is ideal for applications within industrial automation, factory automation, automatic optical inspection, ATMs, public infotainment, in-vehicle signage, and surveillance as well as data acquisition.

Specifications

Main Board
- NISB3142
- Support Intel® Core™ 2 Duo processor T9400 (6M cache, 2.53GHz, 1066MHz FSB)
- Support Intel® Core™ 2 Duo processor P8400 (3M cache, 2.26 GHz, 1066MHz FSB)
- Support Intel® Celeron® processor 575 (1M cache, 2.0GHz, 667MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un- buffered and non-ECC

Chipset
- Intel® GM45 graphics and Memory Controller Hub
- Featuring the mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IEM I/O (ICH9M-E) Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD access/power status LEDs

- 1x front access CFast card socket (SATA interface)
- 2x USB2.0 ports
- Dual IEEE1394b ports

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- 2-pin System signal
- +16V to 30VDC input
- 2x DB9, COM5 & COM6, RS232
- 1x DB44 Serial Port for 4x RS232 (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL, PXE & LAN teaming)
- 4x USB2.0 ports
- 2x DVI-D Port
- 1x Line-out and 1x Mic-in

Storage
- 2x 2.5" SATA HDD drive bay
- 1x external locked CFast card socket (SATA Interface)

126 Fanless Computer

NEXCOM

Dimension Drawing

Expansion Slot
• One PCI expansion (10W max./per slot)
• Add-on card length:
 - 169 mm max. with HDD installed
 - 240 mm max. without HDD installed

Power Input
• ATX power mode
• OnBoard DC to DC power support from +16 to 30VDC
• Optional power adapter

Dimensions
• 195mm(W)x 268mm(D)x 80mm(H) (7.7"x 10.5"x 3.1")

Construction
• Aluminum chassis with fanless design

Environment
• Operating temperature:
 Ambient with air flow: -5°C to 55°C
 (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
• Storage temperature: -20°C to 80°C
• Relative humidity: 10% to 93% (Non-Condensing)
• Shock protection:
 - HDD: 20G, half sine, 11ms, IEC60068-2-27
 - CFast: 50G, half sine, 11ms, IEC60068-2-27
• Vibration protection w/ HDD Condition
 - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
 - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
• CE approval
• FCC Class A

Ordering Information

Barebone

• **NISE 3142M (P/N: 10J00314201X0) RoHS Compliant**
 Intel® Core™ 2 Duo / Celeron® fanless barebone system with dual DVI-D display outputs and one PCI expansion slot

• **19V, 120W AC/DC power adapter w/o power cord (P/N: 7410120002X00)**

NISE 3142M2E

Main Features

- Support Intel® Core™ 2 Duo/ Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, teaming and PXE

- Dual DVI-D Independent display
- 5x RS232 and 1x RS232/422/485 with Auto Direction Control
- One external locked CFast socket (SATA interface)
- Support +16V to 30VDC power input and ATX power mode

Product Overview

NISE 3142M2E fanless computer supports Intel® Core™ 2 Duo and Celeron® socket type processor. Upgraded with two DVI-D and CFast SATA interfaces, NISE 3142M2E transfers data faster than its predecessor NISE 3140 and can present high-definition images simultaneously in dual large independent displays. The feature makes NISE 3142M2E apt for eSOP.

Along with fanless design, it can adapt to filthy environments rife with greasy dusts. In addition, NISE 3142M2E with multiple I/O options is a future proof solution, which is ideal for applications within industrial automation, factory automation, automatic optical inspection, ATMs, public infotainment, in-vehicle signage, and surveillance as well as data acquisition.

Specifications

Main Board
- NISB 3142
- Support Intel® Core™ 2 Duo processor T9400 (6M cache, 2.53GHz, 1066MHz FSB)
- Support Intel® Core™ 2 Duo processor P8400 (3M cache, 2.26 GHz, 1066MHz FSB)
- Support Intel® Celeron® processor 575 (1M cache, 2.0GHz, 667MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 graphics and Memory Controller Hub
- Featuring the mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IEM I/O (ICH9M-E) Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD access/power status LEDs

- 1x front access CFast card socket (SATA interface)
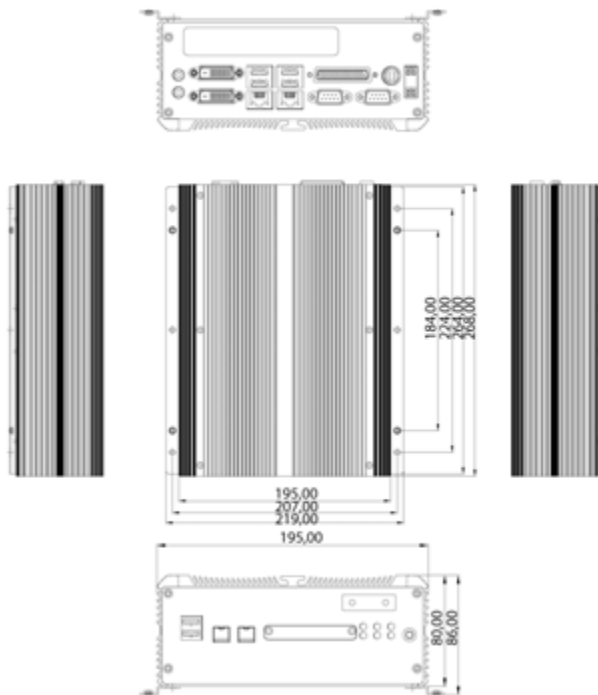- 2x USB2.0 ports

I/O Interface-Rear
- 2-pin remote power on/off switch
- 2-pin system signal
- +16V to 30VDC power input
- 2x DB9, COM5 & COM6, RS232
- 1x DB44 serial port for 4x RS232 (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL, PXE & LAN teaming)
- 4x USB2.0 ports
- 2x DVI-D port
- 1x Line-out and 1x Mic-in

Storage
- 1x 2.5" SATA HDD drive bay
- 1x external locked CFast card socket (SATA interface)

Dimension Drawing

Expansion Slot
- One PCI expansion (10W max./ per slot)
- One PCIe x1 expansion (10W max./ per slot)
- Add-on card length:
  169 mm max. with HDD installed

Power Input
- ATX power mode
- OnBoard DC to DC power support from +16 to 30VDC
- Optional power adapter

Dimensions
- 195mm(W) x 268mm(D) x 101mm(H) (7.7"x 10.5"x 3.98")

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 3142M2E (P/N: 10J00314203X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® fanless barebone system with dual DVI-D display output, one PCI expansion and one PCIe x1 expansion slots

- **19V, 120W AC/DC power adapter w/o power cord (P/N: 7410120002X00)**

NISE 3145

Intel® Core™ 2 Duo Fanless System with Slim DVD Combo
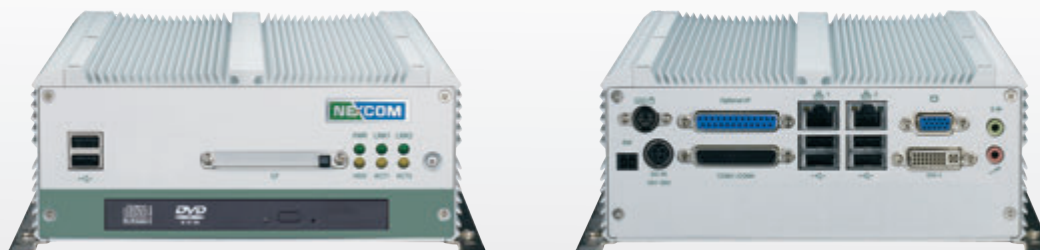
Main Features

- Support Intel® Core™ 2 Duo / Celeron® processor
- Intel® GM45 chipsets
- Dual Intel® 82574L Gigabit Ethernet ports; Support WoL, teaming, PXE
- Dual VGA or VGA/DVI Independent Display
- 3x RS232 and 1x RS232/422/485 with Auto Direction Control
- One external locked CF socket
- OnBoard DC to DC power design to support +16 to 30VDC power input and ATX power mode
- Slim DVD Combo

Product Overview

Utilizing the Intel® GM45 chipsets, NISE 3145 is highly scalable supporting a wide variety of Intel® Core™ 2 Duo and Celeron® processors. Using the Intel® graphics media accelerator 4500MHD, the rugged NISE 3145 delivers exceptional graphics performance with notable rates of data transfer.

NISE 3145 provides a number of important features required by image processing operation, including dual-channel DDR3 memory, two Gigabit Ethernet LANs, auto-direction control on RS485 interface. On top of that, NISE 3145 supports dual independent displays through 2x VGA, DVI or LVDS outputs. Housed in a robust aluminum chassis, NISE 3145 of fanless design offers noise-free, ultra reliable operating in the most demanding of industrial environment. The NISE 3145 series is an idea system for industrial automation, machine automation, Automated Optical Inspection (AOI), visual inspection, video surveillance, image mapping and face recognition markets.

Specifications

Main Board
- NISB 3140
- Support Intel® Core™ 2 Duo Processor P8400
  (3M Cache, 2.26 GHz, 1066 MHz FSB)
- Support Intel® Celeron® Processor 575
  (1M Cache, 2.00 GHz, 667 MHz FSB)

Main Memory
- 2x 240-pin DIMM, up to 4GB DDR3 800/1066 MHz SDRAM, un-buffered and non-ECC

Chipset
- Intel® GM45 Graphics and Memory Controller Hub
- Featuring the Mobile Intel® Graphics Media Accelerator 4500MHD
- Intel® 82801IBM (ICH9M) I/O Controller Hub

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 1x Front Access CF Card Socket
- 2x USB2.0 ports

I/O Interface-Rear
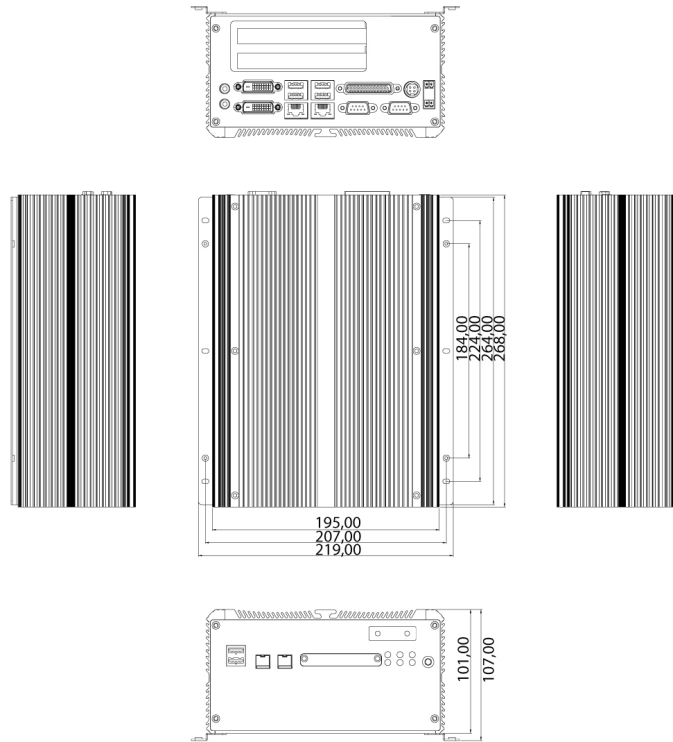- 2-pin Remote Power on/off switch
- +16V to 30VDC input
- 1x PS/2 for Keyboard/Mouse
- 1x DB25 Parallel Port (Optional GPIO or LVDS interface)
- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with Auto Flow Control)
- 2x GbE LAN ports (support WoL, PXE & LAN teaming)
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I Port (DVI-D + VGA)
- 1x Line-out and 1x Mic-in

Device
- 1x 2.5" SATA HDD drive bay
- 1x external locked CF card socket
- Slim DVD Combo

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from +16 to 30VDC
- Optional power adapter

Dimension Drawing
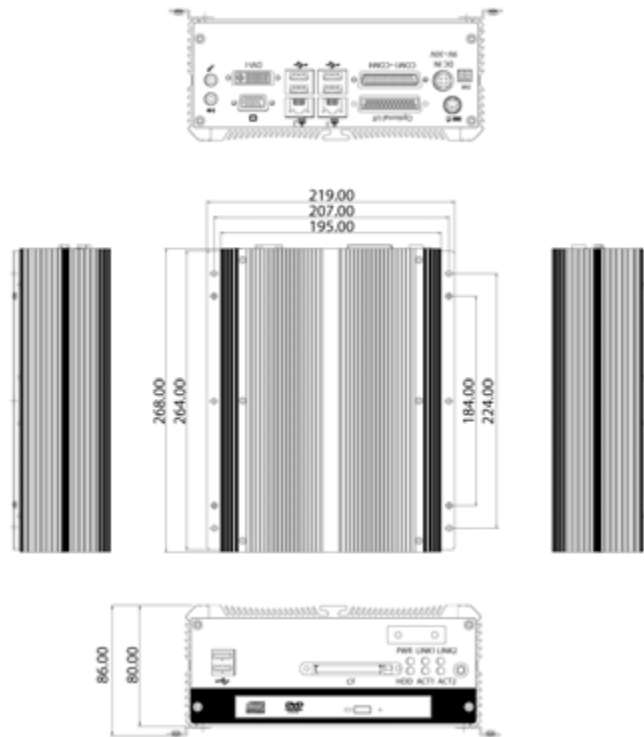
Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7 " x 10.5 " x 3.1 ")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 50°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)

Certifications
- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3145 (P/N: 10J00314500X0) RoHS Compliant**
  Intel® Core™ 2 Duo / Celeron® Fanless Bare-Bone system with Slim DVD Combo

- **19V, 120W AC/DC power adapter w/o power cord (P/N: 7410120002X00)**

NISE 3500

Intel® Core™ i7/i5 Fanless System with

VGA, DVI-I, eSATA and one Expansion Slot

Main Features

- Support Intel® Core™ i7/i5 socket processor
- Mobile Intel® QM57 PCH
- Dual Intel® Gigabit Ethernet ports; Support WoL and PXE
- Dual VGA or VGA/DVI Independent Display

- 3x RS232 and 1x RS232/422/485 with Auto Flow Control
- 5th RS232 (option: 4x digital input, 4x digital output)
- Support +9 to 30VDC power input; Support ATX power mode

Product Overview

Utilizing 32nm Intel® Core™ i7/i5 processor, NISE 3500 series feature Intel® Turbo Boost and Intel® Hyper-Threading technologies (2 cores, 4 threads), as well as on-processor graphics and two DDRIII 800/1066 memory modules up to 4GB. In addition, NISE 3500 provides a wide variety of display I/O configurations and rich I/O interfaces including two Intel® GbE Ethernet ports, 5x COM ports, 6x USB, 8x GPIO, 2x SATAII, 2x eSATA, audio interfaces. NISE 3500M has more features than NISE 3500, for example, it is equipped with 3x IEEE1394b ports and 1x HDMI port. NISE 3500 is designed for a broad range of applications which demand intense graphics performance, these include medical diagnostic equipment, medical imaging, data storage, industrial automation, public infotainment, surveillance security applications.

Specifications

Main Board
- NISB 3500
- OnBoard Mobile Intel® QM57 Platform Controller Hub
- Support Intel® Core™ i7-620M PGA Processor (2.66GHz, 4M Cache)
- Support Intel® Core™ i5-520M PGA Processor (2.4GHz, 3M Cache)
- Support Intel® P4500 PGA Processor (1.86GHz, 2M Cache)

Main Memory
- 2x 240-pin memory DIMM, up to 4GB DDR3 800/1066MHz SDRAM, un-buffered and non-ECC
  Note: Actual memory size is dynamic based on the OS I/O resource allocation

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 2x USB2.0 ports
- 2x eSATA ports

I/O Interface-Rear
- 2-pin Remote Power on/ff switch
- +9 to 30VDC input
- 1x PS/2 for Keyboard / Mouse
- 1x DB9 for COM5, RS232 (option: 4x GPI and 4x GPO)

- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with auto flow control)
- 2x GbE LAN ports; Support WoL and PXE
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I port
- 1x Line-out and 1x Mic-in

Device
- 1x 2.5" HDD driver bay

Expansion
- 1x PCI expansion (10W max./ per slot)
- Add-on card length: 169mm max.

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from +9 to 30VDC
- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7" x 10.5" x 3.1")

Construction
- Aluminum Chassis with fanless design

132   Fanless Computer

NEXCOM

Dimension Drawing

Environment

- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  HDD: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- CE approval
- FCC Class B
- UL/ cUL
- e13

Ordering Information

Barebone

- **NISE 3500 (P/N: 10J00350000X0) RoHS Compliant**
  Intel® Core™ i7/i5 Fanless System with one PCI Expansion Slot

- **19V, 120W AC/DC Power Adapter w/o power core
  (P/N: 7410120002X00)**

NISE 3500P2

Intel® Core™ i7/i5 Fanless System with VGA, DVI-I, eSATA and Two Expansion Slot

Main Features

- Support Intel® Core™ i7/i5 socket processor
- Mobile Intel® QM57 PCH
- Dual Intel® Gigabit Ethernet ports; Support WoL and PXE
- Dual VGA or VGA/ DVI Independent Display

- 3x RS232 and 1x RS232/422/485 with Auto Flow Control
- 5th RS232 (option: 4x digital input, 4x digital output)
- Support +9 to 30VDC power input; Support ATX power mode

Product Overview

Utilizing 32nm Intel® Core™ i7/i5 processor, NISE 3500 series feature Intel® Turbo Boost and Intel® Hyper-Threading technologies (2 cores, 4 threads), as well as on-processor graphics and two DDRIII 800/1066 memory modules up to 4GB. In addition, NISE 3500 provides a wide variety of display I/O configurations and rich I/O interfaces including two Intel® GbE Ethernet ports, 5x COM ports, 6x USB, 8x GPIO, 2x SATAII, 2x eSATA, audio interfaces. NISE 3500M has more features than NISE 3500, for example, it is equipped with 3x IEEE1394b ports and 1x HDMI port. NISE 3500 is designed for a broad range of applications which demand intense graphics performance, these include medical diagnostic equipment, medical imaging, data storage, industrial automation, public infotainment, surveillance security applications.

Specifications

Main Board
- NISB 3500
- OnBoard Mobile Intel® QM57 Platform Controller Hub
- Support Intel® Core™ i7-620M PGA Processor (2.66GHz, 4M Cache)
- Support Intel® Core™ i5-520M PGA Processor (2.4GHz, 3M Cache)
- Support Intel® P4500 PGA Processor (1.86GHz, 2M Cache)

Main Memory
- 2x 240-pin memory DIMM, up to 4GB DDR3 800/ 1066MHz SDRAM, unbuffered and non-ECC
  Note: Actual memory size is dynamic based on the OS I/O resource allocation

I/O Interface-Front
- ATX power on/ off switch
- HDD Access/ Power status LEDs
- 2x USB2.0 ports
- 2x eSATA ports

I/O Interface-Rear
- 2-pin Remote Power on/ off switch
- +9 to 30VDC input
- 1x PS/ 2 for Keyboard / Mouse
- 1x DB9 for COM5, RS232 (option: 4x GPI and 4x GPO)

- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with auto flow control)
- 2x GbE LAN ports; Support WoL and PXE
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I port
- 1x Line-out and 1x Mic-in

Device
- 1x 2.5" HDD driver bay

Expansion
- 2x PCI expansion (10W max./ per slot)
- Add-on card length: 169mm max.

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from +9 to 30VDC
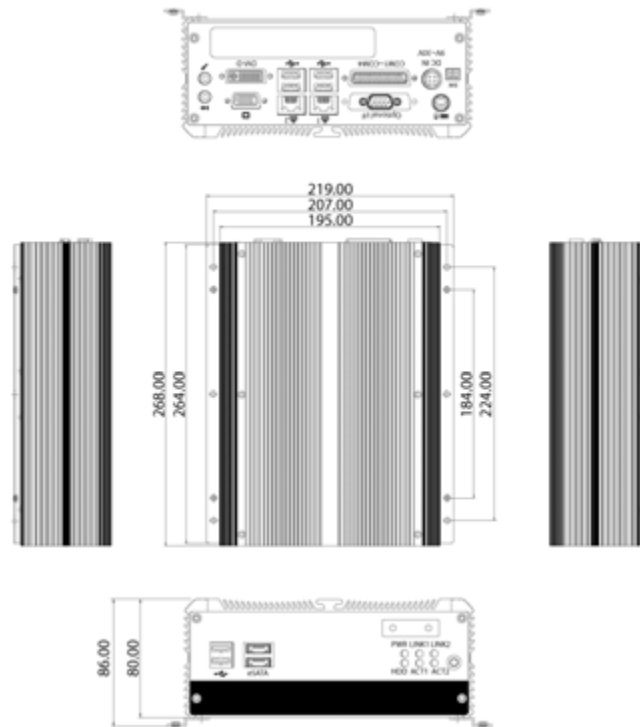- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 101mm (H) (7.7" x 10.5" x 3.98")

Construction
- Aluminum Chassis with fanless design

NEXCOM

Dimension Drawing

Environment

- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  HDD: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- CE approval
- FCC Class B
- UL/ cUL
- e13

Ordering Information

Barebone

- **NISE 3500P2 (P/N: 10J00350002X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with two PCI expansion slots

- **NISE 3500P2E (P/N: 10J00350004X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with one PCI and one PCIe x1 expansion sots (MoQ is required)

- **NISE 3500E2 (P/N: 10J00350005X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with two PCIe x1 expansion slots (MoQ is required, not in UL model list)

- **NISE 3500P2E4 (P/N: 10J00350017X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with one PCI and one PCIe x4 expansion slots (MoQ is required, not in UL model list)

- **19V, 120W AC/DC power adapter w/o power core (P/N: 7410120002X00)**
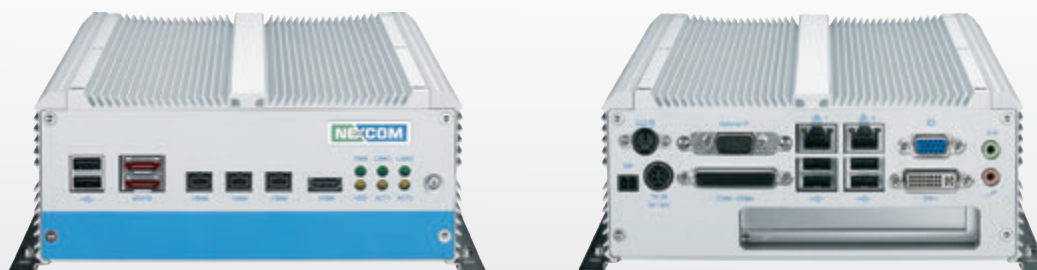
NISE 3500M

Main Features

- Support Intel® Core™ i7/i5 socket processor
- Mobile Intel® QM57 PCH
- Dual Intel® Gigabit Ethernet ports; Support WoL and PXE
- Dual VGA or VGA/DVI or DVI/HDMI Independent Display

- 3x RS232 and 1x RS232/422/485 with Auto Flow Control
- 5th RS232 (option: 4x digital input, 4x digital output)
- 3x IEEE1394b ports, 2x eSATA
- Support +9 to 30VDC power input; Support ATX power mode

Product Overview

Utilizing 32nm Intel® Core™ i7/i5 processor, NISE 3500 series feature Intel® Turbo Boost and Intel® Hyper-Threading technologies (2 cores, 4 threads), as well as on-processor graphics and two DDRIII 800/1066 memory modules up to 4GB. In addition, NISE 3500 provides a wide variety of display I/O configurations and rich I/O interfaces including two Intel® GbE Ethernet ports, 5x COM ports, 6x USB, 8x GPIO, 2x SATAII, 2x eSATA, audio interfaces. NISE 3500M has more features than NISE 3500, for example, it is equipped with 3x IEEE1394b ports and 1x HDMI port. NISE 3500 is designed for a broad range of applications which demand intense graphics performance, these include medical diagnostic equipment, medical imaging, data storage, industrial automation, public infotainment, surveillance security applications.

Specifications

Main Board
- NISB 3500
- OnBoard Mobile Intel® QM57 Platform Controller Hub
- Support Intel® Core™ i7-620M PGA Processor (2.66GHz, 4M Cache)
- Support Intel® Core™ i5-520M PGA Processor (2.4GHz, 3M Cache)
- Support Intel® P4500 PGA Processor (1.86GHz, 2M Cache)

Main Memory
- 2x 240-pin memory DIMM, up to 4GB DDR3 800/1066MHz SDRAM, un-buffered and non-ECC
  Note: Actual memory size is dynamic based on the OS I/O resource allocation

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 2x USB2.0 ports
- 2x eSATA ports
- 3x IEEE1394b ports
- 1x HDMI

I/O Interface-Rear
- 2-pin Remote Power on/ff switch
- +9V to 30VDC input
- 1x PS/2 for Keyboard/ Mouse

- 1x DB9 for COM5, RS232 (option: 4x GPI and 4x GPO)
- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with auto flow control)
- 2x GbE LAN ports; Support WoL and PXE
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I port
- 1x Line-out and 1x Mic-in

Device
- 1x 2.5" HDD driver bay

Expansion
- 1x PCI expansion (10W max./ per slot)
- Add-on card length: 169mm max.

Power Requirements
- ATX power mode
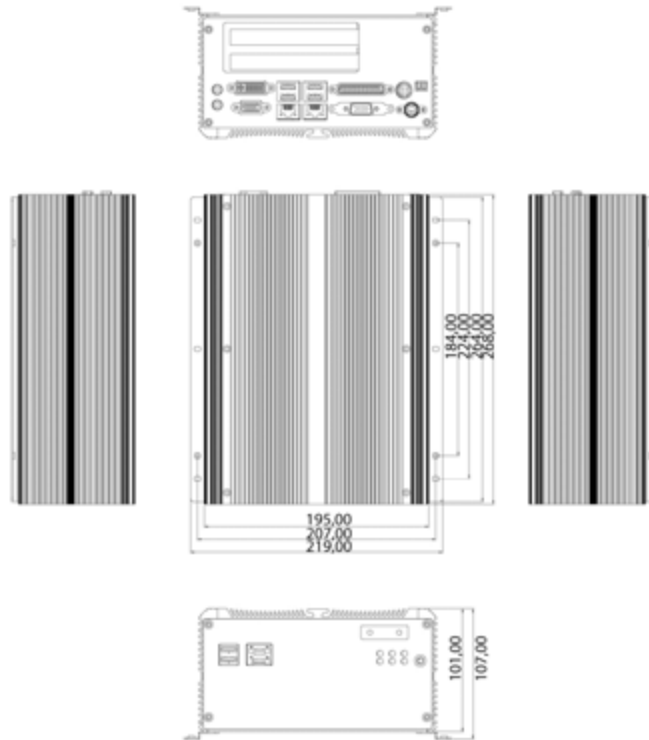- OnBoard DC to DC power support from +9 to 30VDC
- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7" x 10.5" x 3.1")

Construction
- Aluminum Chassis with fanless design

Dimension Drawing

Environment

- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  HDD: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
 - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- EN60601
- CE approval
- FCC Class B
- UL/ cUL
- e13

Ordering Information

Barebone

- **NISE 3500M (P/N: 10J00350001X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with one PCI expansion slot

- **NISE 3500ME (P/N: 10J00350014X2) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with one PCIe x1 expansion slot (MoQ is required)

- **19V, 120W non-medical grade AC/DC power adapter w/o power core (P/N: 7410120002X00)**

NISE 3500M2E

Intel® Core™ i7/i5 Fanless System with
IEEE 1394b, eSATA, HDMI and one Expansion Slot

Main Features

- Support Intel® Core™ i7/i5 socket processor
- Mobile Intel® QM57 PCH
- Dual Intel® Gigabit Ethernet ports; Support WoL and PXE
- Dual VGA or VGA/DVI or DVI/HDMI Independent Display
- 3x RS232 and 1 x RS232/422/485 with Auto Flow Control

- 5th RS232 (option: 4x digital input, 4x digital output)
- 3x IEEE1394b ports, 2x eSATA
- Support +9V to 30VDC power input; Support ATX power mode
- 1x PCI expansion slots and 1x PCIe expansion slots

Product Overview

Utilizing 32nm Intel® Core™ i7/i5 processor, NISE 3500 series feature Intel® Turbo Boost and Intel® Hyper-Threading technologies (2 cores, 4 threads), as well as on-processor graphics and two DDRIII 800/1066 memory modules up to 4GB. In addition, NISE 3500 provides a wide variety of display I/O configurations and rich I/O interfaces including two Intel® GbE Ethernet ports, 5x COM ports, 6x USB, 8x GPIO, 2x SATAII, 2x eSATA, audio interfaces. NISE 3500M has more features than NISE 3500, for example, it is equipped with 3x IEEE1394b ports and 1x HDMI port. NISE 3500 is designed for a broad range of applications which demand intense graphics performance, these include medical diagnostic equipment, medical imaging, data storage, industrial automation, public infotainment, surveillance security applications.

Specifications

Main Board
- NISB 3500
- OnBoard Mobile Intel® QM57 Platform Controller Hub
- Support Intel® Core™ i7-620M PGA Processor (2.66GHz, 4M Cache)
- Support Intel® Core™ i5-520M PGA Processor (2.4GHz, 3M Cache)
- Support Intel® P4500 PGA Processor (1.86GHz, 2M Cache)

Main Memory
- 2x 240-pin memory DIMM, up to 4GB DDR3 800/1066MHz SDRAM, unbuffered and non-ECC
- * Note: Actual memory size is dynamic based on the OS I/O resource allocation

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- 2x USB2.0 ports
- 2x eSATA ports
- 3x IEEE1394b ports
- 1x HDMI

I/O Interface-Rear
- 2-pin Remote Power on/ff switch
- +9V to 30VDC input

- 1x PS/2 for Keyboard / Mouse
- 1x DB9 for COM5, RS232 (option: 4x GPI and 4x GPO)
- 1x DB44 Serial Port for 4x RS232 (COM2: RS232/422/485 with auto fl ow control)
- 2x GbE LAN ports; Support WoL and PXE
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I port
- 1x Line-out and 1x Mic-in

Device
- 2x 2.5" HDD driver bay

Expansion
- 1x PCI expansion (10W max./ per slot)
- 1x PCIe expansion (10W max./ per slot)
- Add-on card length: 169mm max.

Power Requirements
- ATX power mode
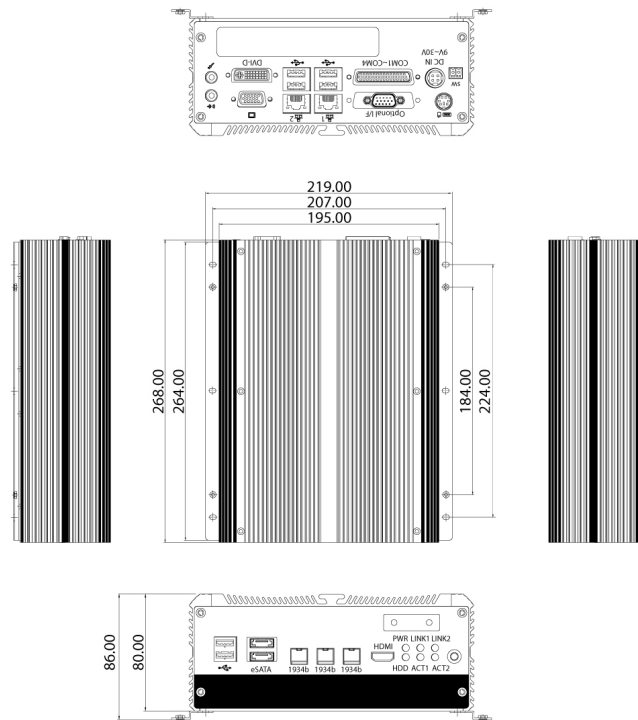- OnBoard DC to DC power support from +9 to 30VDC
- Optional power adapter

Dimension Drawing

Dimensions
- 195mm (W) x 268 mm (D) x 101mm (H) (7.7" x 10.5" x 3.98")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  HDD: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- EN60601
- CE approval
- FCC Class B
- UL/ cUL
- e13

Ordering Information

Barebone

- **NISE 3500M2E (P/N: 10J00350003X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with one PCI expansion and one PCIe x1 expansion slot

- **NISE 3500M2 (P/N: 10J00350006X0) RoHS Compliant**
  Intel® Core™ i7/i5 fanless system with two PCI expansion (MoQ is required)

- **19V, 120W non-medical grade AC/DC power adapter w/o power core (P/N: 7410120002X00)**

NISE 3520

Main Features

- Support Intel® Core™ i7/i5 socket processor
- Mobile Intel® QM57 PCH
- Dual Intel® Gigabit Ethernet ports; Support WoL and PXE
- Dual VGA or VGA/DVI or DVI/HDMI Independent Display
- 3x RS232 and 1x RS232/422/485 with Auto Flow Control
- 1x Mini-PCIe socket with one external SIM card holder
- Support +9V to 30VDC power input; Support ATX power mode

Product Overview

A wireless-ready system, Utilizing 32nm Intel® Core™ i7/i5 processor, NISE 3520 series feature Intel® Turbo Boost and Intel® Hyper-Threading technologies (2 cores, 4 threads), as well as on-processor graphics and two DDRIII 800/1066 memory modules up to 4GB. In addition, NISE 3520 provides a wide variety of display I/O configurations and rich I/O interfaces including two Intel® GbE Ethernet ports, 4x COM ports, 6x USB, 8x GPIO, 1x Mini-PCIe socket, 1x SIM card holder, 1x HDMI and mobile audio interfaces. NISE 3520 is designed for a broad range of applications which demand intense graphic performance, these include medical diagnostic equipment, medical imaging, data storage, industrial automation, public infotainment, surveillance security applications. With mobile communication ability, NISE 3520 can be applied to mobile application or those applications where cannot reach LAN cable, for example, mobile DVR, Kiosk and Data Acquisition in the field.

Specifications

Main Board
- NISB3520
- OnBoard Mobile Intel® QM57 Platform Controller Hub
- Support Intel® Core™ i7-620M PGA Processor (2.66GHz, 4M Cache)
- Support Intel® Core™ i5-520M PGA Processor (2.4GHz, 3M Cache)
- Support Intel® P4500 PGA Processor (1.86GHz, 2M Cache)

Main Memory
- 2x 240-pin memory DIMM, up to 4GB DDR3 800/1066MHz SDRAM, unbuffered and non-ECC
- * Note: Actual memory size is dynamic based on the OS I/O resource allocation

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- Wireless Active LEDs
- 2x Antenna holes
- 2x USB2.0 ports
- 1x Line-out and 1x Mic-in
- 1x HDMI
- 1x External SIM card holder

I/O Interface-Rear
- 2-pin Remote Power on/ff switch
- +9V to 30VDC input
- 1x PS/2 for Keyboard/ Mouse
- 1x DB15 male connector for GPIO (4x input and 4x output)
- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with auto flow control)
- 2x GbE LAN ports; Support WoL and PXE
- 4x USB2.0 ports
- 1x DB15 VGA port
- 1x DVI-I port
- 1x Line-out and 1x Mic-in

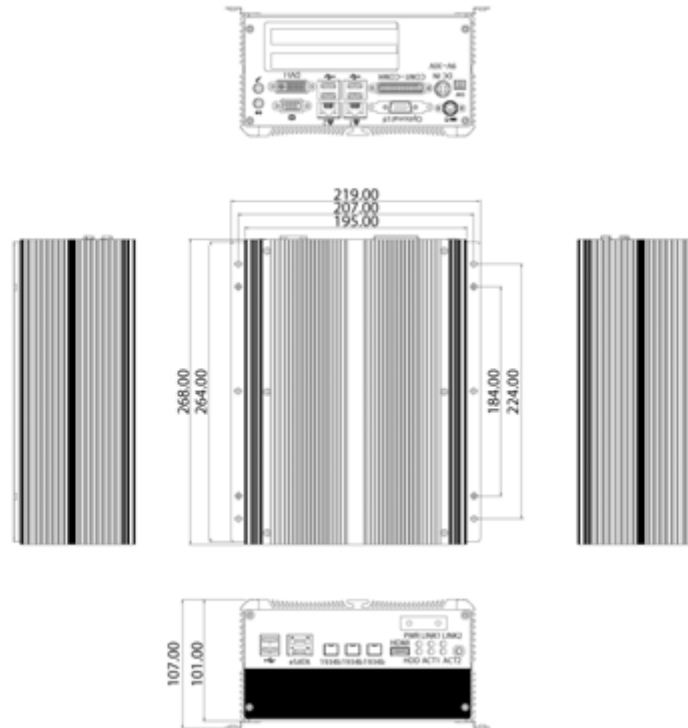### Device
- 1x 2.5" HDD driver bay

Expansion
- 1x PCI expansion (10W max./nper slot)
  Add-on card length: 169mm max
- 1x Mini-PCIe socket
  Default: support optional 3.5G module
  Option: support optional Wi-Fi module

Dimension Drawing

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from +9 to 30VDC
- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 80mm (H) (7.7" x 10.5" x 3.1")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  HDD: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- EN60601
- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3520 (P/N: 10J00352000X0) RoHS Compliant**
  Intel® Core™ i7/i5 Fanless System with one PCI Expansion Slot

- **19V, 120W AC/DC Power Adapter w/o power core
  (P/N: 7410120002X00)**

NISE 3520P2/P2E

Main Features

- Support Intel® Core™ i7/i5 socket processor
- Mobile Intel® QM57 PCH
- Dual Intel® Gigabit Ethernet ports; Support WoL and PXE
- Dual VGA or VGA/DVI or DVI/ HDMI Independent Display

- 3x RS232 and 1x RS232/422/485 with Auto Flow Control
- 1x Mini-PCIe socket with one external SIM card holder
- Support +9V to 30VDC power input; Support ATX power mode

Product Overview

A wireless-ready system, Utilizing 32nm Intel® Core™ i7/i5 processor, NISE 3520 series feature Intel® Turbo Boost and Intel® Hyper-Threading technologies (2 cores, 4 threads), as well as on-processor graphics and two DDRIII 800/1066 memory modules up to 4GB. In addition, NISE 3520 provides a wide variety of display I/O configurations and rich I/O interfaces including two Intel® GbE Ethernet ports, 5x COM ports, 6x USB, 8x GPIO, 1x Mini-PCIe socket, 1x SIM card holder, 1x HDMI, 2x GSM audio, 2x PCI slot,

NISE 3520 is designed for a broad range of applications which demand intense graphics performance, these include medical diagnostic equipment, medical imaging, data storage, industrial automation, public infotainment, surveillance security applications.

Specifications

Main Board
- NISB3500M
- OnBoard Mobile Intel® QM57 Platform Controller Hub
- Support Intel® Core™ i7-620M PGA Processor (2.66GHz, 4M Cache)
- Support Intel® Core™ i5-520M PGA Processor (2.4GHz, 3M Cache)
- Support Intel® P4500 PGA Processor (1.86GHz, 2M Cache)

Main Memory
- 2x 240-pin memory DIMM, up to 4GB DDR3 800/1066MHz SDRAM, unbuffered and non-ECC
- * Note: Actual memory size is dynamic based on the OS I/O resource allocation

I/O Interface-Front
- ATX power on/off switch
- HDD Access/Power status LEDs
- Wireless Active LEDs
- 2x Antenna holes
- 2x USB2.0 ports
- 1x Line-out and 1x Mic-in
- 1x HDMI
- 1x External SIM card holder

I/O Interface-Rear
- 2-pin Remote Power on/off switch
- +9V to 30VDC input
- 1x PS/2 for Keyboard / Mouse
- 1x DB15 male connector for GPIO (4x input and 4x output)
- 1x DB44 Serial Port for 4x RS232
  (COM2: RS232/422/485 with auto flow control)
- 2x GbE LAN ports; Support WoL and PXE
- 4x USB2.0 ports
- 1x DB15 VGA port
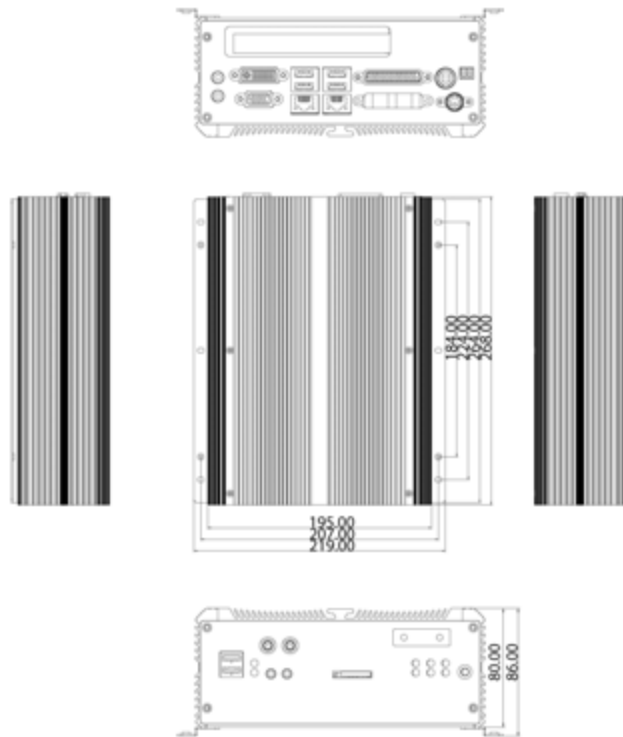- 1x DVI-I port
- 1x Line-out and 1x Mic-in

Device
- 1x 2.5" HDD driver bay

Expansion
- 2x PCI expansion (NISE 3520P2 only, 10W max./per slot)
- 1x PCI & 1x PCIe x1 expansion (NISE 3520P2E only, 10W max./per slot
- Add-on card length: 169mm max
- 1x Mini-PCIe socket
  - Default: support optional 3.5G module
  - Option: support optional Wi-Fi module

Dimension Drawing

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from 9V to 30VDC
- Optional power adapter

Dimensions
- 195mm (W) x 268 mm (D) x 101mm (H) (7.7" x 10.5" x 3.98")

Construction
- Aluminum Chassis with fan-less design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (Non-Condensing)
- Shock protection:
  HDD: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- EN60601
- CE approval
- FCC Class B

Ordering Information

Barebone

- **NISE 3520P2 (P/N: 10J00352002X0) RoHS Compliant**
  Intel® Core™ i7/i5 Fanless System with two PCI Expansion slot

- **NISE 3520P2E (P/N: 10J00352003X0) RoHS Compliant**
  Intel® Core™ i7/i5 Fanless System with one PCI and
  one PCIe x1 Expansion slots

- **19V, 120W AC/DC Power Adapter w/o power core**
  (P/N: 7410120002X00)

NISE 3600E

Main Features

- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 1x VGA, 1x DVI-D and 2x Display port with Independent Display support
- Dual Intel® GbE LAN ports; Support WoL, teaming & PXE

- 4x USB 3.0, 2x USB 2.0, 5x RS232 and 1x RS232/422/485
- 1x internal Mini-PCIe socket support optional Wifi or 3.5G module
- 1x external CFast socket & 1x SIM card socketSupport
- Support +9V to 30VDC input; Support ATX power mode
- One PCIe x4 expansion

Product Overview

Integrated with 3rd generation Intel® Core™ i5/i3 with QM77 PCH platform, NISE series evolve to a new generation called NISE 3600E series. It is not only sustained its good reputation on quality and user friendly features but also innovated its mechanical design.

With computing and graphic performance enhancement, NISE 3600E series supports 2x display port, 1x VGA port and 1x DVI-D port to fulfill the graphic intensive or computing oriented applications, including Auto Optical Inspection, Machinery Automation, ePolice infotainment, Surveillance or Image Processing equipment and Healthcare industry. In addition, NISE 3600E series offers 4x USB 3.0 and 2x USB 2.0, greater expansion capability with 2x Intel® GbE LAN ports, 6x COM ports, and 1x external CFast socket for front accessible availability. NISE 3600E series is sufficient to support wide range of DC input from +9 to 30V and ATX power; it is a new generation to meet most application requirements.

Specifications

CPU Support
- Support 3rd generation Intel® Core™ i5/i3 rPGA Socket Type Processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Support 2nd generation Intel® Core™ i5/i3 rPGA Socket Type Processor
  - Core™ i5-2510E, Dual Core, 2.5GHz, 3M Cache
  - Celeron® B810, Dual Core, 1.6GHz, 2M Cache
  - Support Dual Independent Display with above processors

Main Memory
- 2x DDR3 SO-DIMM socket, supports up to 8GB DDR3/ DDR3L 1333/ 1600 SDRAM, with un-buffered and non-ECC

Display Option
- Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1x VGA
  - Two Display Port and 1x DVI-D
- Dual Independent Display
  - VGA and DVI-D
  - Display Port and VGA
  - Display Port and DVI-D
  - Display Port and Display Port

I/O Interface-Front
- ATX power on/ off switch
- HDD Access/ Power status LEDs
- 2x USB3.0 ports (Blue Color)
- 2x Display Port (Can be converted to DVI-D or HDMI via active cables)
- 2x Antenna holes
- 1x external CFast
- 1x SIM card socket

I/O Interface-Rear
- 2x DB9 for COM5 & COM6 (RS232)
- 1x DB44 Serial Port for 4x COM port
  - COM1/COM3/COM4: RS232
  - COM2: RS232/422/485
- 2x Intel® GbE LAN ports (Intel 82574L and 82579LM); Support WoL, teaming and PXE
- 2x USB2.0 ports
- 2x USB3.0 ports (Blue Color)
- 1x DB15 VGA port
- 1x DVI-D port
- 1x Line-out and 1x Mic-in
- 2-pin Remote Power on/ off switch
- +9V to 30VDC input

NEXCOM

Dimension Drawing

Storage Device
- 1x CFast socket
- 1x 2.5" SATA HDD or 2x SATA DOM
- SATA DOM: support 90°C horizontal type only

Expansion Slot
- One PCIex4 Expansion Slot
  - Add-on card length: 169mm max.
  - Power consumption: 10W/slot max.
- 1x Mini-PCIe socket (support optional WiFi or 3.5G module)

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from 9V to 30VDC
- Optional power adapter

Dimensions
- 215mm (W) x 272mm (D) x 114mm (H) without wall mount bracket (8.5" x 10.7" x 4.5")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 95% at 40°C
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NISE 3600E (P/N: 10J00360000X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with one PCIex4 Expansion

- **NISE 3600E2 (P/N: 10J00360001X2)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with two PCIex4 Expansion

- **NISE 3600P2 (P/N: 10J00360002X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with two PCI Expansion

- **NISE3600P2E (P/N: 10J00360003X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with one PCI Expansion and one PCIex4 Expansion

- **19V, 120W AC/DC power adapter w/o power core (P/N: 7410120002X00)**

NISE 3600E2/P2/P2E

3rd Generation Intel® Core™ i3/i5 rPGA

Fanless System with Expansion

Main Features

- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 1x VGA, 1x DVI-D and 2x Display port with Independent Display support
- Dual Intel® GbE LAN ports; Support WoL, teaming & PXE

- 4x USB 3.0, 2x USB 2.0, 5x RS232 and 1x RS232/422/485
- 1x internal Mini-PCIe socket support optional Wifi or 3.5G module
- 1x external CFast socket & 1x SIM card socket
- Support +9V to 30VDC input; Support ATX power mode
- Two PCI or PCIe x4 expansion

Product Overview

Integrated with 3rd generation Intel® Core™ i5/i3 with QM77 PCH platform, NISE series evolve to a new generation called NISE 3600E series. It is not only sustained its good reputation on quality and user friendly features but also innovated its mechanical design.

With computing and graphic performance enhancement, NISE 3600E series supports 2x display port, 1x VGA port and 1x DVI-D port to fulfill the graphic intensive or computing oriented applications, including Auto Optical Inspection, Machinery Automation, ePolice infotainment, Surveillance or Image Processing equipment and Healthcare industry. In addition, NISE 3600E series offers 4x USB 3.0 and 2x USB 2.0, greater expansion capability with 2x Intel® GbE LAN ports, 6x COM ports, and 1x external CFast socket for front accessible availability. NISE 3600E series is sufficient to support wide range of DC input from +9 to 30V and ATX power; it is a new generation to meet most application requirements.

Specifications

CPU Support

- Support 3rd generation Intel® Core™ i5/i3 rPGA Socket Type Processor
    - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
    - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
    - Support Three Independent Display with above processors
- Support 2nd generation Intel® Core™ i5/i3 rPGA Socket Type Processor
    - Core™ i5-2510E, Dual Core, 2.5GHz, 3M Cache
    - Celeron® B810, Dual Core, 1.6GHz, 2M Cache
    - Support Dual Independent Display with above processors

Main Memory

- 2x DDR3 SO-DIMM socket, supports up to 8GB DDR3/ DDR3L 1333/ 1600 SDRAM, with un-buffered and non-ECC

Display Option

- Three Independent Display (only support on 3rd Generation Processor)
    - Two Display Port and 1x VGA
    - Two Display Port and 1x DVI-D
- Dual Independent Display
    - VGA and DVI-D
    - Display Port and VGA
    - Display Port and DVI-D
    - Display Port and Display Port

I/O Interface-Front

- ATX power on/ off switch
- HDD Access/ Power status LEDs
- 2x USB3.0 ports (Blue Color)
- 2x Display Port (Can be converted to DVI-D or HDMI via active cables)
- 2x Antenna holes
- 1x external CFast
- 1x SIM card socket

I/O Interface-Rear

- 2x DB9 for COM5 & COM6 (RS232)
- 1x DB44 Serial Port for 4x COM port
    - COM1/COM3/COM4: RS232
    - COM2: RS232/422/485
- 2x Intel® GbE LAN ports (Intel 82574L and 82579LM); Support WoL, teaming and PXE
- 2x USB2.0 ports
- 2x USB3.0 ports (Blue Color)
- 1x DB15 VGA port
- 1x DVI-D port

Dimension Drawing
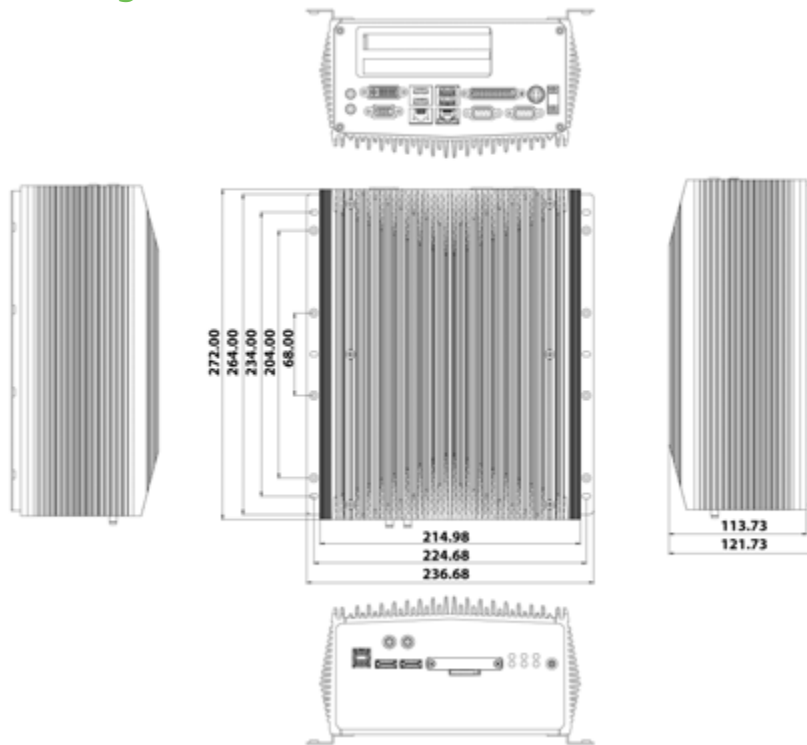
- 1x Line-out and 1x Mic-in
- 2-pin Remote Power on/ off switch
- +9V to 30VDC input

Storage Device
- 1x CFast socket
- 1x 2.5" SATA HDD or 2x SATA DOM
- SATA DOM: support 90°C horizontal type only

Expansion Slot
- NISE 3600E2: Two PCIe x4 Expansion Slot
  - Add-on card length: One 169mm max. and One 240mm max.
  - Power consumption: 10W/slot max.
- NISE 3600P2: Two PCI Expansion Slot
  - Add-on card length: One 169mm max. and One 240mm max.
  - Power consumption: 10W/slot max.
- NISE 3600P2E: One PCIe x4 and One PCI Expansion Slot
  - Add-on card length: 169mm max. for PCIe x4 and 240mm max. for PCI expansion
  - Power consumption: 10W/slot max.
- 1x Mini-PCIe socket (Support optional WiFi or 3.5G module)

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from 9V to 30VDC
- Optional power adapter

Dimensions
- 215mm (W) x 272mm (D) x 114mm (H) without wall mount bracket (8.5" x 10.7" x 4.5")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 95% at 40°C
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NISE 3600E (P/N: 10J00360000X0)**
  3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with one PCIex4 Expansion

- **NISE 3600E2 (P/N: 10J00360001X2) RoHS Compliant**
  3rd Generation Intel® Core™ i5/i3 Fanless System with two PCIe x4 Expansion

- **NISE 3600P2 (P/N: 10J00360002X0)**
  3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with two PCI Expansion

- **NISE 3600P2E (P/N: 10J00360003X0)**
  3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with one PCI Expansion and one PCIe x4 Expansion

- **19V, 120W AC/DC power adapter w/o power core (P/N: 7410120002X00)**

NISE 3640E

Main Features

- OnBoard 3rd generation Intel® Core™ i7 BGA processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 2x Display Port; 1x VGA; 1x DVI-D; 2x USB3.0; 2x USB2.0
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE

- 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- 1x internal Mini-PCIe socket supports optional Wifi or 3.5G module
- 1x CFast socket; 1xSIM card socket;
- Support +24VDC input; Support ATX Power mode
- 1x PCIe x4 expansion

Product Overview

Integrated with 3rd generation Intel® Core™ i7 with QM77 PCH platform, NISE 3640E series designed with 4x Intel® 82574IT GbE LAN controllers which can support up to 4 cameras and better throughput; besides, NISE 3640E series also supports WoL, LAN teaming and PXE function. With computing and graphic performance enhancement, NISE 3640E series support 3 independent display and deliver a level of performance ideal for image and vision measurement on traffice control, overspeed monitoring, real time update and ePlice. More, NISE 3640E seires support 2x RS232/422/485, 4x RS232, 2x USB3.0, 2x USB2.0, 1x CFast socket, 1x SIM card socket, and 1x internal Mini-PCIe socket supports optional Wifi or 3.5G module.

Leveraging a reliable fanless, durable cable-free design and wide operating temperature, NISE 3640E series can be exhibited in harsh environments, where severe temperature variation and vibration may exist.

Specifications

CPU Support
- OnBoard 3rd generation Intel® Core™ i7 BGA processor
  Core™ i7-3517UE, Dual Core, 1.7GHz, 6M Cache
- Mobile Intel® QM77 PCH

Main Memory
- 2x DDR3 SO-DIMM socket, supports up to 8GB DDR3/DDR3L
  1333/1600 SDRAM, with un-buffered and non-ECC

Display Option
- Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1x VGA
  - Two Display Port and 1x DVI-D
- Dual Independent Display
  - VGA and DVI-D
  - Display Port and VGA

I/O Interface-Front
- ATX power on/off switch
- HDD access/ Power status/ LAN status LEDs
- 2x USB3.0 (Blue color)
- 2x USB2.0

- 2x Display Port (Can be converted to DVI-D or HDMI via active cables)
- 1x CFast socket
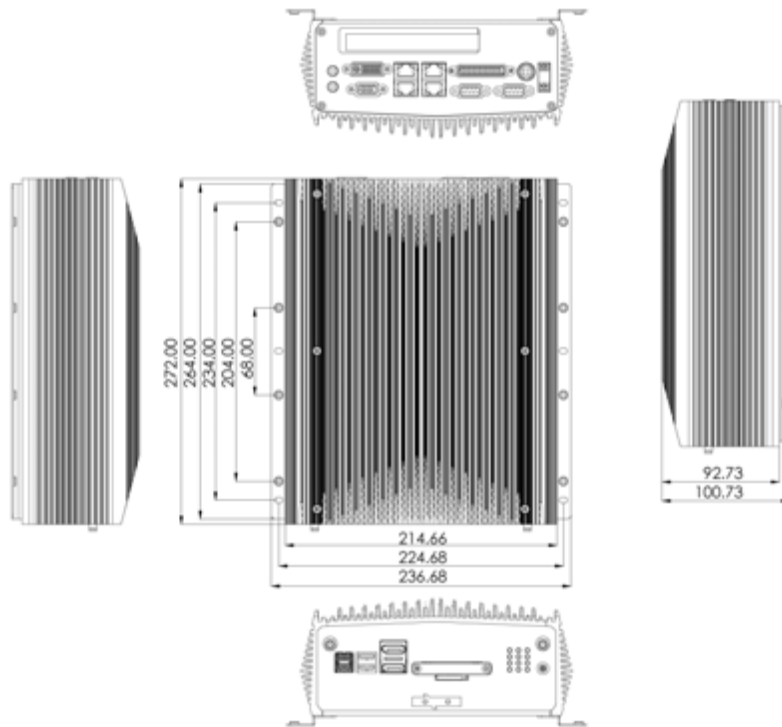- 1x SIM card socket
- 2x Antenna holes

I/O Interface-Rear
- 2x DB9 for RS232/422/485
- 1x DB44 for 4x RS232
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 1x DB15 VGA port
- 1x DVI-D
- 1x Line-out and 1x Mic-in
- 2-pin Remote Power on/off switch
- +24VDC Input

Storage Device
- 1x 2.5" SATA HDD or 2x SATA DOM
  (support 90°C horizontal type only)
- 1x CFast socket

Dimension Drawing

Expansion Slot
- One PCIe x4 Expansion Slot
  - Add-on card length: 169mm max.
  - Power consumption: 10W/slot max.
- 1x Mini-PCIe socket (support optional WiFi or 3.5G module)

Power Requirements
- ATX Power mode
- Support +24VDC Input
- Optional power adapter

Dimensions
- 215mm (W) x 272mm (D) x 93mm (H) without wall mount bracket (8.5" x 10.7" x 3.7")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -20°C to 60°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -30°C to 85°C
- Relative humidity: 95% at 40°C
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 3640E (P/N: TBD)**
  3rd Generation Intel® Core™ i7 Fanless System with One PCIex4 Expansion

- **NISE 3640E2 (P/N: TBD)**
  3rd Generation Intel® Core™ i7 Fanless System with Two PCIex4 Expansion

- **NISE 3640P2 (P/N: TBD)**
  3rd Generation Intel® Core™ i7 Fanless System with Two PCI Expansion

- **NISE 3640P2E (P/N: TBD)**
  3rd Generation Intel® Core™ i7 Fanless System with One PCI Expansion and One PCIex4 Expansion

- **24V, 120W AC/DC power adapter w/o power core (P/N: TBD)**

NISE 3640E2/P2/P2E

3rd Generation Intel® Core™ i7 Fanless System with 4x LANs, 6x COMs and PCI/PCIe Expansion

Main Features

- OnBoard 3rd generation Intel® Core™ i7 BGA processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 2x Display Port; 1x VGA; 1x DVI-D; 2x USB3.0; 2x USB2.0
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE

- 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- 1x internal Mini-PCIe socket supports optional Wifi or 3.5G module
- 1x CFast socket; 1xSIM card socket;
- Support +24VDC input; Support ATX Power mode
- Support PCI or PCIe expansion

Product Overview

Integrated with 3rd generation Intel® Core™ i7 with QM77 PCH platform, NISE 3640E2/P2/P2E designed with 4x Intel® 82574IT GbE LAN controllers which can supports up to 4 cameras and better throughput; besides, 3640E2/P2/P2E also supports WoL, LAN teaming and PXE function. With computing and graphic performance enhancement, NISE 3640E2/P2/P2E supports 3 independent display and delivers a level of performance ideal for image and vision measurement on traffice control, overspeed monitoring, real time update and ePlice. More, NISE 3640E2/P2/P2E supports 2x RS232/422/485, 4x RS232, 2x USB3.0, 2x USB2.0, 1x CFast socket, 1x SIM card socket, and 1x internal Mini-PCIe socket supports optional Wifi or 3.5G module. In NISE 3640E series, multiple chooses for PCI or PCIe expansion is also supported here.

Leveraging a reliable fanless, durable cable-free design and wide operating temperature, 3640E2/P2/P2E can be exhibited in harsh environments, where severe temperature variation and vibration may exist.

Specifications

CPU Support
- OnBoard 3rd generation Intel® Core™ i7 BGA processor
  CoreTM i7-3517UE, Dual Core, 1.7GHz, 6M Cache
- Mobile Intel® QM77 PCH

Main Memory
- 2x DDR3 SO-DIMM socket, supports up to 8GB DDR3/DDR3L
  1333/1600 SDRAM, with un-buffered and non-ECC

Display Option
- Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1x VGA
  - Two Display Port and 1x DVI-D
- Dual Independent Display
  - VGA and DVI-D
  - Display Port and VGA

I/O Interface-Front
- ATX power on/off switch
- HDD access/ Power status/ LAN status LEDs
- 2x USB3.0 (Blue color)
- 2x USB2.0
- 2x Display Port (Can be converted to DVI-D or HDMI via active cables)

- 1x CFast socket
- 1x SIM card socket
- 2x Antenna holes

I/O Interface-Rear
- 2x DB9 for RS232/422/485
- 1x DB44 for 4x RS232
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 1x DB15 VGA port
- 1x DVI-D
- 1x Line-out and 1x Mic-in
- 2-pin Remote Power on/off switch
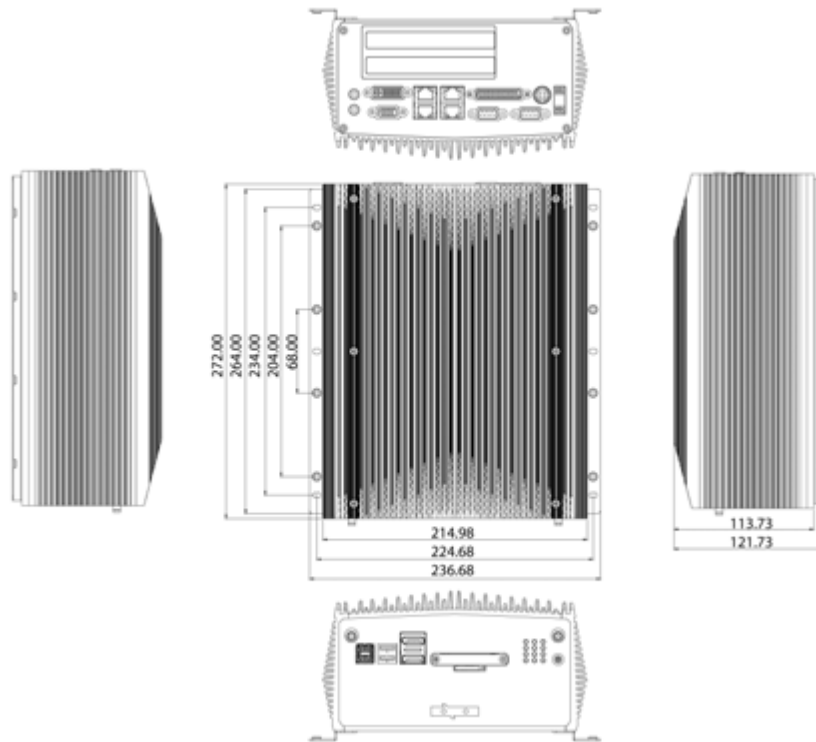- +24VDC Input

Storage Device
- 1x 2.5" SATA HDD or 2x SATA DOM
  (support 90°C horizontal type only)
- 1x CFast socket

Expansion Slot
- NISE 3640E2: Two PCIe x4 expansion
  - Add-on card length: One 169mm max. and One 240mm max.
  - Power consumption: 10W/slot max.

Dimension Drawing

- NISE 3640P2: Two PCI expansion
  - Add-on card length: One 169mm max. and One 240mm max.
  - Power consumption: 10W/slot max.
- NISE 3640P2E: One PCI expansion and One PCIex4 expansion
  - Add-on card length: 169mm max. for PCIex4 and 240mm max. for PCI expansion
  - Power consumption: 10W/slot max.
- 1x Mini-PCIe socket (Support optional WiFi or 3.5G module)

Power Requirements
- ATX Power mode
- Support +24VDC Input
- Optional power adapter

Dimensions
- 215mm (W) x 272mm (D) x 114mm (H) without wall mount bracket (8.5" x 10.7" x 4.5")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -20°C to 60°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 95% at 40°C
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NISE 3640E (P/N: TBD)**

  3rd Generation Intel® Core™ i7 Fanless System with One PCIex4 Expansion

- **NISE 3640E2 (P/N: TBD)**

  3rd Generation Intel® Core™ i7 Fanless System with Two PCIex4 Expansion

- **NISE 3640P2 (P/N: TBD)**

  3rd Generation Intel® Core™ i7 Fanless System with Two PCI Expansion

- **NISE 3640P2E (P/N: TBD)**

  3rd Generation Intel® Core™ i7 Fanless System with One PCI Expansion and One PCIex4 Expansion

- **24V, 120W AC/DC power adapter w/o power core (P/N: TBD)**

NISE 3640VR

Main Features

- OnBoard 3rd generation Intel® Core™ i7 BGA processor
- Mobile Intel® QM77 PCH
- Support 2x 3.5" SATA HDD
- 2x Display Port; 1x VGA; 1x DVI-D
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 2x USB3.0; 2x USB2.0

- 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- 1x internal Mini-PCIe socket supports optional Wifi or 3.5G module
- 1x CFast socket; 1xSIM card socket
- Support +24VDC input; Support ATX Power mode
- Support 2x 3.5" HDD

* Note: Air ventilation holes design will be defined as product launch

Product Overview

NISE 3640VR features the 3rd Generation Intel® Core™ i7 17W BGA type processor with QM77 PCH platform. NISE 3640VR inherits high performance, rich I/O, fanless and cable-free design from NISE family which successful meets market demands.

NISE 3640VR designed with 4x Intel® 82574IT GbE LAN controller, which can support up to 4 cameras and better throughput; also, NISE 3640VR , supports WoL, LAN teaming and PXE function. Moreover, NISE 3640VR delivers a level of performance ideal for image and vision measurement on traffic control, overspeed monitoring, real time update and ePolice. NISE 3640VR supports 2x 3.5" HDD w/ ventilation holes on panels for HDD cooling design, 2x USB3.0, 2x USB2.0, 2x Display port, 1x VGA, 1x DVI-D, 2x RS232/422/485 and 4x RS232. Leveraging a reliable fanless and durable cable-free design in aluminum chassis, NISE 3640VR can be exhibited in harsh environments, where severe temperature variation and vibration may exist.

Specifications

CPU Support
- OnBoard 3rd generation Intel® Core™ i7 BGA processor
  Core™ i7-3517UE, Dual Core, 1.7GHz, 6M Cache
- Mobile Intel® QM77 PCH

Main Memory
- 2x DDR3 SO-DIMM socket, supports up to 8GB DDR3/DDR3L 1333/1600 SDRAM, with un-buffered and non-ECC

Display Option
- Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1x VGA
  - Two Display Port and 1x DVI-D
- Dual Independent Display
  - VGA and DVI-D
  - Display Port and VGA

I/O Interface-Front
- ATX power on/off switch
- HDD access/ Power status/ LAN status LEDs
- 2x USB3.0 (Blue color)
- 2x USB2.0

- 2x Display Port (Can be converted to DVI-D or HDMI via active cables)
- 1x CFast socket
- 1x SIM card socket
- 2x Antenna holes

I/O Interface-Rear
- 2x DB9 for RS232/422/485
- 1x DB44 for 4x RS232
- 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 1x DB15 VGA port
- 1x DVI-D
- 1x Line out and 1x Mic-in
- 2-pin Remote Power on/off switch
- +24VDC Input

Storage Device
- 2x 3.5" SATA HDD
- 1x CFast socket

Expansion Slot
- 1x Mini-PCIe socket (support optional WiFi or 3.5G module)

Dimension Drawing
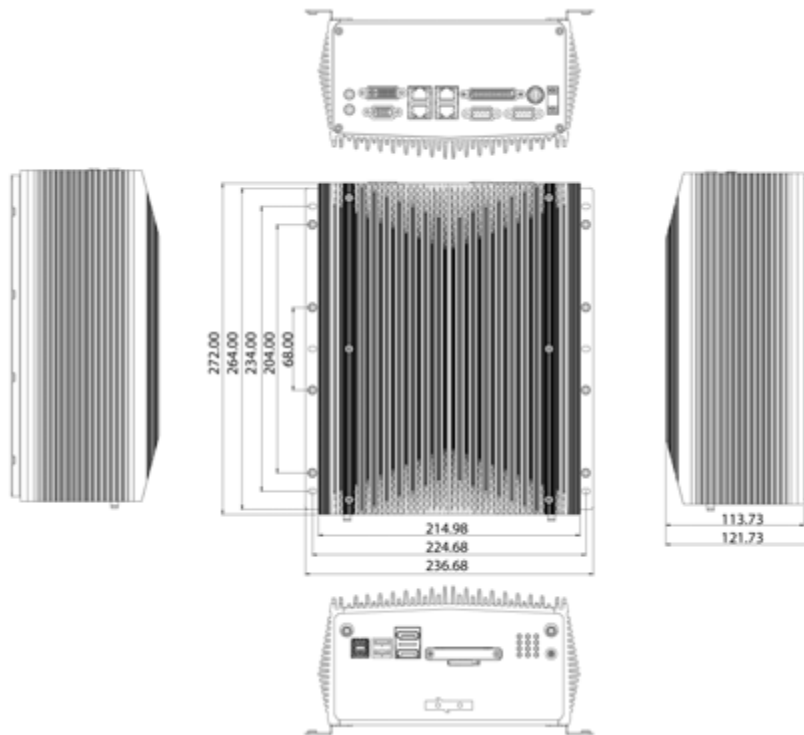
Power Requirements
* ATX Power mode
* Support +24VDC Input
* Optional power adapter

Dimensions
* To be defined

Construction
* Aluminum Chassis with fanless design
* Ventilation holes on panels for HDD cooling design

Environment
* Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
* Storage temperature: -20°C to 80°C
* Relative humidity: 95% at 40 °C
* Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
* Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
* CE approval
* FCC Class A

Ordering Information

Barebone

* **NISE 3640VR (P/N: TBD)**
  3rd Generation Intel® Core™ i7 System with 2x 3.5" SATA HDD

NISE 3660

Main Features

- Support 3rd Generation Intel® Core™ i7 17W BGA type processor
- Mobile Intel® QM77 PCH
- Support 1x 2.5" SATA HDD or 2x SATA DOM
- 2x Display Port; 1x VGA; 1x DVI-D
- 5x Intel® 82574IT GbE/1x Intel® 82579IT GbE LAN port; 2x USB3.0; 2x USB2.0

- 2x DB9 for RS232/422/485
- 1x CFast socket; 1x SIM card socket
- Support ATX Power mode, WoL, LAN teaming and PXE function
- Support +9 to 30VDC Input

Product Overview

NISE 3660 series feature the 3rd Generation Intel® Core™ i7 17W BGA type processor with QM77 PCH platform. NISE 3660 series inherits high performance, rich I/O, fanless and cable-free design from NISE family which successful meet market demands.

NISE 3660 series designed with 5x Intel® 82574IT GbE LAN controller and 1x Intel® 82579IT GbE LAN PHY which can support LAN redundancy, system network, LAN for Ethernet I/O and devices connection. Moreover, NISE 3660 series deliver a level of performance ideal for complex industrial automation control, SCADA monitoring. Leveraging a reliable fanless and durable cable-free design, NISE 3660 can be exhibited in critical automation applications.

Specifications

CPU Support
- 3rd Generation Intel® Core™ i7 17W BGA type processor
- Mobile Intel® QM77 PCH

Main Memory
- 2x DDR3 SO-DIMM socket, supports up to 16GB DDR3/DDR3L 1333/1600 SDRAM, with un-buffered and non-ECC

Display Option
- Three Independent Display
  - Two Display Port and 1x VGA
  - Two Display Port and 1x DVI-D

I/O Interface-Front
- ATX power on/off switch
- HDD access/ Power status/ LAN status LEDs
- 2x USB3.0 (Blue color)
- 2x USB2.0
- 2x Display Ports
- 1x CFast socket
- 1x SIM card socket
- 2x Antenna holes
- I/O Interface-Rear

- 2x DB9 for RS232/422/485
- 6x GbE LAN ports
- 1x DB15 VGA port
- 1x DVI-D
- 1x Speaker out and 1x Mic-in
- 2-pin Remote Power on/off switch
- +9 to 30VDC Input

Storage Device
- 1x 2.5" SATA HDD or 2x SATA DOM (support 90°C horizontal type only)
- 1x CFast socket

Power Requirements
- ATX Power mode
- Support +24VDC Input
- Optional power adapter

Dimensions
- 215mm (W) x 272mm (D) x 114mm (H) without wall mount bracket

Construction
- Aluminum Chassis with fanless design

Dimension Drawing
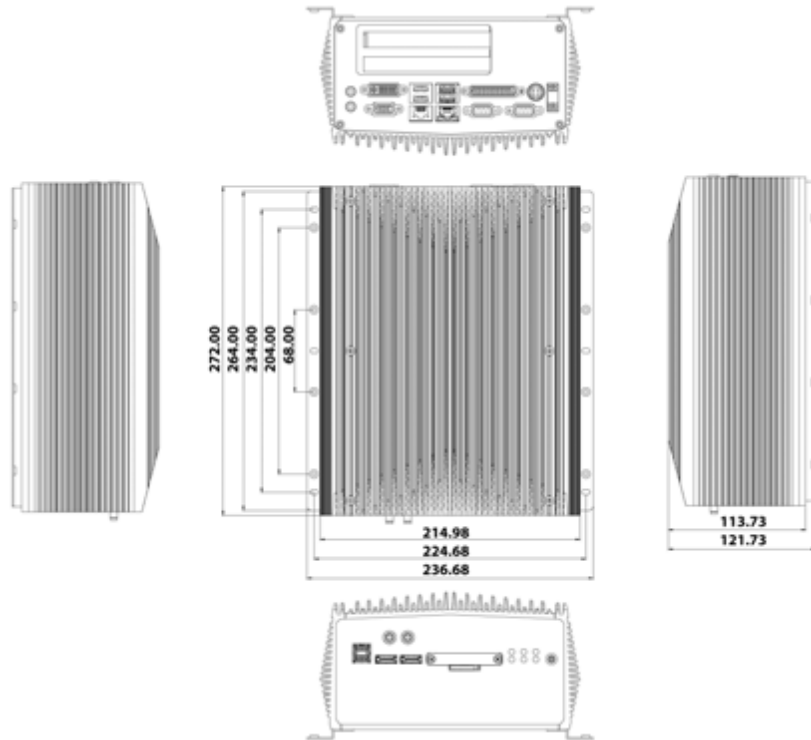
Environment

- Operating temperature:
- Ambient with air flow: -10°C to 60°C
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 95% at 40°C
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-6
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- CE approval
- FCC

Ordering Information

Barebone

- **NISE 3660 (P/N: TBD)**
  3rd Generation Intel® Core™ i7 Fanless System

NISE 4000

Main Features

- Support 3rd generation Intel Core i3/i5/i7 rPGA socket type processor
- Intel® QM77 PCH
- 2x USB3.0 & 2x USB2.0
- 4x Intel GbE LAN Ports
- 1x DVI-I & 1x DVI-D
- 2x RS232/422/485

- 1x CFast socket
- Four PCI/PCIe expansion slots
- Two Mini-PCIe sockets
- Support +9 to 36VDC power input
- Support ATX power mode, WoL and PXE function

Product Overview

Integrated with Intel® 3rd generation Core i7 process, NISE 4000 offer excellent computing performance. The QM77 PCH provides original USB3.0, which ensures the high throughput and is suitable for the high bandwidth devices, such as industrial cameras. The four Intel® GbE LAN ports provides high communication bandwidth and also can be used to access GbE camera for surveillance and industrial automation.

NISE 4000 provide built-in optical isolated digital input and digital output, 16 channels respectively. The LED indicators can be configured to show the status of the first four digital outputs. All built-in I/O connectors of NISE 4000 locate at the front panel. It makes the wiring and maintenance easier for typical installation style for factory automation devices. Alone with well-proven fanless design experience of NEXCOM which ensures the stability, these make NISE 4000 well fit the factory automation applications.

Specifications

CPU Support
- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Support 2nd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-2510E, Dual Core, 2.5GHz, 3M Cache
  - Celeron® B810, Dual Core, 1.6GHz, 2M Cache
  - Support Dual Independent Display with above processors
- Intel® QM77 PCH chipset

Main Memory
- 2x DDR3/DDR3L SO-DIMM sockets, support dual channel up to 8 GB DDR3 1333 SDRAM, un-buffered and non-ECC

Display Option
- Dual independent display
  - VGA
  - DVI-D
- Three independent display
  - VGA
  - VGA output via optional Y-cable
  - DVI-D

I/O Interface
- ATX power on/off switch
- Power status LED
- HDD/ CFast access LEDs
- RF access LED
- COM ports access LEDs
- 2x USB2.0 ports & 2x USB3.0 ports
- 2x RS232/422/485 COM ports
- 1x DB44 DI/O connector
- 1x DVI-I output & 1x DVI-D output
- 4x Intel GbE LAN ports
  (with Intel WG82574L & WG82579LM LAN chip)
- 1x PS/2 connector
- Audio phone jack for speaker-out and Mic-in
- 2-pin remote power on/off switch
- 9-36VDC input

Device
- 2x 2.5" HDD/ SSD bays
- 1x External CFast socket
- Expansion Slot : No

Dimension Drawing

Coming Soon

Power Requirements
- DC input range: +9~36VDC input

Environment
- Operating temperature:
  Ambient with air flow: 0°C ~ 55°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  - Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  - Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications
- CE
- FCC Class A

Ordering Information

- **NISE 4000 (P/N: TBD)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System without expansions slot

NISE 4000P2/4000PE

3rd Generation Intel® Core™ i3/i5/i7
rPGA Fanless System with 2 Expansion

Coming Soon

Main Features

- Support 3rd generation Intel® Core™ i3/i5/i7 rPGA socket type processor
- Intel® QM77 PCH
- 2x USB3.0 & 2x USB2.0
- 4x Intel® GbE LAN Ports
- 1x DVI-I & 1x DVI-D

- 2x RS232/422/485
- 1x CFast socket
- Four PCI/PCIe expansion slots
- Two Mini-PCIe sockets
- Support +9 to 36VDC power input
- Support ATX power mode, WoL and PXE function

Product Overview

Integrated with Intel® 3rd generation Core™ i7 process, NISE 4000P2 and NISE 4000PE offer excellent computing performance. The QM77 PCH provides original USB3.0, which ensures the high throughput and is suitable for the high bandwidth devices, such as industrial cameras. The four Intel GbE LAN ports provides high communication bandwidth and also can be used to access GbE camera for surveillance and industrial automation.

NISE 4000P2 and NISE 4000PE provide built-in optical isolated digital input and digital output, 16 channels respectively. The LED indicators can be configured to show the status of the first four digital outputs. Two PCI/PCIe expansion slots and two Mini-PCIe sockets are available, providing the expansion for Fieldbus interface. All built-in I/O connectors of NISE 4000P2 and NISE 4000PE locate at the front panel. It makes the wiring and maintenance easier for typical installation style for factory automation devices. Alone with well-proven fanless design experience of NEXCOM which ensures the stability, these make NISE 4000P2 and NISE 4000PE well fit the factory automation applications.

Specifications

CPU Support
- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Support 2nd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-2510E, Dual Core, 2.5GHz, 3M Cache
  - Celeron® B810, Dual Core, 1.6GHz, 2M Cache
  - Support Dual Independent Display with above processors
- Intel® QM77 PCH chipset

Main Memory
- 2x DDR3/DDR3L SO-DIMM sockets, support dual channel up to 8 GB DDR3 1333 SDRAM, un-buffered and non-ECC

Display Option
- Dual independent display
  - VGA
  - DVI-D
- Three independent display
  - VGA
  - VGA output via optional Y-cable
  - DVI-D

I/O Interface
- ATX power on/off switch
- Power status LED
- HDD / CFast access LEDs
- RF access LED
- COM ports access LEDs
- 2x USB2.0 ports & 2x USB3.0 ports
- 2x RS232/422/485 COM ports
- 1x DB44 DI/O connector
- 1x DVI-I output & 1x DVI-D output
- 4x Intel® GbE LAN ports
  (with Intel® WG82574L & WG82579LM LAN chip)
- 1x PS/2 connector
- Audio phone jack for speaker-out and Mic-in
- 2-pin remote power on/off switch
- +9 to 36VDC input

Device
- 2x 2.5" HDD/ SSD bays
- 1x External CFast socket

Dimension Drawing

Coming Soon

Expansion Slot
- NISE 4000P2
  - Two PCI expansions (15W max. per slot with optional fan)
- NISE 4000PE
  - One PCI expansion (15W max. per slot with optional fan)
  - One PCIe x16 expansion with PCIe x8 single
  (15W max. per slot with optional fan)
- Add-on card length: 220mm max.

Power Requirements
- DC input range: +9 to 36VDC input

Environment
- Operating temperature:
  Ambient with air flow: 0°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  - Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  - Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications
- CE
- FCC Class A

Ordering Information

- **NISE 4000P2 (P/N: TBD)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with
  two PCI expansions

- **NISE 4000PE (P/N: TBD)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with
  one PCIe x16 (up to PCIe x8) and one PCI expansions

MAC 4000

Main Features

- Support 3rd generation Intel® Core™ i3/i5/i7 rPGA socket type processor
- Intel® QM77 PCH
- 2x USB3.0 & 2x USB2.0
- 4x Intel® GbE LAN Ports
- 1x DVI-I & 1x VGA

- 2x RS232/422/485
- 1x CFast socket
- Four PCI/PCIe expansion slots
- Two Mini-PCIe sockets
- Support +9 to 36VDC power input
- Support ATX power mode, WoL and PXE function

Product Overview

Supporting Intel® 3rd generation Core™ i7 processor, MAC 4000 series offers excellent computing performance. The QM77 PCH provides original USB3.0, which ensures the high throughput and is suitable for the high bandwidth devices, such as industrial cameras. The four Intel® GbE LAN ports provides high communication bandwidth and also can be used to access GbE camera for surveillance and industrial automation.

MAC 4000 series provides built-in optical isolated digital input and digital output, 16 channels respectively. The LED indicators can be configured to show the status of the first four digital outputs. Four PCI/PCIe expansion slots and two Mini-PCIe sockets are available, providing more flexibility planning the system. All built-in I/O connectors of MAC 4000 series locates at the front panel and makes wiring and maintenance easier. The unique design and well-proven fanless experience of NEXCOM make MAC 4000 series well fit the machine automation applications.

Specifications

CPU Support
- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Support 2nd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-2510E, Dual Core, 2.5GHz, 3M Cache
  - Celeron® B810, Dual Core, 1.6GHz, 2M Cache -
  - Support Dual Independent Display with above processors
- Intel® QM77 PCH chipset

Main Memory
- 2x DDR3/DDR3L SO-DIMM sockets, support dual channel up to 8 GB DDR3 1333 SDRAM, un-buffered and non-ECC

Display Option
- Dual independent display
  - VGA
  - DVI-D
- Three independent display
  - VGA
  - VGA output via optional Y-cable
  - DVI-D

I/O Interface
- ATX power on/off switch
- Power status LED
- HDD/ CFast access LEDs
- RF access LED
- COM ports access LEDs
- 2x USB2.0 ports & 2x USB3.0 ports
- 2x RS232/422/485 COM ports
- 1x DB44 DI/O connector
- 1x VGA output & 1x DVI-D output
- 4x Intel® GbE LAN ports
  (with Intel WG82574L & WG82579LM LAN chip)
- 1x PS/2 connector
- Audio phone jack for speaker-out and Mic-in
- 2-pin remote power on/off switch
- +9 to 36VDC input

Device
- 2x 2.5" HDD/ SSD bays
- 1x External CFast socket

Dimension Drawing

Coming Soon

Expansion Slot

- MAC 4013
  - Three PCI expansions (15W max. per slot with optional fan)
  - One PCIe x4 expansion
- MAC 4031
  - One PCI expansion (15W max. per slot with optional fan)
  - Two PCIe x1 expansions (15W max. per slot with optional fan)
  - One PCIe x16 expansion with PCIe x8 single
  (15W max. per slot with optional fan)
- Add-on card length: 220mm max.

Power Requirements

- DC input range: +9 to 36VDC input

Environment

- Operating temperature:
  Ambient with air flow: 0°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications

- CE
- FCC Class A

Ordering Information

- **MAC 4013 (P/N: TBD)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with
  one PCIe x4 and three PCI expansions

- **MAC 4031 (P/N: TBD)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with
  one PCIe x16 (up to PCIe x8), two PCIe x1 and one PCI expansions

MAC 4013GTS

Coming Soon

Main Features

- Full-closed loop motion control by 32-bit dedicated processor
- Dedicated motion control DI/O for every single axis
- 32 channels digital inputs and 32 channels digital outputs
- Support E-CAM, E-Gear, PT and PVT control
- Support Standalone Procedure Access up to 32 tasks
- 2x USB3.0 & 2x USB2.0

- 4x Intel GbE LAN Ports
- 1x CFast socket
- Triple individual display
- +9 to 36VDC power input
- 2x RS232/422/485 with Auto Flow Control
- One PCIe x1, two PCI expansion and two Mini-PCIe slots

Product Overview

MAC 4013GTS is a specialized controller for machine automation applications which involves servo motor control and machine vision analysis. Being capable of full-closed loop controlling up to 4 axes, MAC 4013GTS shows excellent performance in not only point-to-point movement but also multi-axis coordinated motion and irregular velocity profiles. MAC 4013GTS, equipping with uncommitted DI/O up to 32 channels DI and 32 channels DO in total, reduces the number of add-on cards and thus reduces the controller size. When working on machine vision applications, data from industrial cameras can be transmitted via GbE LAN ports, USB3.0 ports or add-on cards depending on the interfaces of the camera. MAC 4013GTS is designed for modern machine automation applications and ensures the shortest integration and development period.

Specifications

System
- 3rd generation Intel® Core™ i5-3610ME with Intel® QM77 PCH chipset
- 8GB DDR3 1333 un-buffered and non-ECC SDRAM
- 4x Intel® GbE LAN ports
- 2x USB2.0 ports & 2x USB3.0 ports
- 2x RS232/422/485 with Auto Flow Control
- 1x VGA & 1x DVI-I, triple independent display supported
- 1x PS/2 connector
- 1x Speaker-out and 1x Mic-in
- ATX power on/off switch & remote power on/off switch

Motion Control
- Full-closed loop servo motors control up to 4 axes
- ±10V 16-bit control output with 4x AB phase encoder input
- Dedicated HOME, LIMITs and ALARM for every single axis
- Dedicated SVON and Clear for every single axis
- Uncommitted DI/O up to 32-channel DI and 32-channel DO
- Support E-CAM, E-Gear, PT and PVT control
- Support Standalone Procedure Access up to 32 tasks

Power Requirements
- DC input range: +9 to 30VDC input

Environment
- Operating temperature:
  Ambient with air flow: 0°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
- Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
- Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications
- CE
- FCC Class A

Dimension Drawing

Coming Soon

Ordering Information

⬩ **MAC 4013GTS**

Expandable 4-Axis Motion Controller with Intel® 3rd generation
Core™ i5-3610ME, Please note that 1 PCI slot is occupied by the
motion controller

⬩ **MAC 4013GTS8**

Expandable 8-Axis Motion Controller with Intel® 3rd generation
Core™ i5-3610ME, Please note that 2 PCI slots are occupied by the
motion controller

MAC 3502GTS

Main Features

- Full-closed loop motion control by 32-bit dedicated processor
- Dedicated motion control DI/O for every single axis
- 16 channels digital inputs and 16 channels digital outputs
- Support E-CAM, E-Gear, PT and PVT control
- Support Standalone Procedure Access up to 32 tasks

- 6x USB2.0 ports
- +9 to 30VDC power input
- 3x RS232 and 1x RS-232/422/485 with Auto Flow Control
- 2x Intel® GbE LAN Ports
- 1x DB15 VGA & 1x DVI-I

Product Overview

MAC 3502GTS is a specialized controller for machine automation applications. Being capable of full-closed loop controlling up to 4 axes, MAC 3502GTS shows excellent performance in not only point-to-point movement but also multi-axis coordinated motion and irregular velocity profiles. Besides the outstanding motion control capability, MAC 3502GTS also equips with uncommitted DI/O up to 16 channels DI and 16 channels DO, and no extra add-on cards are needed. MAC 3502GTS is the best platform of a compact and stable machine automation controller.

Specifications

System

- Intel® Core™ i5-520M with Intel® QM57 PCH chipset
- 4 GB DDR3 800/1066 SDRAM, un-buffered and non-ECC
- ATX power on/off switch & remote power on/off switch
- 2x Intel® GbE LAN ports
- 6x USB2.0 ports
- 3x RS232 and 1x RS232/422/485 with Auto Flow Control
- 1x DB15 VGA & 1x DVI-I, dual independent display supported
- 1x PS/2 connector
- 1x Speaker-out and 1x Mic-in

Motion Control

- Full-closed loop servo motors control up to 4 axes
- ±10V 16-bit control output with 4x AB phase encoder input
- Dedicated HOME, LIMITs and ALARM for every single axis
- Dedicated SVON and Clear for every single axis
- Uncommitted DI/O up to 16-channel DI and 16-channel DO
- Support E-CAM, E-Gear, PT and PVT control
- Support Standalone Procedure Access up to 32 tasks

Power Requirements

- DC input range: +9 to 30VDC input

Dimensions

- System: 195mm (W) x 268mm (D) x 101mm (H)

Environment

- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  - Random: 0.5Grms @ 5~500 Hz according to IEC68-2-64
  - Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications

- CE
- FCC Class A

Dimension Drawing
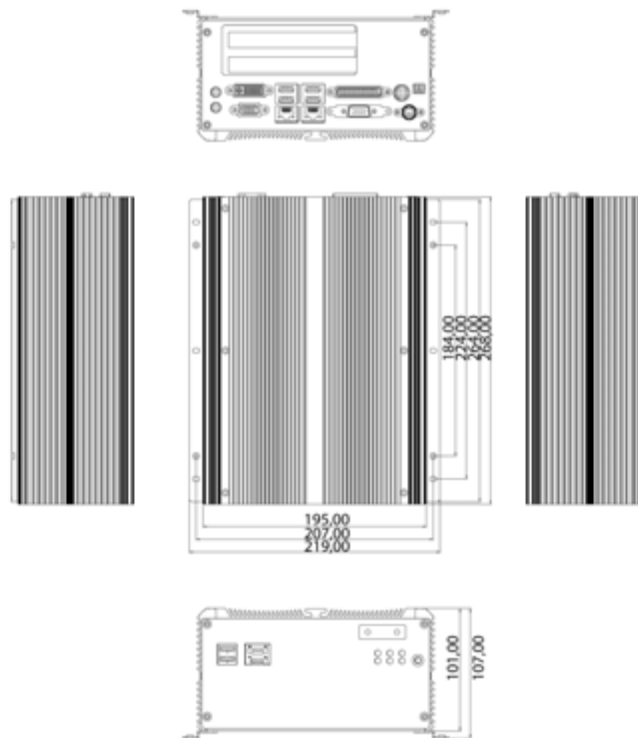
Ordering Information

♦ **MAC 3502GTS (P/N: TBD)**

Fanless 4-Axis Motion Controller with Intel® Core™ i5-520M, Please note that 1 PCI slot is occupied by the motion controller

♦ **MAC 3502GTS8 (P/N: TBD)**

Fanless 8-Axis Motion Controller with Intel® Core™ i5-520M, Please note that 2 PCI slots are occupied by the motion controller

MAC 1014GTS

4U 14-slot Aluminum Rack-Mount Industrial Computer

with Pre-Installed Multi-Axis Motion Controller

Main Features

- Full aluminum chassis
- Support 14-slot backplane
- 2 hot-swappable chassis fans
- Front display for real-time system information
- Built-in front-accessed 3.5" HDD tray

- Full-closed loop motion control by 32-bit dedicated processor
- Dedicated motion control DI/O for every single axis
- 16 channels digital inputs and 16 channels digital outputs
- Support E-CAM, E-Gear, PT and PVT control
- Support Standalone Procedure Access up to 32 tasks

Product Overview

MAC 1014GTS is a 4U 19" rack-mount industrial computer with multi-axis motion controller. The system consists of a full-sized PICMG 1.3 SBC equipping with Intel i7-860 Processor and Intel Q57 Express Chipset, and a 14 slot backplane. A built-in controller keeps monitoring the system status and shows the information on the VFD on the front panel. The pre-installed motion controller is capable of performing full-closed loop controlling up to 4 axes and shows excellent performance in not only point-to-point movement but also multi-axis coordinated motion and irregular velocity profiles. With built-in DI/O up to 16 channels DI and 16 channels DO, the configuration of MAC 1014GTS meets many industrial automation applications. MAC 1014GTS also features with its aluminum chassis which provides robustness with lighter structure, high thermal conductivity, high corrosiveness resistance. The elegant outlook as well as performancee makes MAC 1014GTS suitable for various conditions ranging from hazardous environment of chemistry to instrument rack in air-conditioned room.

Specifications

System
- Full-sized PICMG 1.3 system with Intel® i7-860 Processor and Intel® Q57 Express Chipset
- Dual Channel 4GB DDR3, VGA, 2x Intel GbE LAN, PS2 output
- 7 PCI slots
- 4 PCIe x1/ 1 PCIe x16

Motion Control
- Full-closed loop servo motors control up to 4 axes
- ±10V 16-bit control output with 4x AB phase encoder input
- Dedicated HOME, LIMITs and ALARM for every single axis
- Dedicated SVON and Clear for every single axis
- Uncommitted DI/O up to 32-channel DI and 32-channel DO
- Support E-CAM, E-Gear, PT and PVT control
- Support Standalone Procedure Access up to 32 tasks

Physical Construction
- Form Factor: 4U 19" rackmount industrial computing chassis
- Construction: aluminum plate
- Color: silver

- Dimensions: 484mm (W) x 564mm (D) x 176.5mm (H)
- Mounting: 2x rackmount ear
- Cooling System: 2x 12cm Ball-bearing Fans
- Weight: 12Kg

Indicator
- VFD display

I/O Interface
- Front: 2x USB2.0 Ports
- Rear: 2x USB2.0 Ports, Serial COM1, COM2, Print Port

Storage
- 3.5" 500GB SATA2 HDD with front-accessed tray
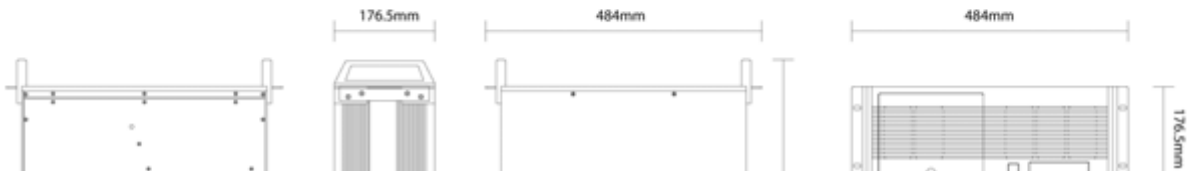
Power Supply
- ATX400W Power supply

Environment
- Operating temperature: 0°C to 40°C

Dimension Drawing

176.5mm   484mm   484mm

176.5mm

Ordering Information

- **MAC 1014GTS (P/N: TBD)**
  4U 14-slot Aluminum rack-mount Industrial Computer Intel® Core™
  i7-860 with Intel® Q57, Please note that the built-in 4-axis motion
  controller occupies 1 PCI slot

PAC 1000

Motion Embedded PAC with integrated IEC 61131-3 Soft-PLC and HMI

Main Features

- One platform with Soft-PLC, motion control and HMI integrated
- Single development environment for all functionalities
- Support IEC 61131-3 standard, providing LD, SFC, ST, IL, FBD, and CFC syntax
- Dedicated motion control DI/O for every single axis
- Support E-CAM, E-Gear, PT and PVT control
- 16 channels digital inputs and 16 channels digital outputs
- Support distributed I/O modules

Product Overview

PAC 1000 series is a highly integrated development platform specialized for machine control system and factory automation. It consists of Industrial PC, multi-axes motion controller, Soft-PLC, and HMI technology. The integrated design ensures reliability and stability. To access to the functionalities including to Soft-PLC, motion control and HMI, only one single IEC 61131-3 development environment, named OtoStudio, is required. OtoStudio supports six programming syntax, covering LD, FBD, SFC, CFC, IL and ST. Besides, full debug and analysis functions, HMI editor and Fieldbus configurator are provided. With the highly integrated technologies, PAC 1000 with OtoStudio provides rapid application creating and easy maintenance.

Specifications

System
- Storage: 1GB DOM
- 1x Realtek 10/100M LAN
- 2x USB2.0 ports
- 1x RS232 COM port
- 1x VGA & 1x specialized HMI connector
- 1x PS/2 connector
- Windows CE 5.0 pre-installed

Motion Control
- Pulse type servo motors control up to 4 axes with 4x AB phase encoder feedback
- Dedicated HOME, LIMITs and ALARM for every single axis

- Dedicated SVON and Clear for every single axis
- Uncommitted DI/O up to 16-channel DI and 16-channel DO
- Support E-CAM, E-Gear, PT and PVT control

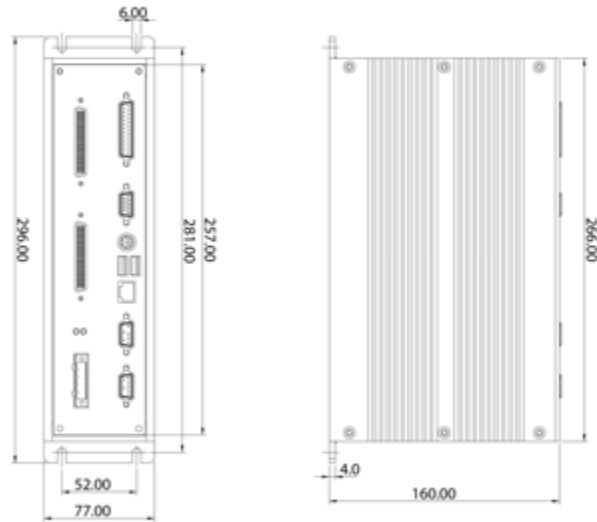**Power Requirements**
- DC input range: +18 to 36VDC input

Dimensions
- System: 296mm (H) x 75mm (W) x 160mm (D)

Environment
- Operating temperature: 0°C to 55°C
- Relative humidity: 5% to 90% (non-condensing)

NEXCOM

Ordering Information

+ **PAC 1041 (P/N: TBD)**

   4-axis pulse type motion control PAC with integrated IEC 61131-3 Soft-PLC and HMI

+ **PAC 1043 (P/N: TBD)**

   4-axis analog type motion control PAC with integrated IEC 61131-3 Soft-PLC and HMI

+ **PAC 1081 (P/N: TBD)**

   8-axis pulse type motion control PAC with integrated IEC 61131-3 Soft-PLC and HMI

+ **PAC 1083 (P/N: TBD)**

   8-axis analog type motion control PAC with integrated IEC 61131-3 Soft-PLC and HMI

+ **OtoStudio (P/N: TBD)**

   IEC 61131-3 integrated development environment for Soft-PLC, Motion Control and HMI

PAC 1040EM

Main Features

- Powerful G, M instruction build system, support MasterCam, UG, PowerMill and other CAD/CAM software generated NC file
- Advanced full-closed loop servo control ensures small following error
- Lookahead trajectory planning realizes high speed machining with small segments
- Power failure protection continue seamless processing from a breakpoint after power recovery
- User-defined runtime screen service ensures uniqueness of end-products
- Support 3D graphics preview and real-time display of processing path

Product Overview

PAC 1040EM, consisting of a main controller, an HMI with operating panel, terminal board connecting servo motors and the runtime software, is a ready-to-use system of engraving machine. Compliance with the ISO G code, PAC 1040EM supports linear and circular interpolation, fixed loop, rotation, zoom, mirror and tool length compensation. PAC 1040EM also supports PLC programming and tool magazine management. With the advanced full-closed loop servo control, trajectory planning algorithm and compensation mechanisms, PAC 1040EM helps the engraving machine to operate in high feeding rate with high precision. Besides, the runtime screen customization is possible to obtain a unique product without further development of an extra platform. PAC 1040EM makes it possible to make your own engraving machine controller.

Specifications

- Main controller with Windows CE 5.0 & runtime software pre-installed
- 12" LCD display & Operation Panel
- Program capacity: 1GB
- Control axis: X, Y, Z
- Spindle supports stall detection and rigid tapping
- Tool length and cutter compensation
- Backlash compensation and screw pitch error compensation
- Program editor supports relative and absolute coordination
- Support metric/ inch conversion
- Work coordinate system: G54-G59, G154-G169
- Coordinate plane directions: G17, G18, G19
- Minimum command distance: 0.001mm
- Maximum program distance: ±9999999.999mm
- Feeding rate up to 7m/min
- Moving speed up to 60m/min

- Uncommitted DI/O up to 16 DI and 16 DO
- Optional hand wheel supported

Power Requirements
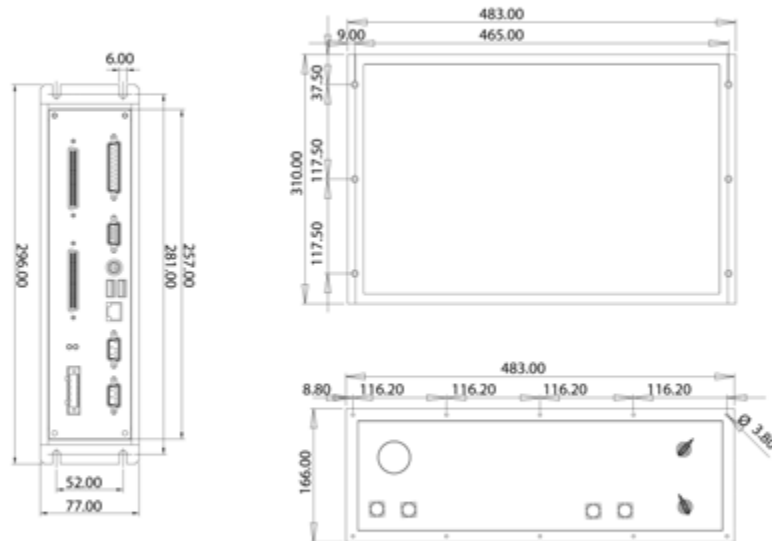- DC input range: +18 to 36VDC input

Dimensions
- System: 296mm (H) x 75mm (W) x 160mm (D)
- Terminal Board: 160mm (L) x 107mm (W)

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: 0°C to 60°C
- Relative humidity: 5% to 90% (non-condensing)
- Shock protection: GB/T 2423.5
- Vibration protection: Sine GB/T 2423.10, Random GB/T 2423.56

Ordering Information

• **PAC 1040EM (P/N: TBD)**

3+1 Axis full-closed loop milling and engraving controller solution,
including one main controller, one 12" LCD display and
one operaton panel

NET 3600RTA

3rd Generation Intel® Core™ i5-3610ME
Fanless Distributed Machine Automation Controller
with B uilt-in EtherCAT Master

Main Features

- 3rd generation Intel® Core™ i5-3610ME and Intel QM77 PCH
- Support hard-realtime down to 1 ms
- Built-in EtherCAT master protocol
- 2x Intel® GbE LAN Ports
- 1x VGA, 1x DVI-D and 2x Display Ports, supporting triple individual display

- 4x USB3.0 & 2x USB2.0
- 1x CFast socket
- 5x RS232 & 1x RS232/422/485 with Auto Flow Control
- One PCIe x1 slot
- +9 to 30VDC power input

Product Overview

NET 3600RTA is a specialized controller for distributed automation control application. Powered by the real-time extension technology, NET 3600RTA shows the time-deterMinistic characteristics and can response timely to events even if operating with Windows XP or Windows 7. Besides the short response time, this feature also enables the fastest fieldbus technology, EtherCAT. The built-in EtherCAT master stack meets the EtherCAT master requirement and is compatible with most certified EtherCAT slaves, including EtherCAT servo drivers. NET 3600RTA is proper for large size, long distance and high axes number automation applications.

Specifications

CPU Support
- 3rd generation Intel® Core™ i5-3610ME with Intel® QM77 PCH chipset

Main Memory
- Dual channel 8GB DDR3 1333 un-buffered and non-ECC SDRAM

Display Option
- Triple independent display
  - Two display ports and DVI-D
  - Two display ports and VGA

I/O Interface-Front
- ATX power on/off switch
- HDD access/ power status LEDs
- LAN1 & LAN2 status LEDs
- 2x Display Ports
- 2x USB3.0 ports

I/O Interface-Rear
- 2-pin remote power on/off switch
- 2-pin system signal
- 2x DB9, RS232 COM port
- 1x DB44 for 3x RS232 and 1x RS232/422/485 COM port

- 2x Intel® GbE LAN ports
- 2x USB2.0 ports & 2x USB3.0 ports
- 1x VGA & 1x DVI-D output
- 1x Speaker-out and 1x Mic-in
- +9 to 30VDC input

Device
- 1x 2.5" HDD/ SSD driver bay
- 1x external CFast socket

Expansion Slot
- One PCIe x4 expansion (10W max. per slot)
- Add-on card length:
  - 169mm max. with HDD installed
  - 240mm max. without HDD installed

Power Requirements
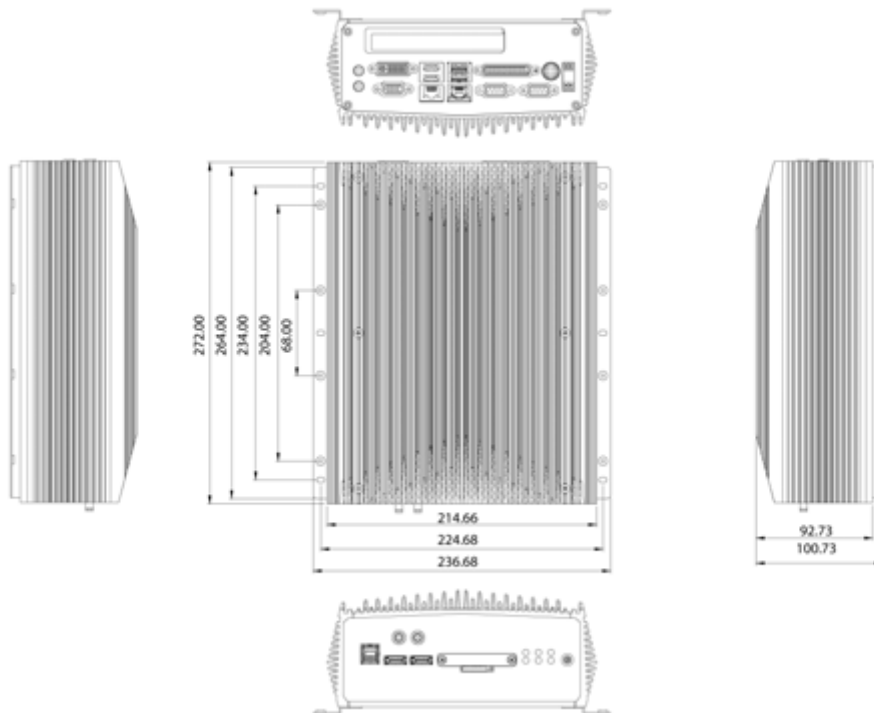- DC input range: +9 to 30VDC input

Dimensions
- 216mm (W) x 270mm (D) x 93mm (H)

Construction
- Aluminum chassis with fanless design

NEXCOM

Dimension Drawing

Environment

- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27
- Vibration protection
  Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6
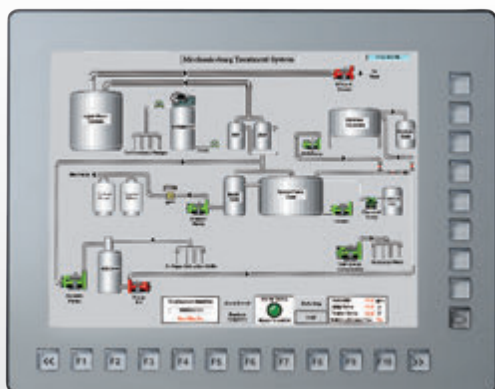
Certifications

- CE
- FCC Class A

Ordering Information

- **NET 3600RTA (P/N: TBD)**
  3rd Generation Intel® Core™ i5-3610ME fanless machine automation controller with built-in RTX and EtherCAT master protocol

FPPC 1220

12.1" TFT SVGA 4:3 Panel PC with Intel® Atom™ D425, 1.8GHz,
1GB DDR3, 2x USB, 3x COM and VGA

Main Features

- 4:3 12.1" Fanless Panel Computer
- Intel® Atom™ D425, Low-Power Consumption CPU
- DDR3 1GB/ 3x GbE/ 2nd display-VGA/ Line-out/ MIC-in/ PS2 KB/MS
- USB x2/ 1x PCI slot/ 1x CF/ 2x RS232/ 1x RS232/422/485
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 75mm x 75mm, 100mm x 100mm

Product Overview

Incorporated a 12.1" 4:3 LCD panel with resolutions up to 800x 600 (SVGA) and 350 nits brightness, industrial motherboard for diverse industrial applications, the factory automation fanless Panel PC FPPC 1220 utilizes Atom™ D425 processor. The IP65 compliant front panel can be offered for automation machine applications.

The FPPC 1220 Panel PC has 3 GbE LAN, 3x COMs, 2x USB, PS2 KB/MS, and Line-out/ MIC-in. With a VGA port, FPPC series can hook 2nd display delivering different content.

Specifications

Panel
- LCD Size: 12.1", 4:3
- Resolution: SVGA 800x600
- Luminance: 370cd/m²
- Contrast ratio: 450
- Viewing angle: 50(U), 60(D), 70(L), 70(R)
- Backlight: CCFL

System
- CPU: Intel® Atom™ D425, 1.8GHz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),
- Support up to 2GB DDR3 800, non-ECC and un-buffered
- SSD: one external locked CF socket by IDE support Type I/II compactFlash card
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature and voltage
- Expansion: 1x PCI slot
- NEXCOM Xcare™ platform system management supported

Rear I/O
- COM #1: RS232
- COM #2: RS232
- COM #3: RS232/422/485
- Ethernet: 3x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x MIC-in
- USB: 2x USB 2.0
- PS2 keyboard/ mouse

Audio
- AC97 codec: Realtek ALC888
- Audio interface: Line out/ MIC-in Audio Jack

Ethernet
- LAN chip: 3x Realtek 8111L Gigabit LAN
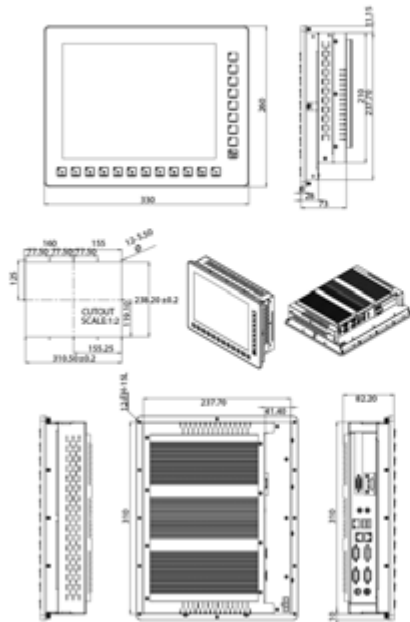- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 75mm x 75mm; 100mm x 100mm
- Power input: 24VDC

Dimension Drawing

Panel PC

Keyboard
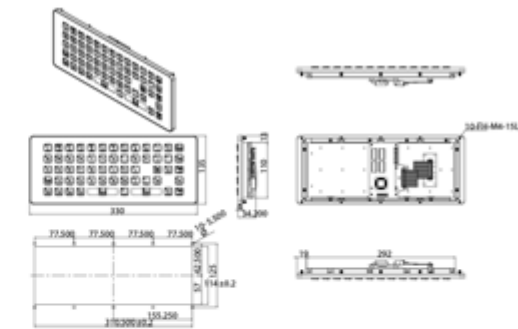
Control Board
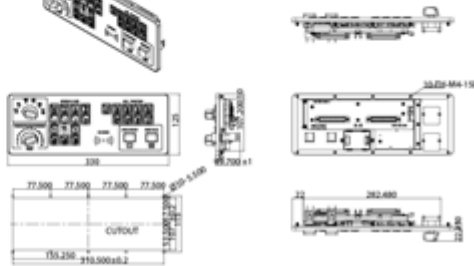
- Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @sine, 5~500Hz, 1hr/axis (HDD operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  IEC 68 2-27
- HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10% to 90% relative humidity, non-condensing

Ordering Information

Barebone

- **FPPC 1220 (P/N: TBD)**
  12.1" TFT Panel PC with Intel® Atom™ D425 1.8 GHz, 1GB DDR3, COM #1/ #2/ #3

NIC 877D

Modularized Design Industrial Computer

Main Features

- EIA 19" Rack-mount aluminum chassis
- Separable 2-independent modularized design
- Built-in power for each controller

- Quick swappable front installation
- 1x PCI, 3x PCIe x1 and 1x PCIe x16 for each controller
- Support Intel® Core™ i7-860, quad core processor

Product Overview

With the modularized design, NIC 877D consists of dual independent system in a 4U 19" chassis. Each system equips with a PEAK 877VL2, a full-sized PICMG 1.3 SBC equipping with Intel® i7-860 Processor and Intel® Q57 Express Chipset, and a NBP 0641 backplane. NIC 877D also features with its aluminum chassis which provides robustness with lighter structure, high thermal conductivity, high corrosiveness resistance and elegant outlook. The modularized and compact design makes the whole system works with high bandwidth and flexibility compared to other systems in identical size, and thus is specially ideal for mobile devices QC system.

Specifications (single module)

Main Board: PEAK 877VL2
- Full-sized PICMG 1.3 system with Intel® i7-860 Processor and Intel® Q57 Express Chipset
- Dual Channel 4GB DDR3, VGA, 2x Intel® GbE LAN, PS2 output

Backplane: NBP 0641
- 1 PCI slots
- 3 PCIex1/ 1 PCIex16

I/O Interface
- Front: 4x USB2.0 Ports
- Rear: 4x USB2.0 Ports, 2x Intel GbE LANs, 1x VGA, 2x RS-232, PS/2

Storage
- 2.5" 500GB SATA2 HDD with front-accessed tray

Power Supply
- ATX 250W

Specifications (System)

Physical Construction
- Form Factor: 4U 19" rack-mount industrial computing chassis
- Construction: aluminum plate
- Color: Dark gray
- Dimensions: 430mm (W) x 450.8mm (D) x 166.8mm (H)
- Cooling System:

Dimension Drawing

480.8mm
430mm
166.8mm
430mm
450.8mm
166.8mm
430mm
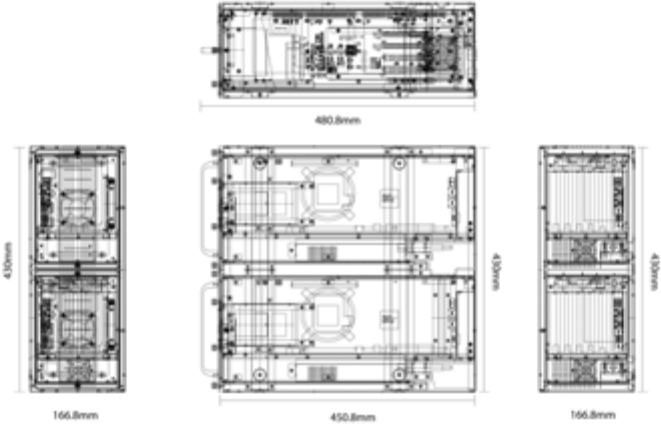
Ordering Information

• **NIC 877D-0641 (P/N: TBD)**
Dual System Modularized Design Industrial Computer
with Intel® Core™ i7-860 and Intel® Q57

IWF 3320X

Main Features

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbps
- Redundant power input supporting 802.3af PoE and +9 to 36VDC Input
- Industrial grade conformal coating for harsh environment
- Rugged Die-casting housing with -30 to + 80°C wide-temperature

- The layer-2 Wireless Firewall gives protection from wireless attacks
- Press-n-Connect to enable auto WDS/mesh network
- Comprehensive WLAN security encryption with WEP, WPA/WPA2, IEEE 802.1X or PSK
- Multiple-SSID Virtual APs for grouping policy management
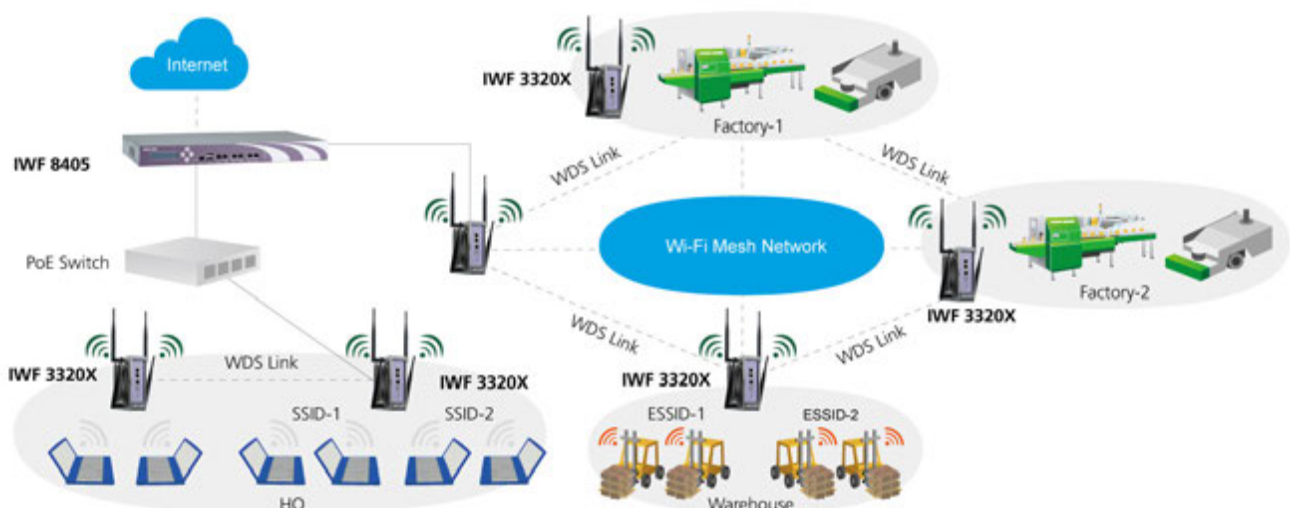- Tunnel-based AP management by backend AP controller

Product Overview

Design for industrial application in critical environment like factory, automation field, IWF 3320X Access Point embedded with 802.11a/b/g/n up to 300Mbps concurrently dual-band , dual RF solution inside an industrial grade metal chassis that support operating at -30 to +80°C wide temperature.

To meet the expectation of high reliable communication in diversify application, IWF 3320X series provides robust redundant mechanism to ensure the trusted operation. The dual power input of both PoE 802.3af & wide voltage +9 to 36VDC ensures power connected all the time. The Dual RF can automatically backup the data transmission each other while any RF disconnect accidently that also can establish mesh network. Dual band radio of 2.4GHz and 5GHz can be separated into different path for application or management need, for instance, the 5GHz radio can be used for central backend communication while 2.4GHz radio is used for front end device communication.

The fast roaming capability within 20ms supports the on-the-move wireless communication without any concern in connectivity

Managed by backend AP controller, IWF 3320X supports CAPWAP thru private tunnel for security & users behavior control cross subnets. This will help IT manager in HQ easily maintain the access points located in local and\or remote sites, ex: oversea factory, branch office for unified management, and flexible grouping control.

Specifications

Wireless Radio

- Wireless Interface: Dual RF IEEE 802.11 a/b/g/n
- Frequency band: Dual 2.4 GHz and 5 GHz
- Wireless architecture:
  (1) AP mode
  (2) WDS mode (Repeater / Bridge)
  (3) Mesh Network
- Channels:
  (1) USA (Channel 1~11)
  (2) Europe (Channel 1~13)
  (3) Japan (Channel 1~13)
- Data rate with auto fallback:
  (1) 802.11a: 6~54 Mbps
  (2) 802.11b: 1~11 Mbps
  (3) 802.11g: 6~54 Mbps
  (4) 802.11n: 6.5~300Mbps
- Transmit Power:
  (1) 802.11a: Up to 22dBm
  (2) 802.11b: Up to 22dBm
  (3) 802.11g: Up to 24dBm
  (4) 802.11an: Up to 22dBm
  (5) 802.11gn: Up to 22dBm
- Receiver Sensitivity:
  (1) 802.11a: -95dBm@6Mbps
  (2) 802.11b: -95dBm@1Mbps
  (3) 802.11g: -95dBm@6Mbps
  (4) 802.11n: 802.11an HT20: -95dBm@MCS0
  (5) 802.11an HT40: -91dBm@MCS0
  (6) 802.11gn HT20: -95dBm@MCS0
  (7) 802.11gn HT20: -90dBm@MCS0

Protocol & QoS support

- IGMP Snooping
- Proxy ARP
- SNMP v1/v2c
- CAWAP
- DHCP client
- SYSLOG client
- RADIUS client
- IPv6
- DiffServ/TOS
- IEEE 802.1p/COS
- IEEE 802.1Q Tag VLAN priority control
- IEEE 802.11e WMM
- IEEE 802.1D Spanning Tree Protocol

Handover & Roaming

- IEEE 802.11i pre-auth (PMKSA cache)
- IEEE 802.11f IAPP fast roaming with adjacent AP

Security

- WEP (64/128/152 bits)
- EAP-TLS + Dynamic WEP
- EAP-TTLS + Dynamic WEP
- PEAP/MS-PEAP + Dynamic WEP
- WPA (PSK + TKIP)
- WPA (802.1X certification + TKIP)
- 802.11i WPA2 (PSK + CCMP/AES)
- 802.11i WPA2 (802.1X certification + CCMP/AES)
- Hidden ESSID support
- MAC Address filtering (MAC ACL)
- MAC authentication with RADIUS servers

System Administration

- Web-based adMinistration
- Provides Event Log
- SYSLOG information support
- Statistics
- Configuration backup and restore
- One-button-click to restore factory default setting
- Firmware upgrade
- Capable of performing RADIUS Accounting and Accounting Update
- Press-n-Connect to enable auto WDS/mesh network
- Ethernet LAN Port Mapping (with a NEXCOM controller)

Wireless Signal Management

- Number of ESSIDs (Virtual APs): 16
- Number of associated clients: 256

Hardware Specifications

- Antenna: 4x omni-directional 5dBi enclosed
- Uplink Port: 1× GbE LAN with IEEE 802.3af PoE
- LAN Port: 2× GbE LAN
- Push buttons: 1x Reset, 2 x WES (Pess-n-Connect)
- Console Port: 1x DB9M
- LED Indicators: 1x Power, 1x Status, 2x WLAN, 2x WES
- Power Source: +9 to 36 VDC & PoE
- IP50 Dust proof metal case
- Industrial grade conformal coating for anti-erosion and anti-moisture
- Form factor: Industrial DIN Rail
- Dimensions: 58.8 W x 139.6 Dx 167 H (mm)w/o antennas
- Weight: 3.81 lbs (1.73kg)

Environment Protection

- Operation Temperature: -30 to +80°C (-22 to 158°F)
- Storage Temperature: -40 to +85°C (-40 to 185°F)
- Operation Humidity: 0% to 95% (Non-condensing)
- Vibration: Random 0.3g

Certifications

- FCC, CE
- RoHS compliant

Package Contents

- NEXCOM IWF 3320X x1
- CD-ROM (User's Manual and QIG) x1
- Detachable Dual-Band Antenna x4 5dBi
- Ethernet Cable x1

* Specifications subject to change without notice

Ordering Information

- **IWF 3320X-US (P/N: 10T00332000x0)**

- **IWF 3320X-EU (P/N: 10T00332001x0)**

- **IWF 3320X-JP (P/N: 10T00332002x0)**

IWF 5320

Main Features

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbp
- Dual Gigabit Ethernet with one standard IEEE 802.3af PoE
- Weatherproof IP68 rated metal-inside housing with -20 to +70°C operating wide-temperature
- Multiple Virtual APs for grouping policy management

- Industrial grade conformal coating for harsh environment
- The layer-2 Wireless Firewall gives protection from wireless attacks
- Comprehensive WLAN security encryption with WEP, WPA/WPA2, IEEE 802.1X or PSK
- Tunnel-based AP management by backend AP controller

Product Overview

The IWF 5320 is a dual radio Wi-Fi 802.11a/b/g/n outdoor device for long range wireless transmission. Its rugged IP68-rated metal housing is weatherproof, watertight and rust-resistant, making it an ideal solution for deployments in harsh conditions, such as outdoor or industrial environments.

When in AP mode, IWF 5320 operates as an AP station with wall-penetrating high-power signal and long-range coverage to better serve Wi-Fi clients. In addition, it can be set up as a WDS-mesh node by establishing multiple WDS links to bridge neighbor access points together.

Coming with business-class security, IWF 5320 in AP mode is also ideal for industrial applications. Furthermore, one IWF 5320 with multiple SSIDs is capable of acting as multiple Virtual APs (VAPs). By tagging the traffic from each VAP with a unique VLAN ID, it allows for segmenting a corporate network using VLANs to protect critical resources.

Being a versatile Wi-Fi device, IWF 5320 does not limit itself to outdoor usage only. When managed by a Nexcom Controller (such as the IWF 8405), it performs as a Wi-Fi base station in either a public or private wireless access deployment.
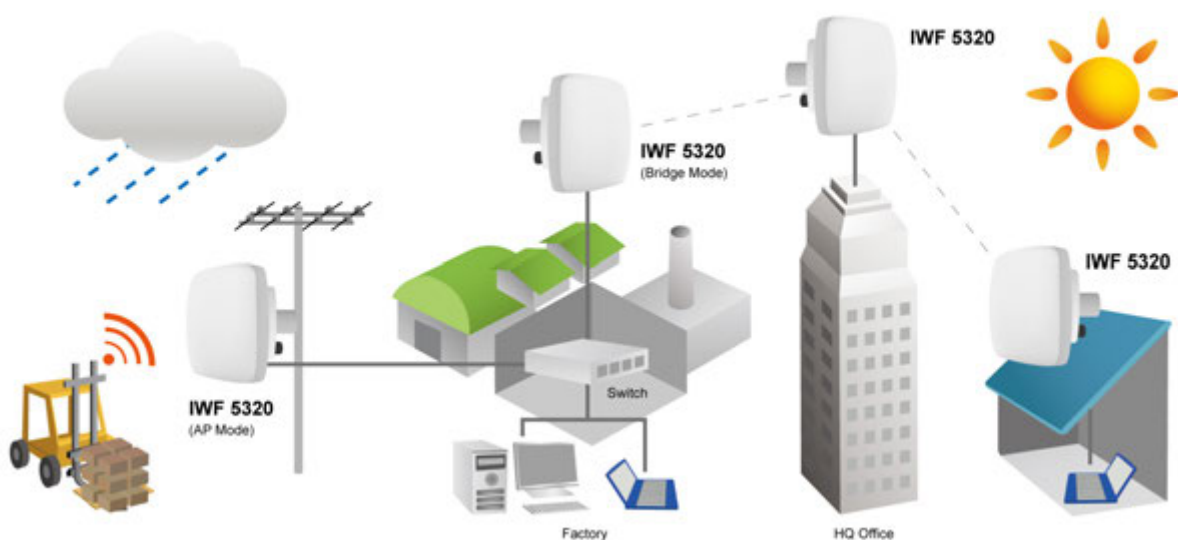
Specifications

Wireless Radio
- Wireless Interface: 2 x IEEE 802.11 a/b/g/n
- Frequency band: 2.4 GHz and 5 GHz
- Wireless architecture:
  (1) AP mode
  (2) WDS mode (Repeater / Bridge)
- Modulation:
  (1) OFDM (64-QAM, 16-QAM, QPSK, BPSK)
  (2) DSSS (CCK, DBPSK, DQPSK)
- Channels:
  (1) USA (Channel 1~11)
  (2) Europe (Channel 1~13)
  (3) Japan (Channel 1~13)
- Data rate with auto fallback:
  (1) 802.11a: 6~54 Mbps
  (2) 802.11b: 1~11 Mbps
  (3) 802.11g: 6~54 Mbps
  (4) 802.11n: 6.5~300Mbps
- Transmit Power:
  (1) 802.11a: Up to 22dBm
  (2) 802.11b: Up to 22dBm
  (3) 802.11g: Up to 24dBm
  (4) 802.11an: Up to 22dBm
  (5) 802.11gn: Up to 22dBm
- Receiver Sensitivity:
  (1) 802.11a: -95dBm@6Mbps
  (2) 802.11b: -95dBm@1Mbps
  (3) 802.11g: -95dBm@6Mbps
  (4) 802.11an HT20: -95dBm@MCS0
  (5) 802.11an HT40: -91dBm@MCS0
  (6) 802.11gn HT20: -95dBm@MCS0
  (7) 802.11gn HT20: -90dBm@MCS0

Protocol & QoS Support
- IGMP Snooping
- Proxy ARP
- SNMP v1/v2c
- CAWAP
- DHCP client
- SYSLOG client
- RADIUS client
- IPv6
- DiffServ/TOS
- IEEE 802.1p/COS
- IEEE 802.1Q Tag VLAN priority control
- IEEE 802.11e WMM
- IEEE 802.1D Spanning Tree Protocol

Handover & Roaming
- IEEE 802.11i pre-auth (PMKSA cache)

Security
- Supports IEEE 802.11 mixed mode; open and shared key authentication
- Data encryption with WEP (64/128/152-bits)
- User Authentication: WEP, IEEE 802.1X, WPA-PSK, WPA-RADIUS, MAC ACL, MAC authentication using RADIUS with built-in 802.1X Authenticator
- WPA/WPA2 with TKIP or AES-CCMP with key's refreshing period setting
- Hidden ESSID: Broadcast SSID enable/disable
- MAC Address filtering (MAC ACL)
- Maximum number of registered RADIUS servers: 2
- Supports AES data encryption over WDS link

- Station Isolation : All associated stations can not communicate with each other when enabled
- Build-in Layer 2 Firewall, blocking Dynamic ARP Inspection & DHCP Snooping

System Administration
- Web-based adMinistration
- SNMP MIBII support (v1/v2c)
- Provides Event Log
- Supports System Log reporting to external SYSLOG server
- Utilities for system configuration backup and restoration
- Firmware upgrade
- Support Tunneled AP Management with Nexcom Secure WLAN Controllers

Wireless Signal Management
- Number of ESSIDs (Virtual APs): 16
- Number of associated clients: 256

Hardware Specifications
- IP68 water-proof metal case
- Industrial grade conformal coating for anti-erosion and anti-moisture
- Uplink Port: 1× 10/100/1000 Base-T Ethernet with IEEE 802.3af PoE
- LAN Port: 1× 10/100/1000 Base-T Ethernet
- Console Port: 1× RJ45
- Antenna:
  (1) 4× N-type connectors
  (2) 1× Built-in dual band panel antenna

Physical and Power
- Support IEEE 802.3af PoE as a PD
- Form Factor: Pole Mountable
- Dimensions (W x D x H): 9.5" x 9.1" x 5.2" (240 mm x 230 mm x 130 mm)
- Weight: 5.3lbs (2.4 kg)

Environment Protection
- Operation Temperature: -20 to +70°C (-22 to 158°F)
- Storage Temperature: -40 to +85°C (-40 to 185°F)
- Operation Humidity: 0% to95% maximum (Non-condensing)
- Vibration: Random 0.3g

Certifications
- FCC, CE
- RoHS compliant

Package Contents
- IWF 5320 x1
- CD-ROM (with User's Manual and QIG) x1
- PSE (POE30G) with power cord x1
- Mounting Kits x1

Ordering Information

- **IWF 5320-US (P/N: 10T00532000x0)**
- **IWF 5320-EU (P/N: 10T00532001x0)**
- **IWF 5320-JP (P/N: 10T00532002x0)**

Wireless Accessories

- **Outdoor omni-directional antenna 2.4~2.5GHz 8dBi (P/N: 60233SMA71x00)**
- **Outdoor directional antenna 5.1-5.9GHz 13dBi (P/N: 60233SMA72x00)**
- **SP-650 Lightning Protector for 0-6GHz (P/N: 7A00000044X00)**
- **Low Loss Cable, LC-CFD400L1, Length = 1M (P/N:6023300106X00)**

IWF 8405

Main Features

- Centralized AP management and multi-level connections up to 150 manageable access points
- Virtual service zone management by user group, security profile and etc.
- Authentication, Authorization, Accounting (AAA) support

- Dual-WAN Load Balance and Failover
- Data tunnel security by Intranet local IPSec VPN, Internet Remote Client PPTP VPN, Site-to-Site VPN
- QoS and WMM Traffic Types support for Voice, Video, Best Effort and Background

Product Overview

The IWF 8405 industrial Secure WLAN Controller is an ideal security solution for medium-scale industrial WLAN deployments. The IWF 8405 integrates "secure access control", " user account provisioning", "centralized WLAN management" , even "flexible accounting and billing" into one box to provide simplified manageability and instant mobility. With more powerful hardware, IWF 8405 is capable of centrally managing 150 access points to cover a wider service area in a medium network.

Secure Networking under Central Management

IWF 8405 is suitable for industry in managing their wired and wireless network access uniformly. The network access of users from different departments and the access of guests can be segregated in different Service Zones. When needed, IWF 8405's Local, Site-to-Site and Remote VPN tunnels can be used to further secure the information flows for business.

For multi-site Manufacturing facilities, Network deployment and management is always challenge to IT manger, IWF8405 makes it easy to quickly deploy and offer wireless Internet service. IT manager can centrally manage all the access points connected to the IWF 8405. Also, remote firmware upgrade can be done through IWF 8405. Security policy and user groups can be pre-defined in Virtual AP profile and applied to the access points through IWF 8405.
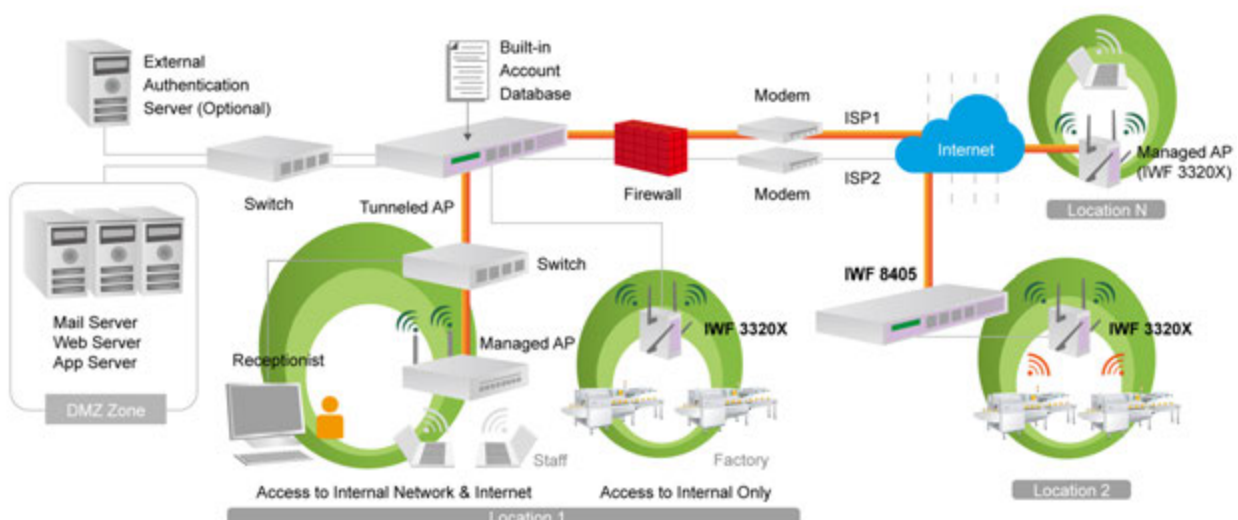
Specifications

Networking
- Support NAT or Router mode
- Support Static IP, DHCP, PPPoE mode on WAN interfaces and PPTP (WAN 1 only)
- Choose freely which LAN is authentication-enabled LAN
- Support NAT: (1) IP/Port destination redirection (2) DMZ server mapping (3) Virtual server mapping (4) H.323 pass-through
- Supports email service via designated email server
- Built-in with DHCP Server and support DHCP relay
- Support walled garden (free surfing zone)
- Walled Garden Ad List that enables advertisement website links on user login portal page
- Support MAC-address and IP-address pass-through
- Support HTTP Proxy
- Support IP Plug and Play (IP PnP)
- Support configurable static routes
- Support dual uplinks, outbound load balancing and failover for more reliable Internet connection
- Support SIP pass-through NAT
- Support Ethernet connection to external terminal servers
- Port location mapping features for working with DSLAM and VLAN switches
- Dynamic Routing Protocol: RIP, OSPF, IS-IS
- Seamless L2/L3 Roaming

System Administration
- Support web-based management user interface
- Provide customizable login and logout portal page
- SSH remote management
- Remote firmware upgrade
- NTP time synchronization
- Menu driven console management interface
- Utilities to backup and restore the system configuration
- Built-in root CA and centralized certificate management

Monitoring and Reporting
- Status monitoring of on-line users
- IP-based monitoring of network devices
- Uplink (WAN) connection failure alert
- Support Syslog for diagnosis and troubleshooting
- User traffic history logging
- Traffic history report via email to adMinistrator
- Users' session log can be sent to FTP or Syslog server
- Graphical system report

User Management and Access Control
- Support 6,000 local accounts and 6,000 on-demand accounts
- Provide on-demand accounts for visitors
- Support Local user account roaming
- Authentication methods supported: Local and On-demand accounts, POP3, LDAP, RADIUS, Windows Domain, and SIP authentication
- Single-Sign-On for Windows Domain
- Allow MAC address and user identity binding for local user authentication
- Support MAC Access Control List
- Support auto-expired guest accounts
- Users can be divided into user groups, each user group has its own network properties, including bandwidth, QoS, accessible service zones, and other privileges
- Support QoS and WMM traffic types: Voice, Video, Best Effort and Background
- Each group (role) may get different network policies in different service zones
- Max concurrent user session (TCP/UDP) limit
- A setting for user-idle-timeout
- Configurable user Black List
- Export/Import local users list to/from a text file

Security
- Support local IPSec VPN tunnels
- Support PPTP VPN tunnels
- Support site-to-site VPN tunnels
- Support VPN pass-through (IPSec and PPTP)
- Built-in DoS attack protection

Service Zones
- The network is divided into maximum 9 Service Zones, each defined by a pair of VLAN tag and ESSID
- Each service zone has its own (1) login portal page (2) authentication options (3) LAN interface IP address (4) DHCP address range
- Each service zone allows access to the selected groups
- Each service zone assigns a network policy to each user group
- WISPr support per service zone

AP Management
- Manage up to 150 x Nexcom AP in both Local and Wide Areas AP management totally
- Monitor 3rd party non-integrated AP: up to 200
- Centralized remote management via HTTP/SNMP interface
- Auto discovery for managed APs
- Enable or disable APs easily via user interface
- Templates for managed APs
- Monitoring managed AP for its status, the number of associated clients, and RF information
- Upgrade managed APs centrally, including bulk upgrade
- Rogue AP detection and AP load balancing
- Tunneled AP management over internet for NEXCOM Wi-Fi AP Family
- Graphical AP statistics display

Accounting and Billing
- Support local on-demand and external RADIUS server
- Contain 10 configurable billing plans for on-demand accounts
- Support credit card billing system by Authorize.net ,PayPal, SecurePay, and WorldPay
- Provide session expiration control for on-demand accounts
- Provide detailed per-user network traffic history for both local and on-demand user accounts
- RADIUS VSA implementation for volume-based session control using RADIUS server
- Support automatic e-mail to report network traffic history
- Support middleware connection to Property Management System (PMS)

Hardware Specifications
- WAN Ports: 2x 10/100/1000 BASE-T RJ-45
- LAN Ports: 4x 10/100/1000 BASE-T RJ-45
- Console Port: 1x RJ-45
- LED Indicators: 1x Power, 1x Status, 1x HDD
- LCD Display

Physical and Power
- Power Adapter: 100~240 VAC, 50/60 Hz
- Form Factor: 19" 1U Rack Mount
- Dimensions (W x D x H): 16.77" x 9.29" x 1.75" (426 mm x 236 mm x 44 mm)
- Weight: 12.3 lbs (5.6 kg)

Environment Protection
- Operating Temperature: 0 to 40 °C
- Storage Temperature: -20 to 75 °C
- Operation Humidity: 10% to 90% (Non-condensing)
- Storage Humidity: 10% to 90% (Non-condensing)

Certifications
- CE, FCC
- RoHS compliant

Package Contents
- IWF 8405 x1
- CD-ROM (User's Manual and QIG) x1
- RS-232 DB9 to RJ45 Console Cable x1
- Ethernet Cable x1
- Power Cord x1
- Rack Mounting Bracket (with Screws) x1

*Specifications subject to change without notice

Ordering Information

- **IWF 8405 (P/N: 10T00840500x0)**

IWF 3320C

Main Features

- Concurrent IEEE802.11 a/b/g/n for transmission rate up to 2x 300Mbps
- Redundant power input supporting 802.3af PoE and 9-36VDC Input
- Industrial grade conformal coating for harsh environment
- Rugged Die-casting housing with -30 to + 80°C wide-temperature

- The layer-2 Wireless Firewall gives protection from wireless attacks
- Press-n-Connect to enable auto WDS/mesh network
- Comprehensive WLAN security encryption with WEP, WPA/WPA2, IEEE 802.1X or PSK
- Multiple-SSID Virtual APs for grouping policy management
- Tunnel-based AP management by backend AP controller

Product Overview

Design for industrial application in critical environment like factory, automation field, IWF 3320X Access Point embedded with 802.11a/b/g/n up to 300Mbps concurrently dual-band , dual RF solution inside an industrial grade metal chassis that support operating at -30 to +80°C wide temperature.

To meet the expectation of high reliable communication in diversify application, IWF 3320X series provides robust redundant mechanism to ensure the trusted operation. The dual power input of both PoE 802.3af & wide voltage +9 to 36VDC ensures power connected all the time. The Dual RF can automatically backup the data transmission each other while any RF disconnect accidently that also can establish mesh network. Dual band radio of 2.4GHz and 5GHz can be separated into different path for application or management need, for instance, the 5GHz radio can be used for central backend communication while 2.4GHz radio is used for front end device communication.

The fast roaming capability within 20ms supports the on-the-move wireless communication without any concern in connectivity

Managed by backend AP controller, IWF 3320X supports CAPWAP thru private tunnel for security & users behavior control cross subnets. This will help IT manager in HQ easily maintain the access points located in local and\or remote sites, ex: oversea factory, branch office for unified management, and flexible grouping control.

Specifications

Wireless Radio

- Wireless Interface: Dual RF IEEE 802.11 a/b/g/n
- Frequency band: Dual 2.4 GHz and 5 GHz
- Wireless architecture:
  (1) AP mode
  (2) WDS mode (Repeater / Bridge)
  (3) Mesh Network
- Channels:
  (1) USA (Channel 1~11)
  (2) Europe (Channel 1~13)
  (3) Japan (Channel 1~13)
- Data rate with auto fallback:
  (1) 802.11a: 6~54 Mbps
  (2) 802.11b: 1~11 Mbps
  (3) 802.11g: 6~54 Mbps
  (4) 802.11n: 6.5~300Mbps
- Transmit Power:
  (1) 802.11a: Up to 22dBm
  (2) 802.11b: Up to 22dBm
  (3) 802.11g: Up to 24dBm
  (4) 802.11an: Up to 22dBm
  (5) 802.11gn: Up to 22dBm
- Receiver Sensitivity:
  (1) 802.11a: -95dBm@6Mbps
  (2) 802.11b: -95dBm@1Mbps
  (3) 802.11g: -95dBm@6Mbps
  (4) 802.11n: 802.11an HT20: -95dBm@MCS0
  (5) 802.11an HT40: -91dBm@MCS0
  (6) 802.11gn HT20: -95dBm@MCS0
  (7) 802.11gn HT20: -90dBm@MCS0

Protocol & QoS Support

- IGMP Snooping
- Proxy ARP
- SNMP v1/v2c
- CAWAP
- DHCP client
- SYSLOG client
- RADIUS client
- IPv6
- DiffServ/TOS
- IEEE 802.1p/COS
- IEEE 802.1Q Tag VLAN priority control
- IEEE 802.11e WMM
- IEEE 802.1D Spanning Tree Protocol

Handover & Roaming

- IEEE 802.11i pre-auth (PMKSA cache)
- IEEE 802.11f IAPP fast roaming with adjacent AP

Security

- WEP (64/128/152 bits)
- EAP-TLS + Dynamic WEP
- EAP-TTLS + Dynamic WEP
- PEAP/MS-PEAP + Dynamic WEP
- WPA (PSK + TKIP)
- WPA (802.1X certification + TKIP)
- 802.11i WPA2 (PSK + CCMP/AES)
- 802.11i WPA2 (802.1X certification + CCMP/AES)
- Hidden ESSID support
- MAC Address filtering (MAC ACL)
- MAC authentication with RADIUS servers

System Administration

- Web-based adMinistration
- Provides Event Log
- SYSLOG information support
- Statistics
- Configuration backup and restore
- One-button-click to restore factory default setting
- Firmware upgrade
- Capable of performing RADIUS Accounting and Accounting Update
- Press-n-Connect to enable auto WDS/mesh network
- Ethernet LAN Port Mapping (with a NEXCOM controller)

Wireless Signal Management

- Number of ESSIDs (Virtual APs): 16
- Number of associated clients: 256

Hardware Specifications

- Antenna: 4x omni-directional 5dBi enclosed
- Uplink Port: 1× GbE LAN with IEEE 802.3af PoE
- LAN Port: 2× GbE LAN
- Push buttons: 1x Reset, 2x WES (Pess-n-Connect)
- Console Port: 1x DB9M
- LED Indicators: 1x Power, 1x Status, 2x WLAN, 2x WES
- Power Source: +9 to 36 VDC & PoE
- IP50 Dust proof metal case
- Industrial grade conformal coating for anti-erosion and anti-moisture
- Form factor: Industrial DIN Rail
- Dimensions: 58.8 W x 139.6 Dx 167 H (mm)w/o antennas
- Weight: 3.81 lbs (1.73kg)

Environment Protection

- Operation Temperature: -30 to +80°C (-22 to 158°F)
- Storage Temperature: -40 to +85°C (-40 to 185°F)
- Operation Humidity: 0% to 95% (Non-condensing)
- Vibration: Random 0.3g

Certifications

- FCC, CE
- RoHS compliant

Package Contents

- NEXCOM IWF 3320X x1
- CD-ROM (User's Manual and QIG) x1
- Detachable Dual-Band Antenna x4 5dBi
- Ethernet Cable x1

* Specifications subject to change without notice

Ordering Information

- **IWF 3320X-US (P/N: 10T00332000x0)**

- **IWF 3320X-EU (P/N: 10T00332001x0)**

- **IWF 3320X-JP (P/N: 10T00332002x0)**

IPPC 1960T

Main Features

- 4:3 19" SXGA Fanless Panel Computer
- Powerful 2nd/ 3rd generation Intel® Core™ processor
- Two expansion slots for add-on PCI or/ and PCIe cards
- Optional 3.5G/ WiFi module/ 2.5"HDD/ 3x Coms/ GPIO/ DIO/ Dimming Control Button

- Front accessible USB2.0 for easy of field maintenance
- Metal housing with robust aluminum front bezel for harsh environment
- IP66 compliant front panel
- Optional: AC power input model/ DC power input model

Product Overview

IPPC 1960T is a heavy industrial panel PC equipped with powerful 2nd / 3rd generation Intel® Core™ processor, TFT LCD panel with LED backlight and user-friendly touch screen. It provides two expansion slots to support EtherCat, PROFINET, Modbus/ TCP modules. The NEMA4/ IP66 rated heavy-duty aluminum front bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. IPPC 1960T is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area.

Specifications

Panel
- LED Size: 19", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 350cd/m²
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: LED

Touch
- Touch screen: 5-wire resistive
- Touch light transmission: 80%
- Touch interface: USB

System
- CPU: Support 2nd generation Intel Core processor family, rPGA 988

Processor	i5-2510E (Default)	i3-2330	Celeron® B810
# of Core	2	2	2
Clock Speed	2.5GHz	2.2GHz	1.6GHz
Max. TDP	35W	35W	35W

- BIOS: AMI BIOS
- System chipset: Intel® QM67
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 2G DDR3 (Default),

Support up to 8GB DDR3-1066/1333, Non-ECC and Un-buffered
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional WiFi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For IPPC1960T-AC only)

Rear I/O
- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 5 x USB 2.0 (1 in front)
- 2x PS2 keyboard/ mouse
- ATX Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V or 12V selection
- COM #2: RS232/422/485 w/RI or 5V or 12V selection
- COM #3: RS232 w/RI or 5V or 12V selection

Dimension Drawing
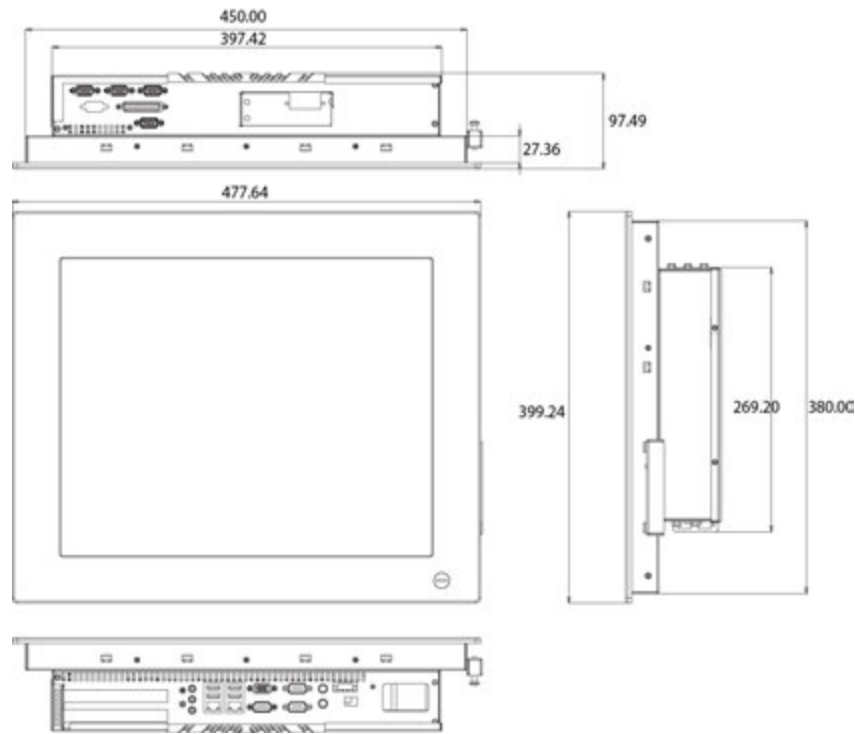
For IPPC1960T-AC only
- DIO w/ 2.5kv isolated protection:
  - 4x Digital Input (Source type)
    Input Voltage (Dry Contact): Logic 0: Close to GND
    Logic 1: Open
    Input Voltage: Logic 0: 3V max
    Logic 1: +5 to 30V
  - 4x Digital Output (Sink type)
    Output Voltage: +3.6 to 5V
    Sink current: 200 mA max. per channel
- GPIO: 4 x digital in / 4 x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated protection
- COM #2: RS232/422/485 w/ 2.5kv isolated protection
- COM #3: RS232 w/ RI or 5V or 12V selection
- COM #4: RS232 w/ RI or 5V or 12V selection
- COM #5: RS232
- COM #6: RS232
- AC Power switch and ATX Power switch

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone 877\ RAL 90 06 front bezel
- Enclosure: Aluminum front bezel with SPCC Housing
- IP protection: IP66 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm

For IPPC1960T-DC
- Power input: +9 to 30VDC
- Power Connector: Terminal Blocks 3-Pin Phoenix Connector

For IPPC1960T-AC
- Power input: 90~260 VAC @ 47~~63Hz, 1.7~1A
- Power Connector: AC Inlet (IEC60320 C14)
- Power Supply: 120W
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
                      Limits to be at 90% RH at max 50°C
- Dimension: 477.64 x 399.24 x 97.49 mm
- Weight: 13Kg (IPPC1960T-AC); 12.4Kg (IPPC1960T-DC)

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **IPPC1960T-AC (P/N: 10II1960T01X0)**
  19" SXGA LED Backlight Fanless Touch Panel PC, Intel® Core™
  i5-2510E 2.5GHz, touch screen, 2GB DDR3, 6xCOMs, 4x4 GPIO, 4x4
  DI/O with isolated protection, AC Power Input

- **IPPC1960T-DC (P/N: 10II1960T02X0)**
  19" SXGA LED Backlight Fanless Touch Panel PC, Intel® Core™
  i5-2510E 2.5GHz, touch screen, 2GB DDR3, 3xCOMs, DC Power Input

APPC 0820T/0820TC

APPC 0820TC

APPC 0820T

Main Features

- 4:3 8" SVGA Fanless Panel Computer
- Intel® Atom™ D525, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS
- USB x4/ 1x Mini-PCIe sockets/ 1x CF

- 1x RS232/ 1x RS232/422/485/ 1x GPIO
- DDR3 1GB/ 2.5" HDD Bracket
- Optional Wi-Fi Module/ 2.5" HDD
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm

Product Overview

Incorporated a 8" 4:3 touch screen LCD panel with resolutions up to 800x600 (SVGA) and 400 nits brightness, the APPC 0820T and APPC 0820TC are fanless Panel PC based on the Atom™ D525 processor. The industrial motherboard is reengineering to have RAM and Mini-PCIe aligned in the same side of the board with its Intel® Atom™ D525 CPU. This dedicated motherboard benefits users both in future capability expansion and ease for maintenance. The Panel PC comes with flush panel design and can have IP65 front for industrial applications. The touch screen provides the durable, reliable, and scratch-able benefits for easy maintenance in wide applications.

The ultra slim APPC 0820TC makes it become industrial slimmest model for space-critical applications, such as, access control, small automation machineries, forklift and truck etc. Even though the size is compact, the I/O functionalities- 1x power switch, 1x reset, 1x RS232, 2x USB, 1x Line-out and 1x VGA- aren't scarified. For more sophisticated automation process, the APPC 0820T provides richer I/O than other 8" Applied Panel PCs. Except for the standard specifications of 1x power switch, 1x reset, 1x RS232, 2x USB, 1x Line-out, 1x VGA, APPC 0820T adds extra functionalities including two additional USB, 1x Line-in, 1x Mic-in, 1x RS232/422/485, 1x GPIO and PS/2 keyboard and mouse.

Specifications

Panel
- LCD Size: 8", 4:3
- Resolution: SVGA 800 x 600
- Luminance: 400cd/m²
- Contrast ratio: 500
- LCD color: 262K
- Viewing angle: 50(U), 70(D), 70(L), 70(R)
- Backlight: LED

Touch screen
- 5-wire resistive (flush panel type)
- Light transmission: 82%
- Interface: USB

System
- CPU: Intel® Atom™ D525, 1.8GHz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 1G DDR3

(Default), Support up to 2GB DDR3 800, Non-ECC and Un-buffered
- Storage:
  APPC 0820TC: (Choice of one)
  - SSD: CF socket by IDE support Type I/II compact Flash card (SATA to CF converter board (Optional))
  - Hard drive bay: optional 2.5" SATA HDD
  - SATA DOM (Optional)
  APPC 0820T: (Choice of one)
  - SSD: CF socket by IDE support Type I/II compact Flash card (Build in SATA to CF converter board)
  - Hard drive bay: optional 2.5" SATA HDD
  - SATA DOM (Optional)
  - HDD and choice of CF or SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 1x Mini-PCIe sockets

Dimension Drawing
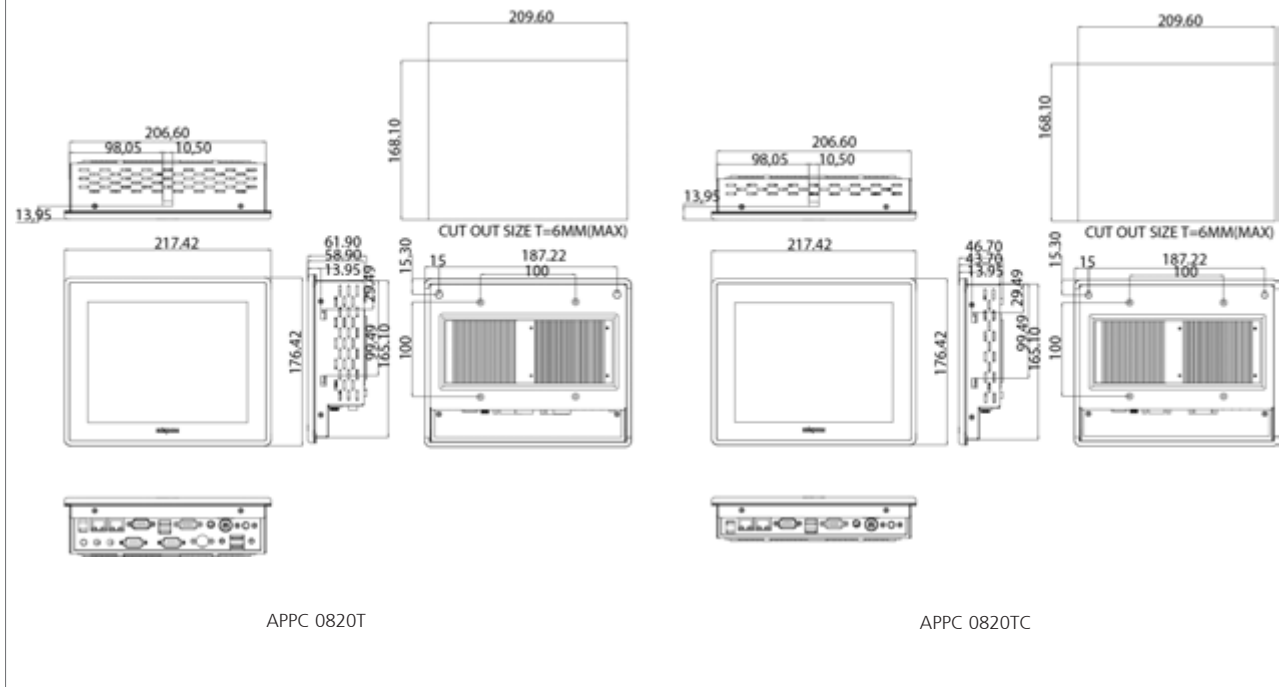
APPC 0820T

APPC 0820TC

Rear I/O

- APPC 0820TC:
  COM #1: RS232
  Ethernet: 2x RJ45
  2nd display VGA port: 1 x DB15
  Audio port: 1x Line out
  USB: 2x USB 2.0
  Power switch
  Reset button
- APPC 0820T:
  GPIO: 4x digital in / 4x digital out
  COM #1: RS232
  COM #2: RS232/422/485
  Ethernet: 2x RJ45
  2nd display VGA port: 1 x DB15
  Audio port: 1x Line out; 1x Line in; 1x MIC-in
  USB: 4x USB 2.0
  PS2 keyboard/ mouse
  Power switch
  Reset button

Audio
- AC97 codec: Realtek ALC888
- Audio interface: Line out/Line in/MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64 (w/ HDD)

0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension:
  APPC0820T - 217.4 x 176.4 x 61.9 mm
  APPC0820TC - 217.4 x 176.4 x 46.7 mm
- Weight:
  APPC0820T - 2Kg
  APPC0820TC - 1.7Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 0820T (P/N: 10IA0820T00X0)**
  8" TFT backlight LED Panel PC with Intel® Atom™ D525 1.8 GHz, touch screen, 1GB DDR3 with two COM ports and Audio

- **APPC 0820TC (P/N: 10IA0820T01X0)**
  8" TFT backlight LED Panel PC with Intel® Atom™ D525 1.8 GHz, touch screen, 1GB DDR3 with one COM port

- **Options**
  12V, 60W AC/DC power adapter w/o power cord
  (P/N: 7400060002X00)

APPC 1230T/1231T

Main Features

- 4:3 12.1" SVGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/ 422/ 485

- Optional 3.5G/ Wi-Fi Module / 2.5"HDD/ 2x COMs / GPIO / DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input 12V~30V DC

Product Overview

The 12.1" fanless panel PC APPC 1230T/ 1231T incorporating an industrial motherboard is intended for versatile industrial applications. APPC 1230T/ 1231T has a touch screen LED backlight LCD panel with 800x600 (SVGA) resolution and 450-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

This APPC series supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, this APPC series can gain a strong foothold in industrial field and machine devices. In addition, this APPC series can hook 2nd display via a VGA port for dual independent display. APPC 1231T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel
- LED Size: 12.1", 4:3
- Resolution: SVGA 800x600
- Luminance: 450cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 65(U), 75(D), 80(L), 80(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 80%
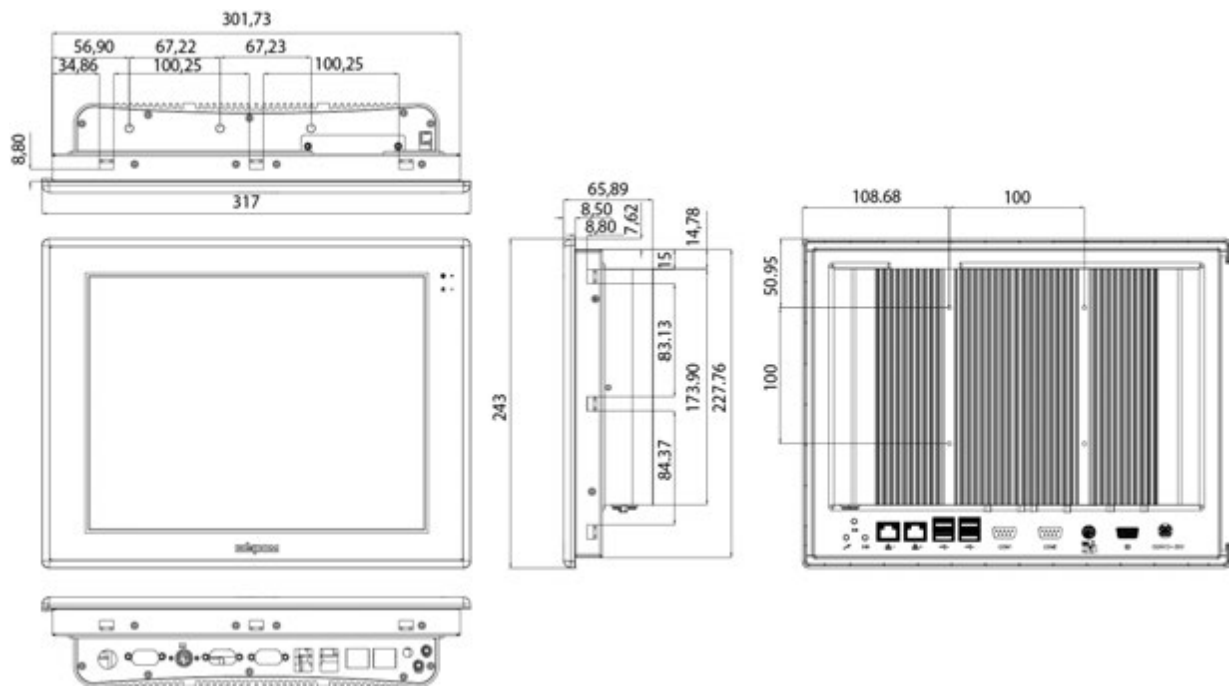- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:

- 1x external locked CFast socket
- 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25℃)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1231T only)

Rear I/O
- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch / Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

For APPC1231T only
- DIO w/ 2.5kv isolated:

Dimension Drawing

4x Digital Input (Source type)
- Input Voltage (Dry Contact): Logic 0: Close to GND
- Logic 1: Open
- Input Voltage: Logic 0: 3V max
- Logic 1: +5V ~ +30V

4x Digital Output (Sink type)
- Output Voltage: 3.6V ~ 5V
- Sink current: 200 mA max. per channel
- GPIO: 2x digital in / 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~ 30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms

- Operating temperature: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
- Dimension: 317 x 243 x 65.89mm
- Weight: 3.9 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1230T (P/N: 10IA1230T00X0)**
  12.1" SVGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485

- **APPC 1231T (P/N: 10IA1231T00X0)**
  12.1" SVGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485 and 4x4 DI/O with isolated protection, 2x RS232, 2x2 GPI/O, Brightness adjustment buttons

Options

- **12V, 60W AC/ DC power adapter w/o power cord (P/N: 7400060002X00)**

APPC 1235T

12.1" TFT XGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4x USB, 2x COM and VGA

Main Features

- 4:3 12.1" XGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ 2x COMs/ GPIO /DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input 12V~30VDC

Product Overview

The 12.1" XGAfanless panel PC APPC 1235T incorporating an industrial motherboard is intended for versatile industrial applications. APPC 1235T supports 1024 x 768 (XGA) resolution and 500-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

This APPC series supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, this APPC series can gain a strong foothold in industrial field and machine devices. In addition, this APPC series can hook 2nd display via a VGA port for dual independent display.

Specifications

Panel
- LED Size: 12.1", 4:3
- Resolution: XGA 1024x768
- Luminance: 500cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 80(U), 80(D), 80(L), 80(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
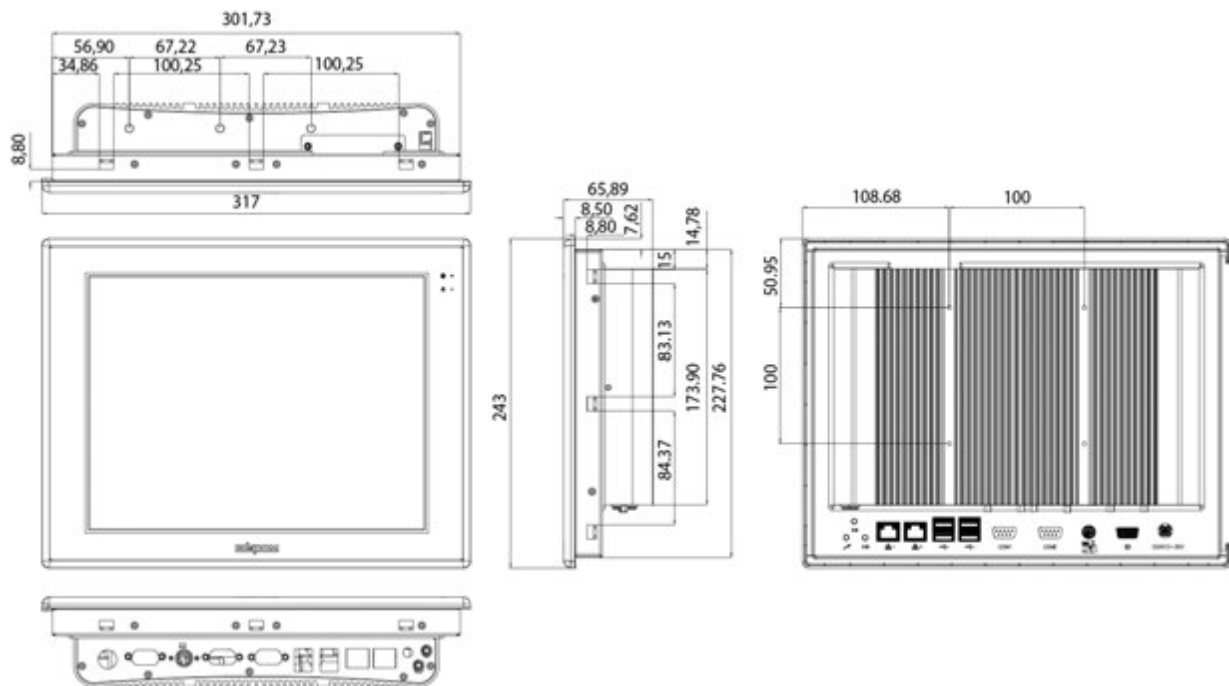
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25℃)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)

Rear I/O
- Ethernet: 2x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch/ Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

Dimension Drawing

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
  Limits to be at 90% RH at max 50°C
- Dimension: 317 x 243 x 65.89mm
- Weight: 3.9 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1235T (P/N: 10IA1235T00X0)**
  12.1" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485

Options

- **12V, 60W AC/ DC power adapter w/o power cord (P/N: 7400060002X00)**

APPC 1530T/1531T

15" TFT XGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4x USB, 4x COM and VGA

Main Features

- 4:3 15" XGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- Optional 3.5G / Wi-Fi Module/ 2.5"HDD/ 2x COMs/ GPIO / DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input 12V~30VDC

Product Overview

The 15" fanless panel PC APPC 1530T/ 1531T incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LED backlight LCD panel with 1024x768 (XGA) resolution and 400-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

The APPC 1530T/ 1531T supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, APPC 1530T/1531T can gain a strong foothold in industrial field and machine devices. In addition, APPC 1530T/ 1531T can hook 2nd display via a VGA port for dual independent display. APPC 1531T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel
- LED Size: 15", 4:3
- Resolution: XGA 1024x768
- Luminance: 400cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 60 (U), 80(D), 80(L), 80(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
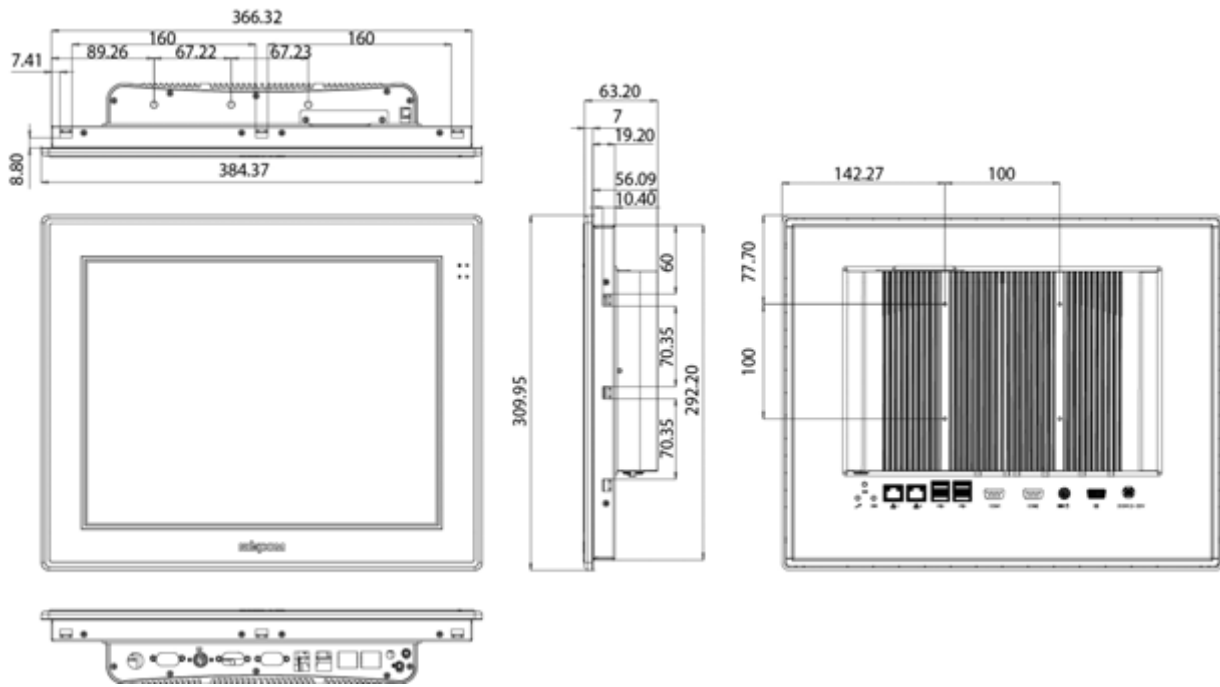
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1531T only)

Rear I/O
- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

Dimension Drawing

For APPC 1531T only
- DIO w/ 2.5kv isolated:
  4x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V
  4x Digital Output (Sink type)
  - Output Voltage: 3.6V ~ 5V
  - Sink current: 200 mA max. per channel
- GPIO: 2x digital in/ 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/ MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)

- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
                    Limits to be at 90% RH at max 50°C
- Dimension: 384.37 x 309.95 x 63.2 mm
- Weight: 5 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1530T (P/N: 10IA1530T00X0)**
  15" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3,2x RS232/422/485

- **APPC 1531T (P/N: 10IA1531T00X0)**
  15" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485 and 4x4 DI/O with isolated protection, 2x RS232, 2x2 GPI/O, Brightness adjustment buttons

Options

- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400060002X00)**

APPC 1730T/1731T

17" TFT SXGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4x USB, 4x COM and VGA

Main Features

- 4:3 17" SXGA Fanless Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- Optional 3.5G/ Wi-Fi Module/ 2.5" HDD/ 2x COMs/ GPIO/ DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input 12V~30VDC

Product Overview

The 17" fanless panel PC APPC 1730T/1731T incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LCD panel with 1280 x 1024 (SXGA) resolution and 380-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

The APPC 1730T/ 1731T supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, APPC 1730T/1731T can gain a strong foothold in industrial field and machine devices. In addition, APPC 1730T/1731T can hook 2nd display via a VGA port for dual independent display. APPC 1731T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel
- LED Size: 17", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 380cd/m²
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: CCFL

Touch Screen
- 5-wire resistive (flush panel type)
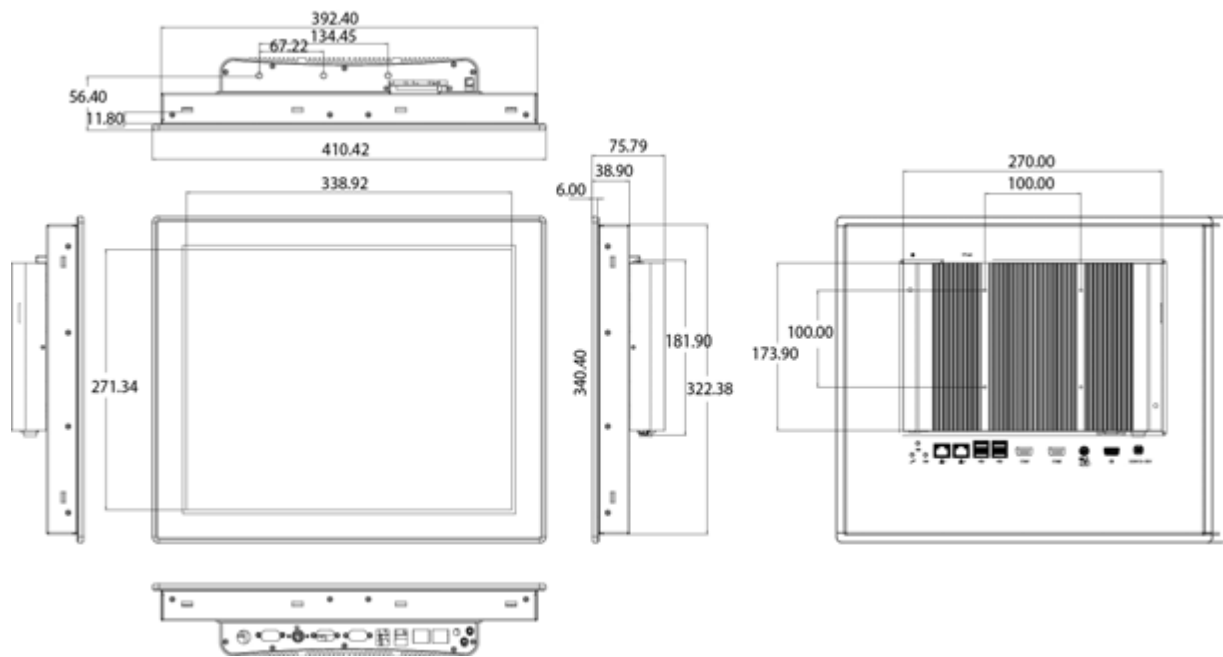- Light transmission: 81%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),
- Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered

- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1731T only)

Rear I/O
- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1 x Line out; 1x Line in; 1 x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

Dimension Drawing

For APPC1731T only
- DIO w/ 2.5kv isolated:
  4x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V
  4x Digital Output (Sink type)
  - Output Voltage: 3.6V ~ 5V
  - Sink current: 200 mA max. per channel
- GPIO: 2x digital in / 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/ MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
  Limits to be at 90% RH at max 50°C
- Dimension: 410.4 x 340.4 x 75.79 mm
- Weight: 6.6 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1730T (P/N: 10IA1730T00X0)**
  17" SXGA CCFL Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485

- **APPC 1731T (P/N: 10IA1731T00X0)**
  17" SXGA CCFL Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485 and 4x4 DI/O with isolated protection, 2x RS232, 2x2 GPI/O, Brightness adjustment buttons

Options

- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400060002X00)**

APPC 1930T/1931T

19" TFT SXGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4x USB, 4x COM and VGA

Main Features

- 4:3 19" SXGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/ 2nd display-VGA/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS
- USB x4/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- Optional 3.5G/ Wi-Fi Module / 2.5"HDD /2 x COMs /GPIO /DIO
- DDR3 1GB/ 2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/ Wall/ Stand/ VESA 100mm x 100mm
- Wide Range Power Input 12V~ 30V DC

Product Overview

The 19" fanless panel PC APPC 1930T/1931T incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LED backlight LCD panel with 1280x1024 (SXGA) resolution. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

The APPC 1930T/ 1931T supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, APPC 1930T/1931T can gain a strong foothold in industrial field and machine devices. In addition, APPC 1930T/ 1931T can hook 2nd display via a VGA port for dual independent display. APPC 1931T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel
- LED Size: 19", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 350cd/m²
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
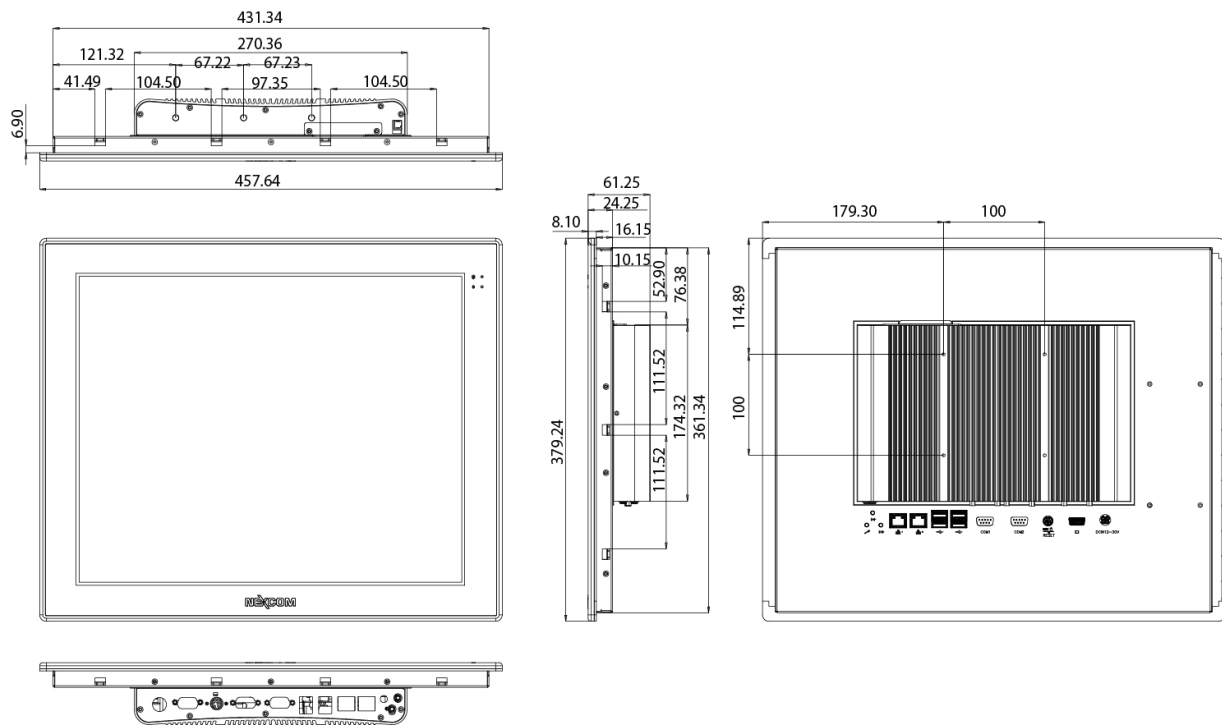
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1931T only)

Rear I/O
- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V selection

Dimension Drawing

- COM #2: RS232/422/485 w/RI or 12V selection

For APPC1931T only
- DIO w/ 2.5kv isolated:
  4x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V
  4x Digital Output (Sink type)
  - Output Voltage: 3.6V~5V
  - Sink current: 200 mA max. per channel
- GPIO: 2x digital in/ 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/ MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)

- 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
- 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
- Dimension: 457.64 x 379.24 x 61.25 mm
- Weight: 6.5 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1930T (P/N: 10IA1930T00X0)**
  19" SXGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485

- **APPC 1931T (P/N: 10IA1931T00X0)**
  19" SXGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, 2x RS232/422/485 and 4x4 DI/O with isolated protection, 2x RS232, 2x2 GPI/O, Brightness adjustment buttons

Options

- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400060002X00)**

APPD 1200T

Main Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen
- Dual display input interface: analog VGA and DVI-D
- Shares identical appearance with APPC series
- Dual touch screen interface: RS232 and USB
- Ultra slim in depth
- OSD Multilanguage function

Product Overview

12.1" 4:3 LCD display APPD 1200T is based on a 5-wire resistive touch screen. It has 450 nits brightness and can support resolutions up to 800x600. APPD 1200T is ideal for space-critical environments where systems and displays are kept apart. In addition, APPD 1200T adopts a flush panel design and has IP65 front panel. APPD 1200T provides prevailing video interfaces: VGA and DVI, supporting both digital and analog signals; touch screen can be connected with RS232 or USB ports. Moreover, APPD 1200T supports 12~24V power input and offers panel mount and VESA mount, allowing users to choose the mounting method that meets their situation. APPD 1200T is the best solution for NEXCOM NISE fanless computer, NViS security surveillance series and APPC panel PC when a second display is required.

Specifications

Panel
- LED Size: 12.1", 4:3
- Resolution: SVGA 800x600
- Luminance: 450cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 65(U), 75(D), 80(L), 80(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB and RS232

Rear I/O
- Touch screen interface port: RS-232 (1x DB9) / USB Type A
- Video port: VGA (1x DB15) / DVI-D (1x DVI-I connector)
- DC power input connector: 3-Pin Phoenix terminal Blocks

OSD Function
- OSD keypad
- Multilanguage OSD

Mechanical & Environment
- Color: pantone black
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64
  2Grms @ sine, 5~500Hz, 1hr/axis (Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  20G@wall mount, half sine, 11ms
  Operating temperature: -5°C to 60°C
  Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 317 x 243 x 53.5mm
- Weight: 2.9Kg

Dimension Drawing
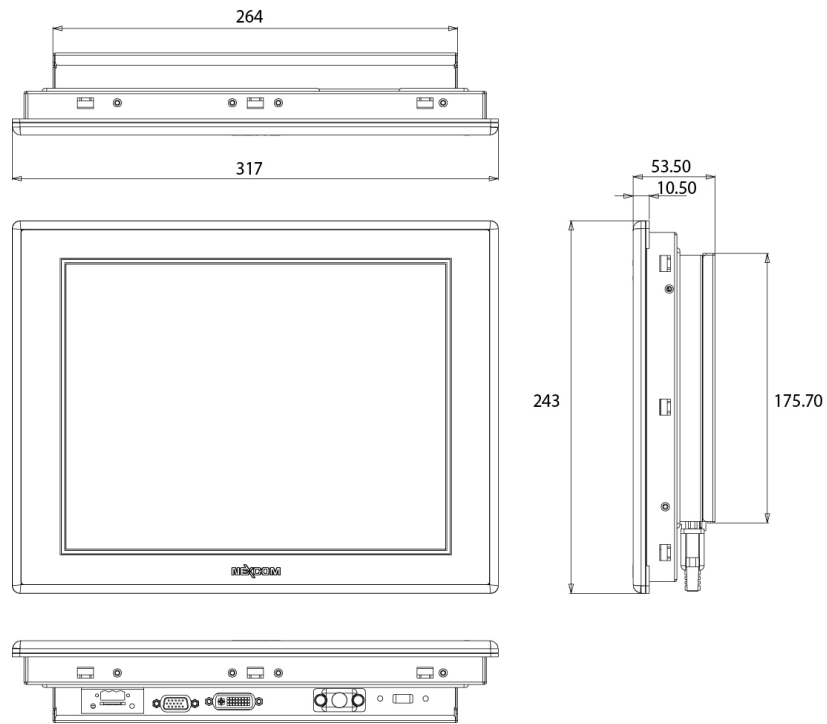
Certifications

- CE approval
- FCC Class B

Ordering Information

- **APPD 1200T (P/N: 10IAD120000X0)**

  12.1" IP65 industrial 4:3 LED Backlight flush touch monitor with VGA and DVI-D input, 12~24VDC input, RS-232 and USB touch screen

Options

- **1.8m DVI-D male to DVI-D male Cable (P/N: 60233DVI28X00)**

APPD 1500T

Main Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen
- Dual display input interface: analog VGA and DVI-D
- Shares identical appearance with APPC series
- Dual touch screen interface: RS232 and USB
- Ultra slim in depth
- OSD Multilanguage function

Product Overview

15" 4:3 LCD display APPD 1500T is based on a 5-wire resistive touch screen. It has 400 nits brightness and can support resolutions up to 1024x768. APPD 1500T is ideal for space-critical environments where systems and displays are kept apart. In addition, APPD 1500T adopts a flush panel design and has IP65 front panel. APPD 1500T provides prevailing video interfaces: VGA and DVI, supporting both digital and analog signals; touch screen can be connected with RS-232 or USB ports. Moreover, APPD 1500T supports 12~24V power input and offers panel mount and VESA mount, allowing users to choose the mounting method that meets their situation. APPD 1500T is the best solution for NEXCOM NISE fanless computer, NViS security surveillance series and APPC panel PC when a second display is required.

Specifications

Panel
- LED Size: 15", 4:3
- Resolution: XGA 1024x768
- Luminance: 400cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 60 (U), 80(D), 80(L), 80(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB and RS232

Rear I/O
- Touch screen interface port: RS-232 (1x DB9) / USB Type A
- Video port: VGA (1x DB15) / DVI-D (1x DVI-I connector)
- DC power input connector: 3-Pin Phoenix terminal Blocks

OSD Function
- OSD keypad
- Multilanguage OSD

Mechanical & Environment
- Color: pantone black
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64
  2Grms @ sine, 5~500Hz, 1hr/axis (Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  20G@wall mount, half sine, 11ms
  Operating temperature: -5°C to 60°C
  Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 384.37 x 310 x 51.2 mm
- Weight: 3.8Kg

NEXCOM

Dimension Drawing

264

384.37

51.20

309.95
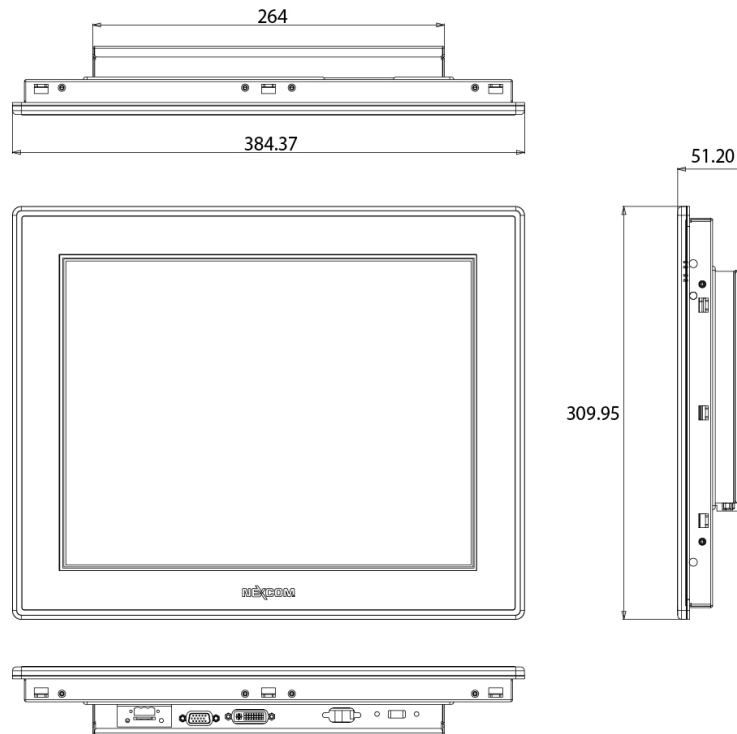
Certifications
* CE approval
* FCC Class B

Ordering Information

* **APPD 1500T (P/N: 10IAD150000X0)**
  15" IP65 industrial 4:3 LED Backlight flush touch monitor with VGA and DVI-D input, 12~24VDC input, RS232 and USB touch screen

Options

* **1.8m DVI-D male to DVI-D male Cable (P/N: 60233DVI28X00)**

APPD 1700T

17″ IP65 Industrial 4:3 SXGA LCD Flush Touch Monitor

Main Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen
- Dual display input interface: analog VGA and DVI-D
- Shares identical appearance with APPC series
- Dual touch screen interface: RS232 and USB
- Ultra slim in depth
- OSD Multilanguage function

Product Overview

17" 4:3 LCD display APPD 1700T is based on a 5-wire resistive touch screen. It has 380 nits brightness and can support resolutions up to 1280x1024. APPD 1700T is ideal for space-critical environments where systems and displays are kept apart. In addition, APPD 1700T adopts a flush panel design and has IP65 front panel. APPD 1700T provides prevailing video interfaces: VGA and DVI, supporting both digital and analog signals; touch screen can be connected with RS232 or USB ports. Moreover, APPD 1700T supports 12~24V power input and offers panel mount and VESA mount, allowing users to choose the mounting method that meets their situation. APPD 1700T is the best solution for NEXCOM NISE fanless computer, NViS security surveillance series and APPC panel PC when a second display is required.

Specifications

Panel
- LED Size: 17", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 380cd/m²
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: CCFL

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

Rear I/O
- Touch interface port: RS232 (1x DB9) / USB Type A
- Video port: VGA (1x DB15) / DVI-D (1x DVI-I connector)
- DC power input connector: 3-Pin Phoenix terminal Blocks

OSD Function
- OSD keypad
- Multilanguage OSD

Mechanical & Environment
- Color: pantone black
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64
  2Grms @ sine, 5~500Hz, 1hr/axis (Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  20G@wall mount, half sine, 11ms
  Operating temperature: -5°C to 50°C
  Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 410.4 x 340.4 x 43.7 mm
- Weight: 5.3 Kg

Dimension Drawing
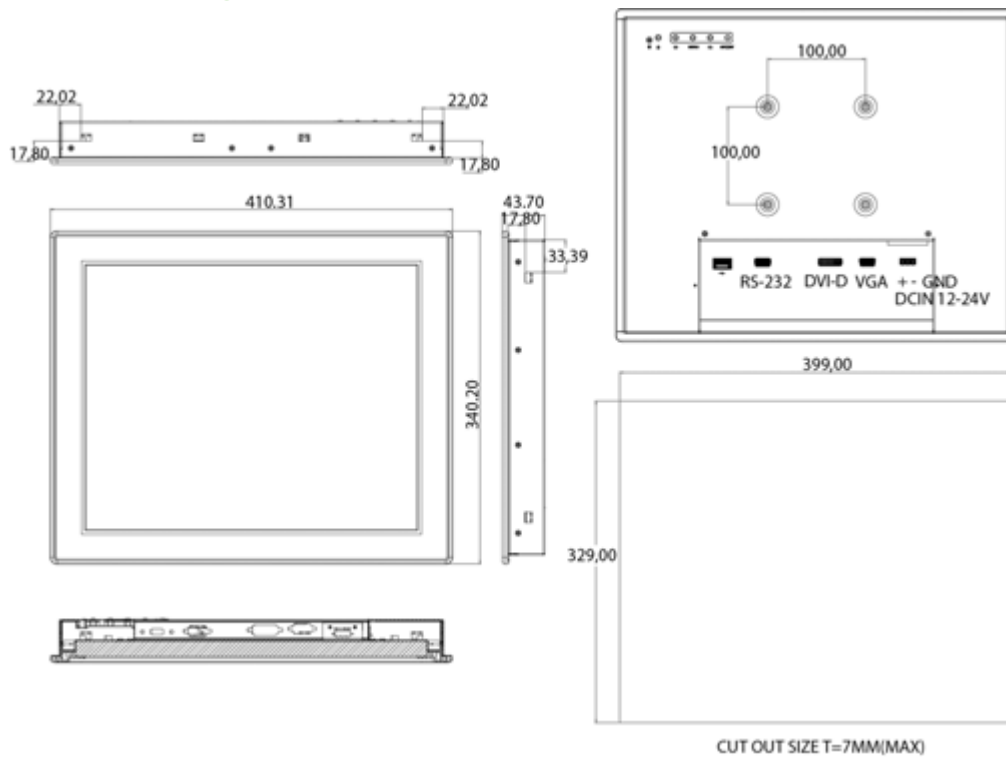
Certifications
- CE approval
- FCC Class B

Ordering Information

- **APPD 1700T (P/N: 10IAD170000X0)**
  17" IP65 industrial 4:3 LCD flush touch monitor with VGA and DVI-D input, 12~24VDC input, RS-232 and USB touch screen

Options

- **1.8m DVI-D male to DVI-D male Cable (P/N: 60233DVI28X00)**

APPD 1900T

19" IP65 Industrial 4:3 SXGA LCD Flush Touch Monitor

Main Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen
- Dual display input interface: analog VGA and DVI-D
- Shares identical appearance with APPC series

- Dual touch screen interface: RS232 and USB
- Ultra slim in depth
- OSD Multilanguage function

Product Overview

19" 4:3 LCD display APPD 1900T is based on a 5-wire resistive touch screen. It has 350 nits brightness and can support resolutions up to 1280x1024. APPD 1900T is ideal for space-critical environments where systems and displays are kept apart. In addition, APPD 1900T adopts a flush panel design and has IP65 front panel. APPD 1900T provides prevailing video interfaces: VGA and DVI, supporting both digital and analog signals; touch screen can be connected with RS232 or USB ports. Moreover, APPD 1900T supports 12~24V power input and offers panel mount and VESA mount, allowing users to choose the mounting method that meets their situation. APPD 1900T is the best solution for NEXCOM NISE fanless computer, NViS security surveillance series and APPC panel PC when a second display is required.

Specifications

Panel
- LED Size: 19", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 350cd/m²
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: LED

Touch Screen
- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

Rear I/O
- Touch interface port: RS-232 (1x DB9) / USB Type A
- Video port: VGA (1 x DB15) / DVI-D (1x DVI-I connector)
- DC power input connector: 3-Pin Phoenix terminal Blocks

OSD Function
- OSD keypad
- Multilanguage OSD

Mechanical & Environment
- Color: pantone black
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64
  2Grms @ sine, 5~500Hz, 1hr/axis (Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  20G@wall mount, half sine, 11ms
  Operating temperature: -5°C to 50°C
  Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 457.64 x 379.24 x 49.25 mm
- Weight: 5.2 Kg

Dimension Drawing

264

457.64

379.24

49.25

175.70

NEXCOM
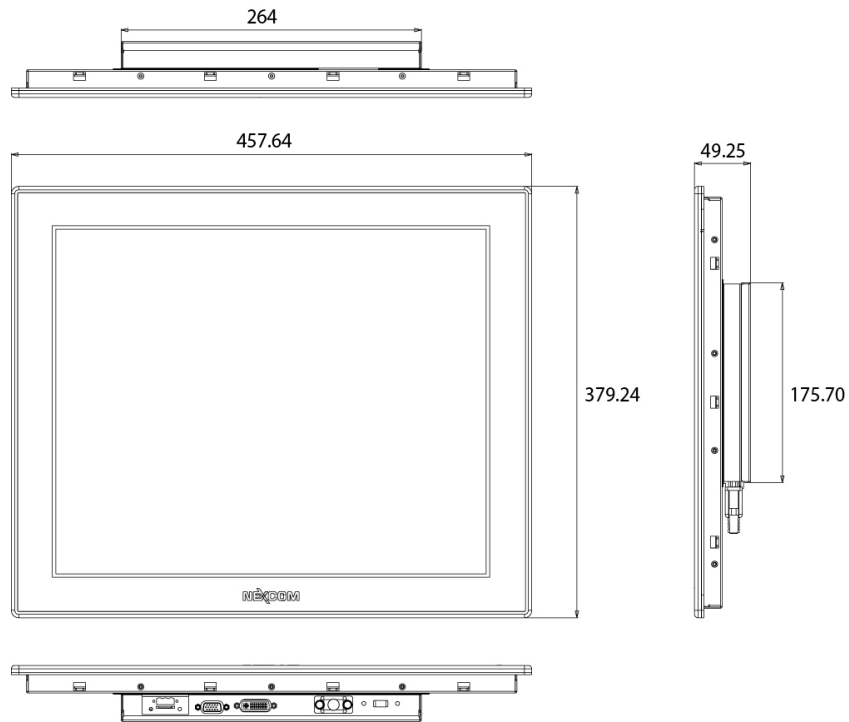
Certifications
- CE approval
- FCC Class B

Ordering Information

- **APPD 1900T (P/N: 10IAD190000X0)**
  19" IP65 industrial 4:3 LED Backlight flush touch monitor with VGA and DVI-D input, 12~24V DC input, RS232 and USB touch screen

Options

- **1.8m DVI-D male to DVI-D male Cable (P/N: 60233DVI28X00)**

MPPC 2130T

**21.5" TFT Full HD 16:9 Fanless Panel PC with Intel® Atom™ D2550,
1.86 GHz, Touch Screen, 1GB DDR3, 4x USB, 2x COM**

Main Features

- 16:9 21.5" Fanless Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4x USB/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- DDR3 1GB/ 2.5" HDD Bracket/ Two Speakers
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ Panel Mount Kit
- Panel Mount/ VESA Mount Compliance
- Wide Range Power Input 12V~30VDC

Product Overview

The MPPC 2130T is available in 21.5" 16:9 LCD size with resolutions up to 1920x1080 (full HD) and industrial motherboard making it the perfect "signage ready" Panel PC solution for self Service/Kiosk and interactive digital signage players. The resistance touch screen enhances user interaction to offer improved customer service. In addition, the MPPC 2130T is fanless multimedia Panel PC which is powered by a high performance Intel® Atom™ D2550 processor with Intel® NM10 Express chipset and support for DDR3 memory, which enable simultaneous running of rich stream dynamic multimedia content. Other features include built-in dual Ethernet, optional Wi-Fi module, the slimmest x86 based touch terminal and panel/ VESA mount design which Minimizes space and enables installation almost any location, including retail outlets, supermarkets, train station and airports.

Specifications

Panel
- LCD size: 21.5", 16:9
- Resolution: full HD, 1920 x 1080
- Luminance: 420 cd/m²
- Contrast ratio: 3000
- LCD color: 16.7M
- Viewing angle: 89 (U), 89 (D), 89 (L), 89 (R)
- Backlight: LED

Touch screen:
- 5-wire Resistive
- Touch light transmission: 80%
- Touch interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
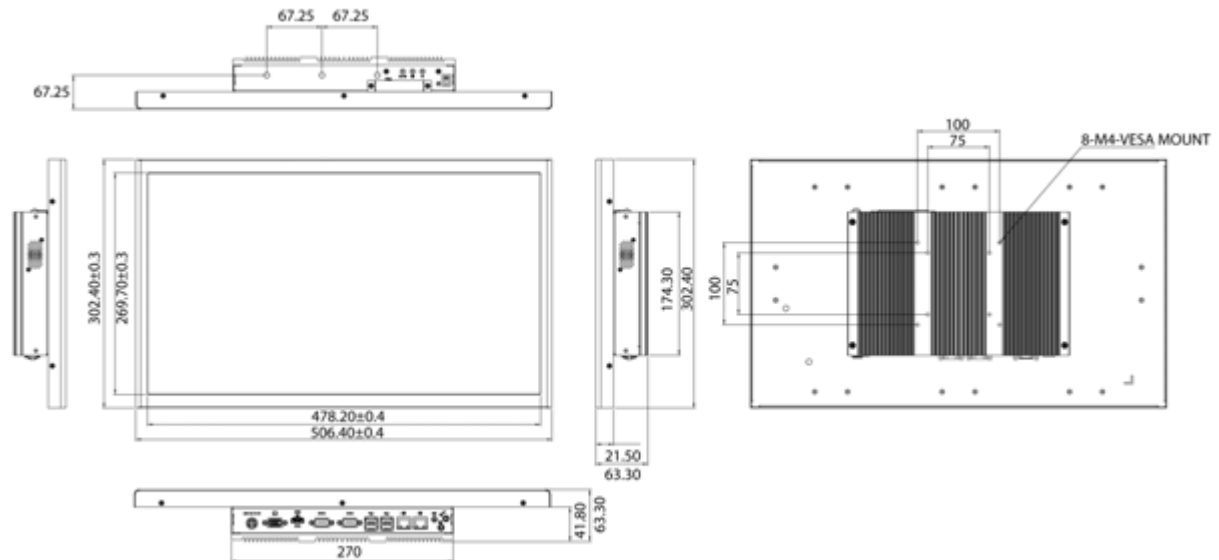
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional WiFi or 3.5G module)

Rear I/O
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection
- Ethernet: 2 x RJ45
- 2nd display port: VGA (1x DB15) and HDMI
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- Power switch
- Reset button

NEXCOM

Dimension Drawing

Audio
* AC97 codec: Realtek ALC886-GR
* Audio interface: Line out/ Line in/ MIC-in Audio Jack
* Two 2W Speakers

Ethernet
* LAN chip: dual Intel® 82574L Gigabit LAN
* Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
* Color: pantone black\ RAL 15 00
* Mounting:
  panel/ wall/ stand/ VESA 75x75; 100x100mm
  Panel Mount Kit (Optional)
* Power input: 12V~30VDC
* Power adapter: AC to DC power adaptor (+12V, 60W)
* Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
* Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
* Operating temperature: 0°C to 45°C
* Storage temperature: -20°C to 75°C
* Operating humidity: 20%~80% relative humidity, non-condensing
* Dimension: 506.4 x 302.4 x 63.3 mm
* Weight: 7.2 Kg

Certifications
* CE approval
* FCC Class B

Ordering Information

* **MPPC 2130T (P/N: 90IM2130T00X0)**
  21.5" LED Backlight Panel PC with Intel® Atom™ D2550 1.86 GHz, touch screen, 1GB DDR3, COM#1/ #2, Power Adapter

MPPC 3220T

Main Features

- 16:9 32" Fanless Panel Computer
- Intel® Atom™ D525, Dual Core, Low Consumption CPU
- SAW touch screen
- Dual GbE/ Line-in/ Line-out/ MIC-in/ PS2 KB/MS

- 4x USB/ 2x Mini-PCIe sockets/ 1x CF/ 2x RS232/422/ 485
- DDR3 1GB/ 2.5" HDD Bracket/ Two Speakers
- Optional Wi-Fi Module/ 2.5"HDD/ VGA Splitter/ Panel Mount Kit
- Panel Mount/ VESA Mount Compliance

Product Overview

The MPPC 3220T is available in 32" 16:9 LCD size with resolutions up to 1920x1080 (full HD) and industrial motherboard making it the perfect "signage ready" Panel PC solution for self Service/Kiosk and interactive digital signage players. The SAW touch screen enhances user interaction to offer improved customer service. In addition, the MPPC 3220T is fanless multimedia Panel PC which is powered by a high performance Intel® Atom™ D525 processor with Intel® ICH8M chipset and support for DDR3 memory, which enable simultaneous running of rich stream dynamic multimedia content. Other features include built-in dual Ethernet, optional Wi-Fi module, the slimmest x86 based touch terminal and panel/VESA mount design which Minimizes space and enables installation almost any location, including retail outlets, supermarkets, train station and airports.

Specifications

Panel
- LCD size: 32", 16:9
- Resolution: full HD, 1920 x 1080
- Luminance: 400 cd/m²
- Contrast ratio: 4000
- LCD color: 1073.7M
- Viewing angle: 89 (U), 89 (D), 89 (L), 89 (R)
- Backlight: LED
- Touch screen: SAW (Surface Acoustic Wave)
- Touch light transmission: 92%
- Touch interface: USB

System
- CPU: Intel® Atom™ D525, 1.8Hz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory:
  1x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),
  Support up to 2GB DDR3 800, Non-ECC and Un-buffered
- SSD: one external locked CF socket by IDE support Type I/II compact Flash card
- Hard drive bay: optional 2.5" SATA HDD or SATA DOM

- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
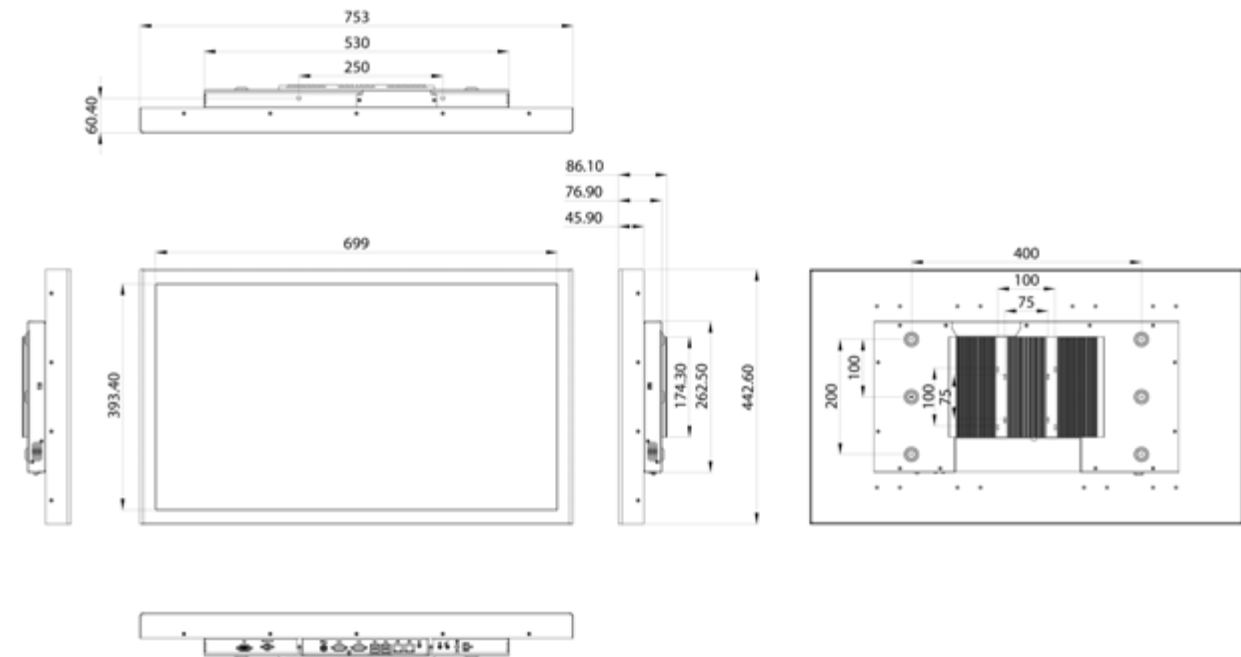- Expansion: 2x Mini-PCIe sockets

Rear I/O
- COM #1: RS232/422/485
- COM #2: RS232/422/485
- Ethernet: 2x RJ45
- Clone VGA port: 1x DB15 (VGA Splitter Optional)
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button

Audio
- AC97 codec: Realtek ALC888
- Audio interface: Line out/ Line in/ MIC-in Audio Jack
- Two 2W Speakers

NEXCOM

Dimension Drawing

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Color: pantone black
- Mounting:
  panel/ wall/ stand/ VESA 75x75; 100x100; 400x200mm
  Panel Mount Kit (Optional)
- Power input: 24VDC
- Power adapter: AC to DC power adaptor (+24V, 180W)
- Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: 0°C to 45°C
- Storage temperature: -20°C to 75°C
- Operating humidity:
  10%~90% relative humidity, non-condensing
  Limits to be at 90% RH at max 40°C
- Dimension: 753 x 442.6 x 86.1 mm
- Weight: 18.2Kg

Certifications
- CE approval
- FCC Class B

Ordering Information

- **MPPC 3220T (P/N: 90IM3220T00X0)**
  32" TFT LED backlight Panel PC with Intel® Atom™ D525 1.8 GHz, touch screen, 1GB DDR3, COM#1/ #2, Power Adapter

OPPC 1230T

12.1" TFT SVGA 4:3 Fanless Open Frame PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4xUSB, 2xCOM and VGA

Main Features

- 4:3 12.1" SVGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd Display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4x USB/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- DDR3 1GB/ 2.5" HDD Bracket
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ Panel Mount Kit
- Open Frame and Panel Mount/ VESA Mount Compliance
- Wide Range Power Input 12V~30VDC

Product Overview

OPPC 1230T fanless Panel PCs are powered by Intel® Atom™ D2550 processor with Intel® NM10 Express chipset and support for DDR3 memory. OPPC 1230T incorporates a 12.1" 4:3 touch screen LCD panel with resolutions up to 800x600 (SVGA) and 450 nits brightness. It is specially designed with bezel-less display which allows customers to design front bezel according to their application requirements without any limitation.

OPPC 1230T is designed to meet the requirements of vertical market segments, such as Kiosk, ATMs, and vending machines. Customers also benefit from various mounting options, including open frame mount from both rear and front sides, VESA mount, wall mount and panel mount. This versatility gives users a quick route to market for a customized Panel PC.

Specifications

Panel
- LED Size: 12.1", 4:3
- Resolution: SVGA 800x600
- Luminance: 450cd/m2
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 65(U), 75(D), 80(L), 80(R)
- Backlight: LED

Touch
- 5-wire resistive
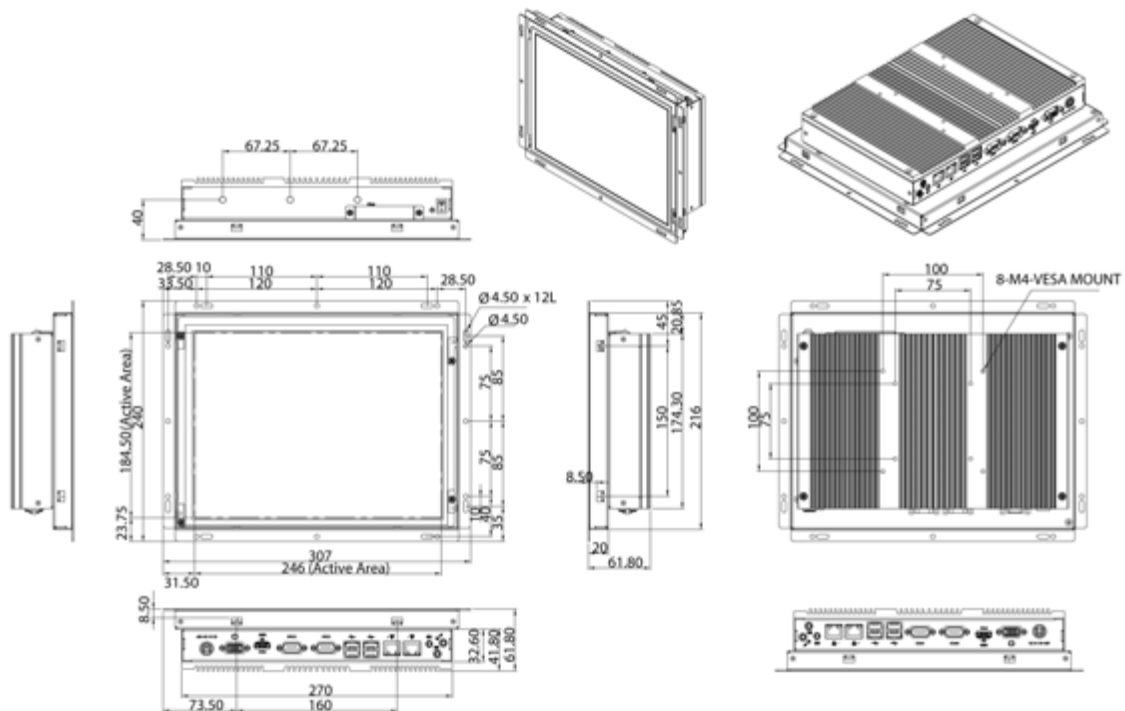- Light transmission: 80%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default), Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered

- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25℃)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional WiFi or 3.5G module)

Rear I/O
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection
- Ethernet: 2x RJ45
- 2nd display port: VGA (1x DB15) and HDMI
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4 x USB 2.0
- Power switch
- Reset button

Dimension Drawing

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Front panel open frame
- Mounting:
  Open frame mount
  Panel/ wall/ stand/ VESA 75 x 75; 100mm x 100mm
  Power input: 12V~30VDC
  Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity:
  10%~90% relative humidity, non-condensing
  Limits to be at 90% RH at max 30°C
  Limits to be at 70% RH at max 50°C
- Dimension: 307 x 240 x 61.8mm
- Weight: 3.8Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone
- **OPPC 1230T (P/N: 90IQ1230T00X0)**
  12.1" TFT LED Backlight Open Frame PC with Intel® Atom™ D2550
  1.86GHz, touch screen, 1GB DDR3, COM#1/ #2

Options
- 12V, 60W AC/DC power adapter w/o power cord
  (P/N: 7400060002X00)

OPPC 1530T

15" TFT XGA 4:3 Fanless Open Frame PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4xUSB, 2xCOM and VGA

Main Features

- 4:3 15" XGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd Display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4 x USB/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- DDR3 1GB/ 2.5" HDD Bracket
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ Panel Mount Kit
- Open Frame and Panel Mount/ VESA Mount Compliance
- Wide Range Power Input 12V~30VDC

Product Overview

OPPC 1530T fanless Panel PCs are powered by Intel® Atom™ D2550 processor with Intel® NM10 Express chipset and support for DDR3 memory. OPPC 1530T incorporates a 15" 4:3 touch screen LCD panel with resolutions up to 1024x768 (XGA) and 400 nits brightness. It is specially designed with bezel-less display which allows customers to design front bezel according to their application requirements without any limitation.

OPPC 1530T is designed to meet the requirements of vertical market segments, such as Kiosk, ATMs, and vending machines. Customers also benefit from various mounting options, including open frame mount from both rear and front sides, VESA mount, wall mount and panel mount. This versatility gives users a quick route to market for a customized Panel PC.

Specifications

Panel
- LCD Size: 15", 4:3
- Resolution: XGA 1024x768
- Luminance: 400cd/m2
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 60(U), 80(D), 80(L), 80(R)
- Backlight: LED

Touch
- 5-wire resistive
- Light transmission: 81%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:

  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1   second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
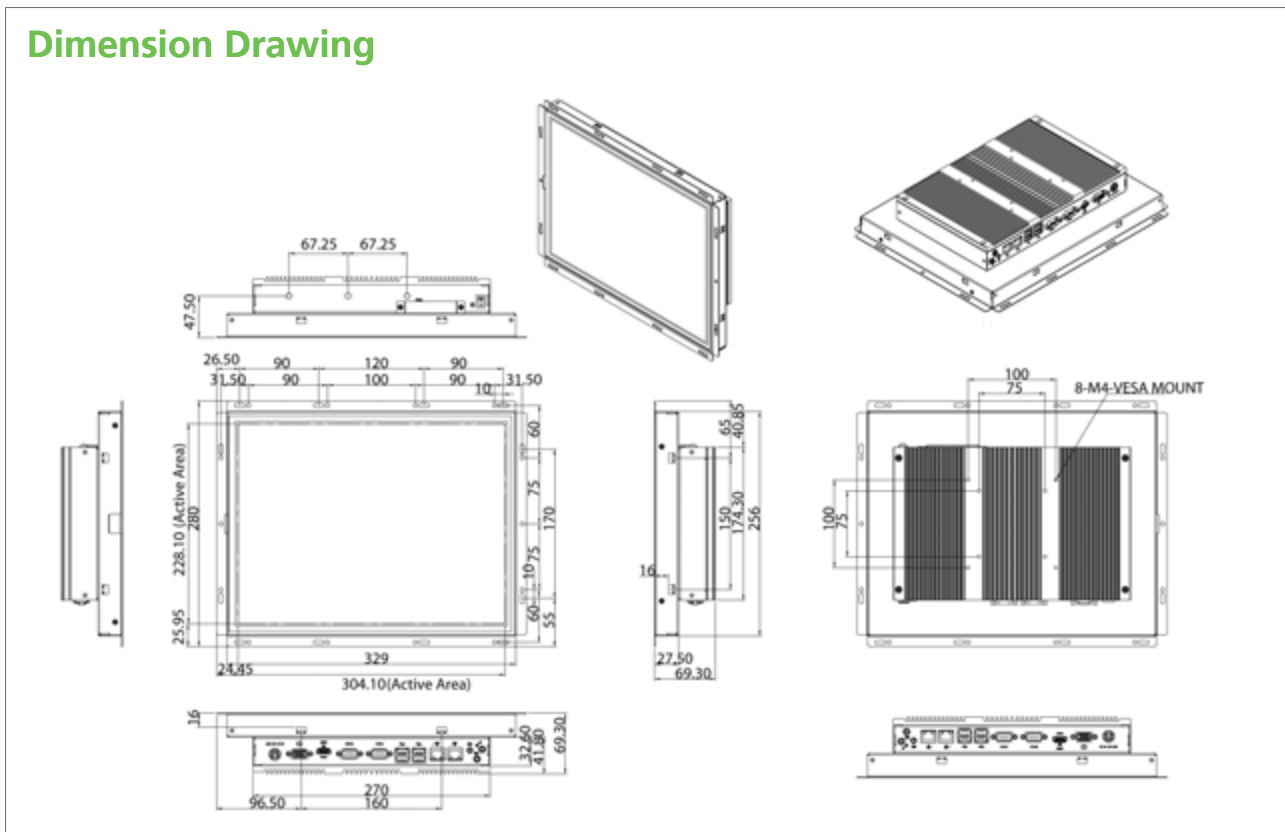- Expansion: 2x Mini-PCIe sockets
   (support optional WiFi or 3.5G module)

Rear I/O
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection
- Ethernet: 2 x RJ45
- 2nd display port: VGA (1 x DB15) and HDMI
- Audio port: 1 x Line out; 1 x Line in; 1 x MIC-in
- USB: 4 x USB 2.0
- Power switch
- Reset button

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

NEXCOM

Dimension Drawing

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Front panel open frame
- Mounting:
  Open frame mount
  Panel/ wall/ stand/ VESA 75 x 75; 100mm x 100mm
  Power input: 12V~ 30V DC
  Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity:
  10%~90% relative humidity, non-condensing
  Limits to be at 90% RH at max 30°C
  Limits to be at 70% RH at max 50°C
- Dimension: 329 x 280 x 69.3 mm
- Weight: 4 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **OPPC 1530T (P/N: 90IQ1530T00X0)**
  15" TFT LED Backlight Open Frame PC with Intel® Atom™ D2550
  1.86GHz, touch screen, 1GB DDR3, COM#1/ #2

Options

- **12V, 60W AC/DC power adapter w/o power cord**
  (P/N: 7400060002X00)

OPPC 1730T

17" TFT SXGA 4:3 Fanless Open Frame PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4x USB, 2x COM and VGA

Main Features

- 4:3 17" Fanless Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd Display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4 x USB/ 2 x Mini-PCIe sockets/ 1 x CFast/ 2 x RS232/ 422/ 485

- DDR3 1GB / 2.5" HDD Bracket
- Optional 3.5G/ Wi-Fi Module / 2.5"HDD / Panel Mount Kit
- Open Frame and Panel Mount/ VESA Mount Compliance
- Wide Range Power Input 12V~30VDC

Product Overview

OPPC 1730T fanless Panel PCs are powered by Intel® Atom™ D2550 processor with Intel® NM10 EXpress chipset and support for DDR3 memory. OPPC 1720T incorporates a 17" 4:3 touch screen LCD panel with resolutions up to 1280x1024 (SXGA) and 380 nits brightness. It is specially designed with bezel-less display which allows customers to design front bezel according to their application requirements without any limitation.

OPPC 1730T is designed to meet the requirements of vertical market segments, such as Kiosk, ATMs, and vending machines. Customers also benefit from various mounting options, including open frame mount from both rear and front sides, VESA mount, wall mount and panel mount. This versatility gives users a quick route to market for a customized Panel PC.

Specifications

Panel
- LED Size: 17", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 380cd/m2
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: CCFL

Touch
- 5-wire resistive
- Light transmission: 80%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
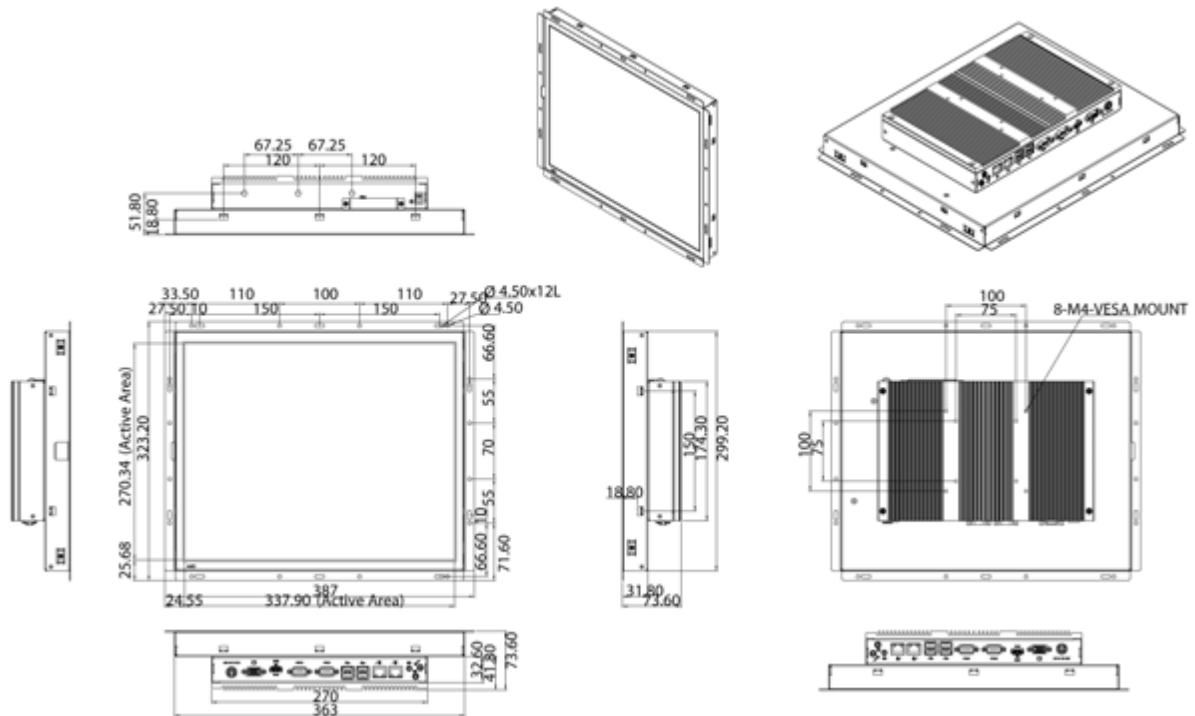- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default)

- Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional WiFi or 3.5G module)

Rear I/O
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection
- Ethernet: 2 x RJ45
- 2nd display port: VGA (1 x DB15) and HDMI
- Audio port: 1 x Line out; 1 x Line in; 1 x MIC-in
- USB: 4 x USB 2.0
- Power switch
- Reset button

Dimension Drawing

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Front panel open frame
- Mounting:
  Open frame mount
  Panel/ wall/ stand/ VESA 75 x 75; 100mm x 100mm
- Power input: 12V~ 30V DC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 387x323.2x73.6mm
- Weight: 5.6 Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **OPPC 1730T (P/N: 90IQ1730T00X0)**
  17" TFT Open Frame PC with Intel® Atom™ D2550 1.86GHz, touch screen, 1GB DDR3, COM#1/ #2

Options

- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400060002X00)**

OPPC 1930T

19" TFT SXGA 4:3 Fanless Open Frame PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 1GB DDR3, 4x USB, 2x COM and VGA

Main Features

- 4:3 19" SXGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Dual GbE/ 2nd Display-VGA and HDMI/ Line-in/ Line-out/ MIC-in
- 4 x USB/ 2x Mini-PCIe sockets/ 1x CFast/ 2x RS232/422/485

- DDR3 1GB/ 2.5" HDD Bracket
- Optional 3.5G/ Wi-Fi Module/ 2.5"HDD/ Panel Mount Kit
- Open Frame and Panel Mount/ VESA Mount Compliance
- Wide Range Power Input 12V~30V DC

Product Overview

OPPC 1930T fanless Panel PCs are powered by Intel® Atom™ D2550 processor with Intel® NM10 Express chipset and support for DDR3 memory. OPPC 1930T incorporates a 19" 4:3 touch screen LCD panel with resolutions up to 1280x1024 (SXGA) and 350 nits brightness. It is specially designed with bezel-less display which allows customers to design front bezel according to their application requirements without any limitation.

OPPC 1930T is designed to meet the requirements of vertical market segments, such as Kiosk, ATMs, and vending machines. Customers also benefit from various mounting options, including open frame mount from both rear and front sides, VESA mount, wall mount and panel mount. This versatility gives users a quick route to market for a customized Panel PC.

Specifications

Panel
- LED Size: 19", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 350cd/m2
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: LED

Touch
- 5-wire resistive
- Light transmission: 80%
- Interface: USB

System
- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered

- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25□)
- H/W status monitor: Monitoring system temperature, and voltage
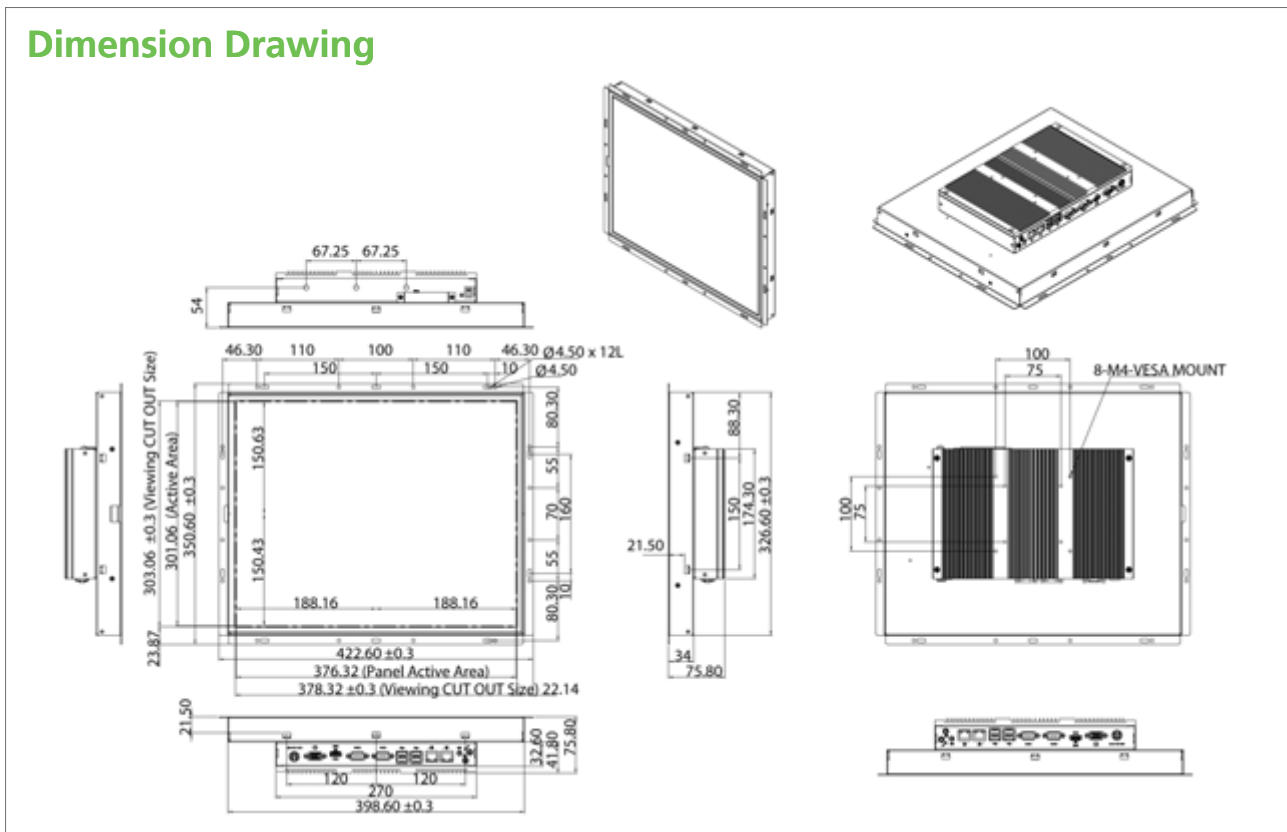- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)

Rear I/O
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection
- Ethernet: 2 x RJ45
- 2nd display port: VGA (1 x DB15) and HDMI
- Audio port: 1 x Line out; 1 x Line in; 1 x MIC-in
- USB: 4x USB 2.0
- Power switch
- Reset button

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

NEXCOM

Dimension Drawing

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment
- Front panel open frame
- Mounting:
  Open frame mount
  Panel/ wall/ stand/ VESA 75 x 75; 100mm x 100mm
  Power input: 12V~ 30V DC
  Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  IEC 68 2-64 (w/ HDD)
  0.5Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  IEC 68 2-27
  HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity:
  10%~90% relative humidity, non-condensing
  Limits to be at 90% RH at max 30°C
  Limits to be at 70% RH at max 50°C
- Dimension: 422.6 x 350.6 x 75.8 mm
- Weight: 6.15Kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **OPPC 1930T (P/N: 90IQ1930T00X0)**
  19" TFT LED Backlight Open Frame PC with Intel® Atom™ D2550 1.86GHz,
  touch screen, 1GB DDR3, COM#1/ #2

Options

- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400060002X00)**

KPPC 1552

Main Features

- 15" 4:3 XGA (1024 x 768) TFT LCD panel
- 15" projected capacitive true flat touch screen
- Fanless Kiosk Panel PC
- Intel® Atom™ D525 Dual-Core processor, 1.8GHz
- Support DDR3 SO-DIMM memory

- 2.5" removable SATA HDD
- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- VESA 100mm x 100mm mounting for wall-mount application

Product Overview

The KPPC 1552 is a multi-functional and rugged Kiosk Panel PC, transcending various markets from Health Care, Gaming and Industrial applications. It has a State of the art 15" touch screen, with cutting edge Projected Capacitive Multi-Touch Technology from Japan. Zero Bezel (True Flat Surface) design and combined with its Solid IP65 Water and Dust proofing, makes it a perfect engine for any Kiosk Applications at any given harsh environment.

Unique Sleek and Noise Free Fanless Design driven by an Intel® Atom™ D525 Dual-Core Processor makes it a cost effective and high value terminal. Scalable M/ B platform can be upgraded from Dual Core to Quad Core . Additional features like Removable HDD for COLD SWAPPING makes repair so easy, lowering terminal downtime to almost zero thus saving on maintenance cost.

KPPC1552 supports 100mm x100mm VESA Standard for various mounting application from Wall Mount, Panel Mount and Bracket Mount e.g. Nursing/ Service cart, Bedside Care, Gaming Kiosk and many more.

Specifications

Panel
- LCD Size: 15", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch screen: projected capacitive true flat (zero bezel)
- Touch light transmission: 91%
- Touch interface: USB

System
- CPU: Intel® Atom™ D525, 1.8GHz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (default), optional support up to 4GB DDR3 800, Non-ECC and Un-buffered

- Hard disk drive: one 2.5" 160GB SATA HDD, removable type
- Expansion: 1 x Mini-card socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/ 100/ 1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +12VDC input, Mini-DIN 4 pin lock type
- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Audio
- High Definition audio codec: Realtek ALC886-GR
- Internal audio: one 3W speaker
- External audio: Line-out audio jack

Dimension Drawing
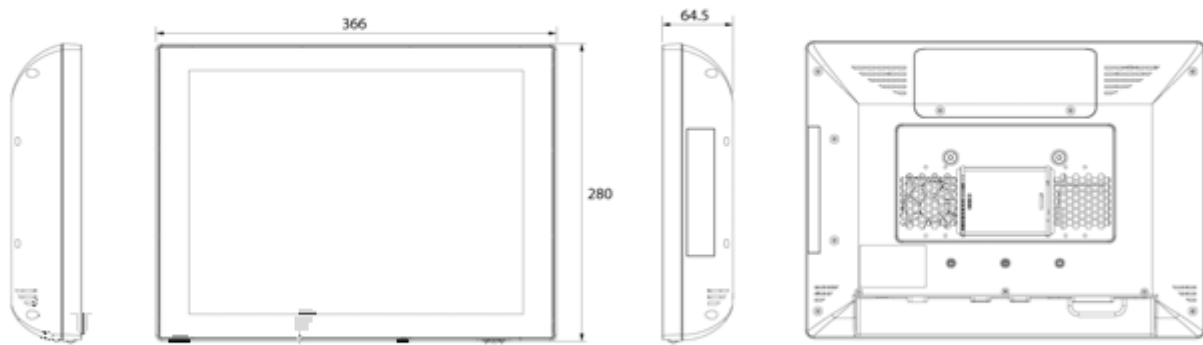
Ethernet
- LAN chip: Realtek RTL8111C-VC-GR Gigabit LAN
- Ethernet interface: 10/ 100/ 1000 Based-TX Ethernet compatible

Mechanical & Environment
- Color: Beige
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +12VDC
- Power adapter: AC to DC power brick (+12VDC/ 8.33A, 100W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension:366mm(L) x 280mm(W) x 64.5mm(H)
- Weight: 5.0 kg
- Tilt angle: 0° ~ 80°

Certifications
- CE approval
- FCC Class A

Ordering Information

- **KPPC 1552-010 (P/N: A0YK0155200X0)**

  CPU: Intel® Atom™ D525, Dual-Core 1.8GHz L2 1MB;
  LCD/ touch: 15" XGA 1024x 768 250nits AUO G-grade/ PCT Zero Bezel Touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +12VDC/ 100W power brick;
  Color: Beige;

- **KPPC 1552-030 (P/N: A0YK0155201X0)**

  CPU: Intel® Atom™ D525, Dual-Core 1.8GHz L2 1MB;
  LCD/ touch: 15" XGA 1024x 768 250nits AUO G-grade/ PCT Zero Bezel Touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +12VDC/ 100W power brick;
  Color: Black;

KPPC 5852

Main Features

- 15" 4:3 XGA (1024x 768) TFT LCD panel
- 15" projected capacitive true flat touch screen
- 2nd/ 3rd Generation Intel® Core™ i3/ i5/ i7 Processor
- Support DDR3 1333 SO-DIMM memory
- 2.5" removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), Cash drawer(1)
- Front bezel complies with IP-65 protection standard
- VESA 100mm x 100mm mounting for wall-mount application

Product Overview

The KPPC 5852 is a multi-functional and Powerful Kiosk Panel PC, transcending various market applications from Health Care, Gaming and Industrial. It has a State of the art 15" touch screen with Projected Capacitive Multi-Touch Technology from Japan .Borderless (True Flat Surface) design combined with its Solid IP65 Water and Dust proofing, making it a perfectengine for any Kiosk Applications.

High-end performance 2nd/ 3rd Generation Intel® Core™ i3/ i5/ i7 Mobile Processor platform makes sure multi-applications runs smoothly and efficiently.

Removable HDD and Dust Filter design makes repair so easy, lowering terminal downtime to almost zero and thus saving on maintenance cost.

KPPC 5852 supports 100mm x 100mm VESA Standard for various mounting application from Wall Mount, Panel Mount and Bracket Mount e.g. Nursing/ Service cart, Bedside Care, Factory Automation and many more.

Specifications

Panel
- LCD Size: 15" , 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch screen: projected capacitive true flat (zero bezel)
- Touch light transmission: 91%
- Touch interface: USB

System
- CPU: Default: Intel® Pentium® Processor B950, 2C/2T, 2.10 GHz, 2MB Cache;
- Upgrade Optional:
  2nd Generation Intel® Core™ Mobile Processor: i7-2710QE, 4C/8T, 2.1GHz, 6MB Cache; i5-2510E, 2C/4T, 2.5GHz, 3MB Cache; i3-2330E, 2C/4T, 2.2GHz, 3MB Cache.
 Optional: Intel® Celeron® Processor B810, 2C/2T, 1.60 GHz, 2M Cache.

- BIOS: AMI BIOS
- System chipset: Intel® BD82HM65 Platform Controller Hub, BD82HM65, FCBGA 989
- System memory: 1x 204-pin DDR3 1333 SO-DIMM socket, 2GB DDR3 (default), optional two sockets support up to 8GB DDR3 1333, non-ECC and un-buffered
- Hard disk drive: One 2.5" 160GB SATA HDD, removable type
- Expansion: 1x Mini-Card Socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/ 100/ 1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +19VDC input, Mini-DIN 4 pin lock type
- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Dimension Drawing
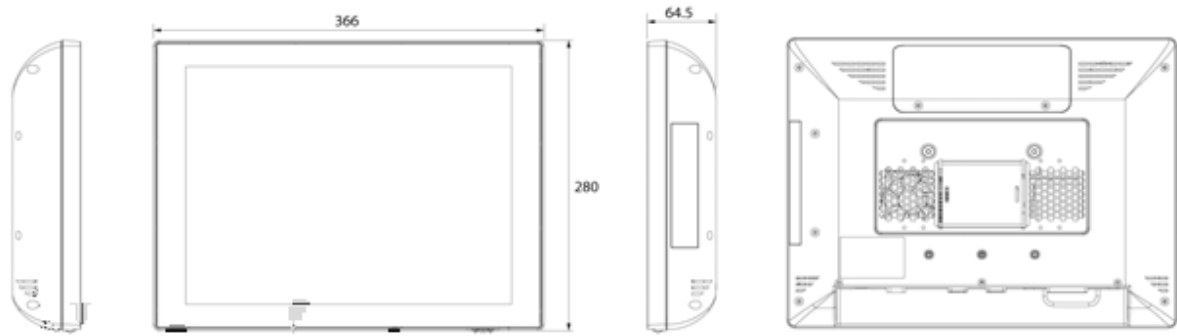
Ethernet
* LAN chip: Intel® PHY WG82579LM Gigabit LAN
* Ethernet interface: 10/ 100/ 1000 Based-TX Ethernet compatible

Mechanical & Environment
* Color: Beige
* Mounting: desktop type, optional VESA 100 x 100mm wall-mount
* IP protection: front bezel complies with IP-65 protection standard
* Power input: +19VDC
* Power adapter: AC to DC power brick (+19VDC/ 6.315A, 120W)
* Operating temperature: 0°C to 40°C
* Storage temperature: -20°C to 60°C
* Operating humidity: 20%~80% relative humidity, non-condensing
* Dimension:366mm(L) x 280mm(W) x 64.5mm(H)
* Weight: 5.0 kg

Certifications
* CE approval
* FCC Class A

Ordering Information

* **KPPC 5852-010 (P/N: A0YK0585200X0)**

  CPU: Intel® Pentium® Processor B950, 2C/ 2T, 2.10 GHz, 2MB Cache;
  LCD/ touch: 15" XGA 1024 x 768 250nits AUO G-grade/ PCT Zero Bezel Touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +19VDC/ 120W power brick;
  Color: Beige;

* **KPPC 5852-030 (P/N: A0YK0585201X0)**

  CPU: Intel® Pentium® Processor B950, 2C/ 2T, 2.10 GHz, 2MB Cache
  LCD/ touch: 15" XGA 1024 x 768 250nits AUO G-grade/ PCT Zero Bezel Touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +19VDC/ 120W power brick;
  Color: Black;

NPT 1550

Main Features

- 15″ 4:3 XGA (1024 x 768) TFT LCD panel
- 15″ 5-wire resistive touch screen
- Fanless POS terminal
- Intel® Atom™ D525 Dual-Core processor, 1.8GHz
- Support DDR3 SO-DIMM memory
- 2.5″ removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- Optional kits for MSR/ fingerprint/ VFD
- Optional VESA 100x 100mm mounting for wall-mount application

Product Overview

NPT 1550 is a high value Point-of-Sale (POS) hardware solution to fulfill your POS hardware requirement. The fanless design is quiet and offers low power consumption and Minimal maintenance. Removable HDD, MSR, fingerprint and VFD kit design provides an easy maintenance method, which saves your service cost. The +12VDC output provides sufficient power for your 2nd display from POS terminal, and offers better cable routing and high-integration for the 2nd display. Small footprint is ideal for installations where space is compact in stores. The VESA mounting design of Display Head, only 100x 100mm, provides an option for wall-mounting application when detaching the stand of terminal. The design offers a spill resistant and high integration for POS peripherals, which provides restaurant and retail conditions with continuous operation.

Specifications

Panel

- LCD Size: 15″, 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch screen: 5-wire resistive
- Touch light transmission: 80%
- Touch interface: USB

System

- CPU: Intel® Atom™ D525, 1.8GHz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (default), optional support up to 4GB DDR3 800, non-ECC and un-buffered
- Hard Disk Drive: One 2.5″ 160GB SATA HDD, removable type
- Expansion: 1x Mini-card socket for Mini-PCIe and USB interface

Rear I/O

- USB: 4x USB2.0 port
- COM: 4x DB-9 Powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/100/1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash Drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +12VDC input, Mini-DIN 4 pin lock type
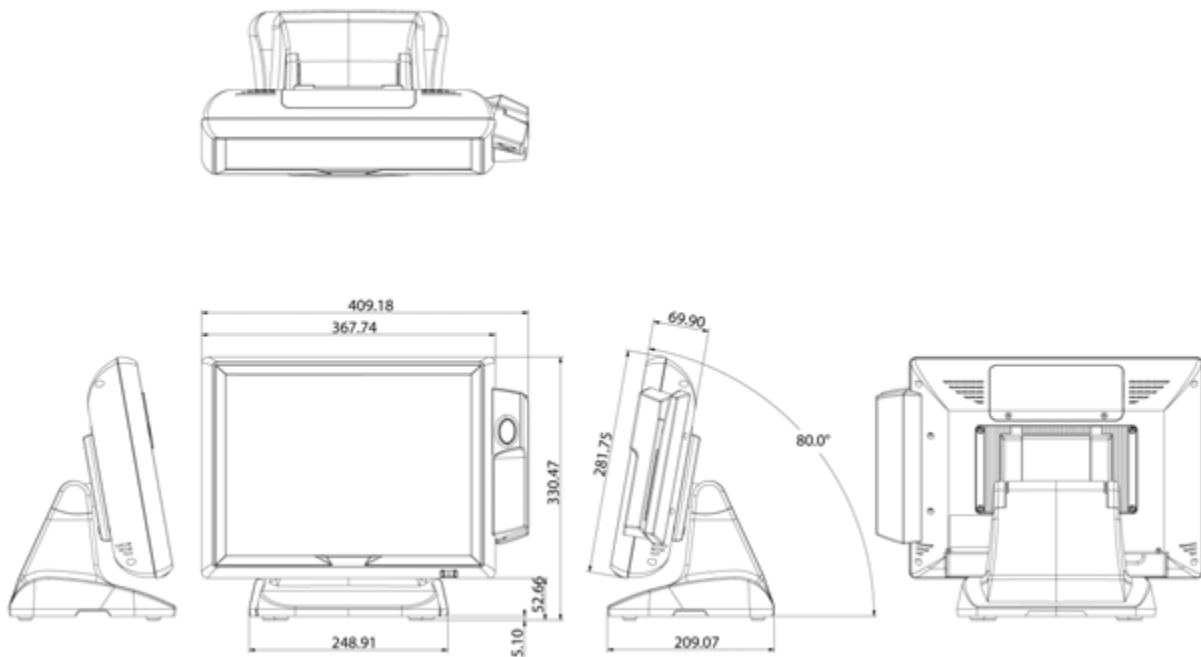- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Audio

- High Definition audio codec: Realtek ALC886-GR
- Internal audio: one 3W speaker
- External audio: Line-out audio jack

Ethernet

- LAN chip: Realtek® RTL8111C-VC-GR Gigabit LAN
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

Dimension Drawing

Mechanical & Environment
- Color: dark gray
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +12VDC
- Power adapter: AC to DC power brick (+12VDC/ 8.33A, 100W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 368mm (W) x 331mm (H) x 210mm (D) (no MSR), 410mm (W) x 331mm (H) x 210mm (D) (with MSR)
- Weight: 9.0kg
- Tilt angle: 0° ~ 80°

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NPT 1550-110 (P/N: A0Y00155006X0)**
  CPU: Intel® Atom™ D525, Dual-Core 1.8GHz L2 1MB;
  LCD/ Touch: 15" XGA 1024 x 768 250nits/ ELO 5-wire resistive touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +12VDC/ 100W power brick

NPT 1551

Main Features

- 15″ 4:3 XGA (1024 x 768) TFT LCD panel
- 15″ 5-wire resistive true flat touch screen
- Fanless POS terminal
- Intel® Atom™ D525 Dual-Core processor, 1.8GHz
- Support DDR3 SO-DIMM memory
- 2.5″ removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- Option kits for MSR/ Fingerprint/ VFD
- Optional VESA 100 x 100mm mounting for wall-mount application

Product Overview

The NPT-1551 is a high value Point-of-Sale (POS) hardware solution to fulfill your POS hardware requirement. The stylish zero bezel design makes it easy for your POS terminal to fit the modern store design.

The fanless design is quiet and offers low power consumption and Minimal maintenance. Removable HDD, MSR, fingerprint and VFD kit design provides an easy maintenance method, which saves your service cost. The +12VDC output provides sufficient power for your 2nd display from POS terminal and offer better cable routing and high-integration for 2nd display. Small footprint is ideal for installations where space is compact in stores. The VESA mounting design of display head, only 100x 100mm, provides an option for wall-mounting application when detaching the stand of terminal. The design offers a spill resistant and high integration for POS peripherals, which provides restaurant and retail conditions with continuous operation.

Specifications

Panel
- LCD Size: 15″, 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch screen: 5-wire true flat (zero bezel) resistive
- Touch light transmission: 80%
- Touch interface: USB

System
- CPU: Intel® Atom™ D525, 1.8GHz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (default), optional support up to 4GB DDR3 800, non-ECC and un-buffered
- Hard disk drive: one 2.5″ 160GB SATA HDD, removable type
- Expansion: 1x Mini-card socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/100/1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash Drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +12VDC input, Mini-DIN 4 pin lock type
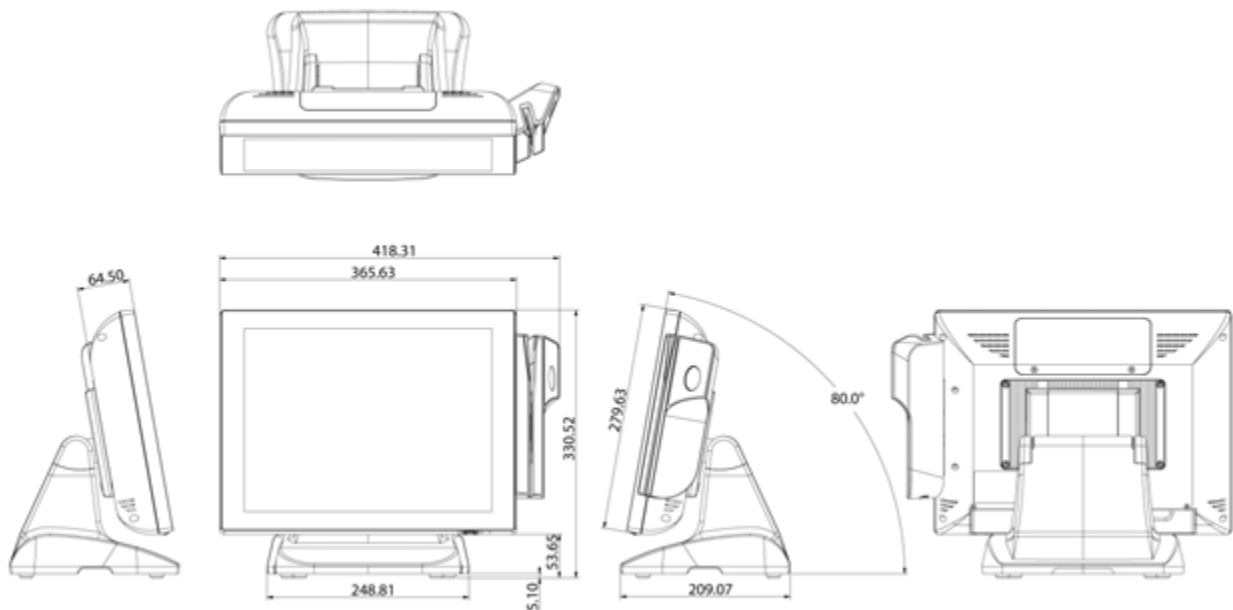- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Audio
- High Definition audio codec: Realtek ALC886-GR
- Internal audio: one 3W speaker
- External audio: Line-out audio jack

Ethernet
- LAN chip: Realtek® RTL8111C-VC-GR Gigabit LAN
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

Dimension Drawing

Mechanical & Environment

- Color: pantone black C
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching the stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +12VDC
- Power adapter: AC to DC Power Brick (+12VDC/ 8.33A, 100W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 366mm (W) x 331(H) x 210mm (D) (no MSR), 419mm (W) x 331mm (H) x 210mm(D) (with MSR)
- Weight: 8.5kg
- Tilt angle: 0° ~ 80°

Certifications

- CE approval
- FCC Class A

Ordering Information

- **NPT 1551-110 (P/N: A0Y00155106X0)**
  CPU: Intel® Atom™ D525, Dual-Core 1.8GHz L2 1MB;
  LCD/ touch: 15" XGA 1024 x 768 250nits/ ELO 5-wire true flat resistive touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +12VDC/ 100W power brick

NPT 1552

Main Features

- 15" 4:3 XGA (1024 x 768) TFT LCD panel
- 15" projected capacitive true flat touch screen
- Fanless POS terminal
- Intel® Atom™ D525 Dual-Core processor, 1.8GHz
- Support DDR3 SO-DIMM memory
- 2.5" removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- Optional kits for MSR/ fingerprint/ VFD
- Optional VESA 100x 100mm mounting for wall-mount application

Product Overview

The NPT 1552 is a high value Point-of-Sale (POS) hardware solution to fulfill your POS hardware requirement. The stylish zero bezel design makes it easy for your POS terminal to fit the modern store design. Projected capacitive touch screen is the best reliable solution, and Minimizes service efforts on touch screen.

The fanless design is noise-free, features low power consumption, and requires Minimal maintenance. Removable HDD, MSR, fingerprint and VFD kit design provides an easy maintenance method, which saves your service cost. The +12VDC output provides sufficient power for your 2nd display from POS terminal, which offers better cable routing and high-integration for 2nd display. Small footprint is ideal for installations where space is compact in stores. The VESA mounting design of display head, 100x 100mm, provides an option for wall-mounting application when detaching the stand of terminal. The design offers a spill resistant and high integration for POS peripherals, which provides restaurant and retail conditions with continuous operation.

Specifications

Panel
- LCD Size: 15", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch screen: projected capacitive true flat (zero bezel)
- Touch light transmission: 91%
- Touch interface: USB

System
- CPU: Intel® Atom™ D525, 1.8GHz
- BIOS: AMI BIOS
- System chipset: Intel® ICH8M
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (default), optional support up to 4GB DDR3 800, Non-ECC and Un-buffered
- Hard disk drive: one 2.5" 160GB SATA HDD, removable type
- Expansion: 1 x Mini-card socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/100/1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +12VDC input, Mini-DIN 4 pin lock type
- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)
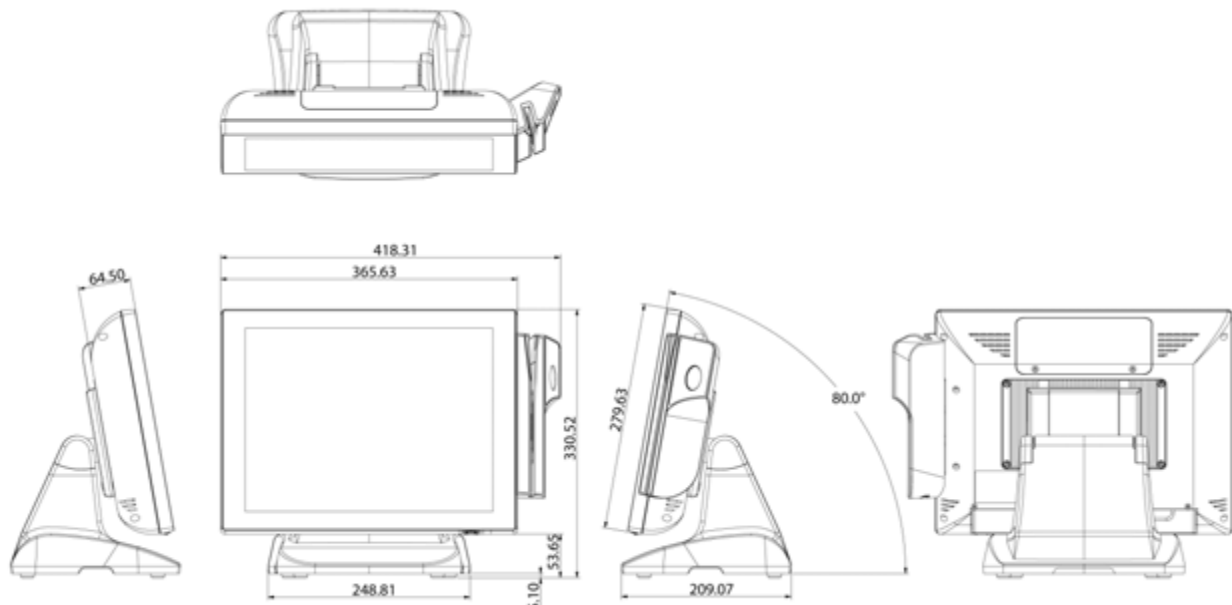
Audio
- High Definition audio codec: Realtek ALC886-GR
- Internal audio: one 3W speaker
- External audio: Line-out audio jack

Ethernet
- LAN chip: Realtek® RTL8111C-VC-GR Gigabit LAN
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

Dimension Drawing

Mechanical & Environment

- Color: Beige
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +12VDC
- Power adapter: AC to DC power brick (+12VDC/ 8.33A, 100W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 366mm (W) x 331mm (H) x 210mm (D) (no MSR), 419mm (W) x 331mm (H) x 210mm (D) (with MSR)
- Weight: 8.5kg
- Tilt angle: 0° ~ 80°

Certifications

- CE approval
- FCC Class A

Ordering Information

- **NPT 1552-110 (P/N: A0Y00155205X0)**
  CPU: Intel® Atom™ D525, Dual-Core 1.8GHz L2 1MB;
  LCD/ Touch: 15" XGA 1024 x 768 250nits/ projected capacitive true flat touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +12VDC/ 100W power brick

NPT 5850

High Performance Point-of-Sales 15″ TFT LCD POS Terminal

Main Features

- 15″ 4:3 XGA (1024 x 768) TFT LCD panel
- 15″ 5-wire resistive touch screen
- Intel® Core™ i3/i5/i7 mobile processor, 2.1GHz
- Support DDR3 1333 SO-DIMM memory
- 2.5″ removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- Option kits for MSR/ Fingerprint/ VFD
- Optional VESA 100 x 100mm mounting for wall-mount application

Product Overview

The NPT 5850 is a high performance Point-of-Sale (POS) hardware solution to fulfill your POS hardware requirement. The 2nd generation Intel® Core™ i3/i5/i7 mobile processor platform is a best choice for high-end POS hardware solution.

Removable HDD, MSR, fingerprint and VFD kit design provides an easy maintenance method and saving your service cost. The +12VDC output provides sufficient power for your 2nd display from POS terminal and offers better cable routing and high-integration for the 2nd display. Small footprint is ideal for installations where space is compact in stores. The VESA mounting design of display head, only 100x 100mm, provides another option for wall-mounting application when detaching the stand of terminal. The design offers a spill resistant and high integration for POS peripherals, which provides restaurant and retail conditions with continuous operation.

Specifications

Panel
- LCD Size: 15″ , 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch screen: 5-wire Resistive
- Touch light transmission: 80%
- Touch interface: USB

System
- CPU: Intel® Core™ i3/i5/i7 mobile processor, 2.1GHz
- BIOS: AMI BIOS
- System chipset: Intel® HM65
- System memory: 1x 204-pin DDR3 1333 SO-DIMM socket, 2GB DDR3 (default), optional two sockets support up to 8GB DDR3 1333, non-ECC and un-buffered
- Hard disk drive: One 2.5″ 160GB SATA HDD, removable type
- Expansion: 1x Mini-card socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/100/1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +19VDC input, Mini-DIN 4Pin lock type
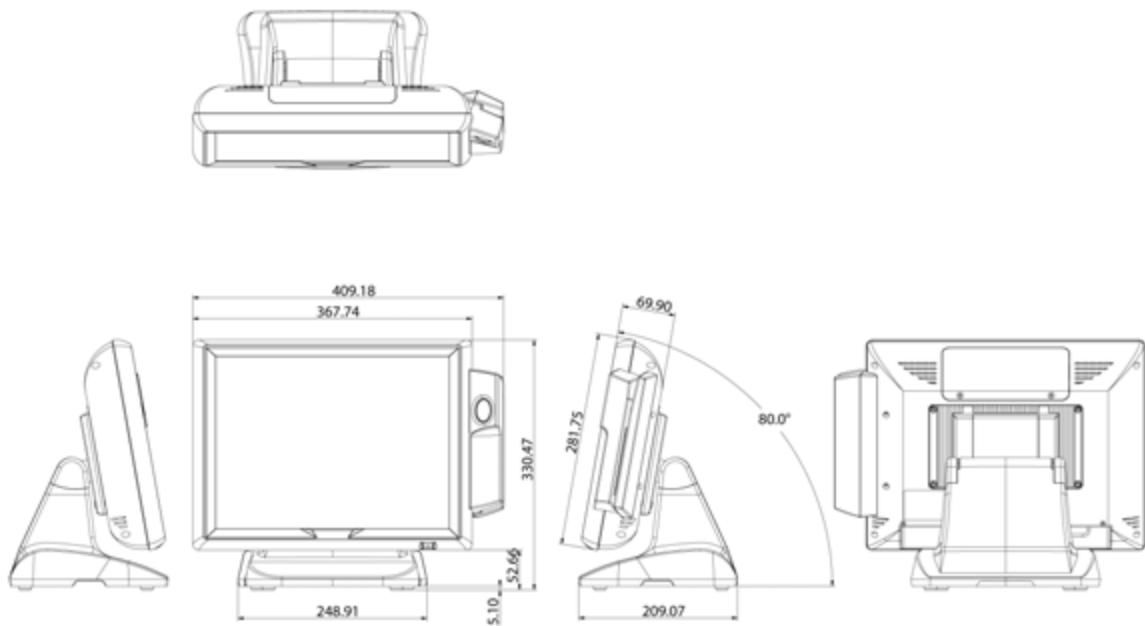- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Audio
- High Definition audio codec: Realtek ALC886-GR
- Internal audio: One 3W speaker
- External audio: Line-out audio jack

Ethernet
- LAN chip: Intel® PHY WG82579LM Gigabit LAN
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

NEXCOM

Dimension Drawing

Mechanical & Environment

- Color: Dark Gray
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +19VDC
- Power adapter: AC to DC power brick (+19VDC/ 6.315A, 120W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 368mm (W) x 331mm (H) x 210mm (D) (No MSR), 410mm (W) x 331mm (H) x 210mm (D) (with MSR)
- Weight: 9.0kg
- Tilt angle: 0° ~ 80°

Certifications

- CE approval
- FCC Class A

Ordering Information

- **NPT 5850-110 (P/N:A0Y00585002X0)**
  CPU: Intel® Core™ i3/i5/i7 mobile processor, 2C/2T, 2.10 GHz, 2MB cache;
  LCD/ touch: 15" XGA 1024 x 768 250nits/ ELO 5-wire resistive touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +19VDC/ 120W power brick

NPT 5851

High Performance Point-of-Sales 15" TFT LCD

High Performance Point-of-Sales 15" TFT LCD

Resistive True Flat POS Terminal

Main Features

- 15" 4:3 XGA (1024 x 768) TFT LCD panel
- 15" 5-wire resistive true flat touch screen
- Intel® Core™ i3/i5/i7 mobile processor, 2.1 GHz
- Support DDR3 1333 SO-DIMM memory
- 2.5" removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- Option kits for MSR/ fingerprint/ VFD
- Optional VESA 100 x 100mm mounting for wall-mount application

Product Overview

The NPT 5851 is a high performance Point-of-Sale (POS) hardware solution to fulfill your POS hardware requirement. The 2nd generation Intel® Core™ mobile processor platform is a best choice for high-end POS hardware solution. The stylish zero bezel design makes it easy for your POS Terminal to fit the modern store design.

Removable HDD, MSR, fingerprint and VFD kit design provides an easy maintenance method, which saves your service cost. The +12VDC output provides sufficient power for your 2nd display from POS terminal, and offers better cable routing and high-integration for the 2nd display. Small footprint is ideal for installations where space is compact in stores. The VESA mounting design of display head, only 100x 100mm, provides another option for wall-mounting application when detaching the stand of terminal. The design offers a spill resistant and high integration for POS peripherals, which provides restaurant and retail conditions with continuous operation

Specifications

Panel
- LCD Size: 15", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85 (right)
- Backlight: CCFL
- Touch Screen: 5-wire true flat (zero bezel) resistive
- Touch light transmission: 80%
- Touch interface: USB

System
- CPU: Intel® Core™ i3/i5/i7 mobile processor, 2C/2T, 2.10 GHz, 2MB cache
- BIOS: AMI BIOS
- System chipset: Intel® HM65
- System memory: 1x 204-pin DDR3 1333 SO-DIMM socket, 2GB DDR3 (default), Optional two sockets support up to 8GB DDR3 1333, non-ECC and un-buffered
- Hard disk drive: One 2.5" 160GB SATA HDD, removable type
- Expansion: 1 x Mini-card Socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/100/1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +19VDC input, Mini-DIN 4Pin lock type
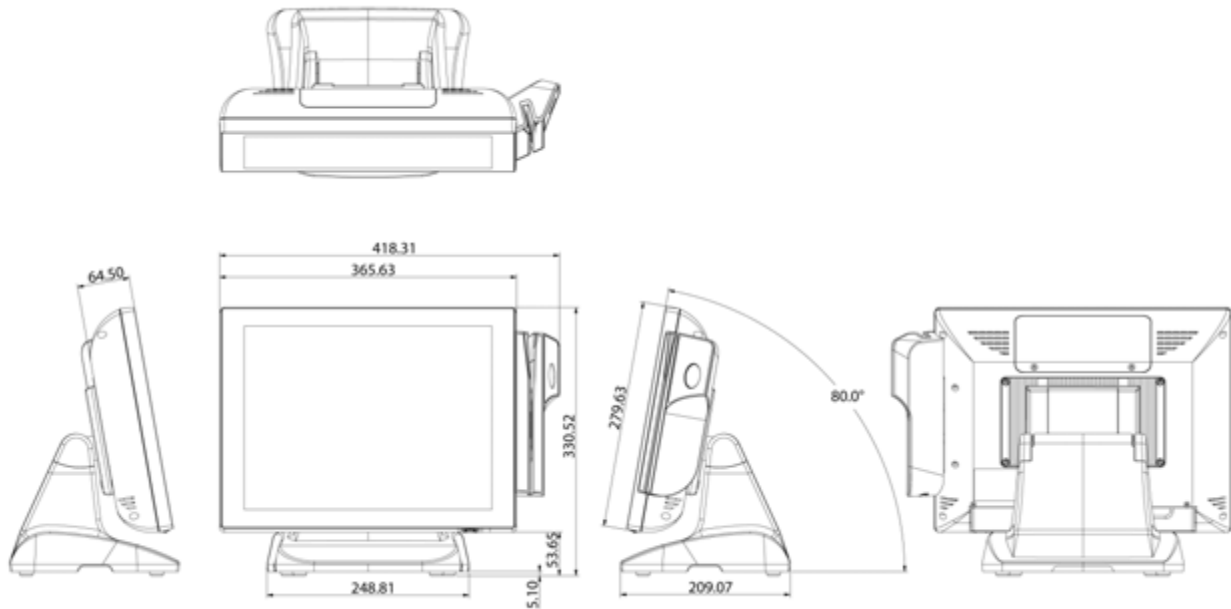- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Audio
- High Definition audio codec: Realtek ALC886-GR
- Internal audio: one 3W speaker
- External audio: Line-out audio jack

Ethernet
- LAN chip: Intel® PHY WG82579LM Gigabit LAN
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

Dimension Drawing

Mechanical & Environment

- Color: pantone Black C
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +19VDC
- Power adapter: AC to DC power brick (+19VDC/ 6.315A, 120W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 366mm (W) x 331mm (H) x 210mm (D) (no MSR), 419mm (W) x 331mm (H) x 210mm (D) (with MSR)
- Weight: 8.5kg
- Tilt angle: 0° ~ 80°

Certifications

- CE approval
- FCC Class A

Ordering Information

- **NPT 5851-110 (P/N:A0Y00585102X0)**

  CPU: Intel® Core™ i3/i5/i7 mobile processor, 2C/2T, 2.10 GHz, 2MB cache;

  LCD/ touch: 15" XGA 1024 x 768 250nits/ ELO 5-wire true flat resistive touch;

  Memory: 2GB DDR3 SO-DIMM;

  HDD: 160GB 2.5" SATA 5,400rpm;

  Power: +19VDC/ 120W power brick

NPT 5852

High Performance Point-of-Sales 15" TFT LCD

Projected Capacitive True Flat POS Terminal

Main Features

- 15" 4:3 XGA (1024 x 768) TFT LCD panel
- 15" projected capacitive true flat touch screen
- Intel® Core™ i3/i5/i7 mobile processor, 2.1GHz
- Support DDR3 1333 SO-DIMM memory
- 2.5" removable SATA HDD

- Powered COM(4), USB(4), printer port(1), VGA(1), GbE LAN(1), cash drawer(1)
- Front bezel complies with IP-65 protection standard
- Option kits for MSR/ Fingerprint/ VFD
- Optional VESA 100 x 100mm mounting for wall-mount application

Product Overview

The NPT 5852 is a high performance Point-of-Sale (POS) hardware solution to fulfill your POS hardware requirement. The 2nd generation of Intel® Core™ i3/i5/i7 mobile processor platform is a best choice for high-end POS hardware solution. The stylish zero bezel design makes it easy for your POS Terminal to fit the modern store design. Projected Capacitive Touch Screen is the best reliable solution and Minimum service effort on Touch Screen.

Removable HDD, MSR, fingerprint and VFD kit design provides an easy maintenance method and saving your service cost. The +12VDC output provides enough power for your 2nd display from POS terminal, and offers better cable routing and high-integration for the 2nd display. Small footprint is ideal for installations where space is compact in stores. The VESA mounting design of display head, only 100x100mm, provides an option for Wall-mounting application when detaching the stand of terminal. The design offers a spill resistant and high integration for POS peripherals, which provides restaurant and retail conditions with continuous operation.

Specifications

Panel
- LCD Size: 15" , 4:3
- Resolution: XGA 1024 x 768
- Luminance: 250cd/m^2
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing angle: 80 (upper), 80 (lower), 85 (left), 85(right)
- Backlight: CCFL
- Touch screen: projected capacitive true flat (zero bezel)
- Touch light transmission: 91%
- Touch interface: USB

System
- CPU: Intel® Core™ i3/i5/i7 mobile processor, 2.1GHz
- BIOS: AMI BIOS
- System chipset: Intel® HM65
- System memory: 1x 204-pin DDR3 1333 SO-DIMM socket, 2GB DDR3 (default), optional two sockets support up to 8GB DDR3 1333, non-ECC and un-buffered
- Hard disk drive: One 2.5" 160GB SATA HDD, removable type
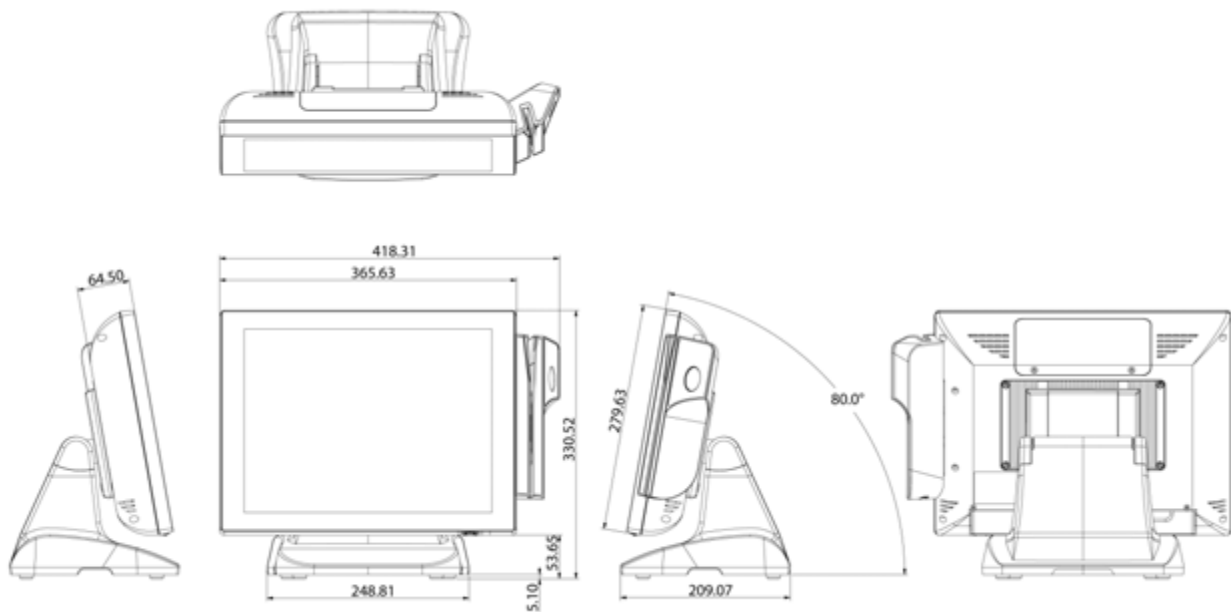- Expansion: 1x Mini-Card Socket for Mini-PCIe and USB interface

Rear I/O
- USB: 4x USB2.0 port
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS setting
- Ethernet: 1x RJ-45, 10/100/1000 Mbps
- VGA: 1x DB-15 2nd VGA port
- Cash Drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- Parallel: 1x DB-25 printer port
- Audio: 1x Line-out jack
- DC-IN: 1x +19VDC input, Mini-DIN 4Pin lock type
- DC-OUT: 1x +12VDC output for 2nd display power (12V, Max 3.0A)

Ethernet
- LAN chip: Intel® PHY WG82579LM Gigabit LAN
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

NEXCOM

Dimension Drawing

Mechanical & Environment

- Color: Beige
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +19VDC
- Power adapter: AC to DC power brick (+19VDC/ 6.315A, 120W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 366mm (W) x 331mm (H) x 210mm (D) (no MSR), 419mm (W) x 331mm (H) x 210mm (D) (with MSR)
- Weight: 8.5kg
- Tilt angle: 0° ~ 80°

Certifications

- CE approval
- FCC Class A

Ordering Information

- **NPT 5852-110 (P/N: A0Y00583202X0)**
  CPU: Intel® Core™ i3/i5/i7 mobile processor, 2C/2T, 2.10 GHz, 2MB cache;
  LCD/ touch: 15" XGA 1024 x 768 250nits/ projected capacitive true flat touch;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 160GB 2.5" SATA 5,400rpm;
  Power: +19VDC/ 120W power brick

NPB 3550

Main Features

- Fanless POS box system
- Slim and compact enclosure design
- Intel® Atom™ processor D2550, 1.86GHz
- Support DDR3 1066 SO-DIMM memory

- 2.5" removable SATA HDD
- Powered COM(4), USB(6), printer port (1), VGA(1), DVI(1), GbE LAN(1), cash drawer(1), PS/2(1)
- Optional wall-mount kit for compact space accommodation

Product Overview

The NEXCOM NPB 3550 is a high value rugged die-cast aluminum POS box PC that is designed with high flexibility and scalability. The Rich I/O interface make the POS system easily work with various peripherals. It is perfect for the retail, Kiosk, and restaurant industries application.

Unique Sleek and Noise Free Fanless Design driven by an Intel® Atom™ Cedarview D2550 Dual Core Processor makes it a become cost effective and high value terminal. Additional features like easy-open Latch design for tool-free access and removable HDD for cold swapping make repair so easy, lowering terminal downtime to almost zero thus saving on maintenance cost. Hardware platform can be easily upgraded by swapping out mother board but not swapping out I/O board.

Specifications

System

- CPU: Intel® Atom™ processor 2550, 1.86 GHz
- BIOS: AMI BIOS
- System chipset: Intel® NM10
- System memory: 1x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 1066
- (default), optional support up to 4GB DDR3 1066, non-ECC and unbuffered
- System Graphic: Integrated Graphics controller ,Intel® HD Graphics 3600
- Hard disk drive: One 2.5" 320GB SATA HDD, removable type, optional one 2.5" SATA HDD 320GB 5,400rpm for 2nd HDD (by SATA backplane)
- Expansion: 1x Full size Mini-card socket for Mini-PCIe and USB interface
- 1x half size Mini-card socket for Mini-PCIe and USB interface
- 1x SIM Card Socket support for 3G USB Mini-Card, Select by BIOS setting.

System Control Indicator

- Power Switch: 1 x Power ON/OFF swich
- Power LED: 1 x Power ON LED(Green)

Front I/O

- USB: 2x USB 2.0 (USB6~7)

Rear I/O

- USB: 4x USB2.0 port(USB1~4)
- COM: 4x DB-9 powered RS-232 port, adjust RI/ 5V/ 12V by BIOS, optional: 1 xDB-9 Powered RS-232, 5V by BIOS Setting
- Powered USB port: 1 x +12VDC Powered USB2.0 (USB5)
- Ethernet: 1x RJ-45, 10/100/1000 Mbps, optional 1 x RJ-45 for 2nd
- LAN
- VGA: 1x DB-15 VGA port, optional: 1 x DB-15 2nd VGA share D-Shape hole with COM5
- DVI: 1x DVI-D port
- Cash drawer: 1x RJ-11 port, support two cash drawers (24V, Max 1.1A)
- PS/2: 1x KB/MS Combo PS/2 port
- Parallel: 1x DB-25 printer port
- Audio: 1 x Headset Jack (Speak-out & MIC)
- DC-IN: 1x +12VDC input, Mini-DIN 4 pin lock type
- Wireless Antenna: Optional Main/ Aux. wireless Antenna

Dimension Drawing
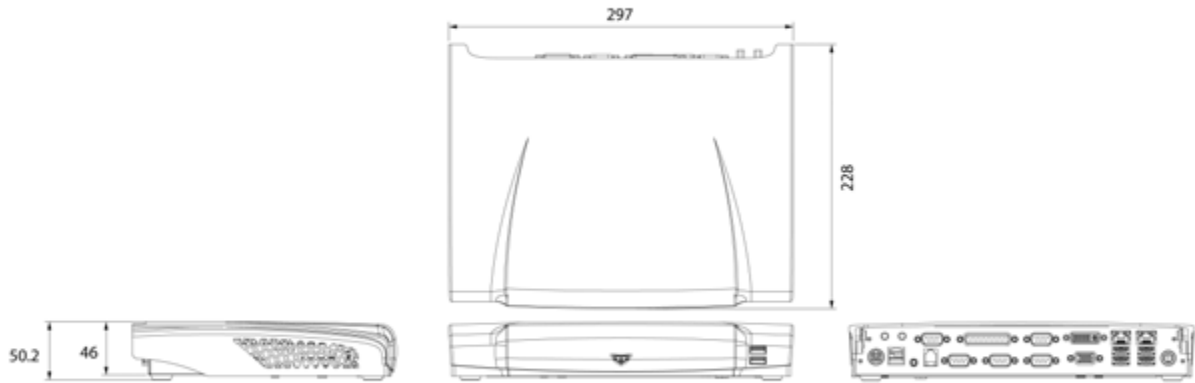
Audio
- High Definition audio codec: Realtek ALC886-GR
- External audio: 1x Headset Jack (Speak-out & MIC)
- Ethernet LAN chip: LAN1, Realtek RTL8111E Gigabit LAN, optional: LAN 2, Intel® WG82574L
- Ethernet interface: 10/100/1000 Based-TX Ethernet compatible

Mechanical & Environment
- Color: dark gray
- Mounting: desktop type, optional wall-mount Kit
- Power input: +12VDC
- Power adapter: AC to DC power brick (+12VDC/ 8.33A, 100W)
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 297 (W)* 228 (D)* 50 (H) mm
- Weight: 2.6kg(5.73lbs)

Certifications
- CE approval
- FCC Class A
- LVD

Ordering Information

- **NPB 3550-110 SYSTEM (P/N: A0Y10355000X0)**
  CPU: Intel® Atom™ processor D2550, Dual-Core 1.86GHz L2 1MB;
  Memory: 2GB DDR3 SO-DIMM;
  HDD: 320GB 2.5" SATA 5,400rpm;
  Power: +12VDC/ 100W power brick

NPD 1050

Main Features

- Front Bezel IP-65 Stand Compliant
- Slim and compact enclosure design
- stand accommodate Power Brick

- Zero Bezel Touch(P Cap/ Resistive Option)
- Modular MSR/FingerPrint(Option)
- Optional wall-mount kit for compact space accommodation

Product Overview

The NPD 1050 is a reliable and flexibility touch monitor that can support an integrated magnetic stripe reader (MSR) and also supports an integrated 2x20 rear customer display. The display has touchscreen with five-wire resistive and also with projected capacitive (PCAP) for a multi-touch experience and zero-bezel. The front bezel with frame and borderless (True Flat Surface) types design combined with its Solid IP65 Water and Dust proofing.

The NPD 1050 offers a stable base touch screen and a hidden cable management system, all in an elegant and simple-to-use design. The display can function as a desktop or wall-mounted unit and includes a VESA mounting option. The 15" touch monitor provides an affordable product in a convenient, space-saving design that both first-time and experienced users can deploy more easily, reliably, and more cost-effectively.NPD-1050 is the best solution for NEXPOS box PC fanless computer.

Specifications

Panel
- 15" 4:3 XGA (1024 x 768) TFT LCD panel
- 15" 5-wire resistive touch screen
- 15" projected capacitive true flat touch screen(optional)
- Front bezel complies with IP-65 protection standard
- Option kits for MSR/ Fingerprint/ VFD
- Optional wall-mount kit for compact space accommodation

Rear I/O
- Touch interface port: 1 x USB 2.0 Type B connector for Upstreaming; 1x USB 2.0 Type A for Downstreaming.
- Video port: 1 x DB15 VGA / 1x DVI-I connector/1 x DP (Display Port)
- OSD: 1 x AUTO button for auto adjust setting; optional 4 buttons (MENU, SELECT, ▲/+, ▼/-), on optional OSD switch board.
- COM: Optional: 2 x DB-9F for RS-232 Upstream.
- DC-IN Jack : 1 x +12VDC Input

System Control/ Indicator
- Power Switch: 1 x Power ON/ OFF switch
- Power LED: 1 x Power ON LED (Green)

Mechanical & Environment
- Color: dark gray
- Mounting: desktop type, optional VESA 100 x 100mm wall-mount when detaching stand
- IP protection: front bezel complies with IP-65 protection standard
- Power input: +12VDC
- Power adapter: Default: Power source from NPB 3550 PoweredUSB 12V; Optional: External AC DC 12V/ 5.0A 60W Power Brick
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 60°C
- Operating humidity: 20%~80% relative humidity, non-condensing
- Dimension: 368mm (W) x 331mm (H) x 210mm (D) (no MSR), 410mm (W) x 331mm (H) x 210mm (D) (with MSR)
- Weight: 8.5kg
- Tilt angle: 0° ~ 80°

Certifications
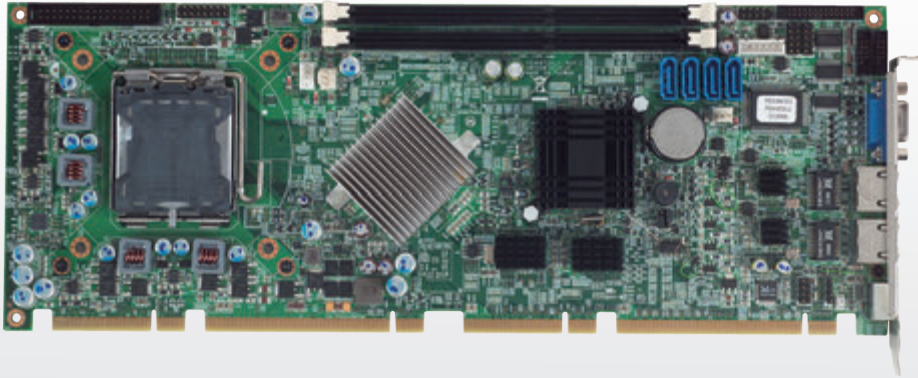- CE approval
- FCC Class A

Dimension Drawing
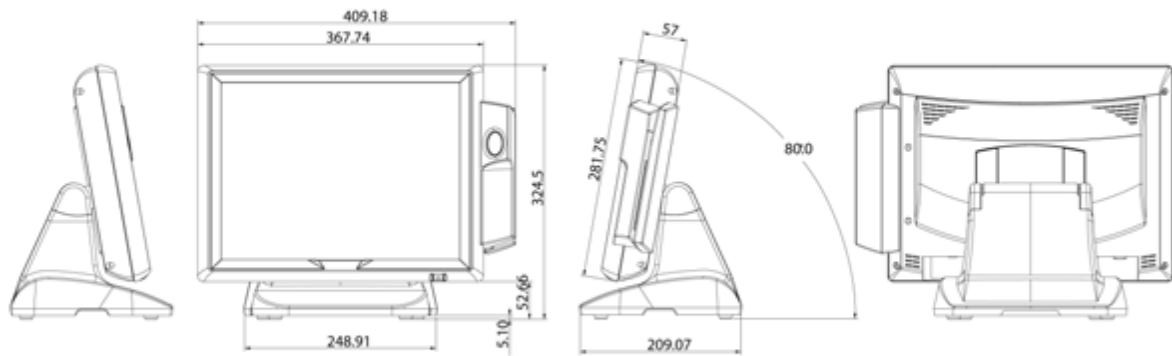
Ordering Information

- **NPD 1050-112 SYSTEM (P/N: A0Y20105000X0)**
  NexPOS 15" LCD Resistive Touch POS Display 4:3 LCD flush touch
  monitor with VGA,DVI-D, and DP input

PEAK 872VL2

PICMG 1.3 Intel® Core™ 2 Quad/Core™ 2 Duo LGA775 with Q45 2x PCI Express Gigabit LAN/ 6x SATA/ 8x USB 2.0

Main Features

- Intel® LGA775 Core™ 2 Quad/ Core™ 2 Duo/ Pentium® D/ Celeron® Processors with 800/1066/1333 MHz
- Support Non-ECC Dual Channel DIMM-DDR3 800/1066 MHz up to 4GB
- 2x 82574 PCI Express Gigabit Ethernet LAN
- 6x SATA, 8x USB2.0, 2x COM, 1x Parallel, 1x Floppy
- Intel® Q45 GMCH Integrated Intel® GMA4500, Max 128 MB of DVMT for Graphics Memory Allocation
- Analog Display Supports up to 2045 X 1536 at 75 Hz for CRT

Product Overview

PEAK 872VL2 is PICMG 1.3 full-size Single Board Computer (SBC), which supports Intel® Core™ 2 Quad/Core™ 2 Duo technology. Featuring Intel® Q45 and ICH10 DO chipsets, the PEAK 872VL2 supports socket LGA775 of Intel® Pentium® D/Celeron® processors with 800/1066/1333 MHz FSB supporting speeds up to 3.0 GHz and Hyper-Threading technology. The Intel® Q45 supports dual channel non-ECC DDR3 800/1066 MHz memory in two DIMM slots and an integrated graphics controller. The South Bridge ICH10 DO manages Ultra ATA/100 & SATA HDD ports, parallel port, and floppy port. Furthermore, it supports other versatile I/O ports such as two serial ports, eight USB ports, and two PCI Express Gigabit LAN ports.

NEXCOM offers the following 2U and 4U backplanes that support the PICMG 1.3 specification:

2U Backplane: NBP 2U220/NBP 2U040

4U Backplane: NBP 14570/NBP 14111/NBP 14210

The PEAK 872VL2 with Intel® Core™ 2 Duo technology and PCI Express LAN offer a great solution for advanced industrial application that require superb display and processing performance.

Specifications

CPU Support
- Support Intel® LGA775 Core™ 2 Quad, Core™ 2 Duo, Pentium® D/ Celeron® processors with 800/1066/1333 MHz
- Intel® Embedded Processor List (Intel® Longevity CPU):
  Intel® Core™ 2 Quad Processor (Q9400)
  Intel® Core™ 2 Duo Processor (E8400 & E7400 & E6400 & E4300)
  Intel® Pentium® Dual Core Processor (E2160)
  Intel® Celeron® Processor 440

Main Memory
- 2x 240-pin DIMM, for up to 4GB dual channel Non-ECC DDR3 800/1066 SDRAM

Chipset
- Intel® Q45 Graphic Controller Hub (GMCH)
- Intel® ICH10 DO

BIOS
- Award system BIOS

- Plug & Play support
- Advanced Power Management and Advanced Configuration & Power Interface support

On-board LAN
- 2x Intel® 82574L PCI Express Gigabit Ethernet Controllers
- Support Boot From LAN (PXE)
- 2x RJ45 with LED

Display
- Intel® Q45 GMCH Integrated Intel® GMA4500, Max 128 MB of DVMT for Graphics Memory Allocation
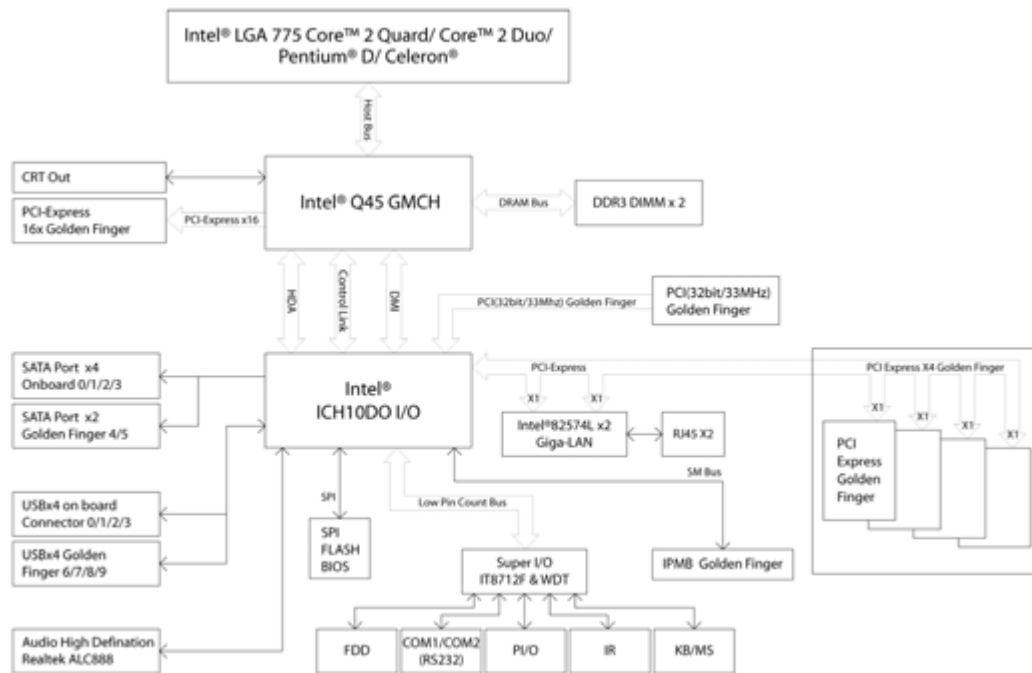- Analog display support up to 2048x1536 @ 75Hz for CRT

Audio
- HD Audio Codec, Realtek ALC888
- 3x (1x 4pin) headers for Line-in/Line-out/MIC-in

I/O Interfaces
- USB 2.0: 8 ports (4 on board, 4 to backplane)

Block Diagram

- Serial port: 2 port, with 2x 5pin headers (COM 1 and COM 2)
- SATA HDD: 6 ports, Support RAID 0/1/5/10 and Intel® Matrix Storage Technology (Intel® MST) (4 on board, 2 to backplane)
- Parallel port: 1x 26-pin connector
- Floppy: 1x 34-pin connector
- IrDA: 1x 5-pin header
- GPIO: Supports 4 sets general purpose I/O each with TTL level (5 V) interface
- On-board buzzer x1
- Power LED/Power On/ Reset/ SMBUS HDD Active LED/ PC speaker: 2x 8pin header
- 5-pin for key lock
- 1x 4pin fan connector (for CPU); 2x 3pin fan connectors (for System)
- IPMB interface through PICMG 1.3 Golden-finger
- I/O On SBC Bracket
  1x VGA DB-15 connector
  2x RJ45 Gigabit Ethernet LAN port
  1x PS/2 Keyboard/Mouse

Watchdog Timer
- 1 minute increments from 1 to 255 minutes
- 1second increments from 1 to 255 seconds
- On-chip RTC with battery backup
- 1 x External Li-Ion battery

System Monitor
- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (For CPU and System)
- 3 FAN speed monitors (1 for CPU and 2 for System FAN)

Dimensions
- PICMG 1.3 SHB
- Dimension: 338.58mm (L) x 126.39mm (W) (13.3" x 4.9")

Power Input
- Power source from backplane through golden finger
- Support ATX power supplies
- +12V/+5V/+3.3V/+5Vsb

Environment
- Board level operating temperatures: -15°C to 60°C
- Storage temperature: -20°C to 80°C
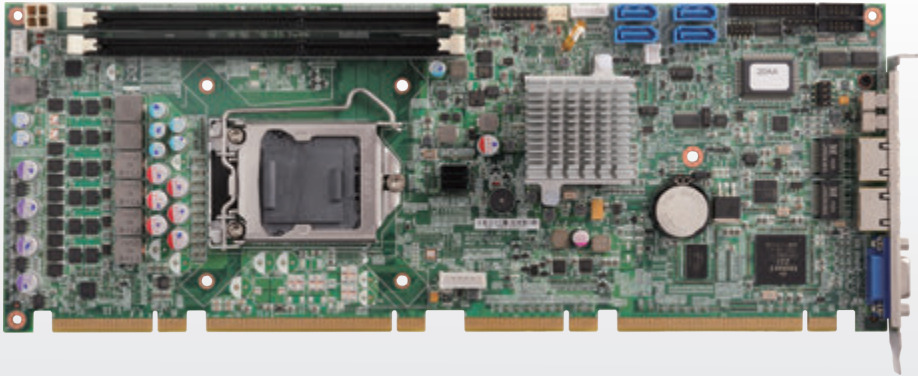- Relative humidity: 10% to 90%, (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **PEAK 872VL2 (P/N: 10P0872VL00X0)**
  PICMG 1.3 Full-Size SBC, Intel® Q45 Chipset, LGA775 Core™ 2 Quad/ Core™ 2 Duo/ Pentium® D/ Celeron® with 800/1066/1333 MHz FSB, 32bit/33MHz PCI, DDR3 DIMM x 2, VGA integrated, Intel® 82574L PCI Express Gigabit Ethernet x 2, Six Serial ATA

PEAK 876VL2

PICMG 1.3 Intel® Core™ i5/i3/Pentium® LGA1156 with Q57 2x PCI Express Gigabit LAN/ 6x SATA/ 8x USB 2.0

Main Features

- Intel® Core™ i5/ i3/ Pentium Integrated Graphics
- Support Intel® LGA1156, Core™ i5/ i3/ Pentium®
- 1x 82574 PCI Express Gigabit Ethernet
- 1x 82578DM Gigabit Ethernet

- 6x SATA, 8x USB2.0, 2x COM, 1x Parallel
- Support Non-ECC Dual Channel DIMM-DDR3 1066/1333 MHz up to 8GB
- Intel® AMT 6.0

Product Overview

PEAK 876VL2 is PICMG 1.3 full-size Single Board Computer (SBC), which supports Intel® Core™ i5/i3/Pentium® processors with Hyper-Threading technology. The Intel® Core™ i5/i3/Pentium® supports dual channel non-ECC DDR3 1066/1333 MHz memory in two DIMM slots and a Core™ i5/i3/Pentium® integrated graphics controller. The Q57 Express Chipset PCH manages SATA HDD ports, parallel port. Furthermore, it supports other versatile I/O ports such as two serial ports, eight USB ports, and two PCI Express Gigabit LAN ports. The PEAK 876VL2, with Intel® Core™ i5/ i3/ Pentium® and PCI Express LAN, offers a great solution for advanced industrial application that requires superb display and processing performance.

Specifications

CPU Support
- Intel® LGA1156, Core™ i5/ i3/ Pentium®

Main Memory
- 2x 240-pin DIMM, for up to 8GB dual channel Non-ECC DDR3 1066/1333 SDRAM

Chipset
- Intel® Q57 Express Chipset PCH

BIOS
- AMI BIOS
- Plug & Play support
- Advanced Power Management and Advanced Configuration & Power Interface support

On-board LAN
- 1x Intel® 82578DM PHY for AMT 6.0
- 1x Intel® 82574L PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- Intel® Core™ i5/ i3/ Pentium® processors Integrated graphics
- Analog display support up to 2048x1536 @ 75Hz for CRT

I/O Interfaces
- USB 2.0: 8 ports (2 on board, 4 to backplane), 2 ports through I/O Bracket
- Serial port: 2 port, with 2x5pin headers (COM 1 and COM 2)
- SATA HDD: 6 ports, Support RAID 0/1/5/10 and Intel® Matrix Storage
- Parallel port: 1 x 26-pin connector
- IrDA: 1x 5pin header
- GPIO: Supports 4 sets general purpose I/O each with TTL level (5 V) interface
- On-board buzzer x 1
- Power LED/Power On/Reset/SMBUS: 2x 8pin header
- 1x 4pin fan connector (for CPU); 1x 3pin fan connectors (for System)
- IPMB interface through PICMG 1.3 Golden-finger
- I/O On SBC Bracket
  1x VGA DB-15 connector
  2x RJ45 Gigabit Ethernet LAN port
  2x USB 2.0 Ports

Watchdog Timer
- 1 minute increments from 1 to 255 minutes
- 1 second increments from 1 to 255 seconds
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Block Diagram
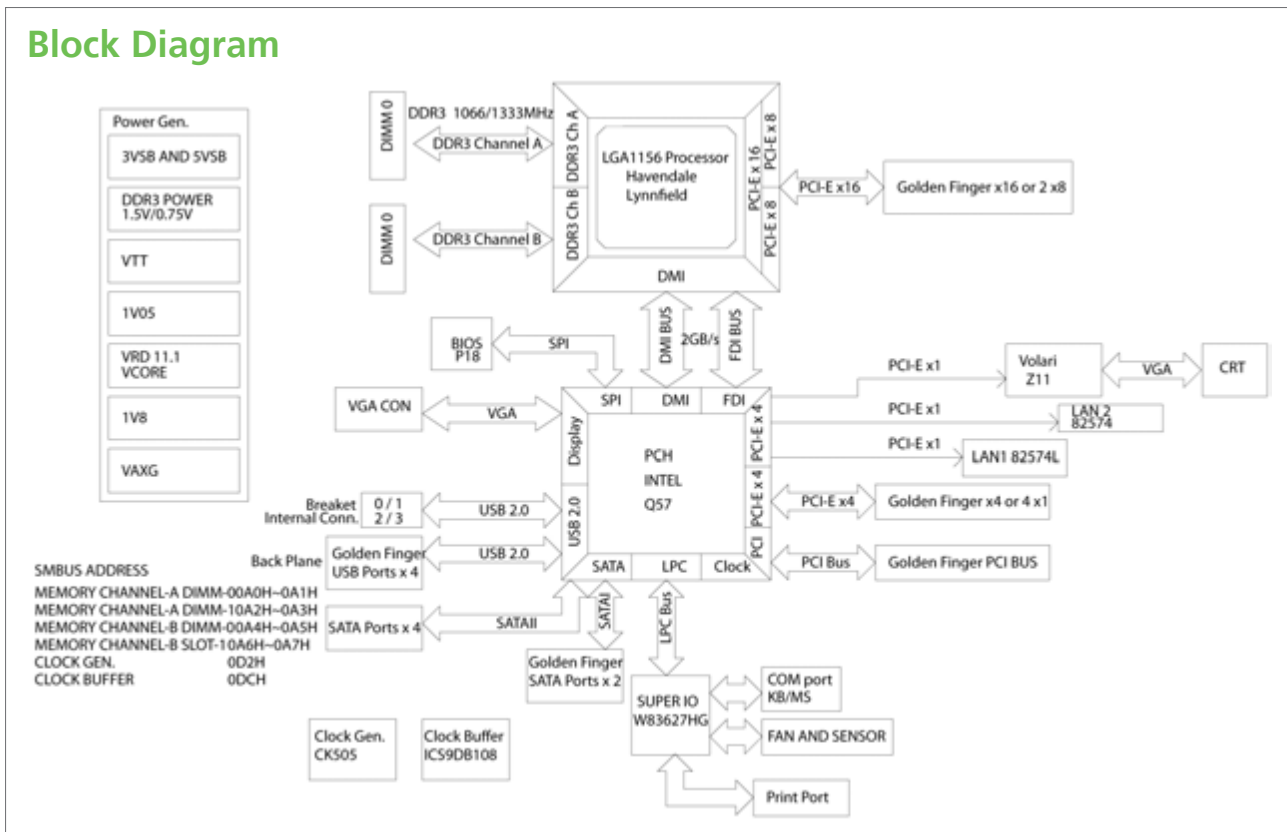
System Monitor
- 6 Voltages (+3.3V, +5V, +12V, Vcore) memory, VTT
- 3 Temperatures (For CPU and System)
- 2 FAN speed monitors (1 for CPU and 2 for System FAN)

Dimensions
- PICMG 1.3 SHB
- Dimension: 338.58mm (L) x 126.39mm (W) (13.3" x 4.9")

Power Input
- Power source from backplane through golden finger and AUX +12V
- Support ATX/AT power supplies
- +12V/ +5V/ +3.3V/ +5Vsb

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
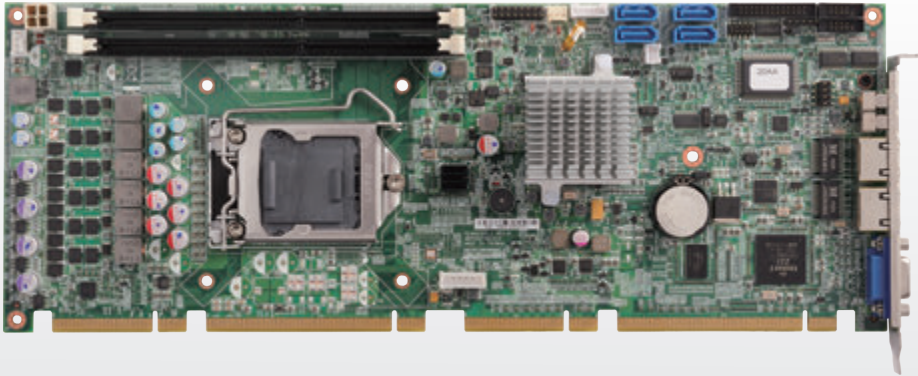- Relative humidity: 10% to 90%, (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **PEAK 876VL2 (P/N:10P0876VL00X0)**
  PICMG 1.3 Full-Size SBC, Intel® LGA1156, Core™ i5/ i3/ Pentium® with Max 8GB, DDR3 DIMM, VGA

PEAK 877VL2

PICMG 1.3 Intel® Core™ i7/i5/i3/Pentium® LGA1156 with Q57 2x PCI Express Gigabit LAN/ 6x SATA/ 8x USB 2.0

Main Features

- Onboard XGI Z11 graphic for Intel® Core™ i7 processors
- Support Intel® LGA1156, Core™ i7/i5/i3/Pentium®
- 1x 82574 PCI Express Gigabit Ethernet
- 1x 82578DM Gigabit Ethernet

- 6x SATA, 8x USB2.0, 2x COM, 1x Parallel
- Support Non-ECC Dual Channel DIMM-DDR3 1066/1333 MHz up to 8GB
- Intel® AMT 6.0

Product Overview

PEAK 877VL2 is PICMG 1.3 full-size Single Board Computer (SBC), which supports Intel® Core™ i7/i5/i3/Pentium® processors with Hyper-Threading technology. The Intel® Core™ i7/i5/i3/Pentium® supports dual channel non-ECC DDR3 1066/ 1333 MHz memory in two DIMM slots and an XGI Z11 integrated graphics controller. The Q57 Express Chipset PCH manages SATA HDD ports, parallel port. Furthermore, it supports other versatile I/O ports such as two serial ports, eight USB ports, and two PCI Express Gigabit LAN ports. The PEAK 877VL2, with Intel® Core™ i7/i5/i3/Pentium® and PCI Express LAN, offers a great solution for advanced industrial application that requires processing performance.

Specifications

CPU Support
- Intel® LGA1156, Core™ i7/i5/i3/Pentium®
- Intel® Quad Core™ i5/ i7

Main Memory
- 2x 240pin DIMM, for up to 8GB dual channel Non-ECC DDR3 1066/1333 SDRAM

Chipset
- Intel® Q57 Express Chipset PCH

BIOS
- AMI BIOS
- Plug and play support
- Advanced power management and advanced configuration & power interface support

On-board LAN
- 1x Intel® 82578DM PHY for AMT 6.0
- 1x Intel® 82574L PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
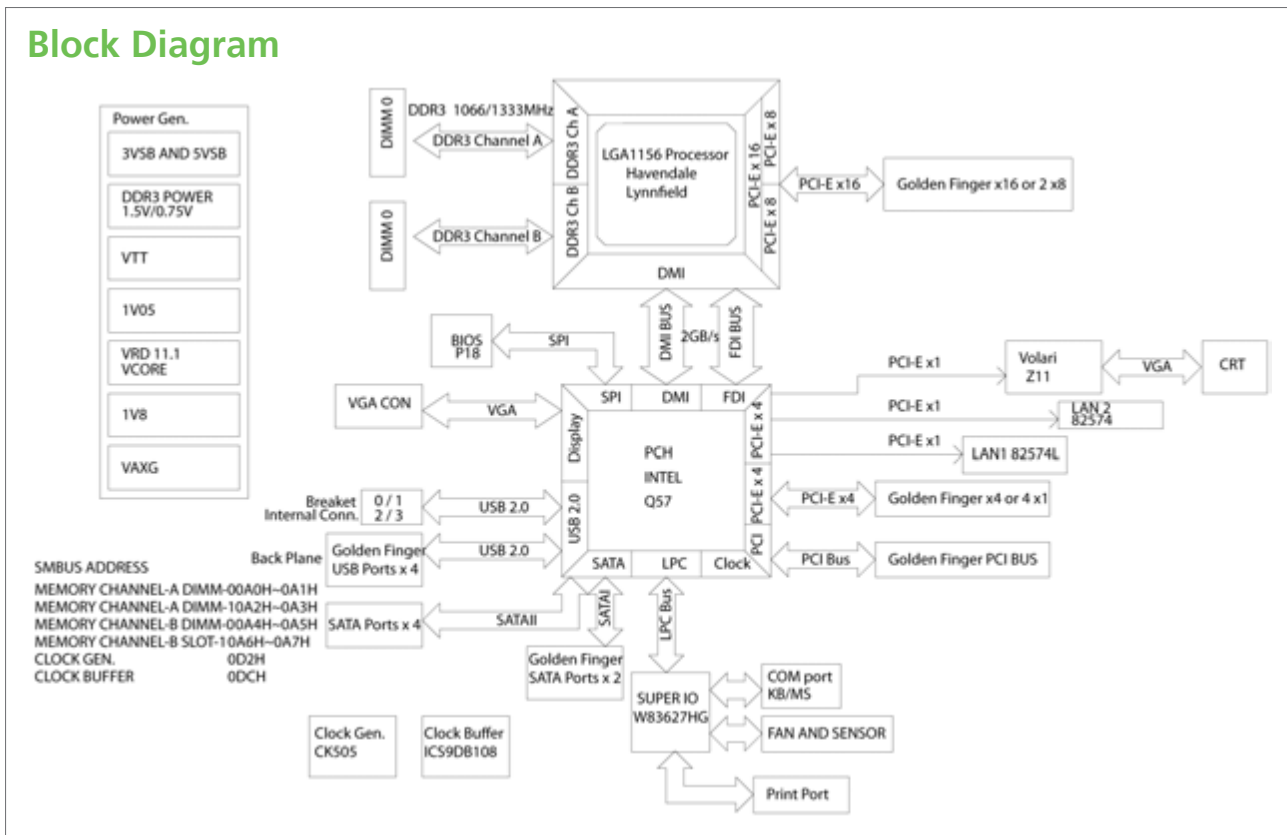- 2x RJ45 with LED

Display
- Integrated graphic engine by XGI Volari Z11 GPU with DDR2 SDRAM through PCIe 1 x Interface

- Analog VGA Interface: 230MHz pixel clock support CRT display up to 1600x1200 @ 70Hz 16M colors

I/O Interfaces
- USB 2.0: 8 ports (2 on board, 4 to backplane), 2 ports through I/O Bracket
- Serial port: 2 port, with 2x5pin headers (COM 1 and COM 2)
- SATA HDD: 6 ports, Support RAID 0/1/5/10 and Intel® Matrix Storage Technology (Intel® MST)
- Parallel port: 1x 26pin connector
- IrDA: 1x 5pin header
- GPIO: Supports 4 sets general purpose I/O each with TTL level (5V) interface
- On-board buzzer x1
- Power LED/ Power On/ Reset/ SMBUS: 2x 8 pin header
- 1x 4-pin fan connector (for CPU); 1x 3-pin fan connectors (for System)
- IPMB interface through PICMG 1.3 Golden-finger
- I/O On SBC Bracket
- 1x VGA DB-15 connector
- 2x RJ45 Gigabit Ethernet LAN port
- 2x USB 2.0 Ports

NEXCOM

Block Diagram

Watchdog Timer
- 1 minute increments from 1 to 255 minutes
- 1 second increments from 1 to 255 seconds
- On-chip RTC with battery backup
- 1x External Li-Ion battery

System Monitor
- 6 Voltages (+3.3V, +5V, +12V, Vcore) memory, VTT
- 3 Temperatures (For CPU and System)
- 2 FAN speed monitors (1 for CPU and 2 for System FAN)

Dimensions
- PICMG 1.3 SHB
- Dimension: 338.58mm (L) x 126.39mm (W) (13.3" x 4.9")

Power Input
- Power source from backplane through golden finger and AUX +12V
- Support ATX/AT power supplies
- +12V/+5V/+3.3V/+5Vsb

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
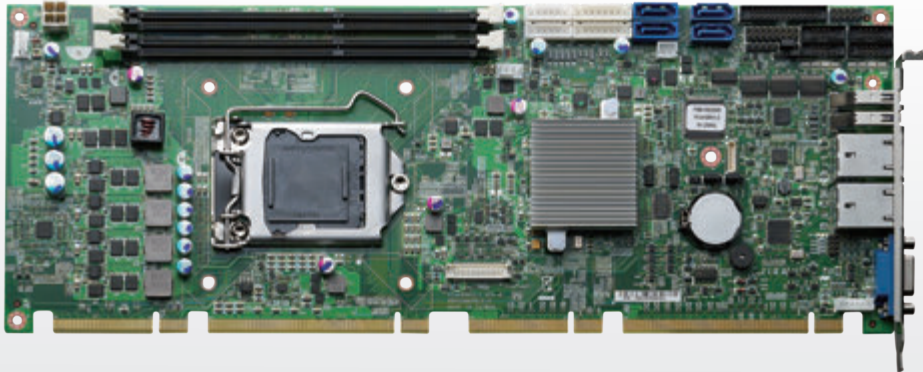- Relative humidity: 10% to 90%, (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **PEAK 877VL2 (P/N:10P0877VL00X0)**

  PICMG 1.3 Full-Size SBC, Intel® LGA1156, Core™ i7/i5/i3/Pentium® with Max 8GB, DDR3 DIMM, VGA integrated, Intel® 82574L PCI Express Gigabit Ethernet x2, Serial ATA x4

PEAK 886VL2

Main Features

- Scalable platform Intel® 3rd generation Core™ i7/i5/i3 processor, Ivy Bridge + Non-ECC
- Intel® Q77 PCH chipset support PICMG 1.3 specification
- Support Dual channel DDR3 with NON-ECC DIMMs 1333/1600MHz up to 16GB

- Support PCIe x16, 4x PCIe x1, 4x USB3.0/ 4x USB2.0, 4x SATA3.0/ 2x SATA2.0 and GbE
- Display support for VGA, DVI, HDMI, DosplayPort
- Dimension 338.58 x 126,39 mm² (W x L) (8 Layers Single side)

Product Overview

The PEAK 886VL2 is a PICMG1.3 Full-size single computing board featuring Intel® Q77 PCH chipset supports Intel® 3rd generation Intel® Core™ processor with Dual DDR3 DIMM socket up to 16GB DDR3 1333/ 1600MHz SDRAM with Non-ECC support and integrated HD Graphic controller.

The Intel® Q77 PCH manages SATA2.0/3.0 Ports. Furthermore, it supports others versatile I/O ports such as legacy four series ports, KB/Mouse interface, optional TPM function, eight USB ports, four PCI express x1 interface and two Intel® PCI express Gigabit LAN port. It offers a great solution for advance industrial application that requires superb display and processing performance.

Specifications

CPU Support
- Support Intel® LGA1155, 3rd generation Intel® Core™ processor
  Intel® Core™ i7- 3770 (4C/ 8M cache/ 3.4GHz/ Max. TDP 77W)
  Intel® Core™ i5- 3550S (4C/ 6M cache/ 3.0GHz/ Max. TDP 65W)
  Intel® Core™ i3- 3220 (2C/ 3M cache/ 2.4GHz/ Max. TDP 55W)
  Intel® Pentium® G2120 (2C/ 3M cache/ 1.6GHz/ Max. TDP 65W)

Main Memory
- Dual DDR3/ DIMMs, support 1333/1600MHz Non-ECC system memory up to 16GB

Platform Control Hub
- Intel® Q77 PCH chipset

BIOS
- AMI System BIOS
- Plug and play support
- Advanced Power Management and Advanced Configuration & Power Interface support

Display
- Intel® HD graphics with DX11 support up to two independent displays
- One PCI Express x16 Lane down to PICMG1.3 Golden finger
- Supports VGA and DVI / HDMI / Display port interface

Audio
- HDA interface with PIN Header

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 8.0
- Intel® 82574l Gigabit Ethernet,
- Support PXE boot from LAN, wake on LAN function

I/O Interface
- USB: 3.0 2 Ports through I/O bracket/ USB 2.0: 4 ports through backplane / 2 Port through 2.5mm JST connectors
- Six SATA Port: Four SATA 3.0/ Two SATA 2.0. (Support RAID0 / 1/ 5/ 10 and Intel® Rapid Storage Technology AHCI)
- One PCI express x16 / Four PCI express x1
- Two RJ45 Gigabit Ethernet LAN ports.
- Four series ports (COM2 Supports RS232/422/485, RI pin can supply 5V/12V voltage)
- Parallel port through box header
- Keyboard / Mouse interface
- HDA Interface through pin header for Audio function.
- On board pin header for IRDA
- TPM support(option)
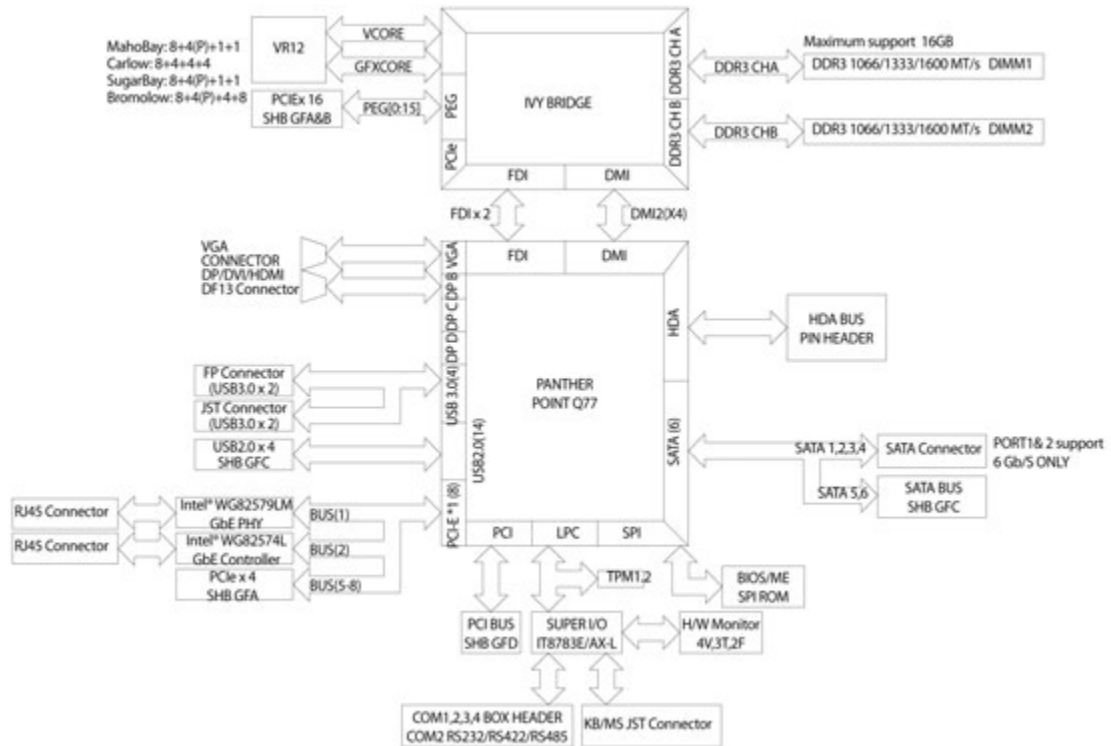
Block Diagram

Power Requirements

- +12V, +5V , +3.3V , +5VSB, +3.3V RTC power
- Power source form backplane through golden finger and AUX +12V
- Support ATX / AT Power supplies

Dimensions

- 338mm (W) x 126mm (L)

Environment

- Board Level Operating temperatures: 0°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
  10% to 90% (operating, non-condensing)
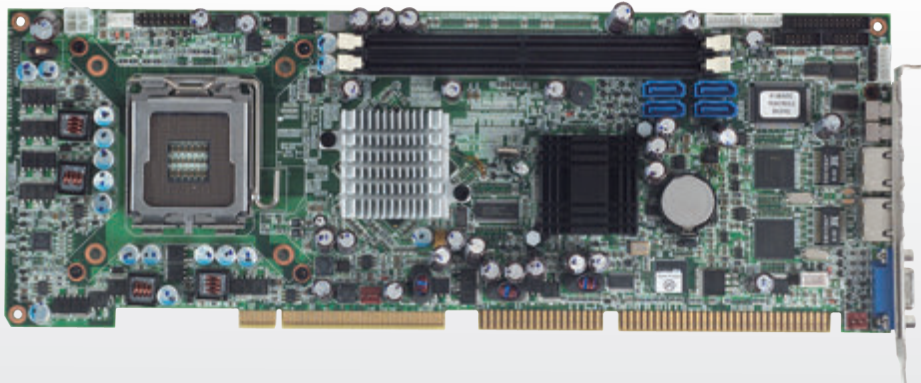 5% to 95% (non-operating, non-condensing)

Certifications

- Meet CE
- FCC Class A

Ordering Information

- **PEAK 886VL2 (P/N: 10P0886VL00X0)**

  PICMG 1.3 Full-size SBC, Intel® LGA1156 3rd Generation Core™ i7/
  i5/i3 Processors With Max 16GB, DDR3 DIMM, VGA integration, Intel®
  Gigabit Ethernet x2, USB3.0 x4, SATA3.0 x3.

PEAK 777VL2

**PICMG 1.0 Intel® Core™ 2 Quad/ Duo LGA775 with
Intel® G41/ ICH7 2x PCI Express Gigabit LAN/ SATA/ VGA/ USB2.0**

Main Features

- Single Socket LGA775, Support Intel® 45nm/65nm Core™ 2 Duo/ Core™ 2 Quad with 800/1066/1333 MHz FSB
- Intel® G41 and ICH7/ICH7R
- 2x DIMM, Support DDR3 Memory up to 4GB
- 2x Intel® 82574L PCI Express Gigabit Ethernet LANs
- 4x SATA, 8x USB 2.0, 2x COM Ports

Product Overview

PEAK 777VL2 is the PICMG 1.0 full-size Single Board Computer (SBC), which support Intel® 45nm Core™ 2 Duo/Quad technology. Featuring Intel® G41 and ICH7 chipsets, the PEAK 777VL2 support socket LGA775 of Intel® Core™ 2 Quad/Core™ 2 Duo/Celeron® processor with 800/1066/1333MHz FSB.

The Intel® G41 supports dual channel non-ECC DDR3 memory up to 4GB maximum with two DIMM slots and an integrated graphics controller. The South Bridge ICH7 manages SATA HDD ports, and parallel. Furthermore, it supports other versatile I/O ports such as two serial ports, six USB ports and two PCI Express Gigabit LAN ports.

Specifications

CPU Support
- Supports Intel® LGA775 Core™ 2 Quad/Core™ 2 Duo/Celeron® processors
- Intel® Embedded Processors List (Intel® Longevity CPU)
  Intel® Core™ 2 Quad Processor Q9400
  Intel® Core™ 2 Duo Processor E8400 & E7400 & E1500
  Intel® Celeron® 440 Processor
- 800/1066/1333 MHz System Bus

Main Memory
- 2x DIMM, support Dual channel SDRAM DDR3 memory up to 4GB, FSB 1066/800MHz
- * Note: Maximum 4GB. Actual memory size is dynamic based on the OS I/O resource allocation

Chipset
- Intel® G41 Graphics Memory Controller Hub (GMCH)
- Intel® ICH7/ICH7R I/O Controller Hub

BIOS
- Award System BIOS
- Plug & Play support
- 8M-bit flash ROM

On-board LAN
- 2x Intel® 82574L PCI Express Gigabit Ethernet LAN
- 2x RJ45 with LED
- Supports Boot From LAN (PXE)
- Supports Wake on LAN (When 5Vsb power available, LAN1 & LAN2)

Display
- Intel® G41 GMCH Integrated
- CRT: 1x DB15 VGA connector

I/O Interface
- USB 2.0: 6 ports, through 1x 6 JST
- Serial port: 2 ports, with 2x 5 box header (2.0mm), supports RS232 only
- Parallel port: 1 port, with 2x 13 box-header (2.0mm)
- PS2: 1x 6-pin JST connector (2.0mm) for KB/Mouse
- Fan: 4pin wafer for CPU; 3pin wafer for System; 3pin wafer for MCH
- 2pin header for SMB; 2pin header for reset; 2pin header for power on switch
- 2pin header for power LED; 2pin header for HDD LED

PICMG 1.0   NEXCOM

Block Diagram
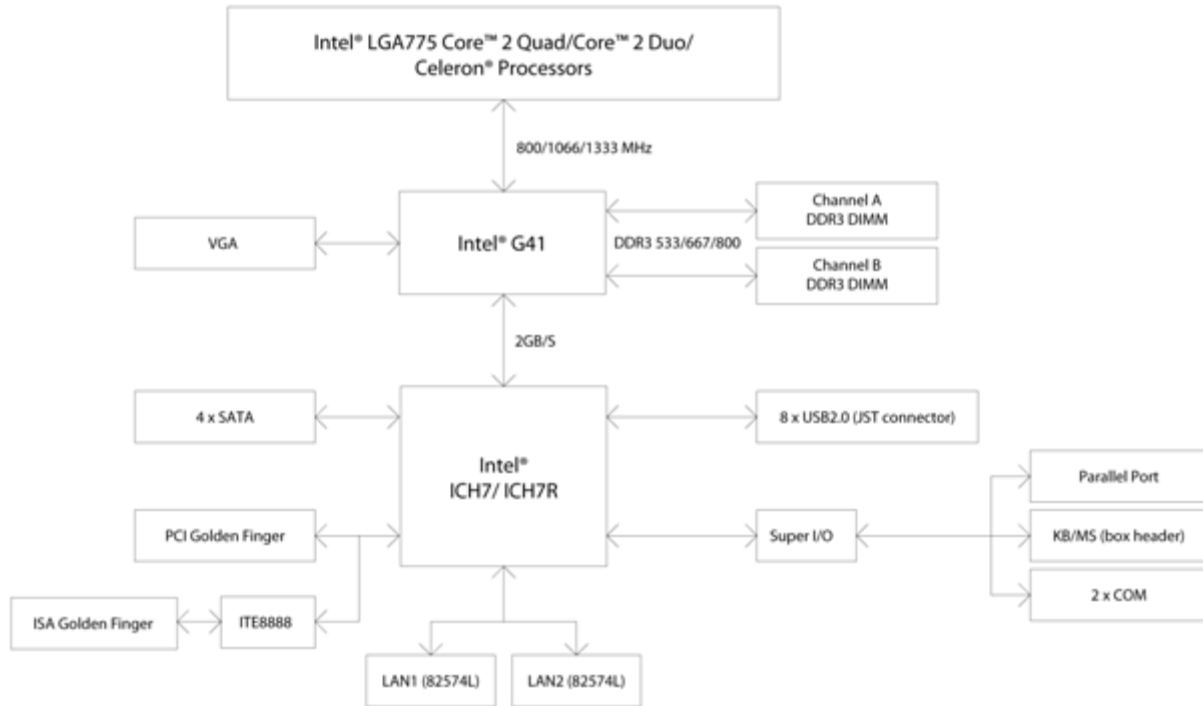
- I/O on bracket
  1x DB15 VGA connector
  2x RJ45 GbE port
  1x PS2
  1x IDE with 40-pin header
  1x Floppy with 34-pin header

Storage
- SATA: 4 ports

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds
- Tolerance 15% under room temperature 25°C

On-board RTC
- On-chip RTC with battery backup
- 1x External Li Battery
- Torrance less than 2sec (24 hours) under 25°C

ISA Support
- Through PCI to ISA Interface (ITE 8888)
- No ISA Master Devices but ISA DMA Devices
- Maximize ISA Slot support up to 3

System Monitor
- 5 voltage (For +1.1V, +1.5V, +3.3V, +5V, +12V, Vcore)
- 3 Temperatures (CPU, two external Temperature Sensor)
- 2 FANs speed (For CPU and System)

Power Input
- Power source from backplane through PCI/ISA Golden Finger
- Supports both AT or ATX Power Supplies (Automatically, BIOS default: AT Mode)
- When change to ATX, the BIOS default setting is as follow:
  POWER -SUPPLY TYPE--> [ATX]
  AUTO PWR-FAILURE RESUME -->[ON]

- +3.3V is Converted from +5V and not directly from Backplane or Power Supply
- +5Vsb (Standby power) is connected from Backplane through 3pins Connectors
- 4Pins +12V Power Input Connector

Dimensions
- 338.58mm (L) x 122mm (W) (13.3 " x 4.8 ")

Environment
- Board level operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: 10% to 90% (Non-condensing) Non-operating 5% to 95%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **PEAK 777VL (P/N: 10P0777VL00X0)**
  PICMG 1.0 Full-Size SBC, Intel® G41 Chipset, Intel® LGA775 Core™ 2 Quad/Core™ 2 Duo/Celeron® processor with 800/1066/1333MHz, Max. 4GB DDR3, DIMM, VGA integrated, 1xGbE, 4xSATA

- **PEAK 777VL2 (P/N: 10P0777VL01X0)**
  PICMG 1.0 Full-Size SBC, Intel® G41 Chipset, Intel® LGA775 Core™ 2 Quad/ Core™ 2 Duo/Celeron® processor with 800/1066/1333MHz, Max. 4GB DDR3 DIMM, VGA integrated , 2 x GbE, 4 x SATA Ports

PEAK 787VL2

Coming Soon

Main Features

- Scalable platform Intel® 3rd generation Core™ i7/i5/i3 processor, Ivy Bridge + Non-ECC
- Intel® B75 PCH chipset support PICMG 1.0 specification
- Support Dual channel DDR3 with NON-ECC DIMMs 1333/1600MHz up to 16GB

- Support PCI/ ISA, 4x USB3.0/ 4x USB2.0, 1x SATA3.0/ 3x SATA2.0 and GbE
- Display support for VGA, DVI, HDMI, DosplayPort (option)
- Dimension 338.58 x 126,39 mm2 (W x L)(8 Layers Single side)

Product Overview

The PEAK 787 is a PICMG1.0 Full-size single computing board featuring Intel® B75 PCH chipset supports Intel® 3rd generation Intel® Core™ processor with Dual DDR3 DIMM socket up to 16GB DDR3 1333/1600MHz SDRAM with Non-ECC support and integrated HD Graphic controller.

The Intel B75 PCH manages SATA2.0/3.0 Ports. Furthermore, it supports others versatile I/O ports such as legacy PCI & ISA interface , two series ports, KB/ Mouse interface, optional TPM function, eight USB ports, and two Intel PCI express Gigabit LAN port. It offers a great solution for advance industrial application that requires superb display and processing performance.

Specifications

CPU Support
- Support Intel® LGA1155, 3rd generation Intel® Core™ processor
- Intel® Core i7-3770 (4C/ 8M cache/ 3.4GHz/ Max. TDP 77W)
- Intel® Core i5-3550S (4C/ 6M cache/ 3.0GHz/ Max. TDP 65W)
- Intel® Core i3-3220 (2C/ 3M cache/ 2.4GHz/ Max. TDP 55W)
- Intel® Pentium G2120 (2C/ 3M cache/ 1.6GHz/ Max. TDP 65W)

Main Memory
- Dual DDR3/ DIMMs, support 1333/1600MHz Non-ECC system memory up to 16GB
- Platform Control Hub
- Intel® B75 PCH chipset

BIOS
- AMI System BIOS
- Plug and play support
- Advanced Power Management and Advanced Configuration & Power Interface support

Display
- Intel® HD graphics with DX11 support up to two independent displays
- Supports VGA and DVI / HDMI / Display port interface. (option)

Audio
- HDA interface with PIN Header.

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 8.0 (option)
- Intel® 82574l Gigabit Ethernet,
- Support PXE boot from LAN, wake on LAN function

I/O Interface
- USB: 3.0 2 Ports through I/O bracket / 2 Port through JST Connector , USB 2.0: 4 ports through 2.5mm JST connectors.
- Four SATA Port: One SATA 3.0 / Three SATA 2.0. (Support RAID0 / 1/ 5/ 10 and Intel Rapid Storage Technology AHCI, option)
- Four PCI interface / Three ISA interface (Through ITE8888).
- Two RJ45 Gigabit Ethernet LAN ports.
- Four series ports (COM2 Supports RS232/422/485, RI pin can supply 5V/12V voltage)
- Parallel port through box header.
- Keyboard / Mouse interface
- HDA Interface through pin header for Audio function.(option)
- On board pin header for IRDA.
- TPM support(option)
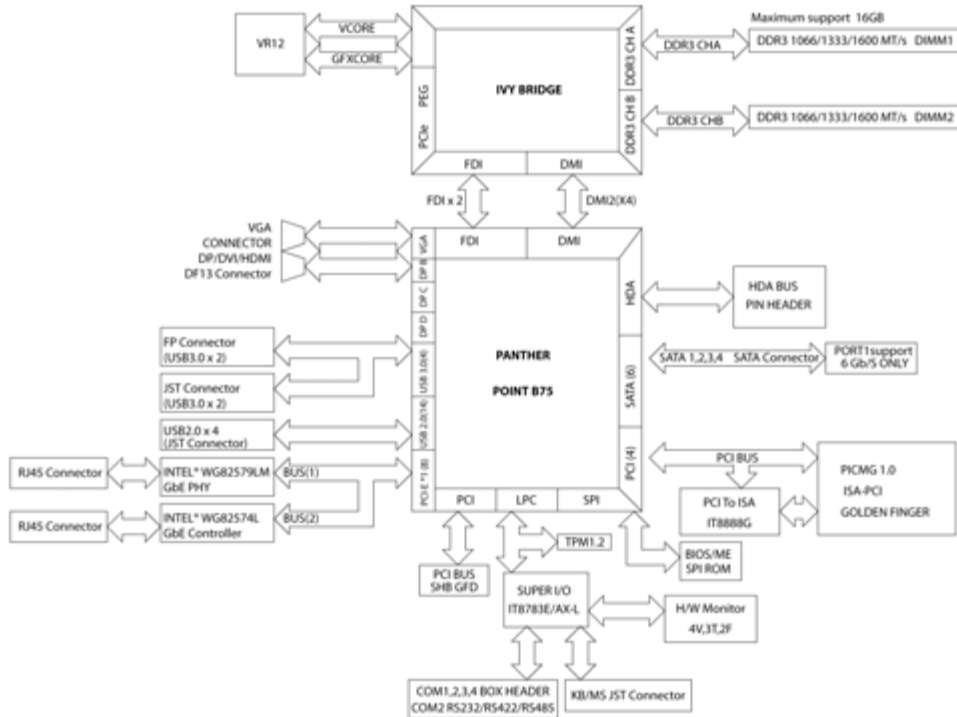
Block Diagram

Power Requirements
- +12V, +5V , +3.3V , +5VSB, +3.3V RTC power
- Power source form backplane through golden finger and AUX +12V
- Support ATX / AT Power supplies

Dimensions
- 338mm (W) x 126mm (L)

Environment
- Board Level Operating temperatures: 0°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
  10% to 90% (operating, non-condensing)
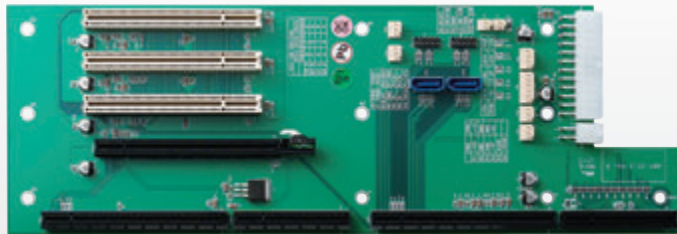 5% to 95% (non-operating, non-condensing)

Certifications
- Meet CE
- FCC Class A

Ordering Information

- **PEAK787 (P/N:TBD)**
  PICMG 1.0 Full-Size SBC, Intel® B75 Chipset, I Intel® 3rd generation Core™ i7/i5/i3 processor with DDR3 DIMM 1333/1600MHz up to 16G, VGA integrated, 2xGbE, 4xSATA

NBP 0513

Main Features

- One PCIe x16 on PICMG 1.3 backplane
- Size : 317mm(W) x 110mm(L)
- Support ATX & BTX power supply

Specifications

System Architecture
- For 5-Slot chassis

Dimensions
- 317mm(W) x 110mm(L)

Slot
- PICMG1.3 (SBC Slot), One PCIe x 16 , Three PCI

Power Input
- 1x 24pin power connector
- 1x 4pin auxiliary power connector

Environment
- Operating Temperature: 0°C to 60°C (32°F~140°F)
- Storage Temperature: -20°C to 60°C (-4°F~140°F)
- Operating Humidity: 10%~90% (Non-condensing)
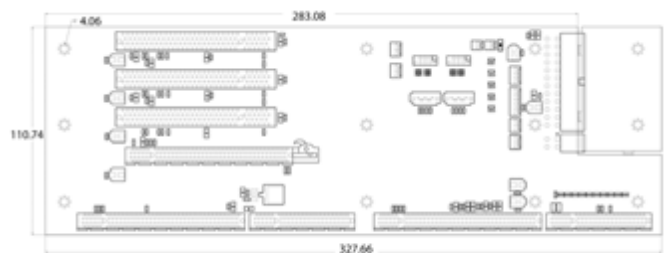
Certifications
- CE approval
- FCC Class A

Ordering Information

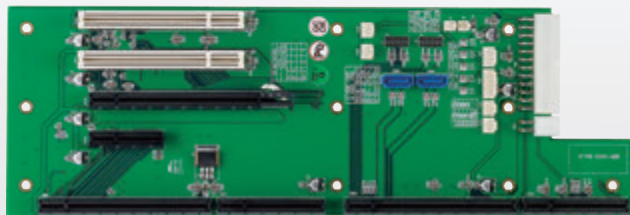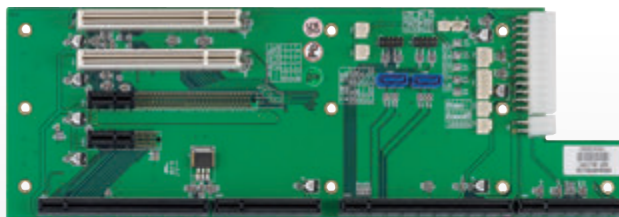- **NBP-0513 (P/N:79N0051300X00) RoHS Compliant**
  PICMG 1.3 5 Slot Backplane for 5Slot chassis w/SBC slot, 1 PCIe Slot, 3 PCI slot.

Dimension Drawing

NBP 0522

PCIMG 1.3 w/ SBC Slot, 1x PCIe x1, 1 PCIe x1, and 2x PCI slot

Main Features

- Designed for PEAK870 and PEAK872
- Support 1 PCIe x16 /1, 1 PCIe x4/ 1 and 1x Full-sized PCI Add-on card
- Compatible with PCIMG 1.3 board

Specifications

System Architecture
- For 5-slot chassis

Dimensions
- 317.5mm(W) x 110.7mm(L)

Slots
- PICMG 1.3 (SBC slot)
- 1x PCIe x16 (default as PCIe x1)
- 1x PCIe x4 (default as PCIe x1)
- 2x PCI 32bit/33MHz

Power Input
- 1x 24pin Power connector

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:
  Operating 10% to 90%, non-condensing
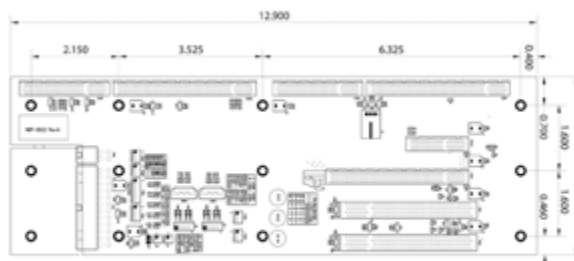 Non-operating 5% to 95%, non-condensing

Certifications
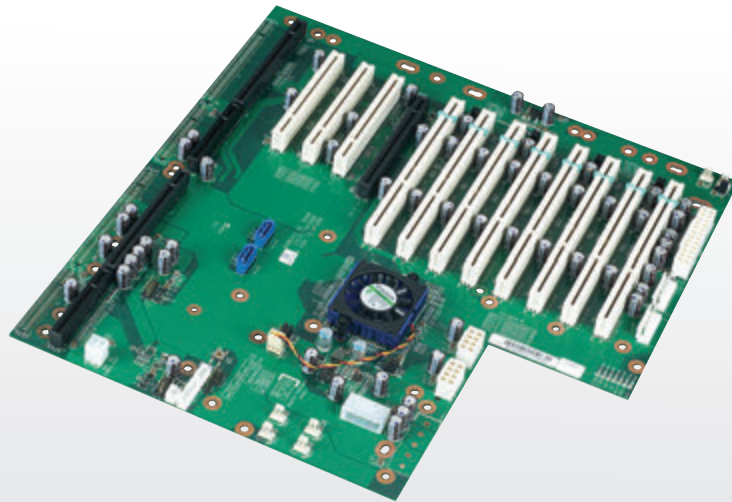- CE approval
- FCC Class A

Ordering Information

- **NBP 0522 (P/N: 79N0052200X00)**
  PCIMG 1.3 w/ SBC slot, 1x PCIe x1, 1 PCIe x1, and 2x PCI slot

Dimension Drawing

NBP 14111

Main Features

- Greater Powers Delivery Capability, Supports High Performance System Host Board and Add-on Card
- Follows PICMG 1.3 Mount Holes and Compatible with GuangHsing's 4U Chassis

- Supports 8x PCI-X 64-bit/66 MHz with Intel® PCI Express to PCI-X Bridge
- Supports ATX/BTX Power Supply
- Compliance with PEAK 870VL2, PEAK 872VL2 and PEAK 8920VL2

Specifications

System Architecture
- 14-slot backplane

Dimensions
- 328mm (L) x 317mm (W) (12.91" x 12.48")

Slots
- 1x PICMG 1.3 (SHB slot)
- 3x PCI 32bit/33Mhz
- 8x PCI-X 64bit/66Mhz
- 1x PCIe x16

I/O Interface
- 4x USB 2.0 with 2 x 9 pin-header
- 2x SATA
- 1x IPMI
- 1x SMBUS
- 1x Wake-up
- 6x 3pin FAN
- 1x 6 pin JST NEXCOM Defined front I/O connector for Power LED Connector/Power Switch/Reset Button connector

Power Input
- 1x 24pin power connector
- 2x 8pin 12V AUX power connector
- 2x 6pin 3.3V power connector for PCI-X add-on
- 1x Terminal Block (Reserved by Manufacturing)

Power Output
- 1x 4pins 12V AUX power connector to SBC/SHB
- 1x 4pins power connector for system fan

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C

- Relative humidity:
  Operating 10% to 90%, non-condensing
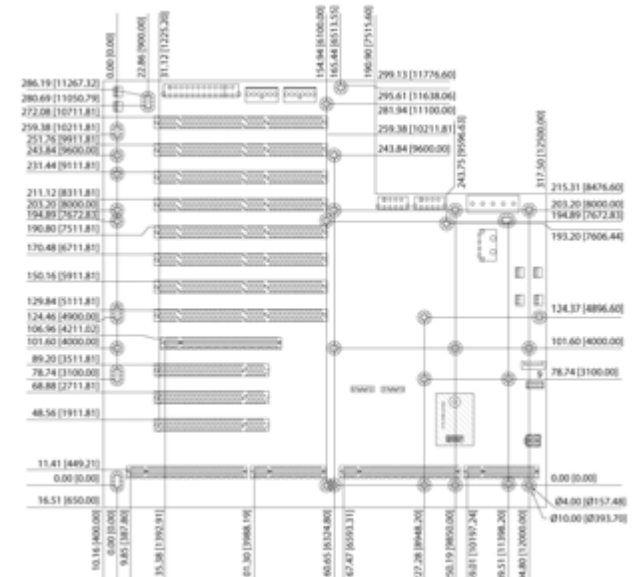 Non-operating 5% to 95%, non-condensing

Certifications
- CE approval
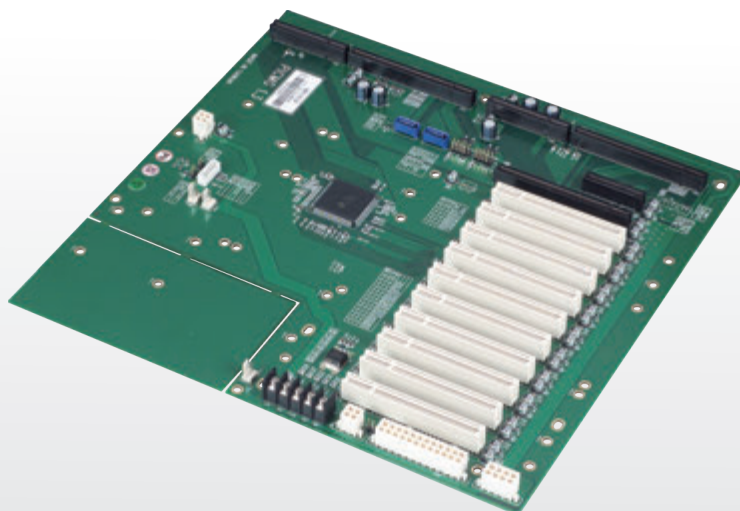- FCC Class A

Ordering Information

- **NBP 14111 (P/N: 10N01411100X0) RoHS Compliant**
  PICMG 1.3 14-slot backplane for 4U chassis w/ 1 SHB slot, 3x PCI slots, 8 x PCI-X slots, 1x PCIe x16

Dimension Drawing

NBP 14210

**PICMG 1.3 14-Slot Backplane for 4U Chassis with
1 SHB Slot, 10x PCI Slots, 1 PCIe x16, 1 PCIe x4**

Main Features

- Follows PICMG 1.3 Mount Holes and Compatible with GuangHsing's 4U Chassis
- 10x PCI 32-bit/33MHz Supports 7 x PCI Full-sized Add-on Card
- Supports ATX/BTX Power Supply
- Compliance with PEAK 870VL2

Specifications

System Architecture
- 14-slot backplane

Dimensions
- 328mm (L) x 317mm (W) (12.91 " x 12.48")

Slots
- 1x PICMG 1.3 (SHB slot)
- 10x PCI 32bit/33Mhz
- 1x PCIe x16
- 1x PCIe x4

I/O Interface
- 4x USB 2.0 with 2 x 9 pin-header
- 2x SATA
- 3x 3-pins FAN
- 1x 6 Pin JST NEXCOM Defined Front I/O Connector for Power LED Connector/Power Switch/Reset Button connector

Power Input
- 1x 24-pin power connector
- 1x 8-pin 12V AUX power connector
- 1x 4-pin 12V AUX power connector

Power Output
- 1x 4-pins 12V AUX power connector to SBC/SHB

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:
  Operating 10% to 90%, non-condensing
  Non-operating 5% to 95%, non-condensing
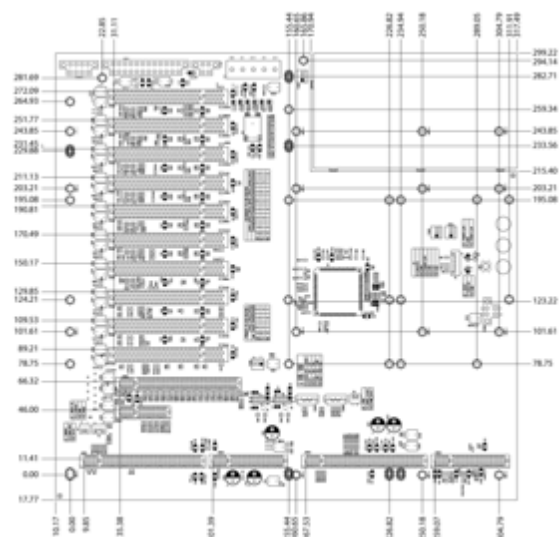
Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 14210 (P/N: 79N1421000X00)**
  PICMG 1.3 14-slot backplane for 4U chassis w/ 1 SHB slot, 10 PCI slots, 1 PCIe x16, 1 PCIe x4

Dimension Drawing

NBP 14534
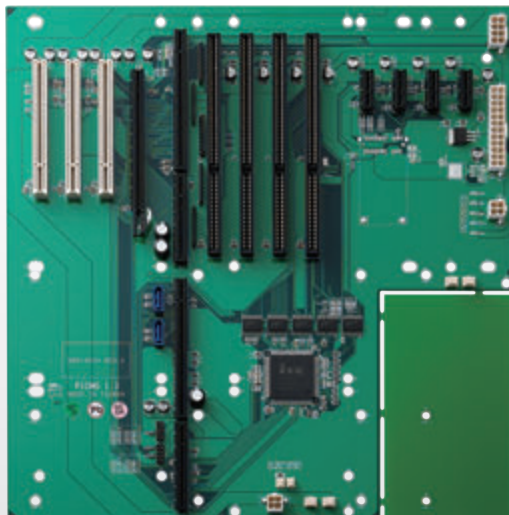
Main Features

- 4 ISA slots on PICMG 1.3 backplane
- Size : 317mm(W) x 328mm(L)

- Support ATX & BTX power supply

Specifications

System Architecture
- For 13-Slot chassis

Dimensions
- 317mm(W) x 328mm(L)

Slot
- PICMG1.3 (SBC Slot), Three PCI , Four ISA , Four PCIe x1

Power Input
- 1x 24pin power connector
- 1x 8pin auxiliary power connector
- 1x 4pin auxiliary power connector

Power Output
- 1x 4pins 12V AUX power connector to SBC/SHB
- 1x 4pins power connector for system fan

Environment
- Operating Temperature: 0°C~60°C (32°F~140°F)
- Storage Temperature: -20°C~60°C (-4°F~140°F)
- Operating Humidity: 10%~90% (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 14534 (P/N: 79N1453400X00) RoHS Compliant**
  PICMG 1.3 13 Slot Backplane for 4U chassis w/SBC slot, 4 PCIe slot
  3 PCI slot, 4 ISA Slot, 1 Mini-PCIe (Reserved)

Dimension Drawing
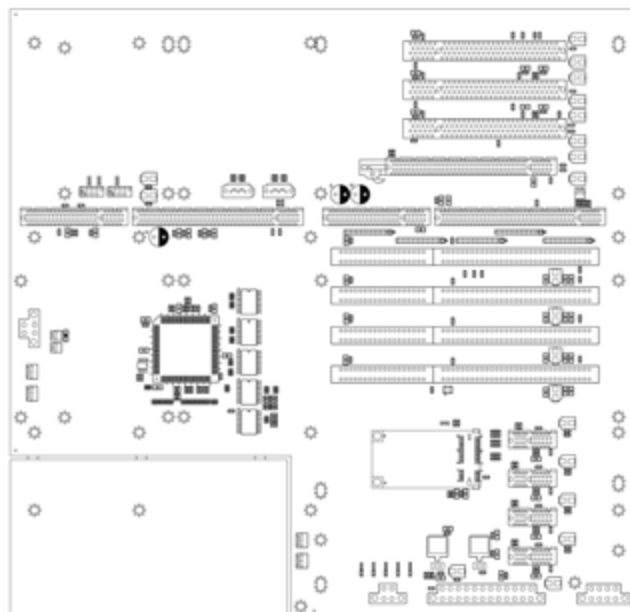
NBP 14570-BX

PICMG 1.3 14-slot Backplane for 4U Chassis with 1 x SHB, 7 x PCI Slots, 4 x PCIe x1, 1 x PCIe x16
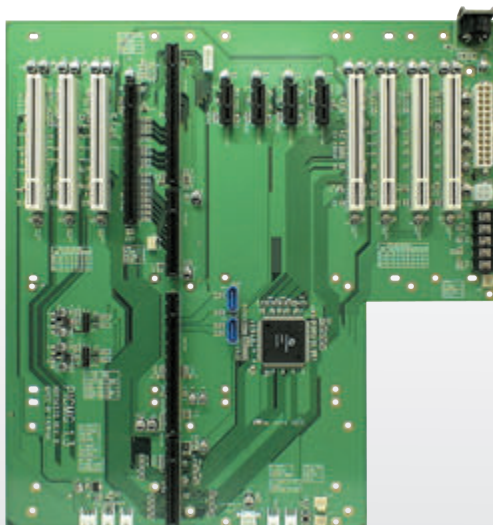
Main Features

- 1x PICMG 1.3 (SHB Slot)/7 x PCI 32-bit/33MHz
- 1x PCIe x16 Lane/ 4x PCIe x1 Lane

- Supports ATX Power Supply

Specifications

System Architecture
- For 14-slot Chassis

Dimensions
- 317mm (L) x 328mm (W) (12.4" x 12.9")

Slots
- 1x PICMG 1.3 (SHB slot)
- 7x PCI 32bit/33Mhz
- 1x PCIe x16
- 4x PCIe x1

I/O Interface
- 4x USB 2.0 with 2 x 9 pin-header
- 2x SATA
- 2x 3pin fan
- 1x 6 Pin JST NEXCOM defined front I/O connector for power LED connector/ power switch/ reset button connector

Power Input
- 1x 24pin power connector
- 1x Terminal Block

Power Output
- 1x 4pin 12V AUX power connector to SBC/SHB

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 14570-BX (P/N: 79N1457001X00)**
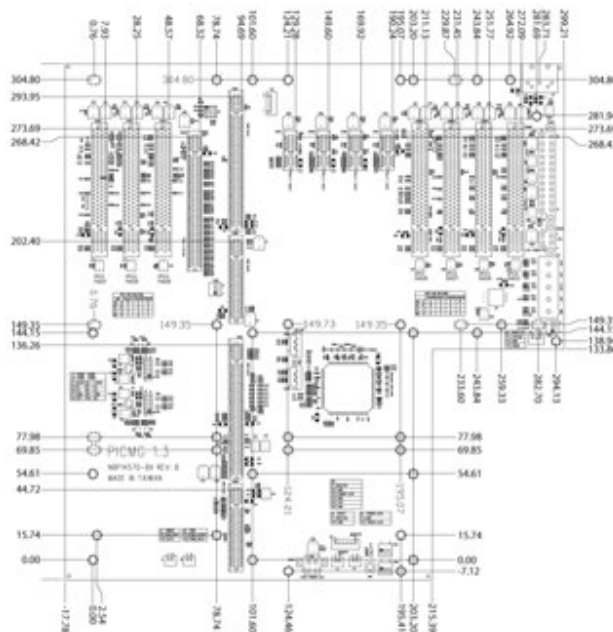 PICMG 1.3 14-slot backplane for 4U chassis w/ 1 SHB slot, 7 PCI slots, 1 PCIe x16, 4 PCIe x1

Dimension Drawing

NBP 20016

PICMG 1.3 20-Slot Backplane for 6U Chassis with
1x SHB Slot, 16x PCI-X Slots
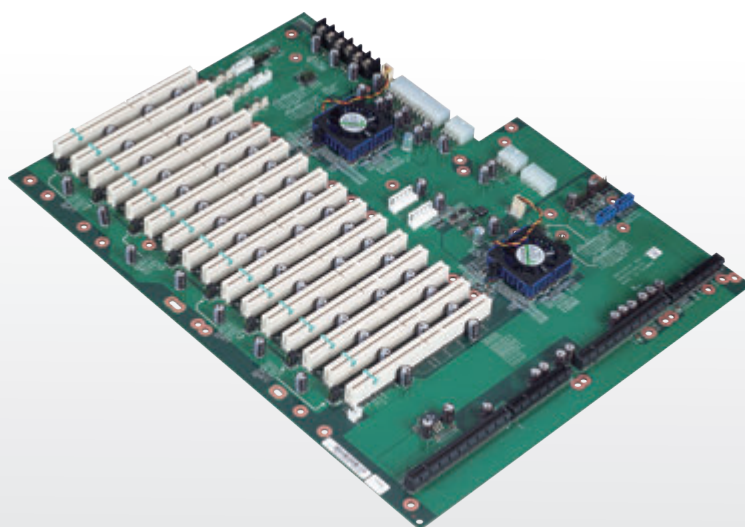
Main Features

- Deliver Greater Power Capacity to Supports High Performance System Host Board and Add-on Card
- Follows PICMG 1.3 Mount Holes and Compatible with GuangHsing's 4U Chassis
- Supports 16 x PCI-X 64-bit/66MHz with Two Intel® PCI Express to PCI-X Bridge
- Supports ATX/BTX Power Supply

Specifications

System Architecture
- 20-slot backplane

Dimensions
- 331mm (L) x 84mm (W) (13.03" x 3.30")

Slots
- 1x PICMG 1.3 (SHB slot)
- 16x PCI-X 64bit/66Mhz

I/O Interface
- 2x SATA
- 1x IPMI
- 1x SMBUS
- 1x Wake-up
- 6x 3pins FAN
- 1x 6pin JST NEXCOM Defined front I/O connector for Power LED Connector/Power Switch/Reset Button connector
- 4x USB 2.0

Power Input
- 1x 24pins power connector
- 2x 8pins 12V AUX power connector
- 2x 6pins 3.3V power connector for PCI-X add-on
- 1x Terminal Block (Reserved)

Power Output
- 1x 4pins power connector for FAN

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:
  Operating 10% to 90%, non-condensing
  Non-operating 5% to 95%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 20016 (P/N: 10N02001600X0)**
  PICMG 1.3 20-slot backplane for 6U chassis w/ 1 SHB slot, 16 PCI-X slots

NEXCOM

NBP 202A6

Main Features

- Deliver Greater Power Capacity to support High Performance System Host Board and Add-on Card
- Follow PICMG 1.3 Mount Holes and Compatible with GuangHsing's 4U Chassis

- Support 16 x PCI, 1x PCIe x4 and 1x PCIe x16
- Support ATX/BTX Power Supply

Specifications

System Architecture
- 20-slot backplane

Dimensions
- 331mm (L) x 84mm (W)

Slots
- PICMG 1.3 (SBC slot)
- 1x PCIe x16
- 1x PCIe x4
- 16x PCI 32bit/33MHz

I/O Interface
- 2x SATA
- 4x 3-pin FAN

Power Input
- 1x 24-pin Power connector
- 1x 8-pin 12V AUX Power connector

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:
  Operating 10% to 90%, non-condensing
  Non-operating 5% to 95%, non-condensing
- Non-operating 5% to 95%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 202A6 (P/N: 79N202A600X00)**
  PCIMG 1.3 20-slot backplane for 6U chassis w/ 1 SHB slot, 1x PCIe x16, 1 PCIe x4, and 16x PCI slot

NBP 2U040

Main Features

- Designed for NEXCOM PBOX 240P with User Friendly Cabling
- Supports 3 Full-sized and 1 Half-sized PCI Add-on Card
- Compatible with GuangHsing's 2U PICMG 1.3 Chassis

Specifications

System Architecture
- 2U (Butterfly) backplane

Dimensions
- 331mm (L) x 84mm (W) (13.0" x 3.3")

Slots
- 1x PICMG 1.3 (SHB slot)
- 4x PCI 32bit/33Mhz (3 x Full-Sized/1 x Half-Sized supported)

I/O Interface
- 4x USB 2.0 with 2x 9pin header
- 2x SATA
- 1x IPMI
- 1x SMBUS
- 1x Wake-up
- 4x 3pins FAN
- 1x 6 pin JST NEXCOM Defined front I/O Connector in 90°C, for Power LED Connector/Power Switch/Reset Button connector

Power Input
- 1x 24pins power connector

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:
  Operating 10% to 90%, non-condensing
  Non-operating 5% to 95%, non-condensing
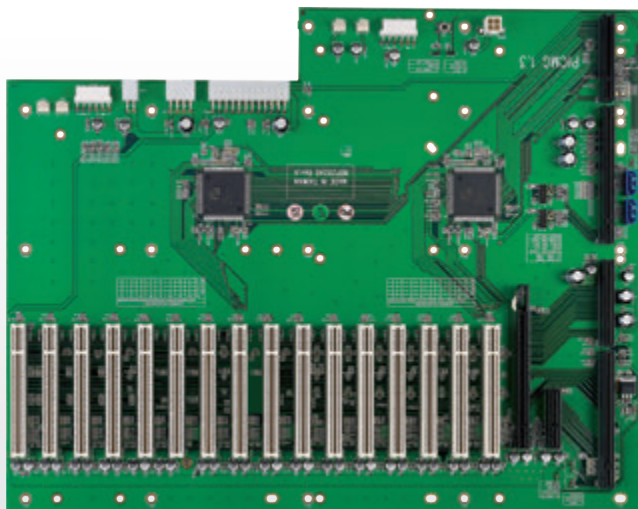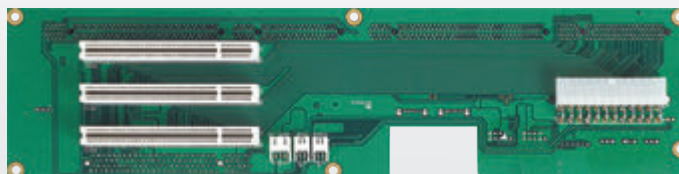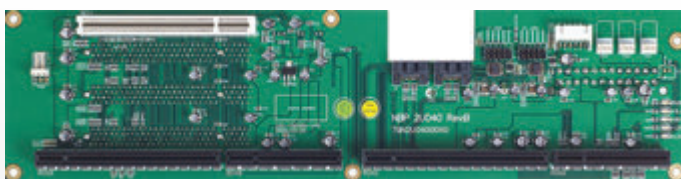
Certifications
- CE approval
- FCC class A

Ordering Information

- **NBP 2U040 (P/N: 79N2U04000X00)**
  PICMG 1.3 butterfly backplane for 2U chassis w/ 1 SHB slot, 4 PCI slots

Dimension Drawing

NEXCOM

NBP 2U220
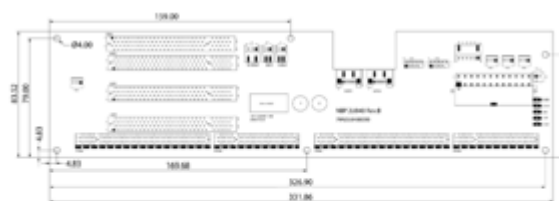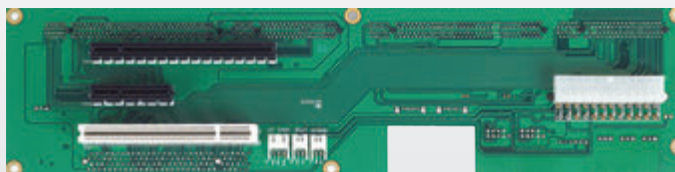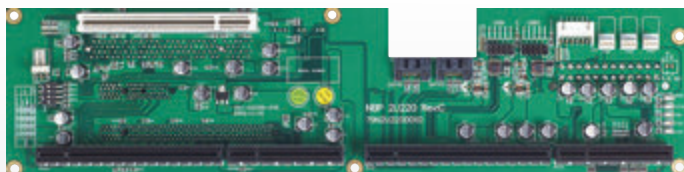
Main Features

• Designed for NEXCOM PBOX 240P with User Friendly Cabling
• Supports 1 PCIe x16 and 1x Full-sized PCIe x4 Lane

• Compatible with GuangHsing's 2U PICMG 1.3 Chassis

Specifications

System Architecture
• 2U (Butterfly) backplane

Dimensions
• 331mm (L) x 84mm (W) (13.0" x 3.3")

Slots
• 1x PICMG 1.3 (SHB slot)
• 2x PCI 32bit/33Mhz (1 x Full-Sized/1 x Half-Sized supported)
• 1x PCIe x16
• 1x PCIe x4

I/O Interface
• 4x USB 2.0 with 2 x 9 pin-header
• 2x SATA
• 1x IPMI
• 1x SMBUS
• 1x Wake-up
• 4x 3pins FAN
• 1x 6pin JST NEXCOM Defined front I/O connector in 90°C,
  for Power LED Connector/Power Switch/Reset Button connector

Power Input
• 1x 24pin power connector

Environment
• Operating temperature: 0°C to 60°C
• Storage temperature: -20°C to 80°C
• Relative humidity:
  Operating 10% to 90%, non-condensing
  Non-operating 5% to 95%, non-condensing

Certifications
• CE approval
• FCC Class A

Ordering Information

• **NBP 2U220 (P/N: 79N2U22000X00) RoHS Compliant**
  PICMG 1.3 butterfly backplane for 2U chassis w/ 1 SHB slot, 2 PCI slots, 1 PCIe x16 slot, 1 PCIe x4 slots.

Dimension Drawing
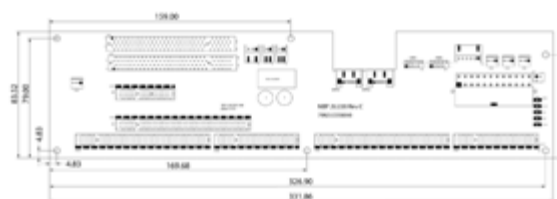
NBP 0807P

PICMG 1.0 8-Slot PICMG/ ISA/ PCI Backplane
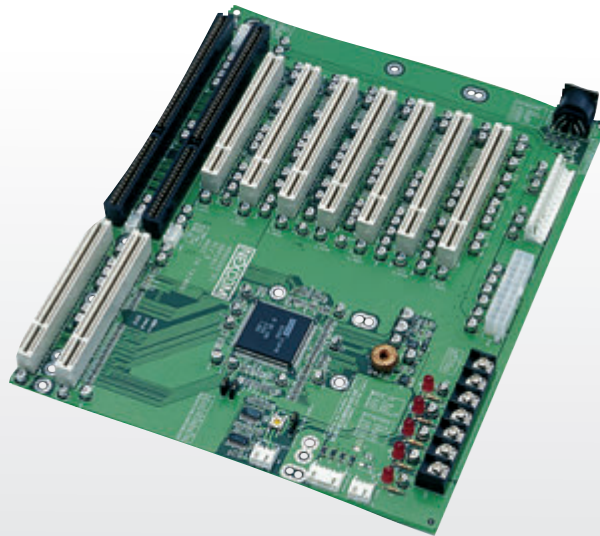
Main Features

- 7x PCI/ 2x PICMG Slots
- Size: 210mm x 260mm

- Supports ATX or AT Power Supply

Specifications

System Architecture
- For 8-slot Chassis

Dimension
- 210mm (L) x 260mm (W) (8.2 " x 10.2 ")

Slot
- PICMG 1.0 (SBC slot)
- 7x PCI 32bit/33MHz

Power Input
- 1x 20pin power connector
- 1x 12pin power connector
- 1x Terminal Block

Environment
- Operating temperature: 0 °C to 60 °C
- Storage temperature: -20 °C to 80 °C
- Relative humidity: 10% to 90% (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 0807P(LF) (P/N: 10N00807P00X0) RoHS Compliant**
  PICMG 1.0 8-slot backplane for wall-mount shoe box w/ SBC slot, 7 PCI slots

Dimension Drawing

NEXCOM

NBP 1407P

Main Features

- 7x PCI/ 2x PICMG/PICMG/ 5x ISA Slots
- Size: 315mm x 310mm

- Supports ATX Power Supply

Specifications

System Architecture
- For 14-Slot Chassis

Dimensions
- 315mm (L) x 310mm (W) (12.8" x 12.2")

Slots
- PICMG1.0 (SBC Slot), 7x PCI, 5x ISA

Power Input
- 1x 20pin power connector
- 1x Terminal Block

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)

Certification
- CE approval
- FCC Class A

Ordering Information

- **NBP 1407P (LF) (P/N: 79N1407P00X00)**
  PICMG 1.0 14-slot backplane for 4U chassis w/ SBC slot, 7 PCI slots, 5 ISA slots.

Dimension Drawing

NBP 1412P

Main Features

- 12x PCI/ 3x PICMG Slots
- Size: 315mm x 260mm

- Supports ATX or AT Power Supply

Specifications

System Architecture
- For 14-slot Chassis

Dimension
- 315mm (L) x 260mm (W) (12.4" x 10.2")

Slots
- PICMG 1.0 (SBC Slot)
- 12x PCI slots

Power Input
- 1x 20pin power connector
- 1x NEXCOM peripheral power connector
- 1x Terminal Block

Environment
- Operating temperatures: 0°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NBP 1412P(LF) (P/N: 10N01412P00X0)**
  PICMG 1.0 14-slot backplane for 4U chassis w/ SBC slot, 12 PCI slots

Dimension Drawing
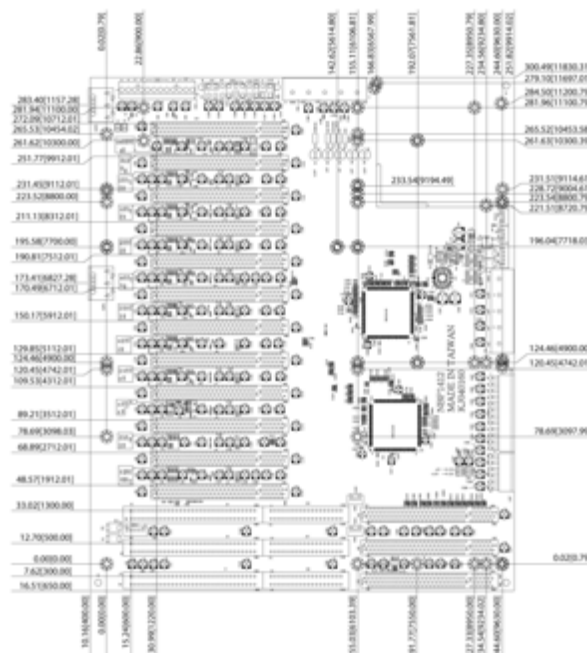
NBP 2027P
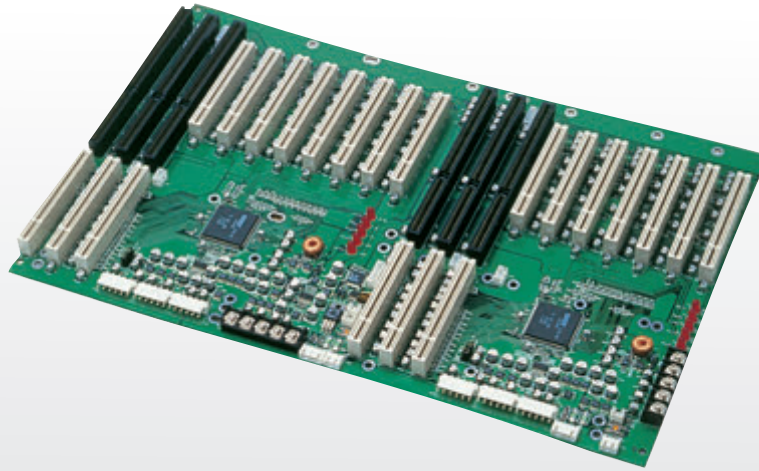
Main Features

- Two Segments Backplane
- 7 PCI Slots Support in Each Segment

- ATX/AT Power Supply

Specifications

System Architecture
- Two segments backplane for 20-slot chassis

Dimensions
- 415mm (L) x 267mm (W) (16.3" x 10.5")

Slots
- Each segment with PICMG 1.0 (SBC slot) and 7 x PCI 32-bit/33MHz

Power Input
- 1x NEXCOM peripheral power connector/each segment
- 1x Terminal Block/each segment

Environment
- Operating temperature: 0 °C to 60 °C
- Storage temperature: -20 °C to 80 °C
- Relative humidity: 10% to 90% (Non-condensing)

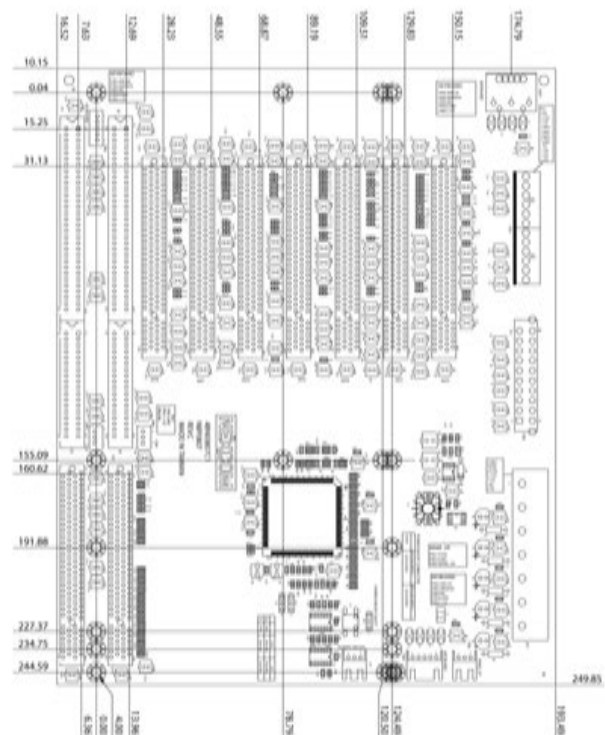**Certifications**
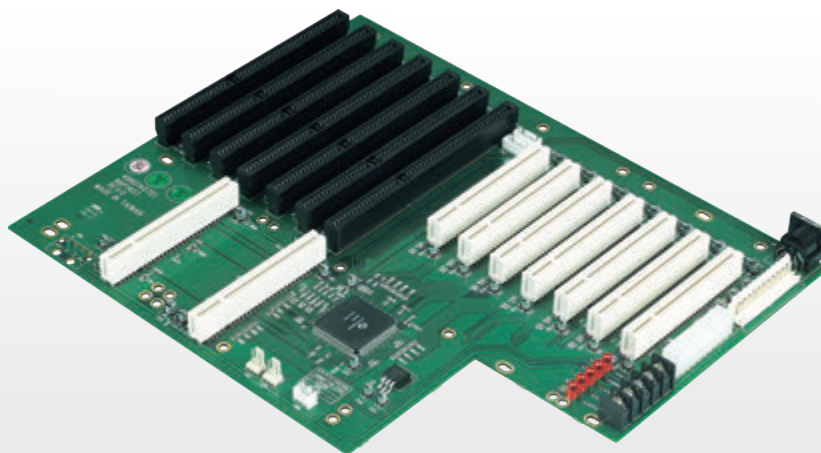- CE approval
- FCC Class A

Ordering Information

- **NBP 2027P(LF) (P/N: 10N02027P00X0)**

  PICMG 1.0 two segment 20-slot backplane For 6U chassis w/ SBC slot, 7 PCI slots for each segment

Dimension Drawing

ICES 170

ETX Module with Intel® Atom™ N270 1.6GHz DDR2,
ISA/ PCI/ IDE Interface
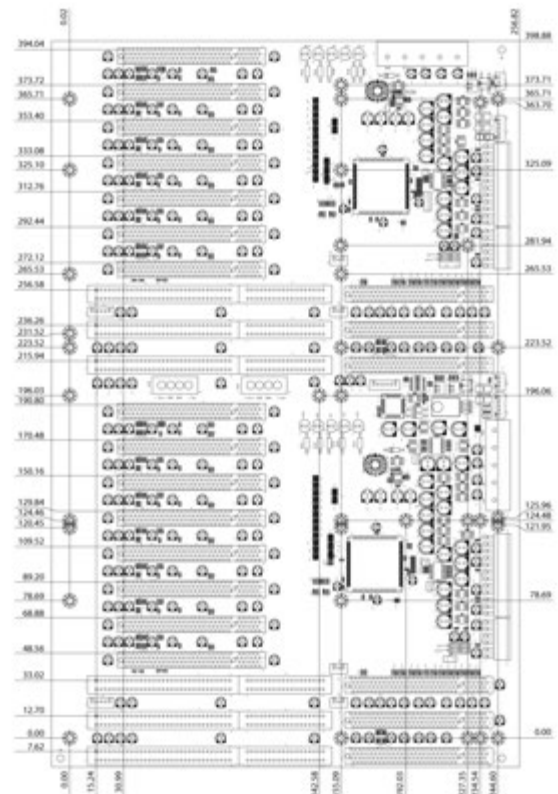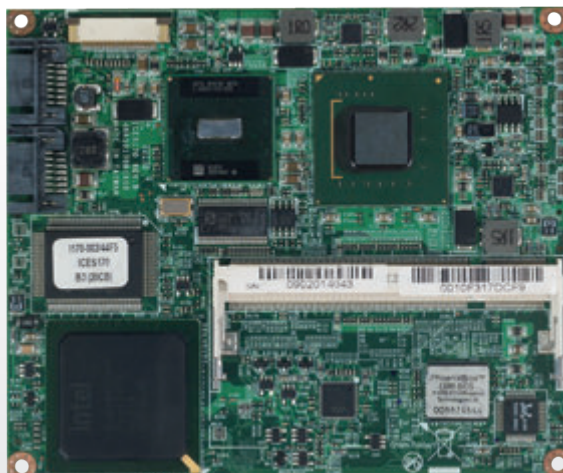
Main Features

- Low Power ETX CPU Module
- On-board Intel® Atom™ N270 Processor, 1.6GHz
- Intel® 945GSE Chipset
- Support DDR2 400/ 533 SO-DIMM up to 2GB

- Realtek RTL8111C Gbe LAN Controller with 10/ 100 Interface
- High Definition Audio ALC888 with AC 97 Interface
- Support LVDS Interface
- Support SDVO Interface

Specifications

CPU Support
- Onboard Intel® Atom™ N270 1.6GHz processor

Chipset
- Intel® 945GSE and ICH7M chipsets

Main Memory
- Support one un-buffered non-ECC DDR2 SO-DIMM 400/533 up to 2GB

BIOS
- Award system BIOS
- Advanced Power Management support
- 8M SPI ROM

Display
- Intel® 945GSE integrated graphics solution with dynamic video memory allocation
- Analog monitor resolution up to 1600 x 1200 @ 85Hz
- Support single or dual channel 18-bit LVDS panel
- SDVO signal down to connector X6

On-board Super I/O
- Winbond W83627

On-board LAN
- Realtek RTL8111C LAN controller
- Support PXE LAN boot function
- 10/100 Ethernet signals down to I/O board

On-board Audio
- High Definition Audio Realtek ALC888
- Support Mic-in/ Line-in/ Line-out

Other Interfaces
- On-board 2x SATA
- On-board IDE controller for secondary IDE interface
- On-board PCI to ISA controller to support ISA interface

ETX Connector
- X 1 connector
  4x 32bit/ 33MHz PCI
  Mic-in/ Line-in/ Line-out
  4x USB 2.0
- X 2 connector
  ISA interface
- X 3 connector
  1x VGA
  1x LVDS
  1x Parallel port or 1 x Floppy
  1x KB/Mouse
  2x Serial ports
  1x IrDA
- X 4 connector
  2x IDE
  1x 10/100 LAN interface
  SM bus or I²C bus

Power Requirements
- +5V and +5VSB (for ATX)
- Support both AT and ATX power mode

266   ETX

NEXCOM

Block Diagram
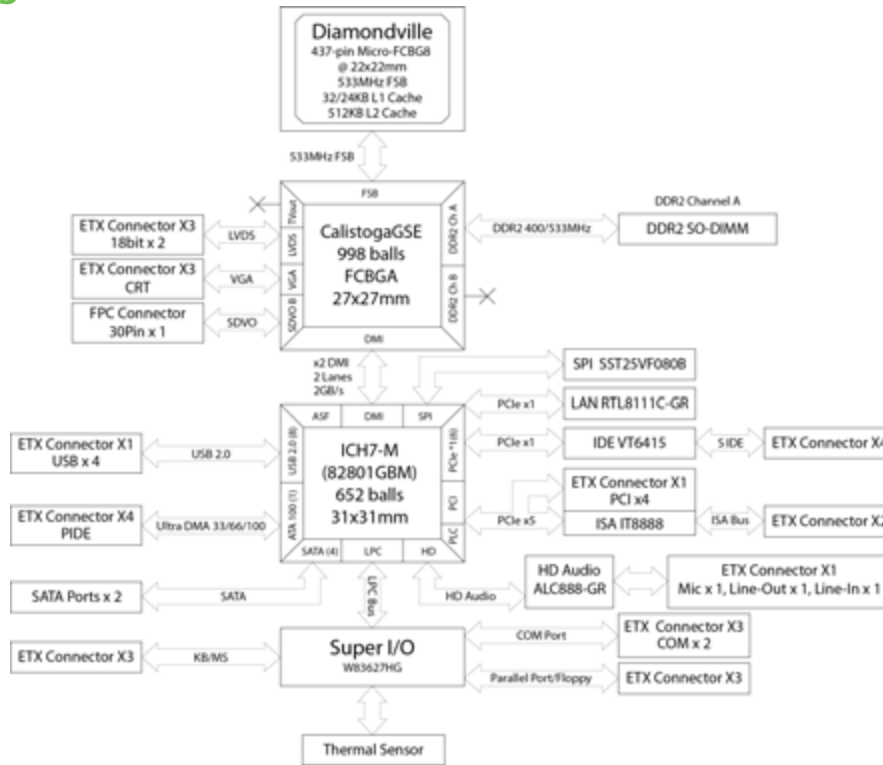
Dimensions
- 95mm (W) x 114mm (L)

Environment
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
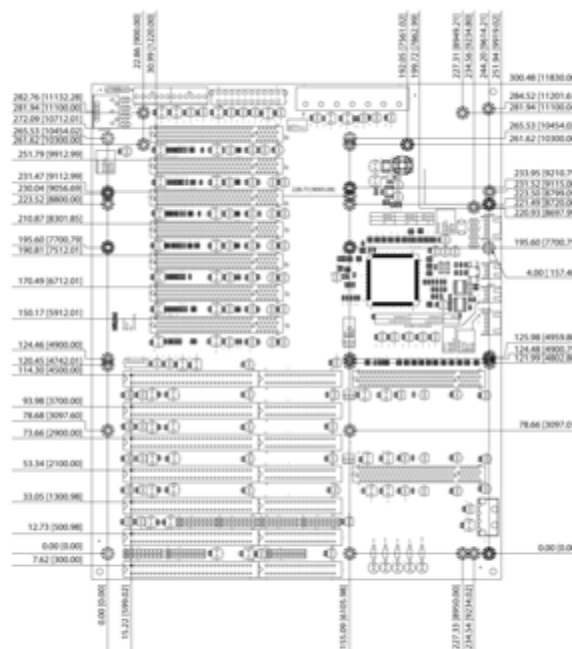- Relative humidity:
  Operating 10% - 90%, non-condensing
  Non-operating 5% - 95% (non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **ICES 170 (P/N: 10K00017000X0)**
  ETX Module with Intel® Atom™ N270/ 945GSE/ DDR2, audio/ COM/ LPT/ USB 2.0/ LAN interface

- **ICEB 3205 (P/N: 10KB0320503X0)**
  ETX evaluation board with PCI/ PC104/ CF/ IDE/ COM/ USB/ LVDS/ VGA/ LAN

ICES 253

COM Express Type 2 Compact Module with Intel® Atom™ D525
1.8GHz DDR2/ PCIe/ PCI/ IDE/ GbE/ LVDS/ Audio Interface
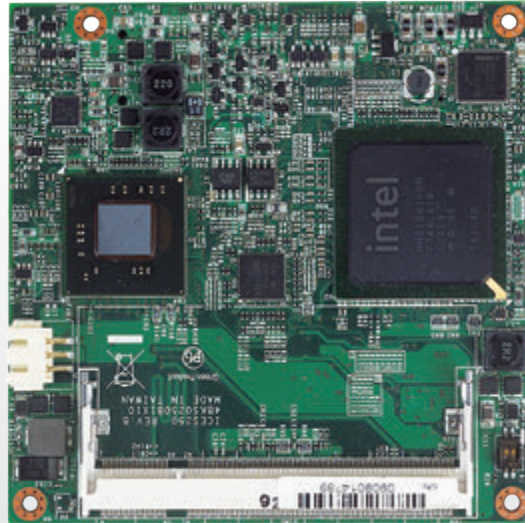
Main Features

- Low Power COM Express CPU Module
- Onboard Intel® Atom™ Dual Core D525 Processor, 1.8GHz
- Intel® ICH8M Chipset
- Support DDR2 667 and 800 SO-DIMM up to 2GB

- Intel® PCI Express GbE 82574L
- Support 3 x SATA, 1 x IDE, 8 x USB2.0 for fast peripherals
- Micro COM Express Type II supports up to 5 Express lanes, 32 bit PCI interface and one IDE and Gigabit LAN

Product Overview

The ICES 253 is a COM Express Type 2 compact module that features Intel® Atom™ D525 1.8GHz and ICH8M in small foot print. ICES 253 provides outstanding performance in the combination of high computing power and low thermal dissipation.

ICES 253 supports DDR2 667 SO-DIMM memory up to 2GB, and supports 3 x SATA, 1 x IDE, 8 x USB2.0 for fast peripherals.

ICES 253 is type 2 COM Express Module support up to 5 Express lanes, 32 bit PCI interface and one IDE and Gigabit LAN.

Specifications

CPU Support
- Onboard Intel® Atom™ Dual Core D525 1.8GHz Processor

Chipset
- Intel® ICH8M chipsets

Main Memory
- Support one un-buffered non-ECC DDR2 SO-DIMM 667 and 800 up to 2GB

BIOS
- AMI System BIOS
- SPI ROM
- Plug & Play support
- Advanced Power Management and Advanced Configuration & Power Interface support

Display
- Intel® Atom™ D525 integrated graphics solution with dynamic video memory allocation
- Analog monitor with pixel resolution up to 2048 x 1536 @60Hz
- Support Single channel for 18 bit
- LFP (local flat panel) LVDS interface

On-board LAN
- Intel® PCI Express GbE 82574L x1
- Support PXE LAN boot function
- Support Wake on LAN function

Other Interfaces
- One 3pin fan connector (90 degree, 12V)

Storage
- 3x SATA
- 1x IDE

Interface
- Reset signal
- 8 GPIO lines (GPI 0~3 and GPO0~3), CMOS Level (0/3.3V)
- I2C Interface/SMbus Interface
- USB 2.0 x8
- PATA

Extension
- One 32-bit PCI V2.3 interface
- One PCI express: 5 Lanes (via dip switch for 5x 1 or 1x 1+ 1x 4)

Other Interfaces
- One 3pin fan connector (Reserved, 90℃, 12V)

Block Diagram

COM Express Connector

- AB connector
  VGA/ LVDS/ 8x USB/ HD Audio interface/ 3x SATA/ LAN/ GPIO(3.3V)/ LPC bus/ 1x PCIe x4/ 1x PCIe x1/ SMBus/ I2C/ SPI BIOS
- CD connector, IDE, PCI

Power Requirements

- +12Vdc, 3.3V battery, +5Vsb power input
- Support both AT and ATX power supply mode

Power Management

- ACPI 2.0 compliant with battery support. Also supports Suspend to RAM (S3)

System Monitor

- Monitoring of 4 voltages, 2 temperatures and 1 fan Speed
- 4 voltage (For +5V, +12V, Vcore, +3.3V)
- 2 Temperatures (CPU and one external Temperature Sensor)

Carrier Board

- ICEB 8050

Dimensions

- 95mm (W) x 95mm (L)

Environment

- Operating temperature: -20°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity:
  10% to 97% (operating, non-condensing)
  5% to 97% (non-operating, non-condensing)

Certifications

- CE approval
- FCC Class A

Ordering Information

- **ICES 253 (P/N: 10K00025300X00)**
  COM Express Type 2 compact module with Intel® Atom™ D525 1.8GHz DDR2/ PCIe/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICEB 8050C (P/N: 10KB0805000X00)**
  COM Express Type 2 R2.0 evaluation board with PCIe/ PCI/ SATA/ CF/ mPCIe/ IDE/ COM/ USB/ VGA/ GbE and bootable from cFAST or Mini-SATA.

ICES 254

Main Features

- Intel® Atom™ Dual Core processor D2550, 1.86GHz
- Intel® ICH10R to support Intel® Matrix Storage RAID 0/1/5/10
- 1x DDR3 SO-DIMM socket up to 4GB

- Type 2 COM Express compact size to support 5 Express lanes, 32 bit PCI interface, one IDE, Gigabit LAN and HDMI

Product Overview

The ICES 254 is a COM Express Type 2 compact module that features Intel® Atom™ Dual-Core processor D2550 with ICH10R chipset to support RAID 0/1/5/10, and one DDR3 SO-DIMM memory socket up to 4GB DDR3 SDRAM/ 1067MHz.

The ICES 254 integrates with Intel® HD graphics engine to support dual displays of CRT resolution up to 1920 x 1200 @ 60Hz, single channel 18-/ 24-bit LVDS up to 1440 x 900 and HDMI 1080p. The high performance ICES 254 COM Express module supports 4 x SATA, 8 x USB 2.0, IDE, PCI, five PCIe x1 lanes and HDMI through the in-house designed carrier board of ICEB 8050C with riser card EBK-A2HDMI for optional HDMI or DisplayPort.

Specifications

CPU Support
- Intel® Atom™ Dual Core processor D2550 1.86Ghz

Chipset
- Intel® ICH10R chipset

Main Memory
- One DDR3 1067MHz SO-DIMM socket up to 4GB

BIOS
- AMI System BIOS
- Plug and play support
- ACPI 3.0b

Display
- Intel® HD graphics with DX9 support
- One HDMI down to the carried board
- Support single channel 18/24-bit LVDS

Audio
- HD audio interface

On-board LAN
- Intel® 82574L GbE controller, support boot from LAN, wake on LAN function
- Signals down to I/O board

COM Express Connector
- AB
  VGA/ LVDS/ GbE/ 8 x USB 2.0/ HD Audio/ 4 x SATA/ LAN/ GPIO (3.3V)/ LPC bus
  Five PCIe X1/ SMBus (I2C)/ SPI BIOS
- CD
  IDE, PCI, HDMI

Power Requirements
- +12V, +5VSB
- Support both AT and ATX power supply mode
- One 3-pins 90 degree edge-connector for DC + 12V fan

Dimensions
- 95mm (W) x 95mm (L)

Environment
- Board level operating temperatures: -15°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
- 10% to 90% (operating, non-condensing)
- 5% to 95% (non-operating, non-condensing)

Block Diagram
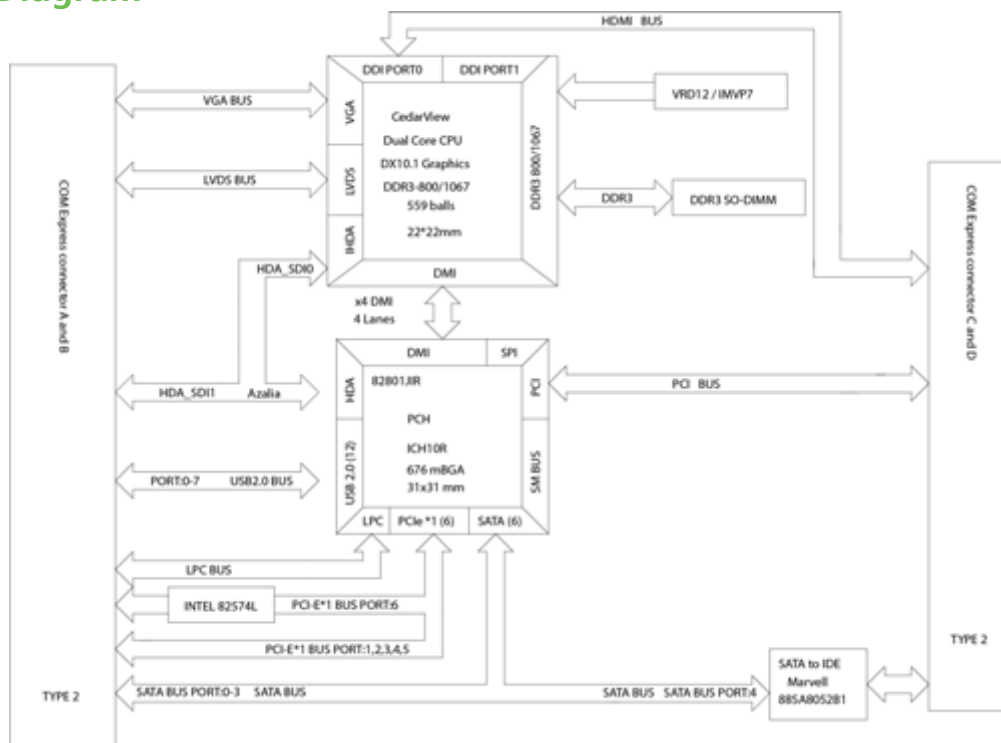
Certifications
- CE approval
- FCC Class A

Ordering Information

- **ICES 254 (P/N: 10K00025400X0)**

  COM Express Type 2 compact module with Intel® Atom™ D2550 1.86GHz/ ICH10R/ DDR3/ GbE/ 4SATA/ IDE/ LVDS/ 5x PCIe and HDMI

- **ICES 254-2800 (P/N: 10K00025403X0)**

  COM Express Type 2 compact module with Intel® Atom™ N2800 1.86GHz/ ICH10R/ DDR3/ GbE/ 4STAT/ IDE/ LVDS/ 5x PCIe and HDMI

- **ICEB 8050C (P/N: 10KB0805001X0)**

  COM Express Type 2 R2.0 evaluation board with PCIe/ PCI/ SATA/ CF/ mPCIe/ IDE/ COM/ USB/ VGA/GbE and bootable from cFAST or Mini-SATA.

- **EBK-A2 HDMI (P/N: 10EA2HDMI00X0)**

  ADD2 module with HDMI or DP by PCIe x16 for ICES 254 onto ICEB 8050C

ICES 267

COM Express Type 2 Basic Module Support Intel® Socket rPGA 988, 2nd Generation Core™ Mobile Processor Family

Main Features

- 2nd Generation Intel® Core™ Mobile Processors
- Intel® QM67/HM65 PCH
- 1x DDR3 SO-DIMM socket support non-ECC DDR3 800/1066/1333MHz up to 8GB
- Type 2 COM Express Module Support 6 Express Lanes, 32 bit PCI Interface, One IDE and Gigabit LAN

Product Overview

The ICES 267 is a COM Express Type 2 basic module featuring Intel® QM67/HM65 Platform Control Hub, switch supports 2nd generation Intel® Core™ Mobile processors and one DDR3 SO-DIMM memory socket up to 8GB. The ICES 267 integrated with Intel® HD graphics or expands via PCI Express Graphic 1x 16 lane to carrier board; it also supports other display types include LFP or Dual channel LVDS. The high performance ICES 267 COM Express Module supports 4x SATA, 8x USB2.0 and 6X PCIe x1 lanes through the carrier board. It is compatible with ICEB 8050 carrier board and in-house designed ICES 267 F-kits from NEXCOM.

Specifications

CPU Support
- Support 2nd generation Intel® Core™ processor family, rPGA 988

Processor	i5-2510E	i3-2330E	Celeron® B810
# of Core	2	2	2
Clock Speed	2.5GHz	2.2GHz	1.6GHz
Max. TDP	35W	35W	35W

Main Memory
- One DDR3 1066/1333 MHz SO-DIMM, up to 8GB

Platform Control Hub
- QM67/ HM65

BIOS
- AMI System BIOS
- Plug and play support

Display
- Intel® HD graphics solution
- One PCI Express X 16 Lane down to the carried board
- Drive a standard progressive scan analog monitor with resolution up to 2048 x 1536 @ 60Hz
- Supports LVDS 18/24-bit & single/dual channel interface

Audio
- HD audio interface

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 7.0 (supported with QM67 only)
- Support boot from LAN, wake on LAN function
- Signals down to I/O board

COM Express Connector
- AB
  VGA/ LVDS/ 8x USB 2.0/ HD Audio/ 3x SATA/ LAN/ GPIO/ LPC bus
  One PCIe X4/ two PCIe X1/ SMBus (I2C)/ SPI BIOS
- CD
  PCIe x16/ IDE/ PCI

Power Requirements
- +12V, +5VSB, +3.3V RTC power
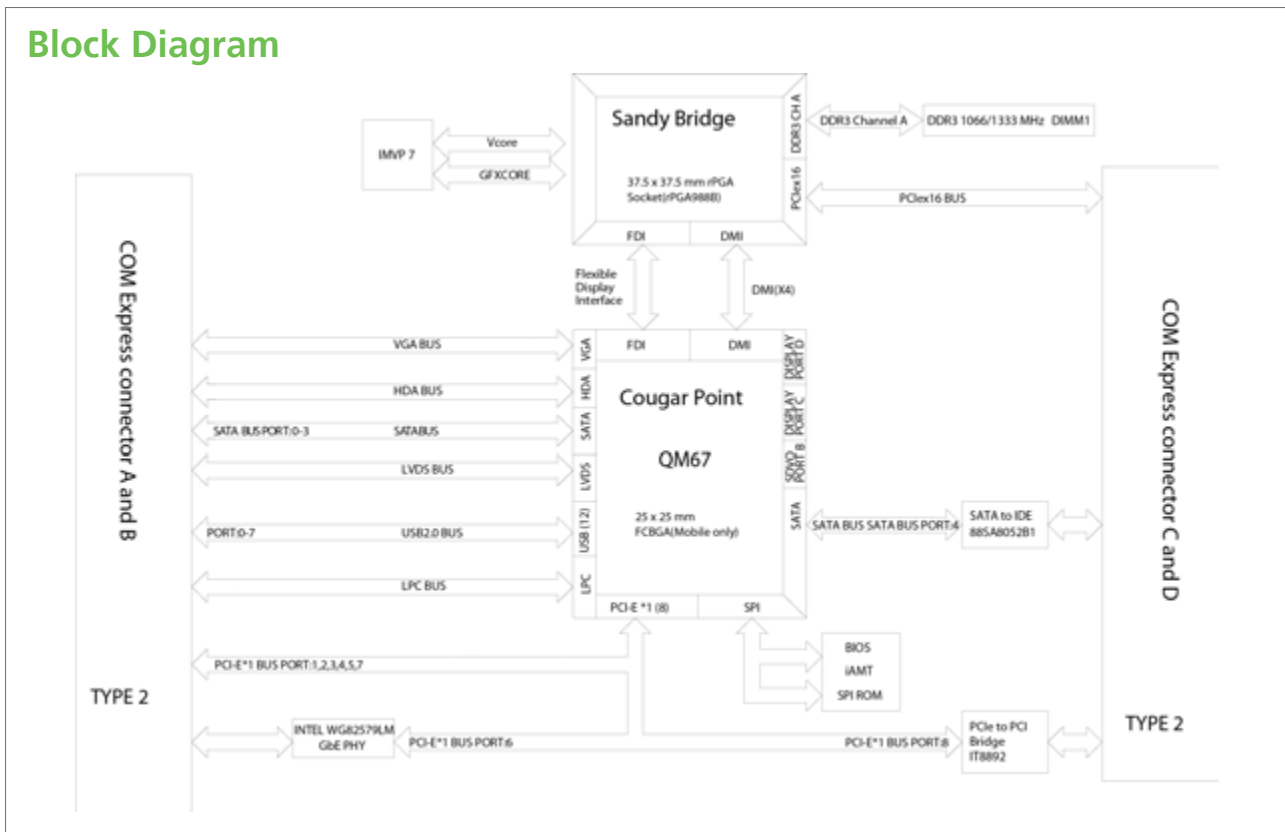
### Dimensions
- 95mm (W) x 125mm (L)

272 | COM Express

NEXCOM

Block Diagram

Environment

* Board Level Operating temperatures: -15°C to 60°C
* Storage temperatures: -20°C to 80°C
* Relative humidity:
  10% to 90% (operating, non-condensing)
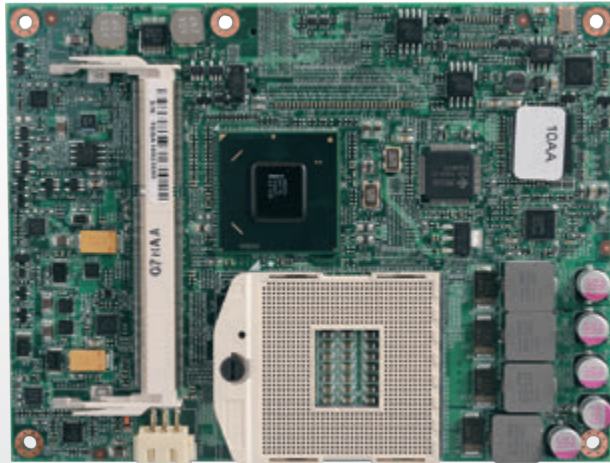 5% to 95% (non-operating, non-condensing)

Certifications

* CE approval
* FCC Class A

Ordering Information

* **ICES 267 (P/N:10K00026700X0)**

  COM Express Type 2 basic module support Intel® Socket rPGA 988, 2nd generation Core™ mobile processor family, DDR3/ PCEe x16/ PCI/ IDE/ GbE/ LVDS/ audio interface

* **ICEB 8050C (P/N: 10KB0805000X00)**

  COM Express Type 2 R2.0 evaluation board with PCIe/ PCI/ SATA/ CF/ mPCIe/ IDE/ COM/ USB/ VGA/ GbE and bootable from cFAST or Mini-SATA.

* **ICES 267 F-Kit (P/N: 10K00026706X00)**

  Active Fan Kits with heat-spreader, heat-sink and Cooling fan in-house designed for ICES267

ICES 267S

COM Express Type 2 Basic Module with QM67 Support

2nd Generation Core™ Mobile Processor Family
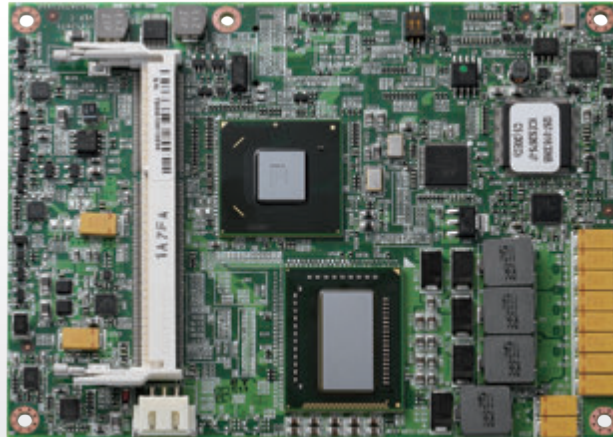
Main Features

- Intel® 2nd generation Intel® Core™ processor family
- Intel® QM67 PCH chipset
- 1x DDR3 SO-DIMM socket support non-ECC DDR3 800/1066/1333MHz up to 8GB
- Support SDVO
- Type 2 COM Express 2.0 module support 6 Express lanes, 32 bit PCI interface, one IDE and Gigabit LAN

Product Overview

The ICES 267S is a COM Express Type 2 basic module featuring Intel® QM67 PCH chipset, and supports 2nd generation Intel® Core™ processor i5-2515E/ i7-2715QE. ICES 267S gears with DDR3 SO-DIMM memory socket up to 8GB DDR3 800/ 1066/ 1333MHz SDRAM single channel with un-buffered non-ECC support.

The ICES 267S integrated with Intel® HD graphics offers display expansion via SDVO to carrier board. In addition, it also supports other display types include LFP or dual channel LVDS. The high performance ICES 267S COM Express module provides 4x SATA, 8x USB 2.0 and 6 PCIe x 1 lanes through the carrier board. It is compatible with ICEB 8050 carrier board and in-house designed ICES 267S F-kits from NEXCOM.

Specifications

CPU Support
- Support 2nd generation Intel® Core™ processor family, FCBGA 1023

Processor	i7-2715QE	i7-2610UE	i5-2515E	Celeron® B810E	Celeron® 847E
# of Core	4	2	2	2	2
Clock Speed	2.1GHz	1.5GHz	2.5GHz	1.6GHz	1.1GHz
Max. TDP	45W	17W	35W	35W	11W

Main Memory
- One DDR3 800/1066/1333MHz SO-DIMM, up to 8GB

Platform Control Hub
- Intel® QM67 (option HM65) PCH chipset

BIOS
- AMI System BIOS
- Plug and play support
- Advanced power management and advanced configuration & power interface support

Display
- Intel® HD graphics with DX11 support
- Drive a standard progressive scan analog monitor resolution up to 2048 x 1536@60Hz
- LFP LVDS interface to support 18/24-bit & single/dual channel interface

Audio
- HD audio interface

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 7.0 (supported with QM67 only)
- Support boot from LAN, wake on LAN function
- Signals down to I/O board

COM Express Connector
- AB
  VGA/ LVDS/ 8 x USB 2.0/ HD Audio/ 3 x SATA/ LAN/ GPIO/ LPC bus
 One PCIe x4/ two PCIe x1/ SMBus (I2C)/ SPI BIOS
- CD
  IDE/ PCI/ SDVO

Power Requirements
- +12V, +5VSB, +3.3V RTC power
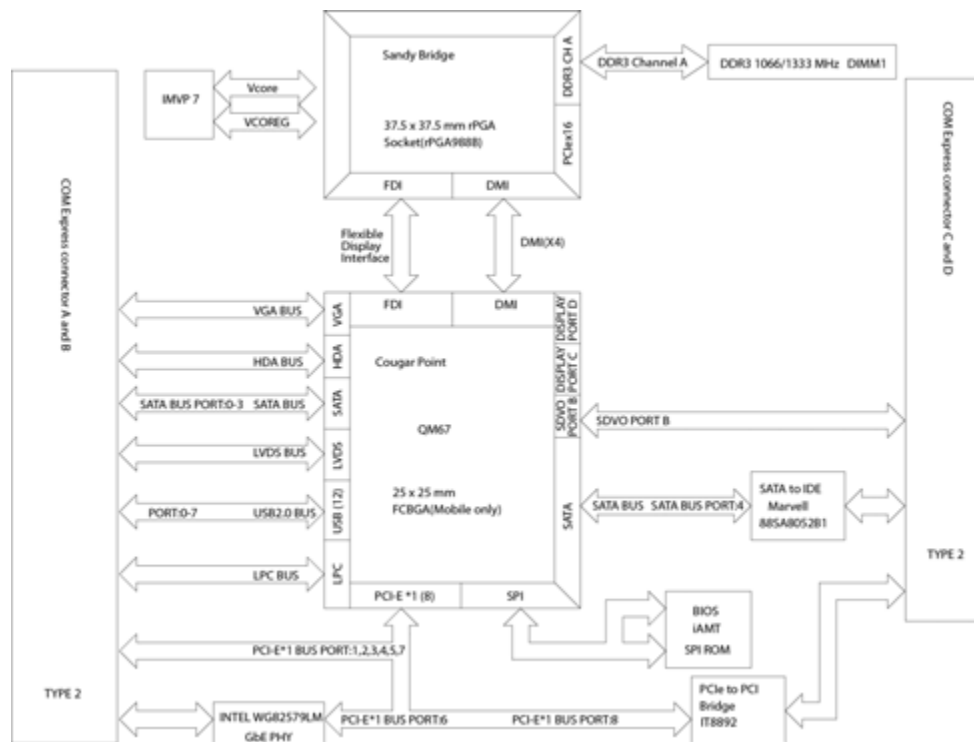
Dimensions
- 95mm (W)x 125mm (L)

274 | COM Express

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Block Diagram

Environment

- Board level operating temperatures: -15°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
- 10% to 90% (operating, non-condensing)
- 5% to 95% (non-operating, non-condensing)

Certifications
- CE approval
- FCC Class A

# Ordering Information

- **ICES 267S (P/N: 10K00026701X00)**
  Onboard i5-2515E processor with QM67 Type 2 COM Express basic module, DDR3/ SDVO/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICES 267S-2610UE (P/N: 10K00026708X00)**
  Onboard i7-2610UE processor with QM67 Type 2 COM Express basic module, DDR3/ SDVO/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICES 267S-i7 (P/N: 10K00026704X00)**
  Onboard i7-2715QE processor with QM67 Type 2 COM Express basic module, DDR3/ SDVO/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICES 267S-B810EN (P/N: 10K00026709X00)**
  Onboard Celeron® B810E processor with QM67 Type 2 COM Express basic module, DDR3/ SDVO/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICES 267S-847E (P/N: 10K00026712X0)**
  Onboard Celeron® 847E processor with HM65 Type 2 COM Express basic module, DDR3/ SDVO/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICEB 8050C (P/N: 10KB0805000X00)**
  COM Express Type 2 R2.0 evaluation board with PCIe/ PCI/ SATA/ CF/ mPCIe/ IDE/ COM/ USB/ VGA/ GbE and bootable from cFAST or Mini-SATA.

- **ICES 267S F-Kit (P/N: 10K00026707X00)**
  Active Fan Kits with heat-spreader, heat-sink and Cooling fan in-house designed for ICES267S

ICES 268
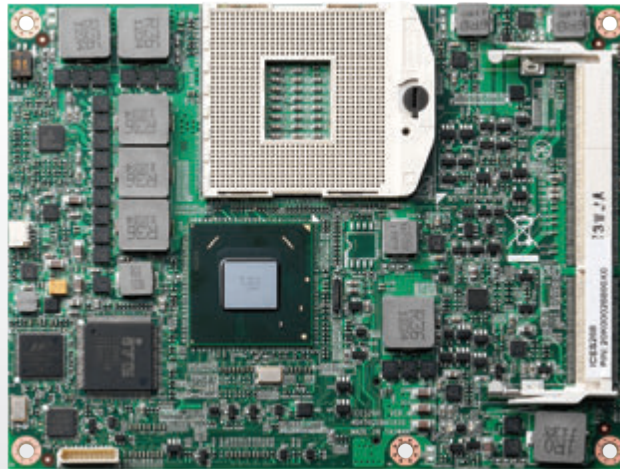
Main Features

- Intel® 3rd generation Intel® Embedded Core™ rPGA988 embedded processors family
- Intel® QM77 PCH (HM76) chipset support PICMG COM.0 Rev. 2.0 Type 2, pin-outs
- Support two DDR3 SO-DIMMs 1333/1600 non-ECC up to 16GB

- Support PCIex16 (Gen3.0), 5x PCIex1, 12x USB2.0, 2x SATA3.0/ 2x SATA2.0 and 1x GbE
- Support VGA, dual channels 18/24-bit LVDS and optional 1x DDI/ SDVO by PEG
- Dimension: 95mm (mm) x 125mm (L)

Product Overview

The ICES 268 is a Type 2 COM Express Basic Module featuring Intel® QM77 PCH (option HM76) chipset supports Intel® 3rd generation Intel® Core™ i7/i5/i3 rPGA988 processors up to i7-3610QE (4x 2.3Ghz/ max. TDP 45W) with two DDR3 SO-DIMMs 1333/1600MHz non-ECC up to 16GB.

The 3rd Generation Core i7/ i5/ i3 processors integrated with Intel® HD graphics with DX11 support one PCIex16 (Gen 3.0) to carrier board. The optional 1 x DDI interfaces port B, allows ICES 268 implement SDVO to HDMI, DVI, DP port by add-in EBK-A2HDMI. The high performance ICES 268 COM Express Basic Module supports 4x SATA3.0/ 2.0, 8x USB 2.0, 5x PCIex1 lanes and 1x Gigabit Ethernet through the carrier board; NEXCOM is offering standard Type 2 carrier board, ICEB 8050C as well as hardware-ready evaluation starter-kit, ICEK 8050C-T2 build-in 10.4" LCD panel, Flex-ATX power supply to help device makers and equipment builders may evaluate full set of I/O function and add-in cards at early development stage.

Specifications

CPU Support
- Support Intel® 3rd generation Core™ i7/i5/i3 embedded rPGA988 processors
  - Intel® Core™ i7-3610QE (4x 2.3GHz/ 6MB cache/ Max. TDP 45W)
  - Intel® Core™ i7-3610ME (2x 2.7GHz/ 3MB cache/ Max. TDP 35W)
  - Intel® Celeron® B810 (2x 1.6GHz/ 2MB cache/ Max. TDP 35W)

Main Memory
- Two DDR3 SO-DIMMs, 1333/1600 MHz SDRAM non-ECC up to 16GB

Platform Control Hub
- Intel® QM77 PCH (option HM76) chipset

BIOS
- AMI UEFI System BIOS
- Plug and play support
- Advanced Power Management and ACPI support

Display
- Intel® HD graphics with DX11 support and supports Triple independent displays
- One PCI Express x16 Lane (Gen 3.0) down to the carried board
- Supports VGA, single/dual channels LVDS 18/24-bit interfaces
- Optional 1x DDI port B support HDMI, DVI, DisplayPort and SDVO by PEG with EBK-A2HDMI

Audio
- HD audio interface

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 8.0 (supported by QM77 only)
- Support boot from LAN, wake on LAN function
- Signals down to I/O board

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Block Diagram
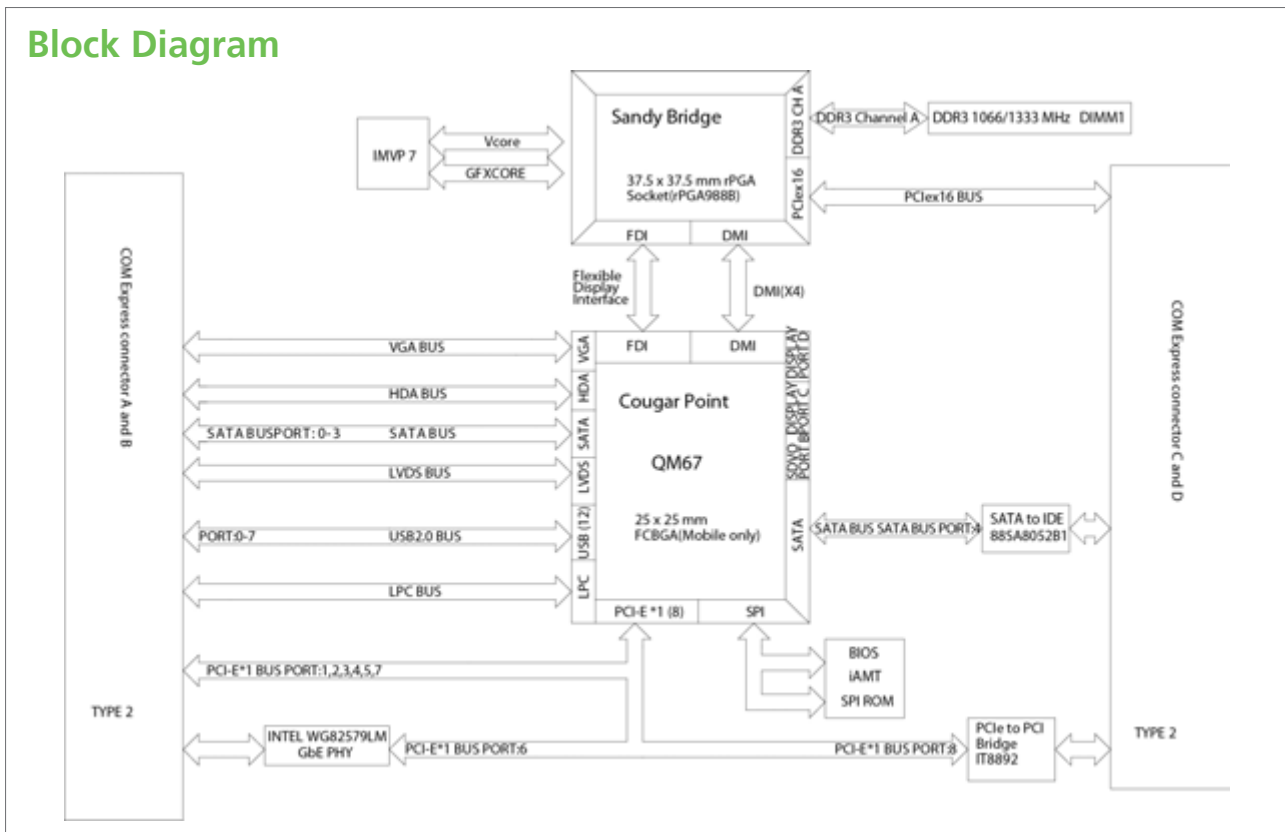
COM Express Connector
- AB
  VGA/ LVDS/ 8x USB 2.0, HD Audio/ 2x SATA3.0, 2x SATA 2.0/ GbE/
 GPIO/ LPC bus/ 5 x PCIex1/ SMBus (I2C)/ SPI BIOS / SPK out
- CD
  PCIex16 (Gen. 3.0) / PCI (v2.3)/ IDE

Power Requirements
- +12V, +5VSB, +3.3V RTC power

Dimensions
- 95mm (W) x 125mm (L)

Environment
- Board level operating temperatures: -15°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
- 10% to 90% (operating, non-condensing)
- 5% to 95% (non-operating, non-condensing)

Certifications
- Meet CE
- FCC Class A

Ordering Information

- **ICES 268 (P/N: 10K00026800X0)**
  COM Express type 2, basic Module QM77 support Intel® 3rd
  Generation Core™ rPGA988 embedded processors, non-ECC DDR3/
  2x SO-DIMMs

- **ICES 268 F- kit (P/N: 10K00026801X0)**
  COM Express Active fan kits with heat-spreader, heat-sink and cooling
  fan for ICES268

- **ICEB 8050C (P/N: 10KB0805001X0)**
  COM Express Type 2, COM.0 Rev. 2.0 Evaluation CRB, VGA/ LVDS/
  8x USB 2.0/ 2x COM/ GbE/ LPT/ 5.1 HD/ SPDIF,
  CF/ IDE/ mSATA/CFast/ PCIe x16/ PCIe x4/ PCIe x1/ PCI/ mPCIe, ATX
  power input
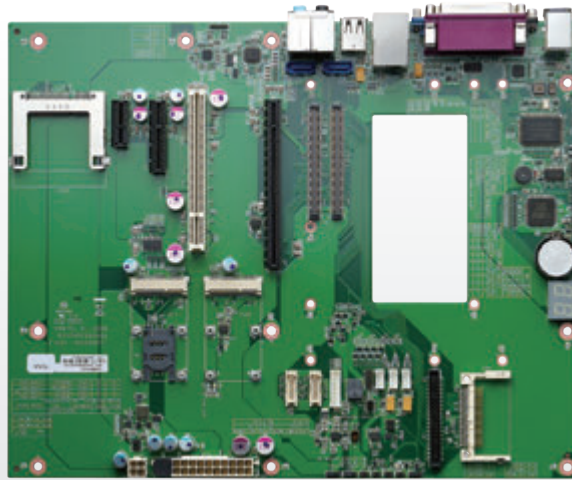
ICEB 8050C

COM Express Carrier Board, Type 2 pin-out, PICMG COM.0 Rev. 2.0

Bootable from CFAST/ Mini-SATA/ SATA and CF/ Shared IDE

Main Features

- COM Express COM.0, Rev2.0 Evaluation carrier, ATX form-factor
- Support Type 2 pin-outs, COMe Extended/ Basic/ Compact Module
- Display: VGA & dual channels 18/24-bit LVDS

- Bootable CFAST or Mini-SATA, CF and shared IDE
- PCIe x16, PCIe x4, PCIe x1, PCI x1 and Mini-PCIe for Wi-Fi
- PS2/KB/Mouse, LPT/ RS232/422/485, VGA/GbE/4USB/ 5.1, S/PDIF

Product Overview

NEXCOM ICEB 8050C is a COM Express type 2, pin-out defined by PICMG, COM.0 Rev. 2.0 specification with ATX form-factor. In-house designed features with bootable CFAST/ SATA or Mini-SATA/ SATA via Mini-PCIe slot (half-/ full-size slot) as well as legacy SATA and CF/ shared IDE-HDD interfaces. ICEB 8050C support added-on card slots of 1x PCIe x16, 1x PCIe x4, 1x PCIe x1 and 1x PCI (32/33Mhz) slots. Onboard Super I/O W83627DHG-PT maybe backward compatible of legacy BIOS.

- Faster system Time-to-market
  ICEB 8050C new type 2 carrier MB may help your system design customer to reduce total development cycle time from our proof-of-concept and design-assistance support for your own customized carrier board.

- CPU support from Atom™ to Core™ i7/ i5/ i3, Celeron® M
  It is ready and easy to adapt with our various CPU/ SKU from Intel® Atom to 2nd generation Intel® Core™ i7/ i5/ i3, Celeron® M-based COM Express core module from compact size (95x 95mm) like ICES 251/ ICES 253/ ICES 254 to Basic-size (125 x 95mm) like ICES 270/ ICES 267/ ICES 267S.

- Longevity for your multi-generation durable equipment
  Once you designed common I/O carrier solution board, you may adapt multiple COMe modules with different CPU and upgradable by follow 440pos type-2 pin-outs board-to-board connectors of PICMG COM.0 Rev. 2.0 specification.

Specifications

Form factor
- ATX Carrier MB, dimension: 305mm x 244mm (12" x 9.9")
- COM Express Evaluation CRB: PICMB COM Express board-to-board interconnectors, type 2 pin-puts, female, 8mm stack-up height, COM.0 Rev. 2.0

NEXCOM Computer-On-Modules Support List
- Compact Size (95x 95mm) : ICES 251/ ICES 251X, ICES 253, ICES 254
- Basic Size (125x 95mm) : ICES 270, ICES 267/ ICES 267S

Expansion
- 1x PCIe x16 slot, support PEG interfaces
- 1x PCIe x4 slot, optional 4x PCIe x1 signals
- 1x PCIe x1 slot and 1x PCI (v2.3) slot
- 1x Mini-PCIe slot for Wi-Fi with SIM tray

Graphic Interfaces
- Graphic Chip: from Type 2 pin-out, COM Express module
- CRT: support analog VGA with DB15 connector on the I/O edge
- LVDS: dual channels 18/24-bit LVDS connector (dual DF-13-20P)
- PCIe x16: optional EBK-A2HDMI (ICES254 only) riser card for HDMI or DP

Super I/O
- Winbond W83627DHG-PT

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Block Diagram
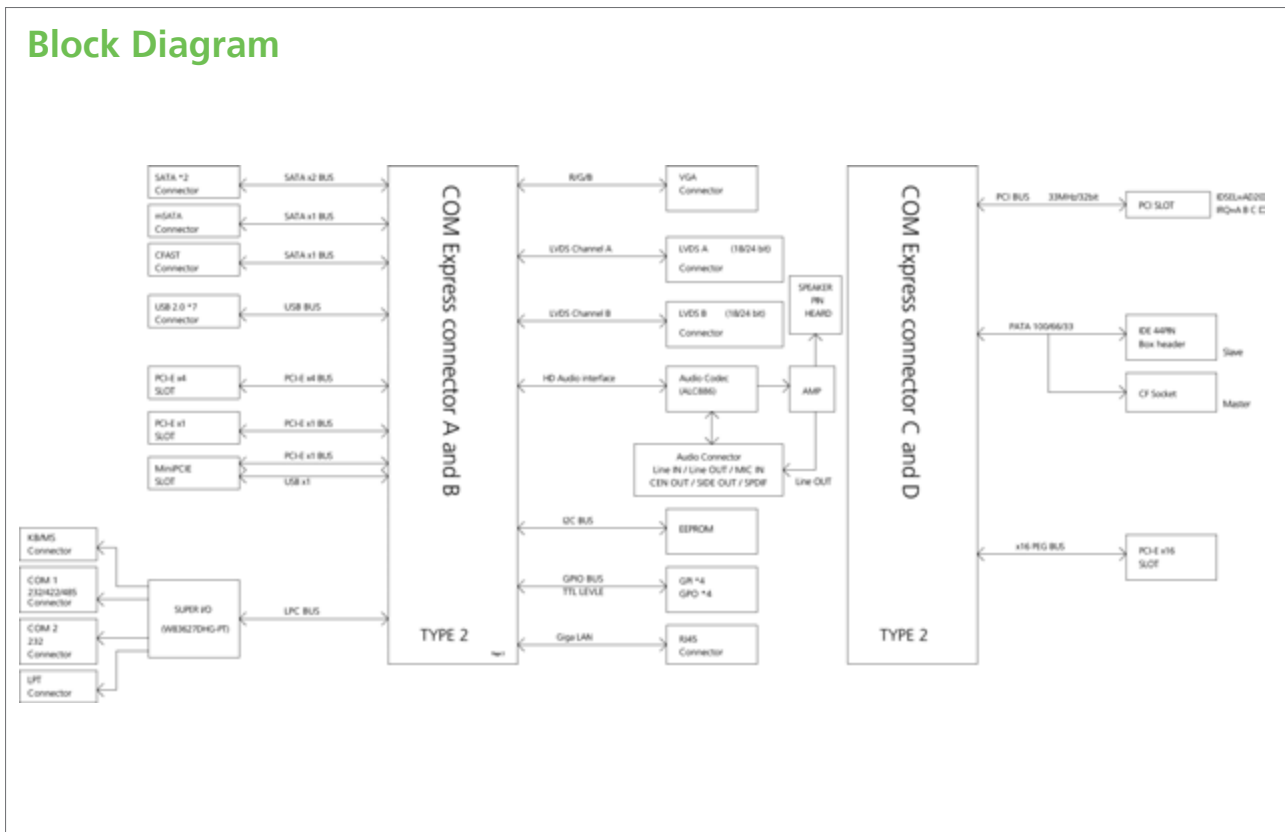
I/O Interface

- Serial COM: 2 ports
- 1x edge DB9 connector to support RS232/ 422/ 485 (+5/ +12V by Ring)
- 1x internal box-header 2.0 pitch to support RS232
- USB2.0: 8 ports
- 4x USB2.0 ports by stack Type A on edge
- 3 USB2.0 by 4-pins JST 2.0mm JST connector,
- 1x internal USB 2.0 to Mini-PCIe slot for external wi-fi module
- SATA 2.0: 4 ports
- 2x SATA 2.0 ports
- 1x Mini-SATA by Mini-PCIe slot for half-/ full size mSATA-SSD
- 1x CFAST slot for CFAST/ SATA 2.0
- CF: 1x CF/ shared IDE slot onboard (default master-mode)
- IDE: 1x 44pins box-header for legacy IDE-HDD
- PS/2: 2x PS/2 connectors on edge for Keyboard/ Mouse
- Printer Port: 1x DB25 on edge for legacy printer interface
- GPIO ports: 8x pins GPIO signals from COMe (default 5V TTL/ option 3.3V)

Network

- LAN chip: from COMe CPU module
- Support 1x RJ45/ GbE port on the edge I/O

Audio

- HD Audio AL886 with 5.1 channels
- Support external S/PDIF interface
- Support internal pin-header for L/R speaker-out 2W/ 4 Ohm

EEPROM

- 1x 2K EEPROM to record PCI Express Lane configuration
- ATMEL AT24C32 (or C02) and address 0 x 57 or (0xAE)

Watchdog Timer

- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% temperature 25°C)

On-board RTC

- On-chip RTC with battery BR2032

Power Input

- Standard ATX 24 pins and AUX 4-pins with 12V

Dimensions

- ATX form factor, 305 x 244mm (L x W, 12"x9.6")

Environment

- Operating temperatures: -20°C to 60°C
- Storage temperature: -40°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications

- CE approval
- FCC Class A

Ordering Information

- **ICEB 8050C (P/N: 10KB0805001X0) RoHS Compliant**
  COM Express Type 2, COM.0 Rev. 2.0 Evaluation CRB, VGA/ LVDS/ 8x USB 2.0/ 2x COM/ GbE/ LPT/ 5.1 HD/ SPDIF/ CF/ shared IDE/ mSATA/ CFAST/ PCIe x16/ PCIe x4/ PCI/ mPCIe, ATX power input

ICEK 8050C-T2

COM Express Type 2 Starter Kit

Integrated COM Express Compact or Basic Module

Bootable Mini-SATA/ CFast-SSD on ICEB8050C with 10.4" LCD and Flex-ATX 110/220V AC input

Main Features

- COM Express Type 2, COM.0, Rev2.0 Evaluation Starter Kit
- COM Express Compact or Basic Modules with passive or active fan-sink
- Bootable Mini-SATA/ CFast-SSD with 10.4" LCD/ 18-bit LVDS Display

- PCIe x16, PCIe x4, PCIe x1, PCI x1 (v2.3) and Mini-PCIe for Wi-Fi
- PS2/ KB/ Mouse, LPT/ RS232/422/485, VGA/ GbE/ 4x USB/ 5.1 Audio S/ PDIF
- Integrated Flex-ATX PSU for AC 110/ 220V Input

Product Overview

NEXCOM ICEK 8050C-T2 as proof-of-concept as pre- configured system of COM Express starter kit join- design- win assistance package based on COM Express type 2, pin-out defined by PICMG, COM.0 Rev. 2.0 specification. NEXCOM configure and assembly to order service with COM Express Type 2, pin-outs Compact Modules (95x 95mm) ICES 253 and ICES 254 or Basic Module (125x 95mm) like ICES 267 or ICES 267S or ICES 268 with active heat-sink for higher computing embedded processors up to i7-2715QE or i7-3610QE of Intel® 2nd or 3rd Generation Core™ i7/ i5/ i3 and Celeron B810E/ 827E/ 847E Mobile processors to adapt wide range of Industrial and embedded applications.

ICEK 8050C-T2 features bootable CFast/ SSD from external access or Mini-SATA/ SSD via Mini-PCIe slot (half-/ full-size slot) from internal build-in onto ICEB 8050C ICEK 8050C-T2 also support legacy SATA and CF/ shared IDE-HDD bootable interfaces. ICEK 8050C-T2 support added-on card slots of 1x PCIe x16, 1x PCIe x4, 1x PCIe x1 and 1x PCI (v2.3) slot for you may add-in I/O cards as evaluation during project development.

- Faster system Time-to-market: ICEK 8050C-T2 as Type 2 starter-kit as pre-configured system ready to help your system design customer to reduce total development cycle time from our proof-of-concept and design-assistance support for your target OS and applications.

- Various CPU SKUs support from Atom™ to Core™ i7/ i5/ i3, Celeron M: It is ready and easy to adapt with our various CPU/ SKU from Intel® Atom™ to 2nd or 3rd generation Intel® Core™ i7/ i5/ i3, Celeron M-based COM Express compact/ basic module from NEXCOM ICES 253/ ICES 254 compact size (95 x 95mm) to Basic-size (125 x 95mm) like ICES 267/ ICES 267S or ICE S268 as support list.

- Longevity for your multi-generation durable equipment: Once you pre-tested your OS and Application onto our ICEK 8050C-T2 starter kit, You may easy to design your own customized I/O carrier solution board which you may adapt multiple COM Express modules for your target application.

Specifications

Form factor
- Rugged Plastic (HDPE) Suitcase dimension: 47x 42x 12 cm³
- Integrated ICEB 8050C Type 2, Carrier CRB for Compact or Basic Modules

Display
- 10.4" AUO, G104SN03 V5

Expansion
- 1x PCIe x16 slot, support PEG interfaces
- 1x PCIe x4 slot, optional 4x PCIe x1 signals
- 1x PCIe x1 slot and 1x PCI (v2.3) slot
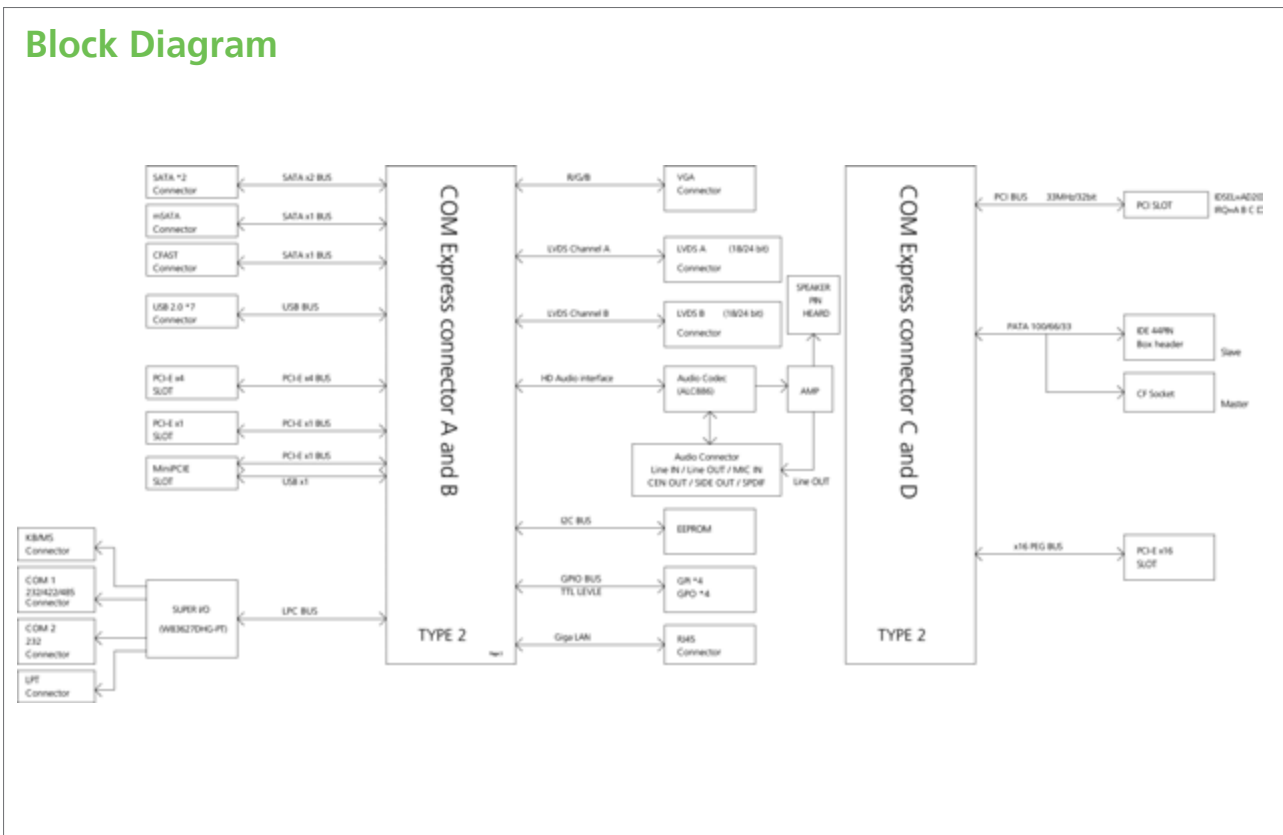- 1x Mini-PCIe slot for Wi-Fi with SIM tray

Graphic Interfaces
- CRT: support analog VGA with DB15 connector on the I/O edge
- LVDS: dual channels 18/24-bit LVDS connector (dual DF-13-20P)
- PCIex16: optional EBK-A2HDMI (ICES254 only) riser card for HDMI or DP

Super I/O
- Winbond W83627DHG-PT

Block Diagram

I/O Interface
- Serial COM: 2 ports
  - 1x edge DB9 connector to support RS232/ 422/ 485 (+5/ +12V by Ring)
  - 1x internal box-header 2.0 pitch to support RS232
- USB 2.0: 8 ports
  - 4x USB 2.0 ports by stack Type A on edge
  - 3x USB 2.0 by 4-pins JST 2.0mm JST connector
  - 1x internal USB 2.0 to Mini-PCIe slot for external wi-fi module
- SATA 2.0: 4 ports
  - 2x SATA 2.0 ports
  - 1x Mini-SATA by Mini-PCIe slot for half-/ full size mSATA-SSD
  - 1x CFast slot for CFast-SSD/ SATA 2.0
- CF: 1x CF/ shared IDE slot onboard (default master-mode)
- IDE: 1x 44pins box-header for legacy IDE-HDD
- PS/2: 2x PS/2 connectors on edge for Keyboard/ Mouse
- Printer Port: 1x DB25 on edge for legacy printer interface
- GPIO ports: 2x + 8x pins header GPIO from COMe (default 5V TTL/ option 3.3V)

Network
- LAN chip: from COMe CPU module
- Support 1x RJ45/ GbE port on the edge I/O

Audio
- HD Audio AL886 with 5.1 channels
- Support external S/PDIF interface
- Support internal pin-header for L/R speaker-out 2W/ 4 Ohm

EEPROM
- 1x 2K EEPROM to record PCI Express Lane configuration
- ATMEL AT24C32 (or C02) and address 0x57 or (0xAE)

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% temperature 25°C)

On-board RTC
- On-chip RTC with battery BR2032

Power Input
- Build-in AC 110/ 220V Input for Flex-ATX PSU in this Starter-Kit

Ordering Information

- **ICEK 8050C-T2 (P/N: MISC by Project Registered)**
  COM Express Type 2 Starter Kit ready for NEXOM COM Express compact/ basic modules assembly SO-DIMM system memory with passive/ active fan-sink onto Type 2 carrier ICEB8050C with bootable Mini-SATA/ CFast-SSD pre-load Win 7 trial version OS with 10.4" LCD/ LVDS display and build-in Flex-ATX PSU AC 110/220V Input

NEXCOM Computer-On-Modules Support List:

Models	ICES 253	ICES 254	ICES 267	ICES 267S	ICES 268
Processors SKUs	Atom™ D525	Atom™ D2550/ N2800	2nd Gen. Core™ i7/i5/i3 rPGA 988	2nd Gen. Core™ i7/i5/i3 FCBGA 1023	3rd Gen. Core™ i7/i5/i3 rPGA 988
Chipset	ICEH8M	ICH10R	QM67	QM67/ HM65	QM77/ HM76
Max. Memory	2GB	4GB	8GB	8GB	16GB
SO-DIMM	1	1	1	1	2
Heat-spreader	Yes	Yes	Yes	Yes	Yes
Heat-Sink	Yes	Yes	Yes	Yes	Yes
Cooling Fan	none	none	Yes	Yes	Yes

ICES 667

Main Features

- 3rd generation Intel® Embedded Core™ rPGA988 embedded processors family
- Intel® QM77 PCH (HM76) chipset support PICMG COM.0 Rev. 2.0 Type 6 pin-outs
- Support two DDR3 SO-DIMMs 1333/ 1600 non-ECC up to 16GB

- Support PCIe x16 (Gen3.0) 7x PCIEx1, 4x USB3.0/ 8x USB2.0, 2x SATA3.0/ 2x SATA2.0 and GbE
- Up to 3x DDI (DP/ HDMI/ DVI) multiple displays, VGA, dual channels 18/ 24-bit LVDS
- Dimension: 95mm (W) x 125mm (L)

Product Overview

The ICES 667 is a Type 6 COM Express Basic Module featuring Intel® QM77 PCH (option HM76) chipset supports 3rd generation Intel® Core™ i7/i5/i3 rPGA988 embedded processors up to i7-3610QE (4x 2.3Ghz/ max.TDP 45W) with two DDR3 SO-DIMMs 1333/1600MHz non-ECC up to 16GB.

The 3rd Generation Intel® Core™ i7/ i5/ i3 processors integrated with Intel® HD graphics with DX11 support one PCIex16 (Gen. 3.0) to carrier board. The Three DDI interfaces allows ICES 667 implement HDMI, DVI, Display Port, SDVO on Customer Solution Board besides VGA, LVDS interface. The high performance ICES 667 COM Express Module supports 4x SATA2.0/ 3.0, 12x USB 2.0/ 3.0 and 7x PCIe x 1 lanes through the carrier board; NEXCOM is offering standard Type 6 carrier board, ICEB 8060 to help device makers and equipment builders to evaluate full set of I/O function and add-on cards at early development stage.

Specifications

CPU Support
- Support 3rd generation Intel® Core™ i7/ i5/ i3 embedded rPGA988 processors
  - Intel® Core™ i7-3610QE (4 x 2.3GHz/ 6MB cache/ Max. TDP 45W)
  - Intel® Core™ i7-3610ME (2 x 2.7GHz/ 3MB cache/ Max. TDP 35W)
  - Intel® Celeron® B810 (2x 1.6GHz/ 2MB cache/ Max. TDP 35W)

Main Memory
- Two DDR3 SO-DIMMs, 1333/ 1600 MHz SDRAM non-ECC up to 16GB

Platform Control Hub
- Intel® QM77 PCH (option HM76) chipset

BIOS
- AMI UEFI System BIOS
- Plug and play support
- Advanced Power Management and ACPI support

Display
- Intel® HD graphics with DX11 support and supports Triple independent displays displays
- One PCI Express x16 Lane (Gen. 3.0) down to the carried board
- Supports VGA, single/ dual channels LVDS 18/ 24-bit interfaces
- 3x DDI supports HDMI, DVI, DisplayPort and SDVO (only by Port B/ DDI #1)

Audio
- HD audio interface

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 8.0 (supported with QM77 only)
- Support boot from LAN, wake on LAN function
- Signals down to I/O board

COM Express Connector
- AB
  VGA/ LVDS/ 8x USB 2.0, HD Audio/ 4x SATA2.0/ 3.0, GbE/ GPIO/ LPC bus, 1x PCIe x4/ 2x PCIe x1/ SMBus (I2C)/ SPI BIOS /SPK out
- CD
  PCIe x16(Gen. 3.0)/ 3x DDI/ 4x USB 3.0/ PCIe x1
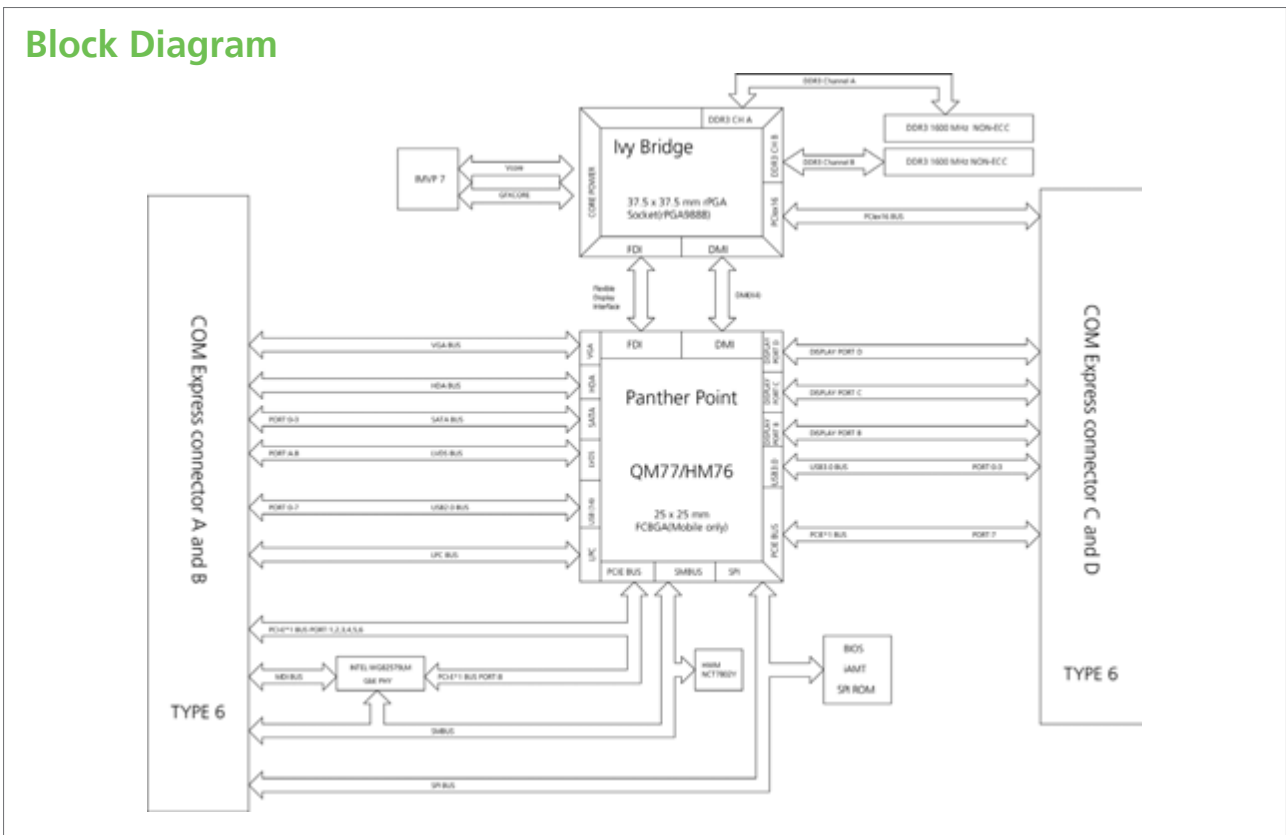
NEXCOM

Block Diagram

Power Requirements
* +12V, +5VSB, +3.3V RTC power

Dimensions
* 95mm (W) x 125mm (L)

Environment
* Board level operating temperature: -15°C to 60°C
* Storage temperature: -20°C to 80°C
* Relative humidity:
  10% to 90% (operating, non-condensing)
  5% to 95% (non-operating, non-condensing)

Certifications
* Meet CE
* FCC Class A

Ordering Information

* **ICES 667 (P/N: 10K00066700X0)**

  COM Express type 6, basic Module QM77 support 3rd Generation Intel® Core™ rPGA988 embedded processors, non-ECC DDR3/ 2x SO-DIMMs

* **ICES 667F-kit (P/N: 10K00066702X0)**

  COM Active fan kits with heat-spreader, heat-sink and cooling fan for ICES 667

* **ICEB 8060 (P/N: 10KB086000X0)**

  COM Express type 6, COM.0 Rev. 2.0 Evaluation Carrier Board, 3x DDI/ VGA/ LVDS/ 4x USB3.0/ 8x USB2.0/ 6x COM/ 2x GbE/ 5.1HD, SPDIF/ 2x SATA3.0/ mSATA/ CFast/ PCIe x16/ PCIE x4/ 2x PCIe x1/ mPCIe, ATX power input

ICES 668

COM Express Type 6 Basic Module with Intel® QM77,
Intel® 3rd Generation Core™ i7/i5/i3 Processors with ECC

Main Features

- Embedded Intel® 3rd generation Core™ i7/i5/i3 processor, Ivy Bridge Mbl + ECC
- Intel® QM77 PCH chipset support PICMG COM.0 Rev. 2.0 Type 6 pin-outs
- Support Dual channel DDR3 with ECC SO-DIMMs 1333/ 1600MHz up to 16GB
- Support PCIe x16, 7x PCIe x1, 4x USB3.0/ 8x USB 2.0, 2x SATA 3.0/ 2x SATA 2.0 and GbE
- Up to 3x Independent Displays, VGA, Dual Channels 18/24-bit LVDS, DVI, HDMI, DisplayPort
- Dimension 95mm (W) x 125mm (L)

Product Overview

The ICES 668 is a Type 6 pin-outs COM Express Basic module featuring Intel® QM77 PCH chipset supports Intel® 3rd generation Intel® Core™ processor with Dual DDR3 SO-DIMM socket up to 16GB DDR3 1333/1600MHz SDRAM with ECC support. The ICES 668 integrated Intel® HD graphics with DX11 support or expands via PCI Express Graphic 1x 16 lanes and support three DDI (Digital Display Interface) to follow the standard of PICMG COM.0 Rev. 2.0 specification. It allows type 6 pin-out Carrier board to implement HDMI, DVI, Display Port, SDVO and legacy VGA, 18/ 24 bits LVDS interface. The high performance ICES 668 COM Express Basic Module supports 4x USB 3.0/ 8x USB 2.0, 2x SATA 3.0/ 2x SATA 2.0 and 7x PCIe x1 lanes through our NEXCOM in-house designed ICEB 8060 evaluation carrier MB as well as customized solution for your embedded OEM/ ODM projects.

Specifications

CPU Support
- Support Intel® BGA 1023, 3rd generation Intel® Core™ processor
  - Intel® Core™ i7 3615QE (4C/ 6M cache/ 2.3GHz/ Max. TDP 45W)
  - Intel® Core™ i7 3555LE (2C/ 4M cache/ 2.5GHz/ Max. TDP 25W)
  - Intel® Core™ i7 3517UE (2C/ 4M cache/ 1.7GHz/ Max. TDP 17W)
  - Intel® Core™ i3 3217UE (2C/ 3M cache/ 1.6GHz/ Max. TDP 17W)
  - Intel® Core™ i5 3610ME (2C/ 3M cache/ 2.7GHz/ Max. TDP 35W)

Main Memory
- Dual DDR3/ SO-DIMMs, support 1333/1600MHz ECC system memory up to 16GB

Platform Control Hub
- Intel® QM77 PCH chipset

BIOS
- AMI System UEFI BIOS
- Plug and play support
- Advanced power management and advanced configuration & power interface support

Display
- Intel® HD graphics with DX11 support up to triple independent displays
- One PCI Express x16 Lane down to the carried board
- Supports VGA and single/dual channel s 18/ 24 bit LVDS interface
- 3x DDI (Digital Display Interface) supports HDMI/ DVI, DisplayPort and SVDO interfaces

Audio
- HD audio interface

On-board LAN
- Intel® 82579LM Gigabit Ethernet, support iAMT 8.0
- Support PXE boot from LAN, wake on LAN function
- Signals down to I/O board

COM Express Connector
- AB
  VGA/ LVDS/ 8x USB 2.0 / 2x Serial Port / HD Audio/ 4x SATA/ GbE/ GPIO/ LPC bus, 1x PCIe x4/ 3x PCIe x1/ SMBus (I2C)/ SPI BIOS /SPK out
- CD
  PCIe x16/ 3x DDI/ 4x USB 3.0

Block Diagram
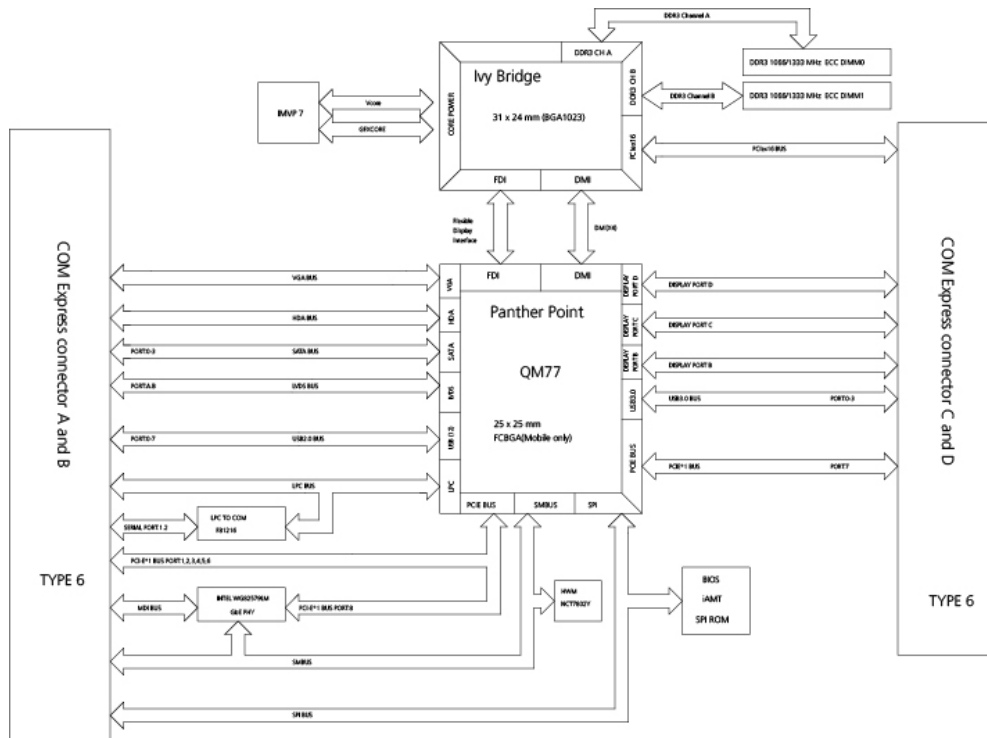
Power Requirements
- +12V, +5VSB, +3.3V RTC power

Dimensions
- 95mm (W) x 125mm (L)

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
  10% to 90% (operating, non-condensing)
  5% to 95% (non-operating, non-condensing)

Certifications
- Meet CE
- FCC Class A

Ordering Information

- **ICES 668-3610ME (P/N: 10K00066806X0)**

  COM Express Type 6, Basic Module, QM77 onboard 3rd Generation Intel® Core™ i5-3610ME (2x 2.7Ghz, 3MB Cache, 35W) processor, ECC DDR3/ 2x SO-DIMMs

- **ICES 668-3615QE (P/N: 10K00066805X0)**

  COM Express Type 6, Basic Module, QM77 onboard 3rd Generation Intel® Core™ i7-3615QE (4x 2.3Ghz, 6MB Cache, 45W) processor, ECC DDR3/ 2x SO-DIMMs

- **ICES 668-3555LE (P/N: 10K00066804X0)**

  COM Express Type 6, Basic Module, QM77 onboard 3rd Generation Intel® Core™ i7-3555LE (2x 2.5Ghz, 4MB Cache, 25W) processor, ECC DDR3/ 2x SO-DIMMs

- **ICES 668-3517UE (P/N: 10K00066803X0)**

  COM Express Type 6, Basic Module, QM77 onboard 3rd Generation Intel® Core™ i7-3517UE (2x 1.7Ghz, 4MB Cache, 17W) processor, ECC DDR3/ 2x SO-DIMMs

- **ICES 668-3217UE (P/N: 10K00066801X0)**

  COM Express Type 6, Basic Module, QM77 onboard 3rd Generation Intel® Core™ i3-3217UE (2x 1.6Ghz, 3MB Cache, 17W) processor, ECC DDR3/ 2x SO-DIMMs

- **ICES 668 F- kit (P/N: 10K00066807X0)**

  Active Fan Kits with heat- spreader, heat-sink and cooling fan for ICES 668 series

- **ICEB 8060 (P/N: 10KB0806000X0) RoHS Compliant**

  COM Express Type 6, COM.0 Rev. 2.0 Evaluation CRB, 3x DDI/ VGA/ LVDS/ 4x USB3.0/ 8x USB2.0 /6x COM/ 2xGbE/ 5.1 HD, SPDIF/ 2x SATA3.0/ mSATA/ CFast/ PCIe x16/ PCIe x4/ PCIe x1/ mPCIe, ATX power input

ICES 670

Coming Soon

Main Features

- Embedded Intel® 4th generation Core™ processor Haswell-BGA
- Intel® Lynx Point-M chipset support PICMG COM.0 Rev. 2.1 Type 6 pin-outs
- Support Dual channel DDR3L/ SO-DIMMs 1333/1600MHz up to 16GB
- Support PCIe x16, 7x PCIe x 1, 4x USB3.0/ 8x USB2.0, 2x SATA3.0/ 2x SATA2.0 and GbE
- Up to 3x Independent Displays, VGA, eDP/ LVDS, DVI, HDMI, DosplayPort
- Dimension 95 x 125mm² (W x L)

Product Overview

The ICES 670 is a COM Express Type 6-pinouts Basic module featuring Intel® Lynx-Point PCH chipset supports Intel® 4th generation Intel® Core™ processors (Haswell/ Shark Bay mobile) with Dual DDR3 SO-DIMM socket up to 16GB DDR3L 1333/1600MHz SDRAM. The ICES 670 integrated Intel® GT1/ GT2/ GT3 graphics engines with DX11.1 support or expands via PCI Express Graphic 1x 16 lanes and support three DDI (Digital Display Interface) to follow the standard of PICMG COM.0 Rev. 2.0 specification. It allows type 6-pinout Carrier board to implement HDMI, DVI, Display Port, eDP and legacy VGA, single channel 18-/ 24-bits LVDS interface. The high performance ICES 670 COM Express Basic Module supports 4x USB3.0/ 8x USB2.0, 2x SATA3.0/ 2x SATA2.0 and 7x PCIe x1 lanes through our NEXCOM designed ICES 8060 as well as customized solution for your embedded projects.

Specifications

CPU Support
- Support Intel® BGA 1364, 4th generation Intel® Core™ processors (Haswell-M/ Shark Bay-MB)

Main Memory
- Dual DDR3L/ SO-DIMMs, support 1333/1600MHz memory up to 16GB

Platform Control Hub
- Intel® 8 series (Lynx Point-M) PCH chipset

BIOS
- AMI System UEFI BIOS
- Plug and play support
- Advanced power management and advanced configuration & power interface support

Display
- Intel® GT1/ GT2/ GT3 integrated graphics processing unit (iGPU)
- One PCI Express x16 (Gen. 3.0) Lane down to the carried board
- Supports VGA and eDP/ LVDS interface
- 3x DDI (Digital Display Interface) supports HDMI/ DVI, DP/ eDP interfaces

Audio
- HD audio interface

On-board LAN
- Intel® Clarkville(I217) Gigabit Ethernet, support next generation vPro/ iAMT
- Support PXE boot from LAN, wake on LAN function
- Signals down to I/O board

COM Express Connector
- AB
  VGA/ LVDS/ 8x USB2.0 / HD Audio/ 4x SATA/ GbE/ GPIO/ LPC bus, 1x PCIe x4/ 3x PCIe x1/ SMBus (I2C)/ SPI BIOS /SPK out
- CD
  PCIex16/ 3x DDI /4x USB 3.0

Power Requirements
- +12V, +5VSB, +3.3V RTC power

Dimensions
- 95mm (W) x 125mm (L)
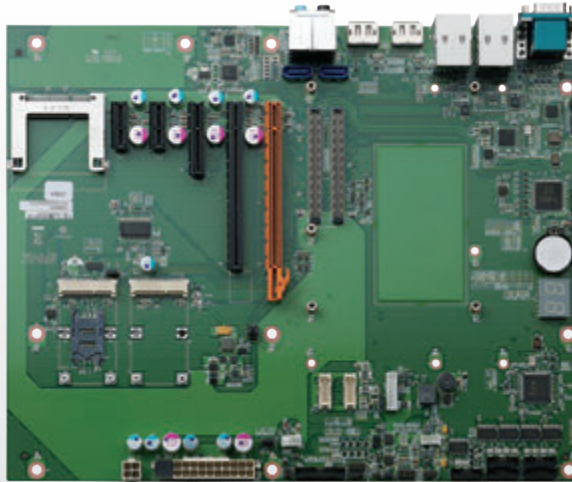
Block Diagram

Coming Soon

Environment

- Board level operating temperatures: -15°C to 60°C
- Storage temperatures: -20°C to 80°C
- Relative humidity:
  10% to 90% (operating, non-condensing)
  5% to 95% (non-operating, non-condensing)

Certifications

- Meet CE
- FCC Class A

Ordering Information

- **ICES 670 (P/N:TBD)**

ICEB 8060

COM Express Carrier Board, Type 6 pin-out, PICMG COM.0 Rev. 2.0 3DDI/ 4 USB 3.0/ 2 SATA 3.0/ PCIe Gen 3.0, Bootable CFAST/ Mini-SATA

Main Features

- COM Express COM.0, Rev 2.0 Evaluation CRB, ATX form-factor
- Support Type 6 pin-out, COMe Extended/ Basic/ Compact Module
- Display: 3 x DDI (2DP/HDMI), VGA & dual channels 18/ 24-bit LVDS
- 4 x USB 3.0/ 2 x SATA3.0, PCIe Gen 3.0, Bootable CFAST or Mini-SATA

- PCIe x16, DDI (PCIe x16), PCIe x4, PCIe x1 and Mini-PCIe for Wi-Fi
- VGA/ RS232/ 422/ 485/ 5COM, Dual GbE/ 12USB/ 5.1, S/PDIF

Product Overview

NEXCOM ICEB 8060 is a Carrier CRB of COM Express type 6, pin-out defined by PICMG, COM.0 Rev. 2.0 specification with ATX form-factor. NEXCOM in-house designed features with bootable CFAST/ SATA or Mini-SATA/ SATA via Mini-PCIe slot (half-/ full-size slot) as well as advanced 2 x SATA3.0 interfaces. ICEB 8060 support added-on card slots of 1 x PCIe x16 (up to PCIe Gen 3.0), 1 x DDI (SDVO/ HDMI/ DVI/ DP by PCIe x16 slot) 1x PCIe x4, 1x PCIe x1 and 1 x Mini-PCIe slots. Onboard Super I/O ITE8783 may support up to 6 x COM including COM2 defined by RS232/ 422/ 485 on edge I/O connector. Additional 2nd GbE LAN supported by Intel® 82574L and up to 4 x USB 3.0 external devices interfaces, up to 2 x SATA 3.0 internal devices interfaces to support most- updated CPU technology from Intel® 3rd generation Core™ i7/ i5/ i3 of Ivy bridge-Mbl + ECC onto NEXCOM Computer-On-Module ICES 668 family together.

Specifications

Form factor
- ATX Carrier MB, dimension: 305mm x 244mm (12" x 9.6")
- COM Express Evaluation CRB: PICMB COM Express board-to-board interconnectors, type 6 pin-put, female, 8mm stack-up height, COM.0 Rev. 2.0
- NEXCOM Computer-On-Modules Support List:
- Basic Size (125 x 95mm) : ICES 668

Expansion
- 1 x PCIe x16 slot, support PEG interfaces
- 1 x DDI (SDVO/ HDMI/ DP by orange color PCIe x16 slot)
- 1 x PCIe x4 slot, optional 4 x PCIe x1 signals
- 1 x PCIe x1 slot and 1 x Mini-PCIe slot for Wi-Fi with SIM tray

Graphic Interfaces
- Graphic Chip: from Type 6 pin-out, COM Express module
- CRT: support analog VGA with DB15 connector on the I/O edge
- LVDS: dual channels 18/ 24-bit LVDS connector (dual DF-13-20P)
- DDI (in PCIe x16): optional EBK-A2HDMI riser card for HDMI or DP

Super I/O
- ITE8783

I/O Interface
- Serial COM: 6 ports
  - 1 x edge DB9 connector to support RS232/ 422/ 485 (+5/ +12V by Ring)
  - 5x internal box-header 2.0 pitch to support RS232
- USB: 12 ports 4 x USB 3.0 and 8 x USB2.0 ports
  - 4 x USB 3.0/ 4 x USB 2.0 ports by stack Type A on edge
  - 3 x USB 2.0 by 4-pins JST 2.0mm JST connector,
  - 1 x internal USB 2.0 to Mini-PCIe slot for external wi-fi module
- SATA: 4 ports
  - 2 x SATA 3.0 ports
  - 1 x Mini-SATA by Mini-PCIe slot for half-/ full size Mini-SATA/ SSD
  - 1 x CFAST slot for CFAST/ SATA 2.0
- PS/2: internal 2 x 4-pins header for Keyboard/ Mouse
- GPIO ports: 2 x + 8 x pins GPIO signals from COMe (default 5V TTL/ option 3.3V)

Network
- ETH0: LAN port Connected from COMe CPU module (ICES 668)
- ETH0: Support 1 x RJ45/ GbE LAN port on the edge I/O
- ETH1: Support 2nd RJ45/ GbE LAN port by Intel 82574L on the edge I/O
- ETH0 and ETH1 support Boot from LAN (PXE)
- ETH0 and ETH1 support Wake-on-LAN (when +5Vsb power available)

Block Diagram
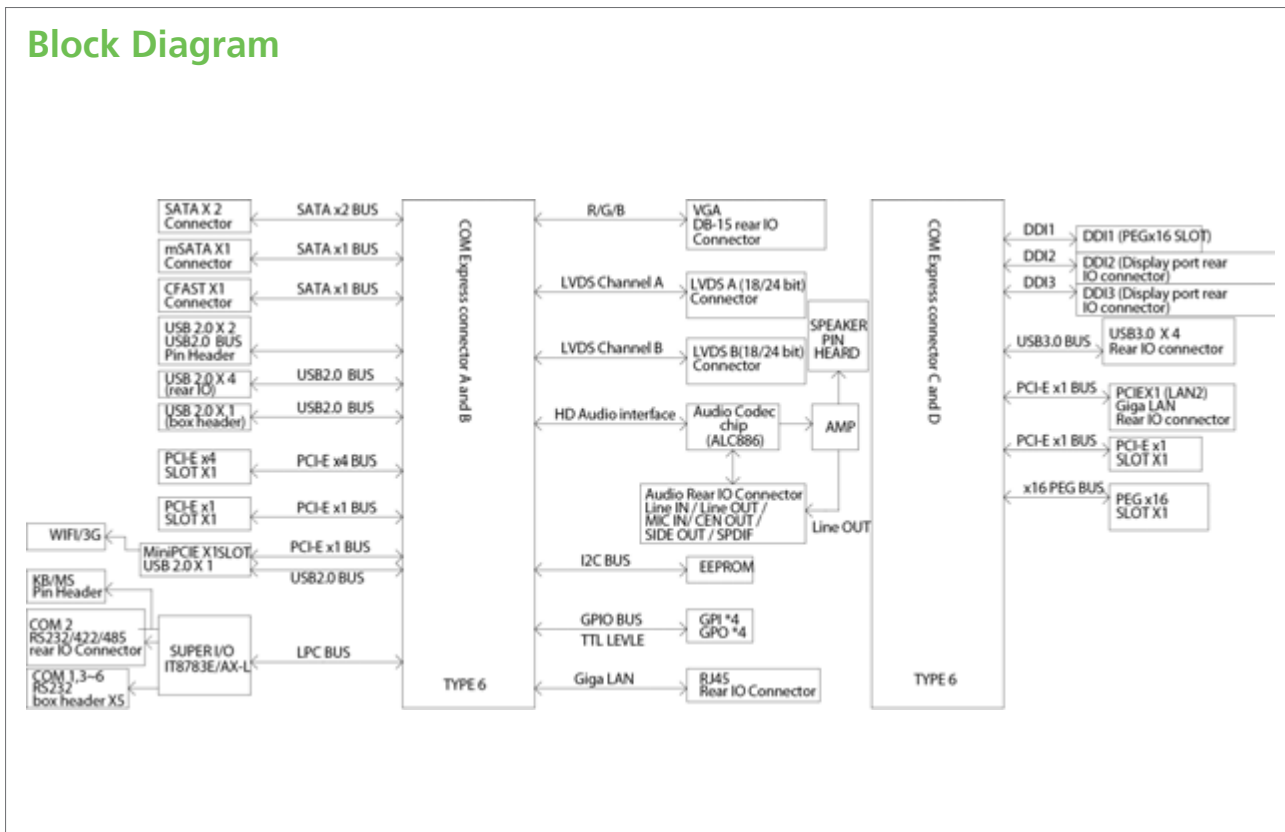
Audio
- HD Audio AL886 with 5.1 channels
- Support external S/ PDIF interface
- Support internal pin-header for L/ R speaker-out 2W/ 4 Ohm
- Onboard buzzer

EEPROM
- 1 x 2K EEPROM to record PCI Express Lane configuration
- ATMEL AT24C32 (or C02) and address 0 x 57 or (0 x AE)

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% temperature 25°C)

On-board RTC
- On-chip RTC with battery BR2032

Power Input
- Standard ATX 24 pins and AUX 4-pins with 12V

Dimensions
- ATX form factor, 305x 244mm (Lx W, 12"x9.6")

Environment
- Operating temperatures: -20°C to 60°C
- Storage temperature: -40°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information
- **ICEB 8060 (P/N: 10KB0806000X0) RoHS Compliant**
  COM Express Type 6, COM.0 Rev. 2.0 Evaluation CRB, 3DDI/ VGA/ LVDS/4USB3.0/ 8USB2.0 /6COM /2GbE/ 5.1 HD, SPDIF/ 2SATA3.0/ mSATA/ CFAST/ PCIe x16/ PCIex4/ PCIe x1/ mPCIe, ATX power input

ICEK 8060-T6

Integrated COM Express Compact or Basic Module

Bootable Mini-SATA/ CFast-SSD on ICEB 8060 with 10.4" LCD and Flex-ATX 110/220V AC input

Main Features

- COM Express Type 6, COM.0, Rev2.0 Evaluation Starter Kit
- COM Express Compact or Basic Modules with passive or active fan-sink
- Bootable Mini-SATA/ CFast-SSD with 10.4" LCD/ 18-bit LVDS Display

- PCIe x16, PCIe x4, 2 x PCIe x1, 1 x PEG/ DDI/ SDVO and Mini-PCIe for Wi-Fi
- 3 x DDI/ 4 x USB3.0/ 2 x SATA3.0/ 6 x COM/ VGA/ LVDS/ 2 x GbE/ 5.1 Audio S/ PDIF
- Integrated Flex-ATX PSU for AC 110/ 220V Input

Product Overview

NEXCOM ICEK 8060-T6 as proof-of-concept as pre-configured system of COM Express starter kit join-design-win assistance package based on COM Express type 6, pin-out defined by PICMG, COM.0 Rev. 2.0 specification. NEXCOM configure and assembly to order service with COM Express Type 6 Basic Module (125 x 95mm) like ICES 667 or ICES 668 with active heat-sink for embedded processors up to i7-3610QE or i7-3615QE (2 x 2.3Ghz/ 6MB/ max. TDP 45W) of Intel® 3rd Generation Core™ i7/ i5/ i3 processors to adapt wide range of Industrial and embedded applications.

ICEK 8060-T6 features bootable CFast/ SSD from external access or Mini-SATA/ SSD via Mini-PCIe slot (half-/ full-size slot) from internal build-in onto ICEB 8060 ICEK 8060-T6 also support legacy SATA 2.0 as bootable interfaces. ICEK 8060-T6 support added-on card slots of 1 x PCIe x16, 1 x PCIe x4, 2 x PCIe x1 and 1 x DDI (port B/ SDVO/ DP/ HDMI) slot may adapt our add-in EBK-A2HDMI (HDMI/ DP) for your evaluation of three independent displays during project development.

- Faster system Time-to-market: ICEK 8060-T6 as Type 6 starter kit as pre-configured system ready to help your system design customer to reduce total development cycle time from our proof-of-concept and design-assistance support for your target OS and applications.

- Various CPU SKUs support Intel® 3rd generation Intel® Core™ i7/ i5/ i3, Celeron Mobile processors supported by COM Express Type 6 Basic module (125x 95mm) like ICES 667 or ICES 668

- Longevity for your multi-generation durable equipment: Once you pre-tested your OS and Application onto our ICEK 8060-T6 starter kit, You may easy to design your own customized I/O carrier solution board which you may adapt multiple COM Express modules for your target application.

Specifications

Form factor
- Rugged Plastic (HDPE) Suitcase dimension: 47 x 42 x 12 cm^3
- Integrated ICEB 8060 Type 2, Carrier CRB for COM Express Basic Module

Display
- 10.4" AUO, G104SN03 V5

Expansion
- 1 x PCIex 16 (Gen 3.0) slot, 1 x PEG/ DDI (port B for SDVO/ EBKA2-HDMI)
- 1 x PCIex4 slot, 2 x PCIex1 slot and
- 1 x Mini-PCIe slot for Wi-Fi with optional SIM tray

Graphic Interfaces
- CRT: support analog VGA with DB15 connector on the I/O edge
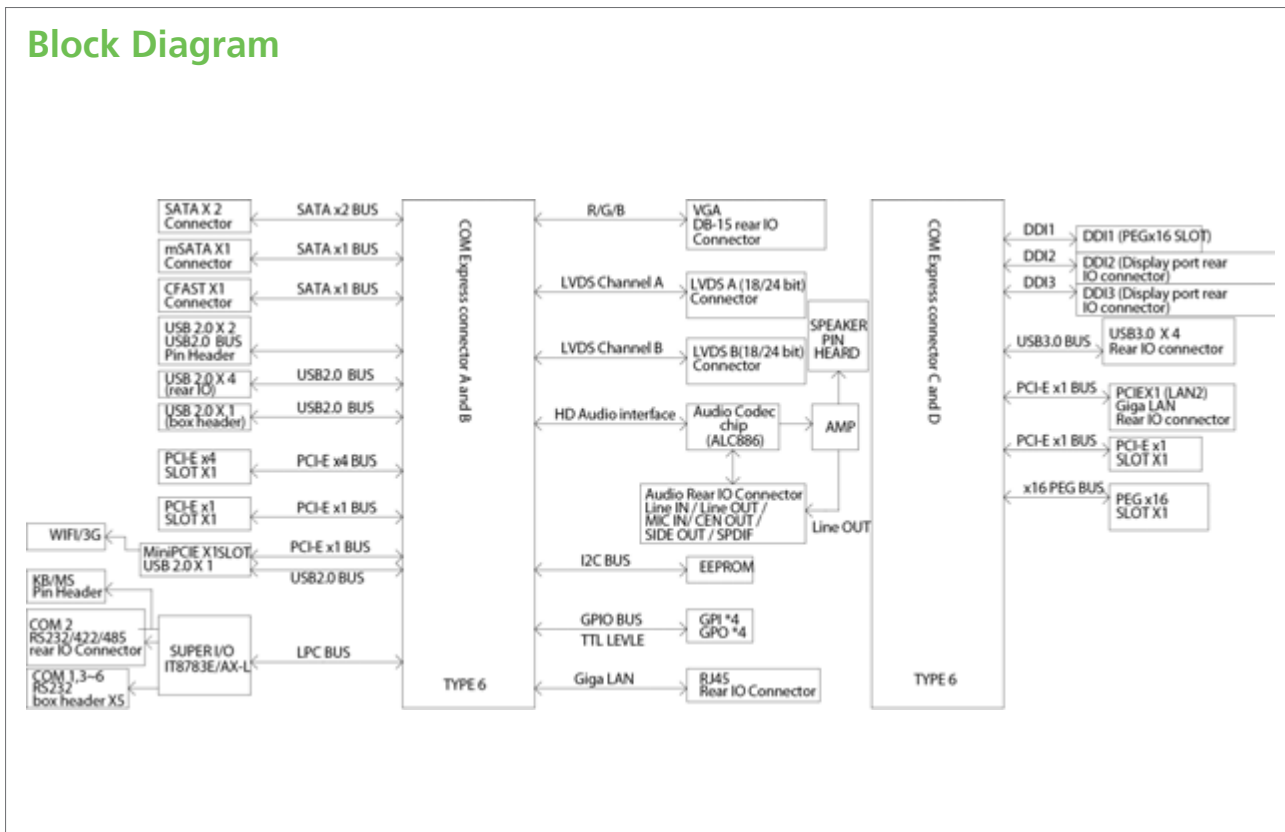- LVDS: dual channels 18/ 24-bit LVDS connector (dual DF-13-20P)

Super I/O
- iTE IT8783

I/O Interface
- Serial COM: 6 ports
  - 1 x edge DB9 connector to support RS232/ 422/ 485 (+5/ +12V by Ring)
  - 5 x internal box-header 2.0 pitch to support RS232

Block Diagram

- USB 3.0/ 2.0: 8 ports
  - 4 x USB 3.0/ USB2.0 ports by stack Type A on edge
  - 3 x USB 2.0 by 4pins JST 2.0mm header connector
  - 1 x internal USB 2.0 to Mini-PCIe slot for external wi-fi module
- SATA 2.0: 4 ports
  - 2 x SATA 3.0/ SATA 2.0 ports
  - 1 x Mini-SATA by Mini-PCIe slot for half-/ full size mSATA-SSD
  - 1 x CFast slot for CFast-SSD/ SATA 2.0
- PS/2: 2x 4pins header for Keyboard/ Mouse
- GPIO ports: 2x + 8x pins header GPIO from COMe
  (default 5V TTL/ option 3.3V)

Network
- ETH0: LAN chip: from COMe CPU module
- ETH1: 2nd RJ45/ GbE port by Intel 82574L
- Support total 2 x RJ45/ GbE ports on the edge I/O

Audio
- HD Audio AL886 with 5.1 channels
- Support external S/ PDIF interface
- Support internal pin-header for L/R speaker-out 2W/ 4 Ohm

EEPROM
- 1 x 2K EEPROM to record PCI Express Lane configuration
- ATMEL AT24C32 (or C02) and address 0 x 57 or (0 x AE)

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% temperature 25°C)

On-board RTC
- On-chip RTC with battery BR2032

Power Input
- Build-in AC 110/ 220V Input for Flex-ATX PSU in this Starter-Kit

Ordering Information

- **ICEK 8060-T6 (P/N: MISC by Project Registered)**
  COM Express Type 6 Starter Kit ready for NEXOM COM Express Type 6 Basic modules assembly SO-DIMM system memory with passive/ active fan-sink onto Type 6 carrier ICEB 8060 with bootable Mini-SATA/ CFast-SSD, pre-load Win 7 trial version OS with 10.4" LCD/ LVDS display and build-in Flex-ATX PSU AC 110/ 220V Input

NEXCOM Computer-on-Modules Support List:

Models	ICES 667	ICES 668
Processors SKUs	3rd Generation Core™ i7/ i5/ i3 rPGA 988	3nd. Generation Core™ i7/ i5/ i3 FCBGA 1023
Chipset	QM77/ HM76	QM77
Max. Memory	16GB	16GB
SO-DIMM	2	2
Memory Type	non-ECC	ECC-DDR3
Heat-spreader	Yes	Yes
Heat-Sink	Yes	Yes
Cooling Fan	Yes	Yes

EBC 500

5.25" Intel® Core™ 2 Duo/ Core™ Duo/ Core™ Solo Embedded CPU Board with 2x PCIe GbE LAN/ 1x PCIe x6
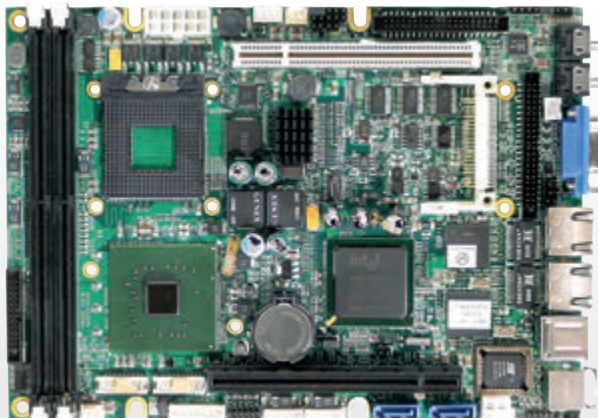
Main Features

- Supports Intel® Core™ 2 Duo, Core™ Duo & Core™ Solo Processor Family
- Intel® 945GME Chipsets
- 2x 240-pin DDR2 DIMM Sockets Support Un-buffered Non-ECC DDR2 400/ 533/667 up to 2GB

- 2x Intel® 82573L PCI Express Gigabit LAN
- Supports LVDS/ VGA Display and 1 PCIe x16 Slot
- CompactFlash Socket

Product Overview

The EBC 500 is a 5.25 " form factor embedded board computer utilizing the latest Intel® Core™ 2 Duo processor with Intel's 65-nanometer technology and new micro-architecture. EBC 500 supports Intel® Core™ 2 Duo, Core™ Duo, Core™ Solo, and Celeron® M family processors up to 2.17 GHz with 533/ 667 MHz FSB and up to 4MB L2 cache. The incorporated mobile Intel® 945GME and ICH7-M DH chipset supports two 240-pin DDR2 DIMM socket up to 2GB un-buffered non-ECC DDR2 533/ 667 MHz, one PCI express x16 slot for superb graphic display and two PCI express x1 Gigabit Ethernet LAN for fastest network connection. The EBC 500 also supports two SATA, IDE, CF, six USB 2.0, VGA & LVDS, four COM, and Parallel port. The RoHS compliant EBC 500 embedded board computer consumes very low power and is designed to deliver higher processing power with greater performance-per-watt to fit in various environments for embedded applications. The new Intel® Core™ 2 Duo processor in the EBC 500 has a flexible design that is able to create new solutions for various environments.

Specifications

CPU Support
- Intel® Socket M
- Supports Intel® Core™ 2 Duo, Core™ Duo,Core™ Solo family processors with 533/667 MHz
- Intel® Embedded Processor List (Intel® Longevity CPU):
  Core™ 2 Duo Processor (T7400 2.16GHz)
  Core™ Duo Processor (T2500 2.0GHz)
  Core™ Solo Processor (Celeron® M 440 1.86GHz)

Main Memory
- 2x 240-pin DDR2 DIMM socket, up to 2GB un-buffered non-ECC DDR2 400/533/667 SDRAM
- * Note: Maximum 4GB. Actual memory size is dynamic based on the OS I/O resource allocation

Chipset
- Intel® 945GME Graphics Memory Controller Hub (GMCH)
- Intel® 82801 GHM ICH7 Mobile Digital Home (ICH7-M DH)

BIOS
- Award system BIOS
- Supports Soft off, Wake on LAN, Power On by PS2 Keyboard Function Key, RTC alarm Power On
- Power on after power failure
- Plug & Play support
- 4M bits flash ROM

On-board LAN
- 2x Intel® 82573L PCI Express Gigabit Ethernet
- Supports Boot From LAN (PXE)
- Supports Wake on LAN (When 5Vsb power available). (LAN1 only)
- 2x RJ45 with LED

Display
- Intel® 945GME chipset with integrated graphics controller, Max. 128MB by Intel® Dynamic Video Memory Technology (DVMT) 3.0
- Analog VGA interface:
  1x DB15 VGA port Resolution up to 1400 x 1050 (Tested); Chipset supports up to 2048 x 1536
- LVDS interface: 2 x DF13 20-pin LVDS connector for internal connection, supports single (18bit) or dual pixel (36bit) LVDS panel
- CCFL interface: 1 x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC655 CODEC for AC'97 v2.1 CODECl
- Interface: Mic-in and Speaker-out connector, Line-in with pin header
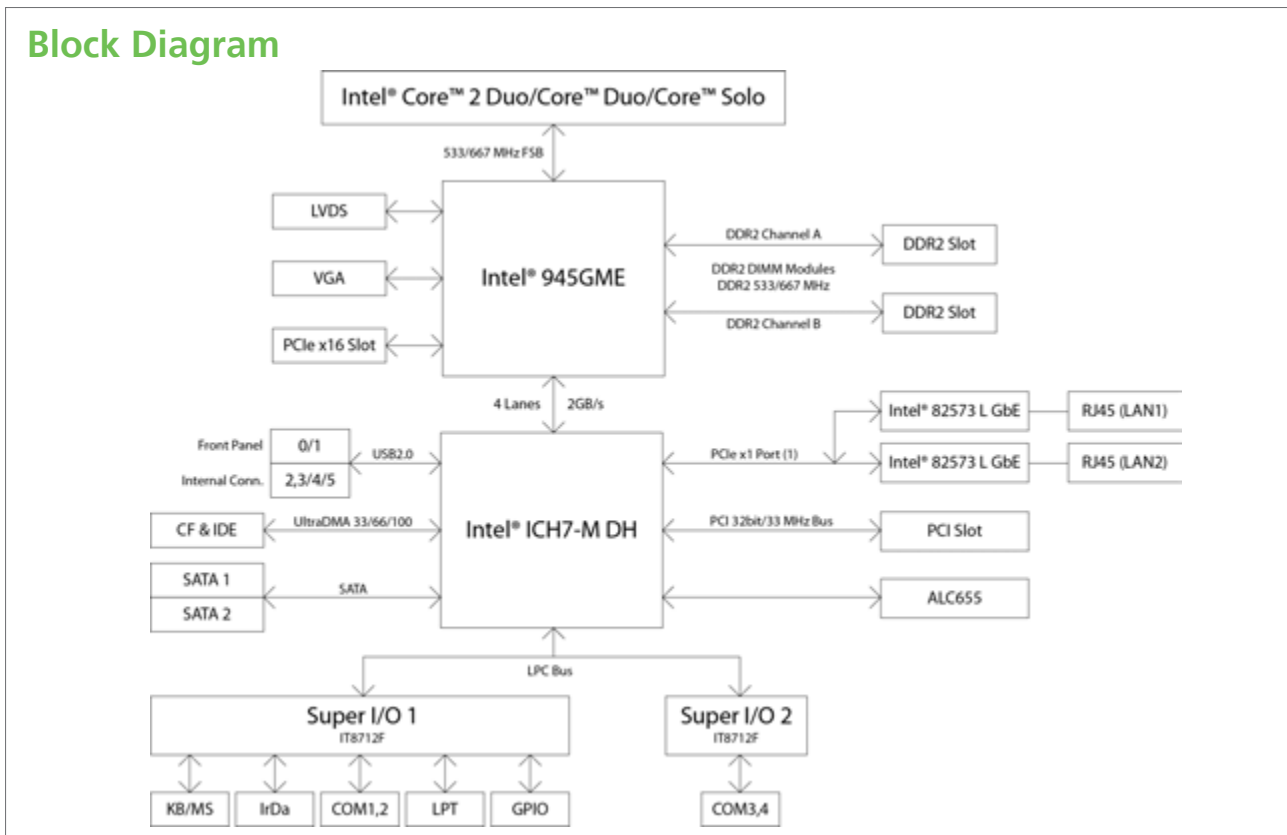
Expansion
- 1x PCIe x16 slot
- 1x PCI slot

I/O Interface
- USB 2.0: 2x ports edge connector
- USB 2.0: 4x ports, by 1x 6 2.5mm JST connector

292   5.25 " CPU Boards

NEXCOM

Block Diagram

- Serial ports: 4x SIO, with 2x 20 box header (2.0mm) support RS232 only 1x jumper to switch 5V and 12V power source
- Parallel port: 1 port, with 2 x 13 box header (2.0mm)
- PS/2: 1x Mini-Din Keyboard/Mouse
- GPIO: Support 4 sets of general purpose I/O each with TTL level (5V) interface
- FAN: Two 1x 3-pin connectors for system Fan, one 1x 4 pin connector for CPU Fan
- 1x on-board 5-pin header for IrDA, TX, RX
- SMBus2.0/ Reset/ On off switch button

Watchdog Timer
- Watchdog Timer is programmable by software from 1 to 255 seconds (Tolerance 10% under room temperature 25°C)

Storage
- 2x SATA II ports
- 1x IDE 44-pin connector
- 1x CF internal socket, supports One Type I & II Compact Flash Card (Primary Master)

System Monitor
- 8 voltage
  (For +3.3V, +5V, +12V, Vcore and +1.5V, +1.8V, +5VSB, +3 VSB)
- 3 Temperatures (CPU, two external Temperature Sensor)
- 3 FANs speed (CPU and System FANs)

On-board RTC
- On-chip RTC with battery back up
- 1x External Li-ion Battery
- RTC Tolerance less than 2sec (24 hours) under 25°C environment

Power Requirements
- Supports both AT and ATX Mode (default setting is AT mode)

CPU: P-M 2.17GHz Memory: 2 x 1G DDR2	+12 V	+5 V
Full-Loading Mode	3.25 A	4.97 A
Light-Loading Mode	0.40 A	2.97 A

* NOTE:
  1. Full Loading: Utilize CPU 100% with Burn-in test running
  2. Light Loading: Utilize CPU loading below 5% without data or application running.

Dimensions
- 5.25" form factor: 203mm (L) x 146mm (W) (7.9" x 5.7")

Environment
- Board level operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 500 (P/N: 10E00050000X0) RoHS Compliant**
  5.25" Embedded Board supporting Intel® Core™ 2 Duo, Core™ Duo and Core™ Solo CPU w/ VGA/ LVDS/ Audio/ 4x COMs/ 6x USB2.0/ Dual Gigabit LAN

- **Packing List**

Part No.	Description
60233USB59X00	USB CABLE
60233POW73X00	POWER CABLE (2x10 TO 2x5)
60233POW34X00	POWER CABLE (BIG 4P)
60233MK202X00	PS2 Y CABLE
60233IDE86X00	IDE CABLE 44P TO 40P
60233ATA06X00	SATA CABLE L: 330mm
6023325262X00	PRINT CABLE
6023309402X00	COM CABLE L: 300mm

EBC 540

Main Features

- Support Intel® Atom™ N270 1.6GHz processor with 533 MHz FSB
- Intel® 945GSE integrated 3D graphics engine GMA950 chipset with CRT and LVDS display
- 1x 240-pin DDR2 DIMM socket, up to 2GB non-ECC 400/ 533 MHz DDR2 memory

- Realtek RTL8111C-GR PCI Express Gigabit Ethernet x2
- Realtek ALC888 Audio CODEC x1
- USB 2.0 x4, Serial port x 6 and parallel port x1
- Mini-PCIe x1/ PCI 104 Interface x1/ PCI slot x1
- SATA x2, Compact Flash Socket x1

Product Overview

The EBC 540 is a 5.25" embedded board with an on-board Intel® Atom™ N270 1.6GHz processor with 512 KB L2 cache by 533 MHz FSB. The EBC 540 features Intel® 945GSE and ICH7-M chipsets, which supports DDR2 400/ 533 memory, along with integrated GMA950 graphics for large display application to support independent CRT and LVDS interface. The South Bridge ICH7-M provides a Compact Flash socket, six serial ports, four USB 2.0 ports, two PCI Express Gigabit Ethernet LAN ports, two SATA ports, one PCI 104 interface and one PCI slot for application.

The EBC 540 is a great solution featuring a low power consumption processor and small footprint with versatile displays and numerous I/O port support at industrial applications.

Specifications

CPU Support
- Support Intel® Longevity CPU Atom™ N270 1.6GHz processor with 533MHz FSB

Main Memory
- 1x 240-pin DDR2 DIMM socket, support up to 2GB non-ECC 400/ 533 DDR2 memory

Chipset
- Intel® 82945GSE Graphic Controller Hub (GMCH)
- Intel® 82801 GBM ICH7 Mobile (ICH7-M)

BIOS
- Award system BIOS
- Plug & Play support
- Advanced Power Management
- Advanced Configuration & Power Interface
- 8M bits SPI ROM

On-board LAN
- 2x Realtek RTL8111C-GR PCI Express Gigabit Ethernet
- Support Boot From LAN (PXE)
- Wake on LAN (When 5Vsb power available) (LAN1 only)
- 2x RJ45 with LED

Display
- Intel® 945GSE integrated 3D graphics engine, based on Intel® GMA950 architecture, delivers sophisticated graphics for large display application, dual independent display support, at graphics core speeds up to 166MHz, provides a wealth of options for high-resolution displays
- Analog VGA Interface:
  1 x DB15 VGA port
  Resolution up to 1600 x 1200 at 85 Hz, 2048 x 1536 at 75Hz
- LVDS Interface:
  Support 18-bit single channel LVDS, resolution up to 1024 x 768 with maximum pixel depth of 18-bpp
- SDVO Interface (one 30-pin box header):
  SDVO w/ CH7308B or CH7307C daughter board for LVDS or DVI output
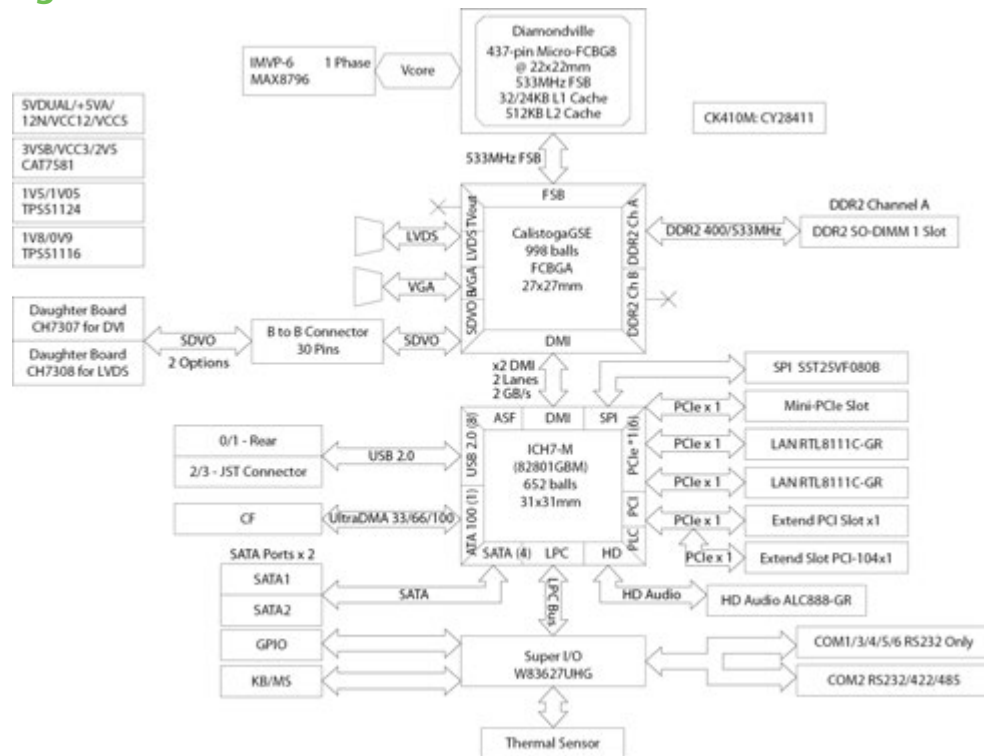- CCFL Interface: 1 x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC888 CODEC for High Definition
- Mic-in and Line-out Connector

Expansion
- 1x Mini-PCIe slot
- 1x PCI slot
- 1x PCI 104 slot

Block Diagram

I/O Interface

- USB 2.0: 2x ports connector on front
- USB 2.0: 2x ports, with 1x 6 JST (2.5 mm)
- Serial ports: 6x COMs, COM 1/ 3/ 4/ 5/ 6 for RS232, COM 2 for RS232/422/485 (select in BIOS)
- Parallel port: 1 port, with 2 x13 box-header (2.0 mm)
- PS/2: 1x Mini-Din Keyboard/Mouse
- GPIO: Support 4 sets of general purpose I/O each with TTL level (5V) interface
- FAN: 2x 3-pin FAN connector (CPU and system)
- On-board buzzer / SMBus2.0/ Reset/ On & Off switch button/ power LED/ HDD/ Active LED

Watchdog Timer

- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage

- 2x SATA ports
- 1x CF socket

System Monitor

- Monitoring of 5 voltages and 3 temperatures
- 5 Voltage (+5V, Vcore, +12V, +3.3V, +1.5V)
- 2 Temperatures (CPU, System temperature sensor)

On-board RTC

- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Requirements

- Supports both AT and ATX Mode (default setting is AT mode)
- Power Supply must provide +12V, +5V at least for AT mode
- Power Supply must provide +12V, +5V, +5Vsb for ATX mode
- Power On CON 6P (Standard) + PS_On JST 3P CON

Dimensions

- 5.25" form factor/ 203mm (L) x 146mm (W) (7.9"x5.7")

Environment

- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications

- CE approval
- FCC Class A

Ordering Information

- **EBC 540 (P/N: 10E00054000X0)**
  Low power Embedded Board with Intel® Atom™ N270 processor and based on Intel® 945GSE 3D graphics engine GMA950 w/ VGA/ LVDS/ 4x USB2.0/ 6x COMs/ 2x PCIe Gigabit LAN/ 1x parallel port/ 1x Mini-PCIe interface/ 1x PCI 104 interface/ 1x PCI slot

- **EBKSDVO1 (P/N: 10E0SDVO100X0)**
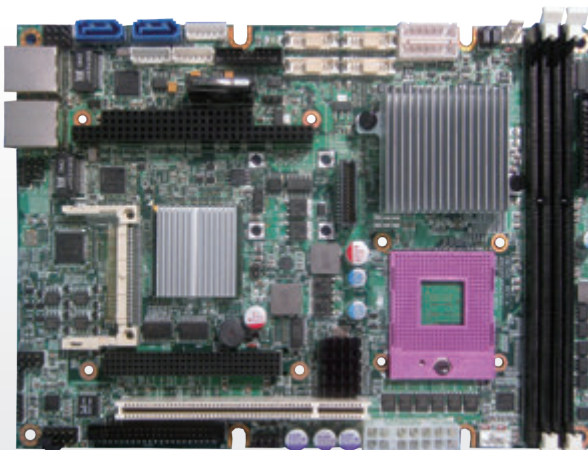 CH7307C daughter board w/ DVI-Single link for DVI output

- **EBKSDVO2 (P/N: 10E0SDVO200X0)**
  CH7308B daughter board for LVDS output

- **Packing List**

Part No.	Description
60233USB59X00	USB CABLE
60233MK202X00	PS2 Y CABLE
6023309402X00	COM CABLE L: 300mm
60233PW145X00	POWER CABLE
60233ATA17X00	SATA CABLE
60233PRT10X00	PRINT CABLE
60233SIO06X00	COM CABLE

EBC 545

5.25" Intel® Core™ 2 Quad/ Core™ 2 Duo/ Celeron® Embedded CPU Board with Dual Display/ 1 x PCI/ 1 x PC/ 104+/ 2 x GbE

Main Features

- Support Intel® Core™ 2 Quad, Core™ 2 Duo, Celeron® Processor
- Intel® GM45 with GMA4500MHD Graphic Engine
- 2x 240-pin DDR3 DIMM socket, up to 8 GB non-ECC 1066 MHz DRAM
- 2x Intel® 82574L PCI Express Gigabit Ethernet

- 1x Realtek ALC888 HD CODEC
- 6x USB 2.0, 4x Serial port, 2x SATA
- 1x PCI Slot/ 1x PC / 104+ slot

Product Overview

The EBC 545 is a 5.25" form factor embedded utilizing Intel® Core™ 2 Quad, Core™ 2 Duo and Celeron® 575 Processor. EBC 545 features Intel® GM45 and ICH9-M chipsets, which supports DDR3 1066 MHz DRAM. The multi expansion features via PCI and PC/104+ for different application at your system device.

The EBC 545 embedded board supports a various operation systems such as Windows7 embedded, Windows XP embedded, Win CE and Linux.

Specifications

CPU Support
- Intel® Core™ 2 Quad (Q9100 2.26GHz) (non longevity CPU)
- Intel® Embedded Processor List (Intel® Longevity CPU):
  Intel® Core™ 2 Duo (T9400 2.53GHz)
  Intel® Celeron® 575 2.0GHz

Main Memory
- 2x 240-pin DDR3 DIMM Socket, up to 8GB non-ECC1066 MHz DRAM

Chipset
- Intel® GM45
- Intel® ICH9-M

BIOS
- Award System BIOS
- PnP and ACPI support
- 8M bits SPI ROM

On-board LAN
- 2x Intel® 82574L PCI Express GbE
- Support PXE and Wake on LAN (When 5Vsb available) (LAN1 only)
- 2x RJ45 (180°/ 90° option)

Display
- Intel® GM45 integrated GMA4500MHD Graphic engine
- Analog VGA Interface:
  One 2x 8.0mm box header
  Resolution up to 1600 x 1200 at 85 Hz, 2048 x 1536 at 75Hz

- LVDS1 Interface:
  2x DF13 20-pin LVDS connector for internal connection support single (24bit) or dual pixel (48bit) LVDS panel
- LVDS2 (Through SDVOB w/ CH7308B) Interface:
  2x DF13 20-pin LVDS connector for internal connection support single (24bit) or dual pixel (48bit) LVDS panel
- SDVO Interface (option, one 30-pin box header):
  EBK SDVO1 (SDVOC w/ CH7307C DVI transmitter w/ DVI-Single link output)
- CCFL Interface: 2x CCFL for Panel Backlight Inverter
- Composition:
  VGA + LVDS1
  VGA + DVI
  LVDS + DVI
  LVDS1 + LVDS2

Audio
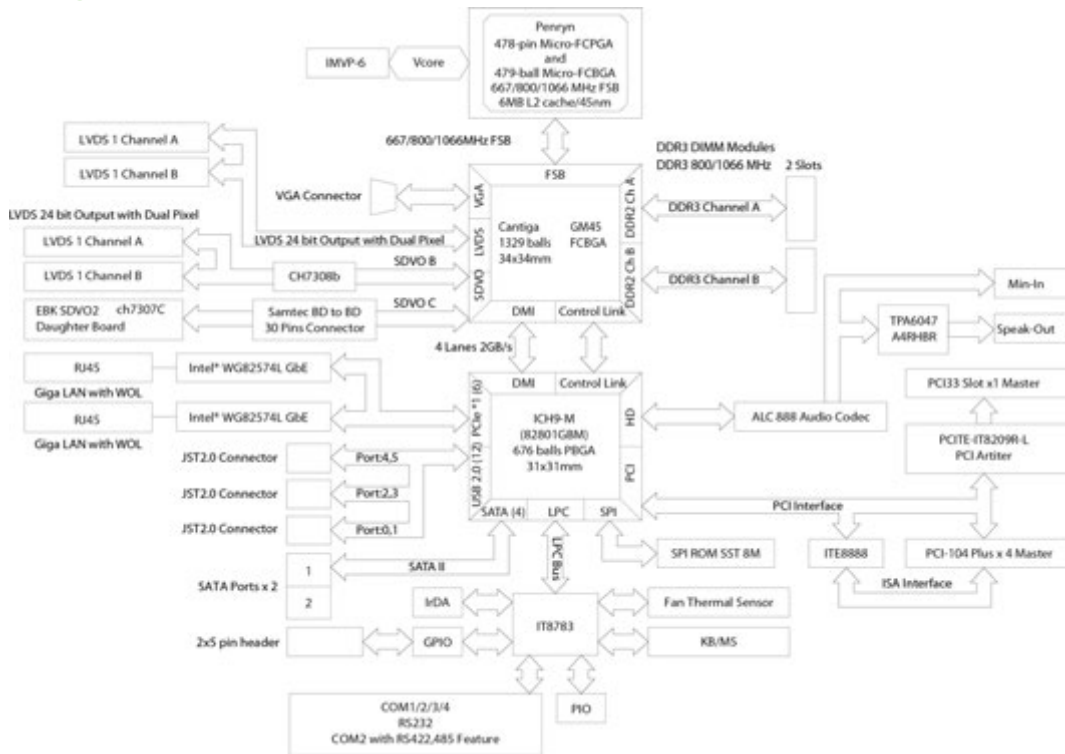- Realtek ALC888 HD CODEC
- 1x Mic-in/ 1 x Line-out

Expansion
- 1x PCI
- 1x PC/ 104+

I/O Interface
- Serial port: 3x COM support RS232 and 1x COM support RS232/422/485 (BIOS setting)

Block Diagram

- Parallel port: 1x 26-pin box header
- USB 2.0: 6x ports by JST connector x3
- 8x GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5 V)
- 2x 2-pin 2.54mm header for Power LED/ HDD Active LED
- 1x 4-pin and 1 x 3-pin Fan connector
- 1x PS/2 KB/ MS via pin header
- On board Buzzer/ SMBus2.0 / Reset SW
- 1x 5-pin header for IrDA

Watchdog Timer
- WDT can be programmable by Software from 1 sec to 255 sec and from 1 min to 255 minutes (Tolerance 15% at 25°C)

Storage
- 2x SATA port
- 1x CF socket

System Monitor
- Monitoring of 5 voltages and 2 temperatures and 2 fan speed monitor
- 5 voltage (+5V, Vcore, +12V, +3.3V, +1.5V)
- 2 temperatures (CPU, external temperature)
- 2 fan speed monitor (CPU, system)

Power Requirements
- Supports both AT and ATX Mode (default setting is ATX mode)
- ATX mode:
  2x 5pin ATX power connector w/ +12V/ -12V/ +5V/ 5Vsb Power In
  2x 2pin power connector +12V Power In
  At ATX Mode, the BIOS setting is as follow:
  POWER -SUPPLY TYPE: [ATX]
  AUTO PWR-FAILURE RESUME: [ON]
- AT mode:
  2x 5pin ATX power connector w/ +12V/ -12V/ +5V Power In
  No Power On push Button, Software Shutdown function and LAN remote wake up

Dimensions
- 5.25" form factor/ 203mm (L) x 146mm (W) (7.9"x 5.7")

Environment
- Operation temperatures: 0°C to 60°C
- Storage temperatures: -20°C to 85°C
- Humidity: 10% to 90%, non condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 545 (P/N: 10E00054500X0)**
  5.25" Intel® Core™ 2 Quad, Core™ 2 Duo/ Celeron® Embedded CPU Board with Dual Display/ 1x PCI / 1x PC/ 104+/ 2x GbE

- **EBKSDVO1 (P/N: 10E0SDVO100X0)**
  CH7307C daughter board w/ DVI-Single link for DVI output

- **EBKSDVO2 (P/N: 10E0SDVO200X0)**
  CH7308B daughter board for LVDS output

- **Packing List**

Part No.	Description
60233USB59X00	USB CABLE
60233POW73X00	POWER CABLE (2x10 TO 2x5)
60233MK202X00	PS2 Y CABLE
6023309402X00	COM CABLE L: 300mm
60233PRT15X00	PRINT CABLE
60233ATA17X00	SATA CABLE
60233POW22X00	POWER CABLE (BIG 4P)

EBC 550

5.25" Intel® Core™ 2 Quad/ Core™ 2 Duo/ Celeron® Embedded CPU Board
with Dual Display/ 1x PCIe x16/ 1x PCIe x4/ 1x PCI/ 2x GbE

Main Features

- Support Intel® Core™ 2 Quad, Core™ 2 Duo, Celeron® Processor
- Intel® GM45 with GMA4500MHD Graphic Engine
- 2x 240-pin DDR3 DIMM socket, up to 8GB non-ECC 1066 MHz DRAM
- 2x Intel® 82574L PCI Express Gigabit Ethernet
- 1x Realtek ALC888 HD CODEC
- 6x USB 2.0, 4 x Serial port , 4x SATA and 1x Parallel port
- 1x PCIe x16 Slot/ 1x PCIe x4 Slot/ 1x PCI slot

Product Overview

The EBC 550 is a 5.25" form factor embedded utilizing Intel® Core™ 2 Quad, Core™ 2 Duo and Celeron® 575 Processor. EBC 550 features Intel® GM45 and ICH9-M chipsets, which supports DDR3 1066 MHz DRAM. The multi expansion features via PCIe x16, PCIe x4 and PCI for different application at your system device.

The EBC 550 embedded board supports a various operation systems such as Windows XP embedded, Win CE and Linux.

Specifications

CPU Support
- Intel® Core™ 2 Quad (Q9100 2.26GHz) (non longevity CPU)
- Intel® Embedded Processor List (Intel® Longevity CPU):
  Intel® Core™ 2 Duo (T9400 2.53GHz)
  Intel® Celeron® 575 2.0GHz

Main Memory
- 2x 240-pin DDR3 DIMM Socket, up to 8GB non-ECC 1066 MHz DRAM

Chipset
- Intel® GM45
- Intel® ICH9-M

BIOS
- Award System BIOS
- PnP and ACPI support
- 8M bits SPI ROM

On-board LAN
- 2x Intel® 82574L PCI Express GbE
- Support PXE and Wake on LAN (When 5Vsb available) (LAN1, LAN2 both)
- 2x RJ45 w/ LED

Display
- Intel® GM45 integrated GMA4500MHD Graphic engine
- Analog VGA Interface:
  1x DB15 port
  Resolution up to 1600 x 1200 at 85 Hz, 2048 x 1536 at 75Hz
- LVDS Interface:
  2x DF13 20-pin LVDS connector for internal connection, supports Single (24bit) or dual pixel (48bit) LVDS panel, resolution up to 1600 x 1200
- CCFL Interface:
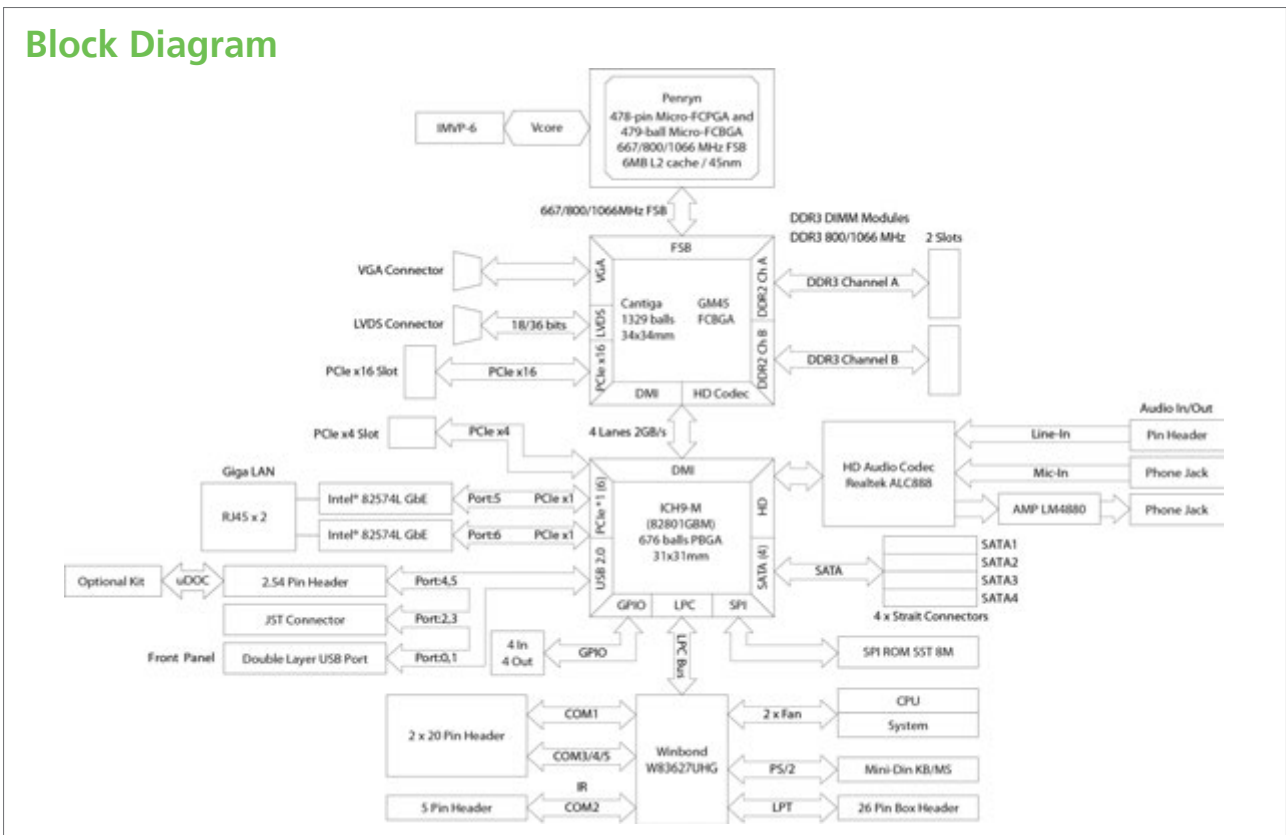 1x CCFL for Panel Backlight Inverter

Audio
- Realtek ALC888 HD CODEC
- 1x Mic-in/ 1 x Line-out

Expansion
- 1x PCIe x16
- 1x PCIe x4
- 1x PCI

Block Diagram

I/O Interface

- Serial port: 4x COM support RS232 only
- Parallel port: 1x 26-pin box header
- USB 2.0: 6x ports, 2x edge ports, 2x ports by JST, 1x pin header for uDOM
- 8x GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5 V)
- On-board Power LED and HDD Active LED Pin Header
- 1x 4-pin and 1x 3-pin Fan connector
- 1x PS/2 KB/MS Jack
- On board Buzzer/ SMBus2.0/ Reset SW
- 1x DB15 VGA port

Watchdog Timer

- WDT can be programmable by Software from 1 sec to 255 sec and from 1 min to 255 minutes (Tolerance 15% at 25°C)

Storage

- 4x SATA port

System Monitor

- Monitoring of 5 voltages and 2 temperatures and 2 fan speed monitor
- 5 voltage (+5V, Vcore , +12V , +3.3V , +1.5V)
- 2 temperatures (CPU, external temperature)
- 2 fan speed monitor (CPU , system)

Power Supply

- Supports both AT and ATX Mode (default setting is AT mode)
- ATX mode:
  2x 5pin ATX power connector w/ +12V/ -12V/ +5V/ 5Vsb Power In for EBC 550
  2x 2pin power connector +12V Power In for PCIe x16 Card
  At ATX Mode, the BIOS setting is as follow:
  POWER -SUPPLY TYPE: [ATX]
  AUTO PWR-FAILURE RESUME: [ON]
- AT mode:
  2x 5pin ATX power connector w/ +12V/ -12V/ +5V Power In for EBC 550
  No Power On push Button, Software Shutdown function and LAN remote wake up

Dimensions

- 5.25" form factor/203mm (L) x 146mm (W) (7.9"x5.7")

Environment

- Operation Temp: 0°C to 60°C
- Storage Temp: -20°C to 85°C
- Humidity: 10% - 90%, non condensing

Certifications

- CE approval
- FCC Class A

Ordering Information

- **EBC 550 (P/N: 10E00055000X0) RoHS Compliant**
  5.25" Embedded Board supporting Intel® Core™ 2 Quad, Core™ 2 Duo and Celeron® Processors w/ Dual display/ 6x USB2.0/ 4x COMs/ 2x PCIe GbE/ 1x PCIe x16/ 1x PCIe x4/ 1x PCI

- **Packing List**

Part No.	Description
60233USB59X00	USB CABLE
60233POW73X00	POWER CABLE (2x10 TO 2x5)
60233MK202X00	PS2 Y CABLE
6023309402X00	COM CABLE L: 300mm
60233PRT15X00	PRINT CABLE
60233ATA17X00	SATA CABLE
60233POW22X00	POWER CABLE (BIG 4P)

EBC 310

3.5" ECX Intel® Atom™ E640 1.0GHz CPU,
Onboard DDR2 1GB
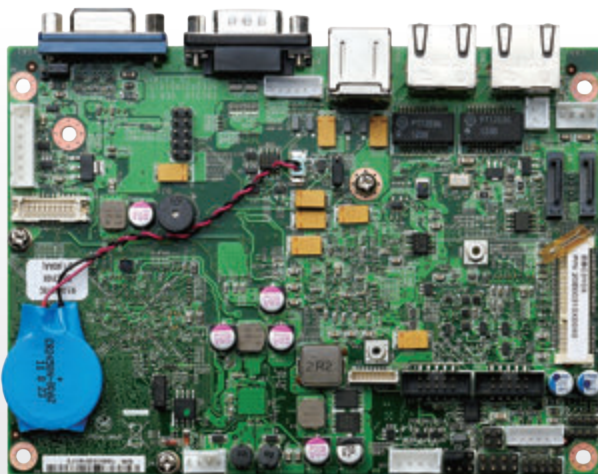
Main Features

- Support Intel® Atom™ E600 Series Ultra Low Power Consumption SoC
- On-board DDR2 1GB Main Memory
- Support VGA/ LVDS Display
- Support Video Decode (MPEG2, MPEG4, H.264, VC1, WMV9) / Encode (MPEG4, H.264)
- Two Gigabit Ethernet
- One CAN Controller
- 3x COMs, 5x USB2.0, 2x SATA
- Single DC12V Power Input

Product Overview

The EBC 310 is a 3.5" ECX embedded board with an on-board Intel® Atom™ E640 1.0GHz SoC with L2 cache 512 KB and extreme low power consumption 3.6 watts. The EBC 310 features DDR2 1GB memory on-board, dual display application to support independent CRT and LVDS interface and build-in HD video decoder/ encoder. Intel® PCH EG20T supports 1x CAN and USB 2.0 controller. The EBC 310 embedded board supports a various operation systems such as Windows 7, Windows XP embedded, Win CE and Linux.

Specifications

CPU Support
- Onboard Intel® Atom™ E640 1.0GHz SoC (System-On-Chip)

Main Memory
- Onboard DDR2 800-MHz 1GB, Non-ECC and Un-buffered

Chipset
- Intel® EG20T (PCH)

BIOS
- AMI BIOS
- Plug and play support

On-board LAN
- 1x Intel® 82574L Gigabit Ethernet controller
- 1x Realtek 8211CL Gigabit Ethernet controller
- Support Boot from LAN and Wake on LAN
- 2x RJ45 with LED

Display
- Intel® Atom™ E600 series integrated graphic engine, support video decode (MPEG2, MPEG4, H.264, VC1, WMV9)/ encode (MPEG4, H.264)
- Analog VGA interface:
  1x DB15 VGA port, resolution up to 1280 x 1024
- LVDS interface: support Single 18/ c24-bit LVDS channel, resolution up to 1280 x 768

Audio
- Realtek ALC886 CODEC for High Definition
- 1x Mic-in and 1 x Line-out pin header

Expansion
- 1x Mini-PCIe socket

I/O Interface
- Serial port: 3 ports
- 1x RS232 DB9 Connector (COM1)
- 1x RS232 with 10-pin box header, 2.0mm pitch (COM3)
- 1x RS232/ 422/ 485 (COM2) with 10-pin box header, 2.0mm pitch
- USB 2.0: 5 ports
  2 ports with USB 2.0 connector
  2 ports with 2x 2-pin header, 2.54mm pitch
  1 port supports USB DOM
- CAN:
  Integrated CAN 2.0 Controller supporting IEEE1588 over CAN
  External CAN Bus Driver – TJA1050
  2x 2-pin header, 2.54mm pitch
- 8x GPIO, 10-pin pin header, (GPI 0~3 and GPO0~3) with TTL Level (0/ 5 V)
- On-board Power LED and HDD Active LED Pin Header
- 1x 4-pin fan connector (for CPU)
- 6-pin JST connector for PS2 Keyboard/ Mouse
- On board Buzzer/ SMBus2.0/ Reset/ On & Off switch button

300   3.5" CPU Boards

NEXCOM

Block Diagram

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 2x SATA connector (support 1 x SATA DOM)

System Monitor
- Monitoring of 5 voltages and 2 temperature
- 5 voltages (12, 5, 3.3, VNN, Vcore)
- 2 temperature (CPU, system)

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode (ATX as the default)

Power Requirements
- Power requirement: +12V DC Input
- One 4-pin power connector

Dimensions
- 3.5" ECX form factor
  146mm (L) x 105mm (W) (5.7" x 4.1")

Environment
- Operating temperatures: -15°C to 60°C
- Storage temperature: -20°C to 85°C
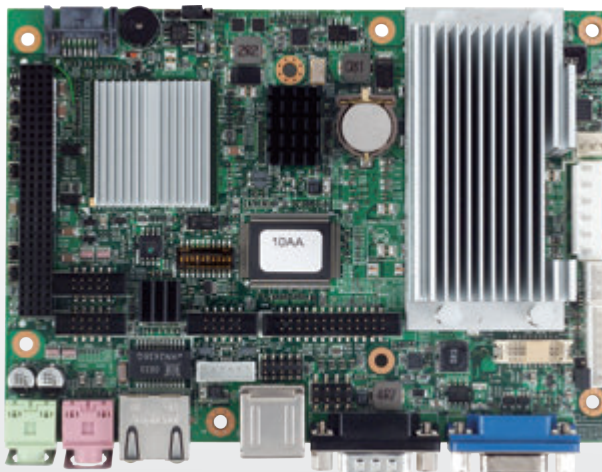- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 310-01G (P/N: 10E00031000X1) RoHS Compliant**
  Ultra Low power Embedded Board with Intel® Atom™ E640 processor
  Onboard DDR2 1GB memory, VGA/ LVDS, 1x CAN, 2x GbE,
  1x Mini-PCIe, 3x COM, 5x USB 2.0, 12VDC input

EBC 340

Main Features

- Support Intel® Atom™ N270 1.6GHz processor with 533 MHz FSB
- Intel® 945GSE integrated 3D graphics engine GMA950 chipset with CRT and LVDS display
- 1 x 200-pin SO-DIMM socket, up to 2GB single channel non-ECC 400/ 533 MHz DDR2 memory

- Realtek RTL8111C-GR PCI Express Gigabit Ethernet x1
- Realtek ALC888 Audio CODEC x1
- USB 2.0 x6, Serial port x4, SATA x1 and parallel port x1
- CompactFlash Socket x1/ PCI 104 Interface x1

Product Overview

The EBC 340 is a 3.5" ECX embedded board with an on-board Intel® Atom™ N270 1.6GHz processor with 512 KB L2 cache by 533 MHz FSB. The EBC 340 features Intel® 945GSE and ICH7-M chipsets, which supports DDR2 400/ 533 memory along with integrated GMA950 graphics for large display application to support independent CRT and LVDS interface. The EBC 340 embedded board supports a various operation systems such as Windows XP embedded, Win CE and Linux.

Specifications

CPU Support
- Support Intel® Atom™ N270 1.6GHz processor with 533MHz FSB

Main Memory
- 1x 200-pin SO-DIMM socket, up to 2GB non-ECC 400/533 DDR2 memory

Chipset
- Intel® 82945GSE Graphic Controller Hub (GMCH)
- Intel® 82801 GBM ICH7 Mobile (ICH7-M)

BIOS
- Award system BIOS
- Plug & Play support
- Advanced Power Management
- Advanced Configuration & Power Interface
- 8M bits SPI ROM

On-board LAN
- 1x Realtek RTL8111C-GR PCI Express Gigabit Ethernet
- Support Boot From LAN (PXE)
- 1x RJ45 with LED

Display
- Intel® 945GSE integrated 3D graphics engine, based on Intel GMA950 architecture, delivers sophisticated graphics for large display application, dual independent display support, at graphics core speeds up to 166MHz, provides a wealth of options for high-resolution displays

- Analog VGA interface:
  1x DB15 VGA port
  Resolution up to 1600 x 1200 at 85 Hz, 2048 x 1536 at 75Hz
- LVDS interface:
  Support 18-bit single channel LVDS, resolution up to 1600 x 1200
- CCFL interface:
  1x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC888 CODEC for High Definition
- 1x Mic-in and 1 x Line-out Phone Jack

Expansion
- 1x PCI 104 slot

I/O Interface
- Serial port: 4 port, One DB9 Connector and Three 2x 5 2.0mm box header serial, COM2 supports RS232/ RS422/485
- Parallel port: 1x 26-pin box header
- USB 2.0: 6 ports, 2 ports edge connector, 2 ports by 2.0mm JST connector (2.0mm pin header option)
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5 V)
- On-board Power LED and HDD Active LED Pin Header
- 1x 3-pin fan connector (for CPU)
- 1x DB15 VGA connector
- 1x Keyboard/ Mouse pin header
- On board Buzzer/ SMBus2.0/ Reset SW

NEXCOM

Block Diagram
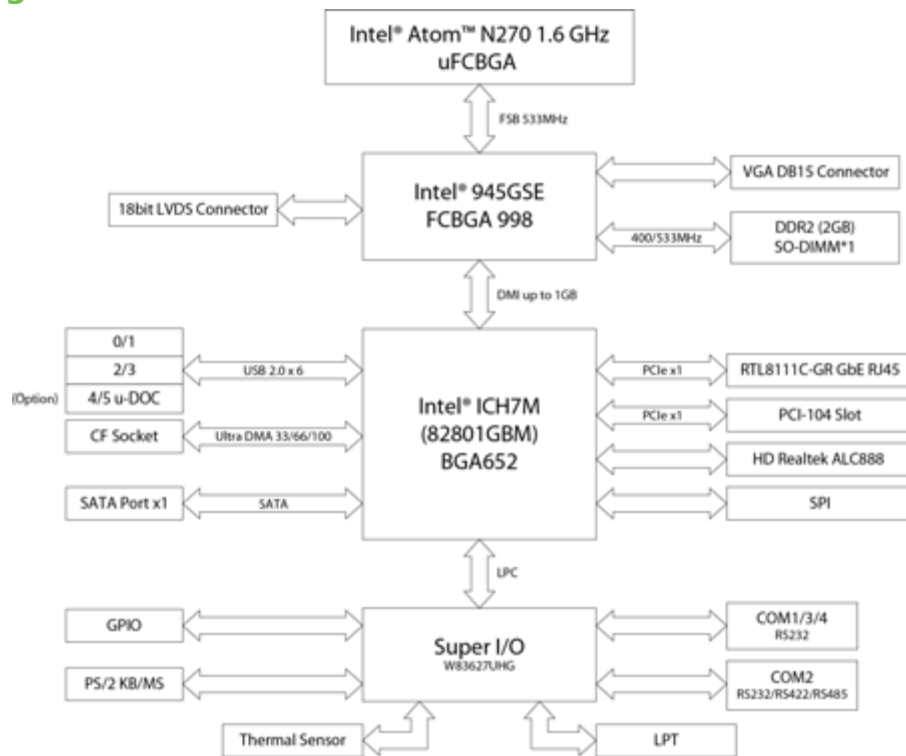
Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 1x SATA port
- 1x CF socket
- 1x uDOC (option)

System Monitor
- Monitoring of 4 voltages and 2 temperatures
- 4 Voltage (Vcore , +12V , +3.3V , +1.5V)
- 2 Temperatures (CPU, System)

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT mode only
- Support AT and ATX power supply
- 6-pin power connector for +5V/ +12V power in
- 3-pin Jst connector with PS_ON# directly connected to GND for ATX power supply (Without power on push button function)

Power Requirements

Power Requirement	+5 V	+12 V
Full-Loading Mode	1.26	0.66
Idle Mode	1.15	0.5
Standby Mode	0.86	0.41

Dimensions
- 3.5" ECX form factor/ 146mm (L) x 105mm (W) (5.7"x4.1")

Environment
- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 340 (P/N: 10E00034000X0) RoHS Compliant**
  Low power Embedded Board with Intel® Atom™ N270 processor and based on Intel® 945GSE 3D graphics engine GMA950 w/ VGA/ LVDS/ 6x USB2.0/ 4x COMs/ 1x PCIe Gigabit LAN/ 1x parallel port/ 1x PCI 104 interface

- **Packing List**

Part No.	Description
60233USB59X00	USB CABLE
60233PW145X00	POWER CABLE
60233ATA17X00	SATA CABLE
6023309101X00	COM PORT CABLE
60233PRT10X00	PRINT CABLE
60233PS203X00	PS/2 CABLE

EBC 342

3.5" ECX On-board Intel® Atom™ N270 1.66GHz CPU
with 24-bit LVDS/ Gigabit LAN/ CF
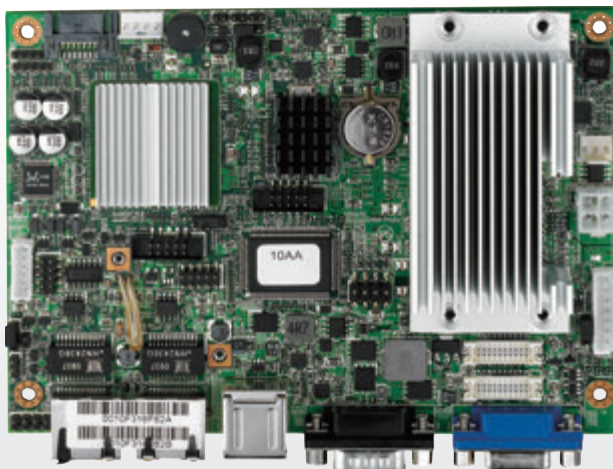
Main Features

- Onboard Intel® Atom™ N270 1.6 GHz CPU
- Intel® 945GSE/ ICH7-M Chipset
- One 200-pin SODIMM socket supports up to 2 GB DDR2 400/ 533 MHz SDRAM
- Dual Gigabit Ethernet

- 24-bit LVDs Dual View, 2-CH LVDS
- 5.1-CH Audio
- 1x CF, 1 Mini-PCIe Card
- 1x SATA, 3x COM, 6x USB, 16-bit GPIO

Product Overview

The EBC 342 is a 3.5" ECX embedded board with an on-board Intel® Atom™ N270 1.6GHz processor with 512 KB L2 cache by 533/ 667 MHz FSB. The EBC 342 features Intel® 945GSE and ICH7-M chipsets, which supports DDR2 400/ 533 memory, along with integrated GMA950 graphics for large display application to support Multiple Display. The South Bridge ICH7-M provides a Compact Flash socket, four serial ports, six USB 2.0 ports, two Gigabit Ethernet LAN port, one Mini-PCIe interface for application. The EBC 342 is a great solution featuring a low power consumption processor and small footprint with versatile displays and numerous I/O port support at industrial applications.

Specifications

CPU Support
- Support Intel® Atom™ N270 1.6GHz processor with 533MHz FSB

Main Memory
- 1x 200-pin SO-DIMM socket, up to 2GB non-ECC 400/ 533 DDR2 memory

Chipset
- Intel® 82945GSE Graphic Controller Hub (GMCH)
- Intel® 82801 GBM ICH7 Mobile (ICH7-M)

BIOS
- Award system BIOS
- Plug & Play support
- Advanced Power Management
- Advanced Configuration & Power Interface
- 8M bits SPI ROM

On-board LAN
- 2x Realtek RTL8111C-GR PCI Express Gigabit Ethernet
- Support Boot From LAN (PXE)
- 2x RJ45 with LED

Display
- Intel® 945GSE integrated 3D graphics engine, based on Intel® GMA950 architecture, delivers sophisticated graphics for large display application, dual independent display support, at graphics core speeds up to 166MHz, provides a wealth of options for high-resolution displays
- Analog VGA interface:
  1x DB15 VGA port
  Resolution up to 1600 x 1200 at 85 Hz, 2048 x 1536 at 75Hz
- LVDS interface:
  SDVO w/ CH7308B single/ dual LVDS transmitter to single (24bit) or dual pixel (48bit) LVDS panel, resolution up to 1600 x 1200
  2x DF13 20-pin LVDS connector for internal connection
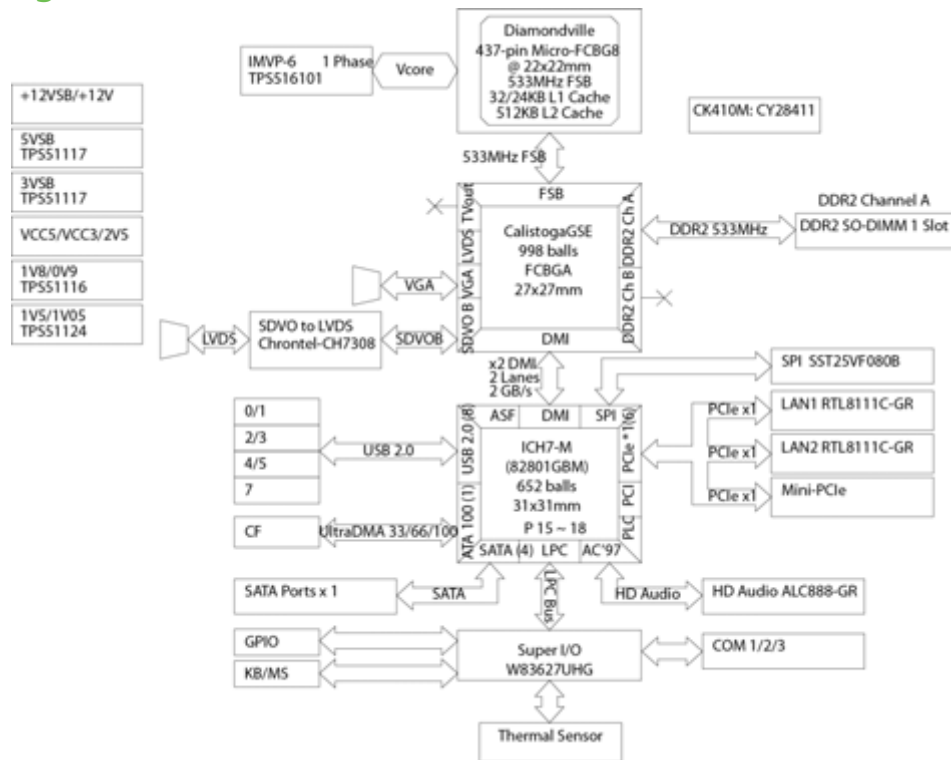- CCFL interface:
  1x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC888 CODEC for High Definition
- 1x Mic-in and 1 x Line-out Pin header

Expansion
- 1x Mini-PCIe

Block Diagram

I/O Interface
- Serial port: 3 port, One DB9 Connector and Two 2 x 5 2.0mm box header serial
- Parallel port: 1x 26-pin box header
- USB 2.0: 6 ports, 2 ports edge connector, 2 ports by 2.0mm JST connector, 2 ports by 2.0mm pin header
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/5 V)
- On-board Power LED and HDD Active LED Pin Header
- 1x 3-pin fan connector (for CPU)
- 1x DB15 VGA connector
- 1x Keyboard/Mouse pin header
- On board Buzzer/ SMBus2.0/ Reset SW

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes
  (Tolerance 15% under room temperature 25°C)

Storage
- 1x SATA port
- 1x CF socket

System Monitor
- Monitoring of 4 voltages and 2 temperatures
- 4 Voltage (Vcore, +12V , +3.3V , +1.5V)
- 2 Temperatures (CPU, System)

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode

Power Requirements
- Power requirement: +12V DC Input
- One 4-pin power connector

Dimensions
- 3.5" ECX form factor/ 146mm (L) x 105mm (W) (5.7"x4.1")

Environment
- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
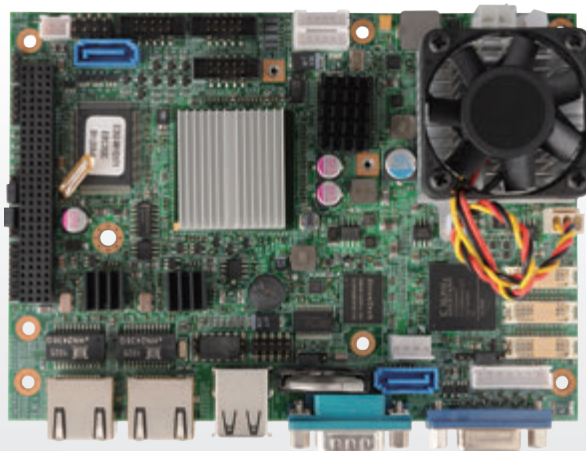- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 342 (P/N: 10E00034200X0) RoHS Compliant**
  Low power Embedded Board with Intel® Atom™ N270 processor and based on Intel® 945GSE 3D graphics engine GMA950 w/ VGA/ 24bit LVDS/ 6x USB2.0/ 3x COMs/ 1x Mini-PCIe/ 2x Gigabit LAN/ 1x parallel port

EBC 352

3.5" ECX on-board Intel® Atom™ D525 1.8GHz CPU

Main Features

- Support Intel® Atom™ Dual Core D525 Processor
- Support DDR3 SO-DIMM SDRAM, up to 2GB
- Support VGA/ LVDS 18/ 24-bit Display
- Dual Intel Gigabit Ethernet
- Support PCI 104, 1x Mini PCI Express Socket
- 4x COMs, 6x USB 2.0
- Single DC12V Power Input

Product Overview

The EBC 352 is a 3.5" ECX board with an on-board Intel® Atom™ dual core D525 with L2 cache 1MB and supports DDR3 SO-DIMM SDRAM module. It features dual display application to support independent CRT and LVDS 18/ 24-bit interface, dual Gigabit Ethernet, one PCI 104 and one Mini PCI Express slot.

Specifications

CPU Support
- Onboard Intel® Atom™ Dual Core D525 (1.8GHz, 1M Cache) processor

Main Memory
- 1x 204-pin DDR3 SO-DIMM socket, DDR3 800 2GB Max., Non-ECC and Un-buffered

Chipset
- Intel® NH82801HBM (ICH8M)

BIOS
- AMI BIOS
- Plug & Play support
- Advanced Power Management
- Advanced Configuration & Power Interface
- 8M bits SPI ROM

On-board LAN
- 2x Intel® GbE LAN controllers
- Support Boot From LAN (PXE) and Wake on LAN (WoL)
- 2x RJ45 with LED

Display
- Intel® D425/ D525 integrated graphic engine, support Directx*9, with Intel Clear Video Technology on MPEG2 Hardware Acceleration
- Analog VGA interface: 1x DB15 VGA port, support up to 2048 x 1563@ 60Hz resolution
- 2x DF-13 20-pin LVDS connector, support single (24-bit) or dual (48-bit) LVDS panel support
- CCFL interface: 1x 7-pin JST connector, 5V or 12V power source to enable LCD Panel backlight Inverter

Audio
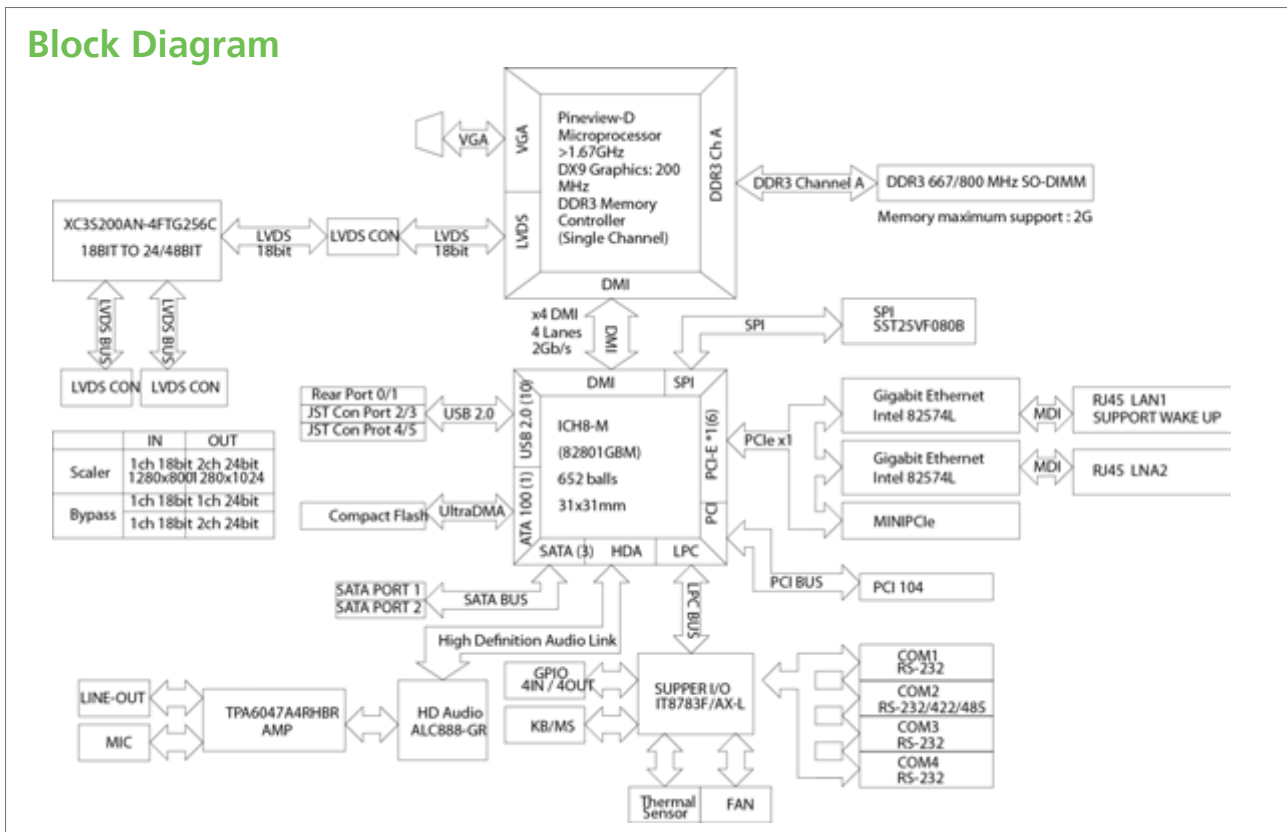- Realtek ALC888 CODEC for High Definition
- 1x Mic-in and 1x Line-out Pin header

Expansion
- 1x Mini-PCIe socket

NEXCOM

Block Diagram

I/O Interface
- Serial port: 4 port
  1x RS232 DB9 Connector
  2x RS232 with 10-pin box header, 2.0mm pitch
  1x RS232/422/485 (COM2) with 10-pin box header, 2.0mm pitch
- USB 2.0: 6 ports
  2 ports with USB 2.0 connector
  4 ports with internal JST connector
  8x GPIO, 10-pin pin header, (GPI 0~3 and GPO0~3) with TTL Level (0/ 5V)
- On-board Power LED and HDD Active LED Pin Header
- 1x 3-pin fan connector (for CPU)
- 1x Keyboard/Mouse pin header
- On board Buzzer/ SMBus2.0/ Reset SW

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 2x SATA connector (support 2.5" HDD and SATA DOM)
- 1x CF socket

System Monitor
- Monitoring of 4 voltages and 2 temperatures
- 4 voltage (Vcore , +12V , +3.3V , +5V)
- 2 temperatures (CPU, system)

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode (ATX as the default)

Power Requirements
- Power requirement: +12VDC Input
- One 4-pin power connector

Dimensions
- 3.5" ECX form factor
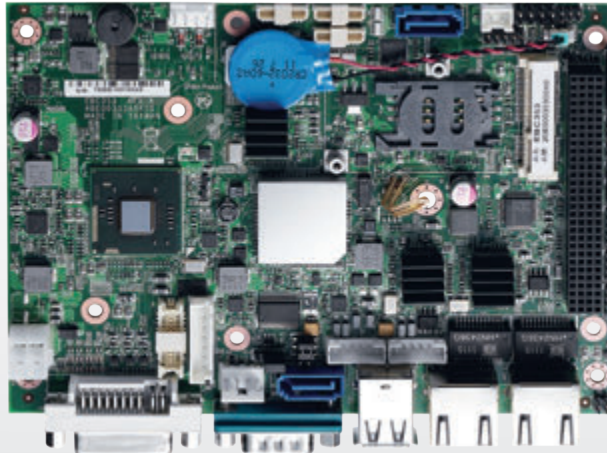 146mm (L) x 105mm (W) (5.7"x4.1")

Environment
- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information
- **EBC 352 (P/N: 10E00035200X0) RoHS Compliant**
  Low power Embedded Board with Intel® Atom™ Dual Core D525 processor support DDR3 SO-DIMM memory module

EBC 353

Main Features

- Onboard Intel® Atom™ processor D2550 1.86GHz CPU
- Intel® NM10 Express chipset
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/ 1066 MHz SDRAM
- Display: VGA & DVI-I & LVDS (1x DF13 20-pin 18/24-bit Single channel)

- 1x Mini-PCIe; 1x PCI-104
- 2x Intel 82574L PCI Express Gigabit Ethernet
- 2x SATA
- 6x USB, 4-in/4-out GPIO, Mic-in , Speak out
- Serial port: 3x RS232, 1x RS232/422/485 port
- Support AT/ ATX mode and single +12VDC input

Product Overview

The EBC 353 is a 3.5" ECX embedded board with an on-board Intel® Atom™ processor D2550 1.86GHz CPU with 1MB L2 cache, which supports DDR3 800/1066 memory, along with integrated SGX545 PowerVR Core @ 400/ 640 MHz Enhanced Gfx & Video, support DX*10.1, OpenGL 3.0, Full HD-Decode (MPEG2, VC1, AVC, H.264), along with integrated graphics for large display applications to support multiple displays. Intel® NM10 Express chipset provides two SATA, four serial ports, six USB 2.0 ports, two Gigabit Ethernet LAN port, one PCI-104 , one Mini-PCIe interface for application. Able to support matrix-displays with rich I/O, the EBC 353 is a great solution featuring low power consumption and small footprint for multi-media applications.

Specifications

CPU Support
- Intel® Atom™ processor D2550 1.86GHz CPU

Main Memory
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/1066 MHz SDRAM

Chipset
- Intel® NM10 Express chipset

BIOS
- AMI BIOS
- Plug & Play support
- Advanced power management
- Advanced configuration & power interface
- 8M bits SPI ROM

On-board LAN
- 2x Intel® PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- Intel® Atom™ processor D2550 integrated 3D graphics engine, which enhances Gfx & video, support DX*10.1, OpenGL 3.0 , and Full HD decode (MPEG2,VC1,AVC,H.264), delivers sophisticated graphics for large display applications, supports dual independent displays at graphics base frequency up to 640MHz, and provides multi-options for high-resolution displays
- Analog VGA interface:
  1x VGA within DVI-I connector
  Resolution up to 1920 x 1200 75Hz
- DVI interface:
  1x DVI-I connector
  Resolution up to 1920 x 1200
- LVDS interface:
  Single (24bit) LVDS panel, resolution up to 1440 x 900 DF13 20-pin LVDS connector for internal connection
- CCFL interface:
  1x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC886 CODEC for High Definition
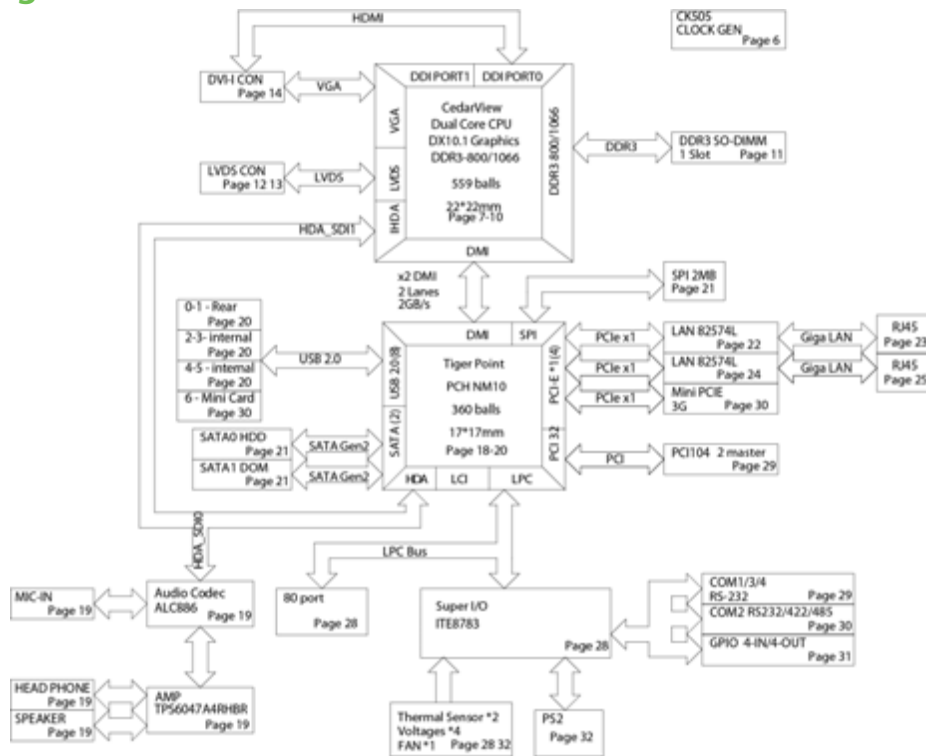- 1x Mic-in and 1x Line-out pin header

Expansion
- 1x Mini-PCIe
- 1x PCI-104

I/O Interface
- Serial port: 4 port
  COM1 support RS232 with DB9 connector

Block Diagram

COM2 support RS232/422/485 with 10-pin box connector
COM3, 4 support RS232 with 10-pin box connector
- USB 2.0: 6 ports
  2 ports edge connector
  4 ports by 2.0mm JST connector
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5 V)
- On-board power LED and HDD active LED pin Header
- 1x 4-pin fan connector (for CPU)
- 1x keyboard/ mouse pin header
- On board buzzer/ SMBus2.0/ reset SW/ on & off switch button

Edge I/O Interface
- 1x DVI-I connector
- 1x COM1 support RS232 with DB9 connector
- 1x dual stack USB connector
- 2x RJ45 with LED connector

Watchdog Timer
- Watchdog timeout can be programmable by software from 1 second
  to 255 seconds and from 1 minute to 255 minutes
  (tolerance 15% under room temperature 25°C)

Storage
- 2x SATA port

System Monitor
- Monitoring of 4 voltages and 2 temperatures
- 4 voltage (Vcore, +12V , +3.3V , 5V)
- 2 temperatures (CPU, system)
- 1 fan speed detection

On-board RTC
- On-chip RTC with battery backup
- 1x external Li-Ion battery

Power Input
- Support AT and ATX mode

Power Requirements
- Power requirement: +12VDC input
- One 4-pin power connector

Dimensions
- 3.5" ECX form factor/ 146mm (L) x 105mm (W) (5.7"x 4.1")

Environment
- Operating temperature: -15°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 353-2550 (P/N: 10E00035303X0) RoHS Compliant**
  Low power embedded board with Intel® Atom™ processor D2550
  and based on Intel® integrated graphics engine w/ VGA/ 24-bit LVDS/
  6x USB2.0/ 4 x COMs/ 1x Mini-PCIe/ 2x Gigabit LAN/ 2x SATA/
  1x PCI-104

- **EBC 353/ EBC 354 Cpu Cooler (P/N: 10E00035301X0)**
  EBC 353/ EBC 354 Cpu cooler with heat sink, Fau and Thermal Pad

- **Optional EBC 353 Cable Kit (P/N: 10E00035302X0)**
  Include SATA cable, SATA power cable, PS2 KB/ MS cable, DVI to
  DVI-D and D-SUB15 cable, COMPORT and USB cable

EBC 354

3.5" ECX On-board Intel® Atom™ Processor D2550 1.86GHz
with 24-bit LVDS/ Gigabit LAN, Dual Mini-PCIe

Main Features

- On-board Intel® Atom™ processor D2550 1.86GHz CPU
- Intel® NM10 Express chipset
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/1066 MHz SDRAM
- Display: VGA & DVI-I & HDMI & LVDS (1x DF13 20-pin 18/ 24-bit Single channel)

- 2x Mini-PCIe
- 2x Intel® 82574L PCI Express Gigabit Ethernet
- 2x SATA
- 6x USB, 4-in/ 4-out GPIO, Mic-in , Speak out
- Serial port: 3x RS232, 1x RS232/422/485 port
- Support AT/ ATX mode and single +12VDC input

Product Overview

The EBC 354 is a 3.5" ECX embedded board with an on-board Intel® Atom™ processor D2550 1.86GHz CPU with 1MB L2 cache, which supports DDR3 800/ 1066 memory, along with integrated SGX545 PowerVR Core @ 400/640 MHz Enhanced Gfx & Video, support DX*10.1, OpenGL 3.0, Full HD decode (MPEG2, VC1, AVC, H.264), along with integrated graphics for large display applications to support multiple displays. Intel® NM10 Express chipset provides two SATA, four serial ports, six USB 2.0 ports, two Gigabit Ethernet LAN port, two Mini-PCIe interface for application. Able to support matrix-displays with rich I/O, the EBC 354 is a great solution featuring a low power consumption and small footprint for multi-media applications.

Specifications

CPU Support
- Intel® Atom™ processor D2550 1.86GHz CPU

Main Memory
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/1066 MHz SDRAM

Chipset
- Intel® NM10 Express chipset

BIOS
- AMI BIOS
- Plug & Play support
- Advanced power management
- Advanced configuration & power interface
- 8M bits SPI ROM

On-board LAN
- 2x Intel® PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- Intel® Atom™ processor D2550 integrated 3D graphics engine, which enhances Gfx & video, support DX*10.1, OpenGL 3.0 , and Full HD

decode (MPEG2,VC1,AVC,H.264), delivers sophisticated graphics for large display applications, supports dual independent displays at graphics base frequency up to 640MHz, and provides multi-options for high-resolution displays

- Analog VGA interface:
  1x VGA within DVI-I connector
  Resolution up to 1920 x 1200 75Hz
- DVI interface:
  1x DVI-I connector
  Resolution up to 1920 x 1200
- HDMI interface:
  1x HDMI connector
  Resolution up to 1920 x 1200
- LVDS interface:
  Single (24bit) LVDS panel, resolution up to 1440 x 900 DF13 20-pin LVDS connector for internal connection
- CCFL interface:
  1x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC886 CODEC for High Definition
- 1x Mic-in and 1 x Line-out Pin header

310   3.5" CPU Boards   NEXCOM

Block Diagram

Expansion
- 2x Mini-PCIe

I/O Interface
- Serial port: 4 port
  COM1, 3, 4 support RS232 with 10-pin box header
  COM2 support RS232/422/485 with 10-pin box header
- USB 2.0: 6 ports
  4 ports edge connector
  1 ports by 2.0mm JST connector
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5V)
- On-board power LED and HDD active LED pin header
- 1x 3-pin fan connector (for CPU)
- 1x keyboard/ mouse pin header
- Onboard buzzer/ SMBus2.0/ reset SW/ on & off switch button

Edge I/O Interface
- 1x DVI-I connector
- 1x HDMI connector
- 2x dual stack USB connector
- 2x RJ45 with LED connector

Watchdog Timer
- Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)

Storage
- 2x SATA port

System Monitor
- Monitoring of 4 voltages and 2 temperatures
- 4 voltage (Vcore, +12V, +3.3V, 5V)
- 2 temperatures (CPU, system)
- 1 fan speed detection

On-board RTC
- On-chip RTC with battery backup
- 1x external Li-Ion battery

Power Input
- Support AT and ATX mode

Power Requirements
- Power requirement: +12V DC Input
- One 4-pin power connector

Dimensions
- 3.5" ECX form factor/ 146mm (L) x 105mm (W) (5.7"x 4.1")

Environment
- Operating temperature: -15°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 354-2550 (P/N: 10E00035403X0) RoHS Compliant**
  Low power embedded board with Intel® Atom™ processor D2550 and based on Intel® integrated graphics engine w/ VGA/ 24bit LVDS/ 6x USB2.0/ 4x COMs/ 2x Mini-PCIe/ 2x Gigabit LAN/ 2x SATA

- **EBC 353/ EBC 354 Cpu Cooler (P/N: 10E00035301X0)**
  EBC 353/ EBC 354 Cpu cooler with heat sink, Fau and Thermal Pad

- **Optional EBC 353 Cable Kit (P/N: 10E00035302X0)**
  Include SATA cable, SATA power cable, PS2 KB/ MS cable, DVI to DVI-D and D-SUB15 cable, COMPORT and USB cable

EBC 354DL

Main Features

- Onboard Intel® Atom™ processor D2550 1.86GHz CPU
- Intel® NM10 Express chipset
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/ 1066 MHz SDRAM
- Display: VGA & LVDS1 (1x DF13 20-pin 18/24-bit Single channel) & LVDS2 (2x DF13 20-pin 24/48-bit Single channel

- 2x Mini-PCIe
- 2x Intel® 82574L PCI Express Gigabit Ethernet
- 2x SATA
- 6x USB, 4-in/4-out GPIO, Mic-in , Speak out
- Serial port: 3x RS232, 1x RS232/422/485 port
- Support AT/ ATX mode and Single +12VDC input

Product Overview

The EBC 354DL is a 3.5" ECX embedded board with an on-board Intel® Atom™ processorD2550 1.86GHz CPU with 1MB L2 cache, which supports DDR3 800/ 1066 memory, along with integrated SGX545 PowerVR Core @ 400/640 MHz Enhanced Gfx & Video , support DX*10.1,OpenGL 3.0 , Full HD-Decode (MPEG2,VC1,AVC,H.264), along with integrated graphics for large display application to support Multiple Display. Intel® NM10 Express chipset provides two SATA, four serial ports, six USB 2.0 ports, two Gigabit Ethernet LAN port, two Mini-PCIe interface for application. The EBC 354DL is a great solution featuring a low power consumption processor and small footprint with versatile displays and numerous I/O port support at multi-media applications.

Specifications

CPU Support
- Intel® Atom™ processor D2550 1.86GHz CPU

Main Memory
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/1066 MHz SDRAM

Chipset
- Intel® NM10 Express chipset

BIOS
- AMI BIOS
- Plug & Play support
- Advanced power management
- Advanced configuration & power interface
- 8M bits SPI ROM

On-board LAN
- 2x Intel® PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- Intel® Atom™ processor D2550 integrated 3D graphics engine, enhances Gfx & video, support DX*10.1, OpenGL 3.0 , and Full HD

decode (MPEG2,VC1,AVC,H.264), delivers sophisticated graphics for large display applications, dual independent displays support, at graphics base frequency up to 640MHz, provides a wealth of options for high-resolution displays
- Analog VGA interface:
  1x VGA within DSUB connector
  Resolution up to 1920 x 1200 75Hz
- LVDS-1 interface:
  Single (24bit) LVDS panel, resolution up to 1440 x 900 DF13 20-pin LVDS connector for internal connection
- CCFL interface:
  1x CCFL for LCD Panel Backlight Inverter & PWM/Analog dimming control
- LVDS-2 interface:
  Single (24bit/ 48bit) LVDS panel, resolution up to 2560 x 1600 with two DF13 20-pin LVDS connector for internal connection
- CCFL interface:
  1x CCFL for LCD Panel Backlight Inverter & PWM/Analog dimming control

Audio
- Realtek ALC886 CODEC for High Definition
- 1x Mic-in and 1x Line-out Pin header

Block Diagram
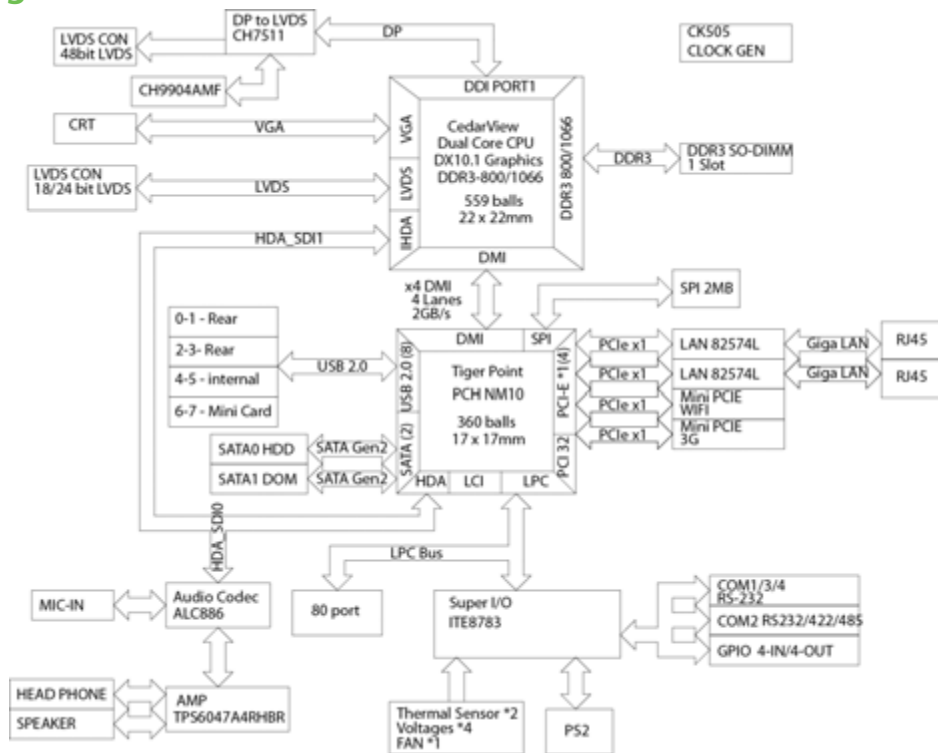
Expansion
• 2x Mini-PCIe

I/O Interface
• Serial port: 4 port
  COM1, 3, 4 support RS232 with 10-pin box header
  COM2 support RS232/ 422/ 485 with 10-pin box header
• USB 2.0: 6 ports
  4 ports edge connector
  1 ports by 2.0mm JST connector
• 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/5 V)
• On-board power LED and HDD active LED pin header
• 1x 3-pin fan connector (for CPU)
• 1x keyboard/ mouse pin header
• On-board buzzer/ SMBus2.0/ reset SW/ on & off switch button

Edge I/O Interface
• 1x VGA D-SUB connector
• 2x dual stack USB connector
  2x RJ45 with LED connector

Watchdog Timer
• Watchdog timeout can be programmable by software from 1 second
  to 255 seconds and from 1 minute to 255 minutes
  (tolerance 15% under room temperature 25°C)

Storage
• 2 x SATA port

System Monitor
• Monitoring of 4 voltages and 2 temperatures
• 4 voltage (Vcore, +12V , +3.3V , 5V)
• 2 temperatures (CPU, system)
• 1 fan speed detection

On-board RTC
• On-chip RTC with battery backup
• 1x external Li-Ion battery

Power Input
• Support AT and ATX mode

Power Requirements
• Power requirement: +12V DC Input
• One 4-pin power connector

Dimensions
• 3.5" ECX form factor/ 146mm (L) x 105mm (W) (5.7"x 4.1")

Environment
• Operating temperature: -15°C to 60°C
• Storage temperature: -20°C to 85°C
• Relative humidity: operating 10% to 90%, non-condensing

Certifications
• CE approval
• FCC Class A

Ordering Information

• **EBC 354DL (P/N: 10E00035402X0) RoHS Compliant**
  Low power Embedded Board with Intel® Atom™ D2550 processor
  and based on Intel® integrated graphics engine w/ VGA/ 24bit LVDS1 /
  48bit LVDS2/ 6x USB2.0/ 4x COMs/ 2x Mini-PCIe/ 2x Gigabit LAN/
  2x SATA

NEX 603

Mini-ITX Intel® Atom™ Dual Core D525,
DDR3, 1x Gigabit Ethernet

Main Features

- Support Intel® Atom™ Dual Core D525 Processor
- Support 2x DDR3 SO-DIMM SDRAM, up to 4GB
- Support Dual Display VGA and LVDS
- One Gigabit Ethernet
- Support High Definition Audio Codec with 2W Amplifier
- 6x COMs, 6x USB 2.0, 1x Cash Drawer
- Mini-DIN 4pin 12VDC Power Input

Product Overview

The NEX 603 is a Mini-ITX board with an on-board Intel® Atom™ Dual Core D525 with L2 cache 1MB and DDR3 SO-DIMM SDRAM module. It features dual display application to support independent CRT and LVDS 18 or 24-bit interface, One gigabit Ethernet, one Mini-PCIe connector.

Specifications

CPU Support
- Onboard Intel® Atom® Dual Core D525 processor (1.8GHz, 1M Cache)

Main Memory
- 2x 204-pin DDR3 SO-DIMM socket, DDR3 800 4GB max., non-ECC and un-buffered

Platform Control Hub
- Intel® NH82801HBM (ICH8M)

BIOS
- AMI System BIOS
- Plug and play support

On-board LAN
- 1x Realtek 8111C Gigabit Ethernet controller
- Support Wake on LAN
- 1x RJ45 with LED

Display
- Intel® D525 integrated graphic engine, support Directx*9, with Intel® Clear Video Technology on MPEG2 hardware acceleration
- Analog VGA interface: 1 x DB15 VGA port, support up to 2048 x 1563 @ 60Hz
- LVDS interface: support single 18 or 24-bit LVDS channel

Audio
- Realtek ALC886 CODEC for High Definition
- 1x phone jack for Line-out
- 1x phone jack for Mic-in
- 1x 4 pin-header for Speaker with 2W Amplifier

Expansion
- 1x Mini-PCIe connector

I/O Interface
- Serial port: 6 ports
- 3x RS232 DB9 connector (COM1, 2, 3), support RI/ +5V/ +12V
- 1x RS232 2x 5-pin header, 2.54mm pitch, support RI/ +5V/ +12V (COM4)
- 2x RS232 2x 5-pin header, 2.54mm pitch, support +12V (COM5, 6)
- USB 2.0: 6 ports
- 2x Dual stack USB 2.0 connector
- 2ports 1 x 4-pin header, 2.0mm pitch
- 4x GPIO, 5-pin pin header, (GPI 1~2 and GPO1~2) with TTL Level (0/ 5V)
- On-board power LED and Storage active LED pin header
- 1x 26-pin connector for parallel port
- 2x 4-pin fan connector for CPU & System
- 1x Mini-DIN 4-pin for DC12V power input
- 1x 6-pin JST connector for PS2 keyboard
- 1x 5-pin JST resistive touch connector
- On board buzzer/ SMBus2.0/ reset
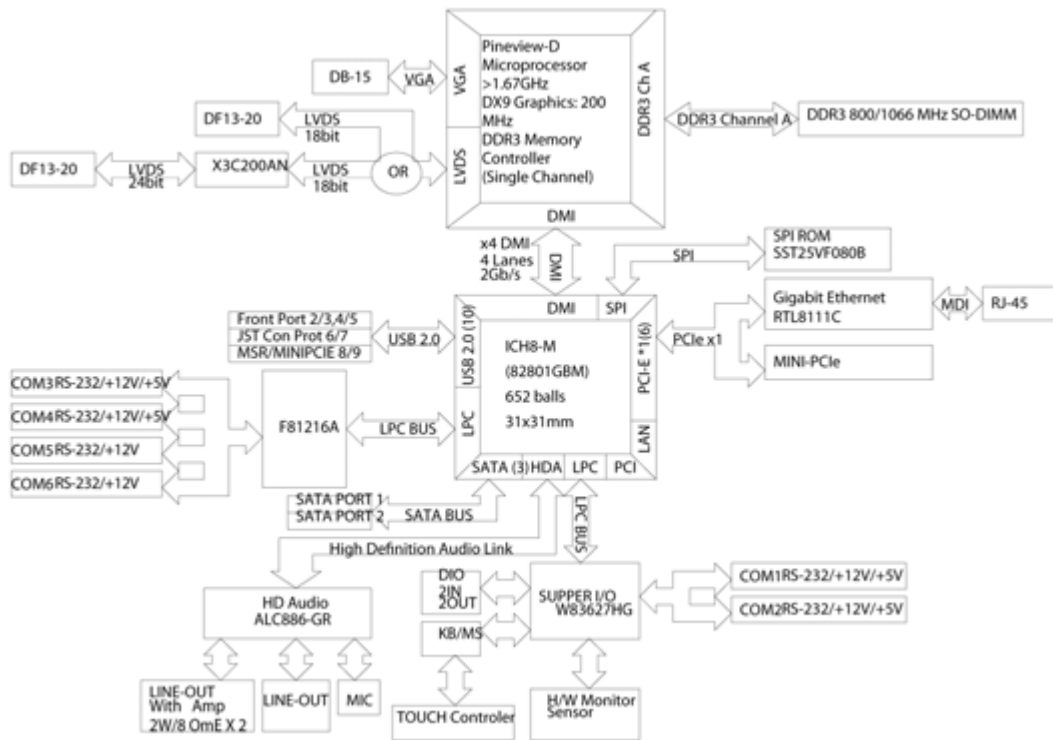
Block Diagram

Watchdog Timer
* Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
* 2x SATA connectors (from ICH8M)

System Monitor
* 4 voltages (+3.3V, +5V, +12V, Vcore)
* 1 temperatures (1 external temperature sensors)
* 2 fan speed monitors

On-board RTC
* On-chip RTC with battery backup
* 1x External Li-Ion battery

Power Input
* Support AT and ATX mode (ATX as the default)

Power Requirements
* Power requirement: +12V DC Input
* One 4-pin power connector

Dimensions
* Mini-ITX form factor
* 170mm (L) x 170mm

Environment
* Operating temperatures: 0°C to 60°C
* Storage temperature: -20°C to 8°C
* Relative humidity: Operating 10% to 90%, non-condensing

Certifications
* CE approval
* FCC Class A

Ordering Information

* **NEX 603 (P/N: 10G00060305X0)**
  Mini-ITX, Intel® Atom™ Dual Core D525 processor, 2x DDR3 SODIMM, 1x GbE, 6x COM, 1x Mini-PCIe, 12VDC input

* **NEX 603 Cpu Cooler (P/N: 10G00060306X0)**
  Optional CPU cooler Kit for NEX 603

NEX 604

Main Features

- Intel® Atom™ Dual-Core D2550/ 1.86GHz processor
- Intel® NM10 Express chipset
- Dual 204-pins DDR3 SO-DIMMs support max. 4GB SDRAM memory
- Support VGA/ HDMI, VGA/ LVDS or HDMI/ LVDS dual displays

- 6x USB, 4x COM, 2x GbE, 2x SATA, 1x LPT
- Audio Mic-in/ Line- out, (internal Line-in)
- 2x Mini-PCIe (1x full/ SIM tray, 1x half-size), 1x PCI
- Single +12VDC input by AT/ ATX mode

Product Overview

NEX 604 is a Mini-ITX industrial MB embedded Intel® Atom™ D2550 1.86GHz dual-core processor, which integrated Intel® HD graphic controller SGX545 to support 640MHz/ DX9 NEX 604 supports VGA, LVDS (1x ch. 24-bit up to 1440 x 900 @ 60Hz) and HDMI (1080p) by dual displays interface as standard along with two DDR3 SO-DIMMs for max 4GB memory.

NEX 604 is equipped with Intel® NM10 Express chipset to provide two SATA 2.0 for SSD, six USB 2.0 (2 x USB to 2 x mPCIe slots), two GbE by Realtek RTL8111E PCIe LAN controllers, two Mini-PCIe slots for one support full-size card with SIM tray and one half-size slot for standard add-on I/O application. The HDMI and full I/O function supports make NEX 604 well fit for data logging, mobile communication, networking, gateway and embedded focus applications.

Specifications

Embedded Support
- Intel® Atom™ processor D2550 1.86GHz CPU

Main Memory
- Dual 204-pin SO-DIMMs support DDR3 up to 4GB SDRAM 800/1066MHz

Chipset
- Intel® NM10 Express chipset

BIOS
- AMI BIOS
- Plug & Play support
- Advanced power management
- Advanced configuration & power interface
- 16M bits SPI ROM

On-board LAN
- 2x Realtek 8111E PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LEDs built-in 2 x dual stackable USB type A connectors on edge I/O

Display
- New 2-chips solution 32nm package Intel® Atom™ processor D2550 integrated 3D graphics engine SGX545, to support up to 640MHz/ DX9, and provides multi-options for high-resolution displays
- Analog VGA interface:
  1x VGA by DB15 connector
  Resolution up to 1920 x 1200 75Hz
- HDMI interface:
  1x HDMI connector
  Resolution up to 1920 x1200
- LVDS interface:
- Single (24-bit) LVDS panel, resolution up to 1440 x 900 by DF13 20-pin LVDS connector
- Inverter (LVDS panel backlight) interface:
  1x 7-pins CCFL for LCD panel backlight inverter
- Audio:
  Realtek ALC886-GR High Definition codec
  1x Mic-in/ 1x Line-out by audio jack on edge I/O and 1x Line-in by internal 4-pins header
- Expansions:
  2x Mini-PCIe (1x full-size/ SIM tray and 1x half-size slots)
  1x PCI slot (32bit/ 33Mhz)

Block Diagram
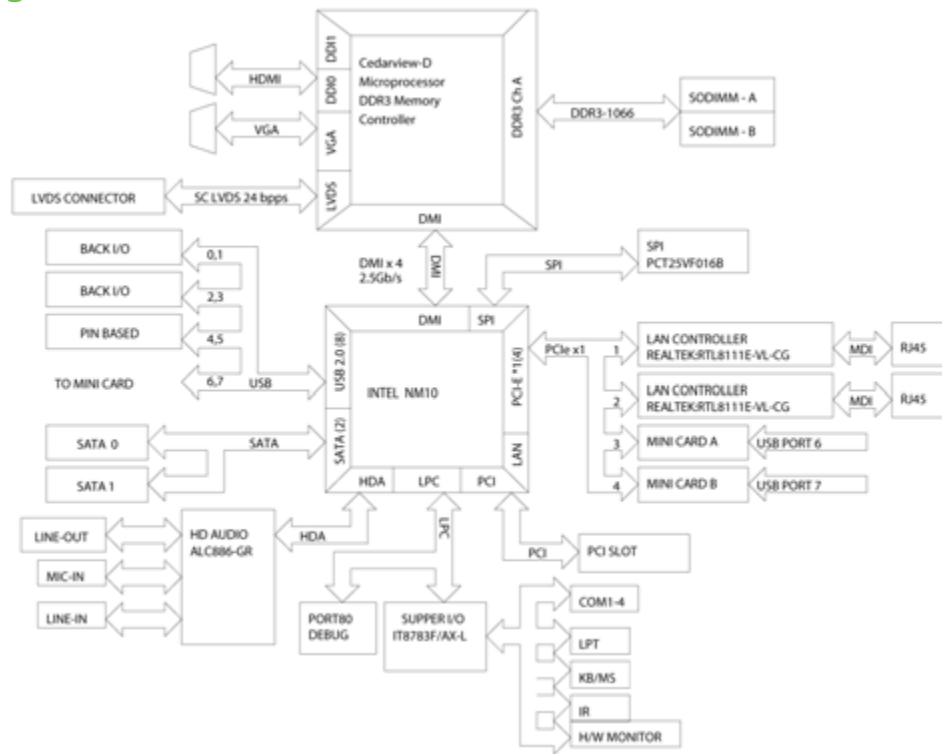
I/O Interfaces-Front
* Serial port: 4 ports
  COM1, RS232 by DB-9 male on edge I/O
  COM2, 3, 4 ports support 3 x RS232 by three 2x 5-pins box-headers
* USB 2.0: 8 ports
  4x ports by 2 x dual stack USB2.0 on edge I/O (port 0 ~ 3)
  2x ports by 2 x 5-pins header pitch 2.54mm (port 4 ~ 5)
  2x ports to Mini-PCIe slots (port 6, 7)
* 2x 5-pins header for power LED and HDD active LED/ reset/ power on-off
* 2x 4-pins fan connector (for CPU and system)
* 1x 5-pins pin-headers IrDA (Tx/ Rx) and 1 x 4-pins pin-header for SMbus
* 2x 13-pins box-header for legacy parallel port/ LPT

I/O Interfaces- Rare
* 1x 5-pins AT power connectors for DC + 12V input
* 1x dual stack PS2 for keyboard/ mouse
* 1x dual stack DB9 male for COM1 + DB15 female VGA
* 1x HDMI connector
* 2x RJ45 LAN + dual stack USB connectors
* 1x Mic-in/ 1 x Line-out Jack

Watchdog Timer
* Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
* 2x SATA 2.0 ports
* 2x 4-pins power connectors for SATA/ HDD

System Monitor
* Monitoring of 4 voltages and 2 temperatures
* 4 voltage (Vcore, +12V , +3.3V , 5V)
* 2 temperatures (CPU, System)
* 2 fans speed detection

On-board RTC
* On-chip RTC with battery backup
* 1x External Li-Ion battery

Power Input
* Support AT and ATX mode (1 x 3pins) by jumper setting

Power Requirements
* Power requirement: DC +12V Input
* 1x 4-pins Mini-DIN AT power connector on edge I/O,
* One 2 x 2-pins ATX power connector

Dimensions
* Mini-ITX form factor/ 170mm (L) x 170mm (W) (6.7" x 6.7")

Environment
* Operating temperature: -15°C to 60°C
* Storage temperature: -20°C to 85°C
* Relative humidity: Operating 10% to 90%, non-condensing

Certifications
* CE approval
* FCC Class A

Ordering Information

* **NEX 604-2550 (P/N: 10G00060403X0) RoHS Compliant**
  Mini-ITX, embedded Intel® Atom™ Dual-Core D2550/ NM10, 2x DDR3, VGA/ LVDS/ HDMI, 2GbE, 2SATA, 4COM, 6USB, 2mPCIe, PCI and +12VDC input

* **NEX 604/ NEX 605 CPU Cooler (P/N: 5050300517X00)**
  Optional CPU cooler for NEX 604/ NEX 605

NEX 605

Mini-ITX, Intel® Atom™ Dual-Core D2550 1.86GHz, 2x DDR3, VGA/ LVDS/ HDMI, 2x GbE, eSATA/ 5x SATA, 4x COM, 8x USB, mPCIe, PCIe x4

Main Features

- Intel® Atom™ Dual-Core D2550/ 1.86GHz processor
- Intel® ICH10R to support software RAID 0/ 1/ 5/ 10
- Dual 204-pins DDR3 SO-DIMMs support max. 4GB SDRAM memory
- Support VGA/HDMI, VGA/LVDS or HDMI/LVDS dual displays

- 8x USB, 4x COM, 2x GbE (Intel), 1x eSATA/ 5x SATA, 1x LPT
- Audio Mic-in/ Line- out, (internal Line-in)
- 1x Mini-PCIe (1x full-size/ SIM tray), 1x PCIe x4
- Standard ATX v.2.0 input by AT/ ATX power mode

Product Overview

NEX 605 is a Mini-ITX industrial MB embedded Intel® Atom™ D2550 1.86GHz dual-core processor, which integrated Intel HD graphic controller SGX545 to support 640MHz/ DX9.. NEX 605 supports VGA, LVDS (1x ch. 24-bit up to 1440 x 900 @ 60Hz) and HDMI (1080p) by dual displays interface as standard along with two DDR3 SO-DIMMs for max 4GB memory.

NEX 605 embedded Intel® ICH10R chipset to support Intel® Matrix Storage Technology up to six SATA 2.0 for RAID 0/ 1/ 5/ 10 (default 1 x eSATA/ 5x SATA, optional 2x eSATA/ 4x SATA) eight USB 2.0 (extra 1x USB 2.0 to mPCIe interfaces), two Intel® 82574L Gigabit Ethernet controller, one Mini-PCIe full-size slot with SIM stray for standard add-on application and one more PCIe x4 slot by add-on PCIe riser card for expansion.

NEX 605 is featuring versatile displays, matrix storage devices of eSATA/ SATA as RAID for mass storage and riches I/O support for multimedia as well as critical mission of industrial embedded applications.

Specifications

Embedded Support
- Intel® Atom™ processor D2550 1.86GHz CPU

Main Memory
- Dual 204-pin SO-DIMMs support DDR3 up to 4GB SDRAM 800/ 1066MHz

Platform Control Hub
- Intel® ICH10R support Intel® Matrix Storage technology of RAID 0/ 1/ 5/ 10 configuration

BIOS
- AMI BIOS
- Plug & Play support
- Advanced power management
- Advanced configuration & power interface
- 16M bits SPI ROM

On-board LAN
- 2x Intel® 82574L PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LEDs build-in 2x dual stackable USB type A connectors on edge I/O.

Display
- New 2-chips solution 32nm package Intel® Atom™ processor D2550 integrated 3D graphics engine SGX545, to support up to 640MHz/ DX9 and provides multi-options for high-resolution displays
- Analog VGA interface:
  1x VGA by DB15 connector
  Resolution up to 1920 x 1200 75Hz
- HDMI interface:
  1x HDMI connector
  Resolution up to 1920 x 1200
- LVDS interface:
  Single (24-bit) LVDS, resolution up to 1440 x 900 @ 60Hz by DF13 20-pin LVDS
- Inverter (LVDS panel backlight) interface:
  1x 7-pins CCFL for LCD panel backlight inverter
- Audio
  Realtek ALC886-GR High Definition codec
  1x Mic-in/ 1x Line-out by audio jack on edge I/O and 1x Line-in by internal 4-pins header
- Expansions
  1x Mini-PCIe (1x full-size/ SIM tray)
  1x PCIe x4 slot

NEXCOM

Block Diagram
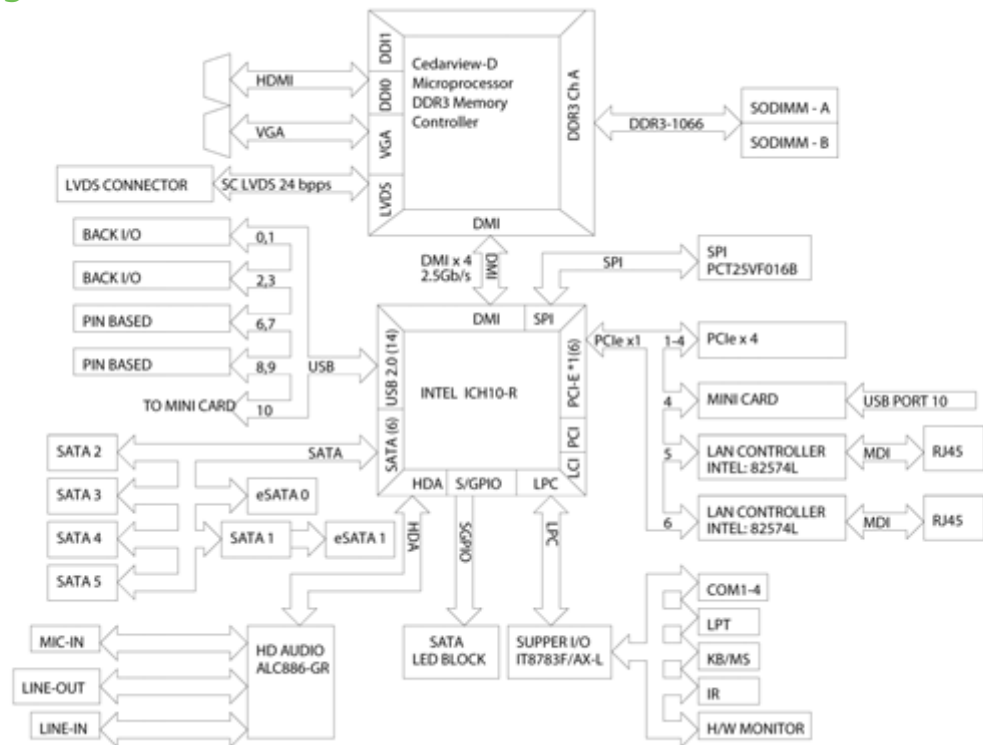
- I/O Interfaces
  Serial port: 4 ports
  COM1, RS232 by DB-9 male on edge I/O
  COM2, 3, 4 support 3x RS232 ports by 2x 5-pins box header and dual- JST 10pins wafer
- 8x USB 2.0: Use 9 of 14 ports (ICH10R)
  4x ports by 2x dual stack USB2.0 on edge I/O (port 0 ~ 3)
  4x ports by 2x 5-pins header pitch 2.54mm (port 6 ~ 9)
- 1x ports to Mini-PCIe slots (port 10)
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5V)
- Power LED and HDD active LED/ reset/ power on-off by 2 x 5-pins header
- 2x 4-pins fan connector (for CPU and system)
- On board Buzzer and SMBus 2.0 by 1 x 4-pins, IrDA by 1 x 5-pins header
- 2x 13-pins box header for legacy parallel port/ LPT
- 2x 13-pins header for 6SATA/ 2GbE LEDs connector

Edge I/O Interfaces
- 1x dual stack PS2 for Keyboard/ Mouse
- 1x dual stack DB9 male for COM1 + DB15 female VGA
- 1x HDMI connector
- 1x dual stack eSATA (port 1 is default by eSATA)
- 2x RJ45 LAN + dual stack USB connectors
- 1x Mic-in/ 1x Line-out Jack

Watchdog Timer
- Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)

Storage
- Default 1x eSATA by external edge I/O and internal 5x SATA connectors support software RAID 0,1,5 and 10
- Optional by DIP-SW1 setting to 2x eSATA by external edge I/O and internal 4x SATA support software RAID 0,1,5 and 10
- 2x 13-pins header for 6 x SATA/ 2 x LAN LEDs connector

System Monitor
- Monitoring of 4 voltages and 2 temperatures
- 4 voltage (Vcore, +12V , +3.3V , 5V)
- 2 temperatures (CPU, System)
- 2 fans speed detection

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode

Power Requirements
- Power requirement: ATX Input, jumper AT/ ATX (default) mode
- Onboard 2x 12-pins standard ATX version 2.0 power connector

Dimensions
- Mini-ITX form factor/ 170mm (L) x 170mm (W) (6.7"x 6.7")

Environment
- Operating temperature: -15°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 605-2550 (P/N: 10G00060502X0)**

  Mini-ITX, embedded Intel® Atom™ Dual-Core D2550/ ICH10R, 2DDR3, VGA/ LVDS/ HDMI, 2GbE, 1x eSATA/ x SATA, 4COM, 8USB, mPCIe, PCIe x4, ATX input

- **NEX 604/ NEX 605 CPU Cooler (P/N: 5050300517X00)**
  Optional CPU cooler for NEX 604/ NEX 605

NEX 607

Mini-iTX 2nd Generation Intel® Core™ Processor Family with VGA/ Dual 24-bit LVDS/ DVI-D/ HDMI/ 2x Gigabit LAN/ 10x USB

Main Features

- 2nd generation Intel® Core™ processor family
- Intel® QM67 chipset
- Two 204-pin SO-DIMM socket supports up to 8 GB DDR3 1066/1333 MHz SDRAM
- Display: VGA & DVI-D & HDMI & LVDS (2 x DF13 20-pin 18 /24/ 36/ 48-bit dual channel)

- 1x Mini-PCIe, 1x PCIe x16 slot
- 2x Intel® Gigabit Ethernet
- 4x SATA
- 10x USB, 4-in/ 4-out GPIO, Mic-in , Line-out
- Serial port: 3x RS232, 1x RS232/422/485 port
- Support AT/ATX mode and single +12 Vdc input

Product Overview

The NEX 607 is a Mini-iTX board with 2nd generation Intel® Core™ processor family, which supports DDR3 1066/1333 memory and is equipped with integrated graphics controller, Intel® HD Graphics 3000. It makes NEX 607 an ideal multimedia solution for large, multi-display applications. Geared with Intel® QM67 chipset, NEX 607 also provides four SATA, four serial ports, ten USB 2.0 ports, two Gigabit Ethernet LAN port, one PCIe x16 slot, one Mini-PCIe interface for applications.

Specifications

CPU Support
- Support 2ndgeneration Intel® Core™ processor family

Processor	i7-2710QE	i5-2510E	i3-2330E	Celeron® B810
# of Core	4	2	2	2
Clock Speed	2.1GHz	2.5GHz	2.2GHz	1.6GHz
Max. TDP	45W	35W	35W	35W

Main Memory
- Two 204-pin SO-DIMM socket supports up to 8 GB DDR3 1066/ 1333MHz SDRAM Chipset

Chipset
- Intel® QM67 chipset

BIOS
- AMI BIOS
- Plug & play support
- Advanced power management
- Advanced configuration & power interface

On-board LAN
- 2x Intel® PCI Express Gigabit Ethernet
- Support Boot From LAN (PXE)
- 2x RJ45 with LED

Display
- 2nd generation Intel® Core™ processor integrated Intel® HD Graphics 3000 engine. Intel® HD Graphics concluding high-performance graphics and media processing is built in the processor, which is capable of delivering sophisticated graphics for large, multi-display applications.
- Analog VGA interface: 1x VGA connector Resolution up to 2048 x 1536 75Hz
- DVI interface: 1x DVI-I connector Resolution up to 1920 x 1200
- HDMI interface: 1x HDMI connector
- LVDS1 interface: Dual LVDS panel, 2x DF13 20-pin LVDS connector for internal connection
- LVDS2 interface (option, Through SDVO w/ CH7308): Dual LVDS panel, 2x DF13 20-pin LVDS connector for internal connection
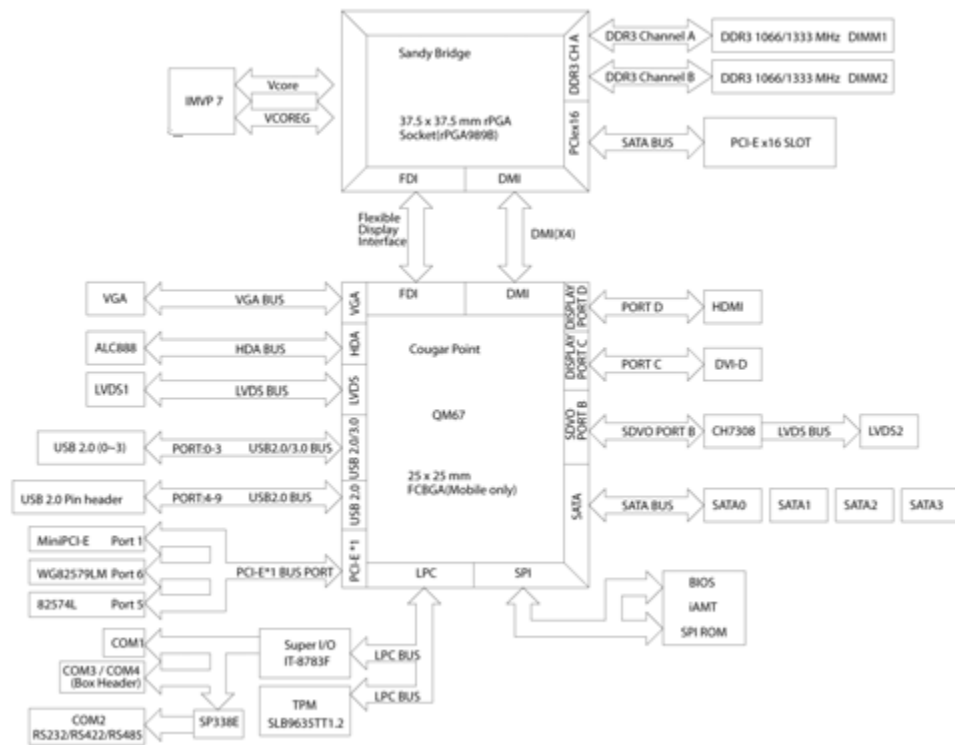- CCFL interface: 2x CCFL for LCD Panel Backlight Inverter

Audio
- Realtek ALC886 CODEC for High Definition
- 1x phone jack for Mic-In.
- 1x phone kack for Line-out .
- 1x 4 2.0 pitch pin header for Line-In.
- 1x 5 pin 2.0 pitch pin header for speak-out

Expansion
- 1x Mini-PCIe
- 1x PCIe x16

Block Diagram

I/O Interface
- Serial port: 4 port
  COM1: RS232 DB-9 male connector on edge I/O
  COM2: RS232/422/485 DB-9 male connector on edge I/O
  COM3,4: RS232 2x 5/ 2.54mm box header
- USB 2.0: 10 ports
  4 ports edge connector
  6 ports by 2.0mm pin connector
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL Level (0/ 5V)
- On-board power LED and HDD active LED pin header
- 1x 4-pin fan connector (for CPU)
- 1x 3-pin fan connector (for system)
- 1x keyboard/ mouse pin header
- On board buzzer/ SMBus2.0/ reset SW/ on & off switch button

Edge I/O Interface
- 1x DVI/ VGA connector
- 1x HDMI connector
- 2x dual stack USB and RJ45 connector
- 1x dual stack serial port connector
- 1x Mic-in and Line out phone jack

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 4x SATA port

System Monitor
- Monitoring of 4 voltages and 2 temperatures and 2 fan speed detection
- 4 voltages (Vcore, +12V, +3.3V, 5V)
- 2 temperatures (CPU, System)
- 2 fan speed detection

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode

Power Requirements
- Power requirement: +12V DC input
- One 4-pin power connector

Dimensions
- Mini-ITX M/B form factor
- 170mm (L) x 170mm (W)

Environment
- Operating temperatures: -15°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 607 (P/N : 10G00060700X0) RoHS Compliant**
  Mini-ITX , 2nd generation Intel® Core™ processor family and based on Intel® integrated graphics engine w/ VGA/ dual channel LVDS/ 10x USB2.0/ 4x COMs/ 1x Mini-PCIe/ 1x PCIe x16/ 2x Gigabit LAN/ 4x SATA, 12VDC input

- **CPU Cooler NEX 607 (P/N: 5050300544X00)**
  Optional CPU cooler for NEX 607 and rPGA 988 socket NEX 609

NEX 608

Main Features

- Support Intel® Atom™ Dual Core D525 Processor
- Support DDR3 SO-DIMM SDRAM, up to 2GB
- Support VGA/ LVDS 18/ 24-bit Display
- Three Gigabit Ethernet

- Support SATA RAID 0/ 1
- 4x COMs, 6x USB 2.0, 1x LPT
- Single 24VDC Power Input

Product Overview

The NEX 608 is a Mini-ITX board with an on-board Intel® Atom™ Dual Core D525 with L2 cache 1MB and DDR3 SO-DIMM SDRAM module. It features dual display application to support independent CRT and LVDS 18/ 24-bit interface, SATA RAID 0/ 1, three gigabit Ethernet, one PCI slot and one Mini-PCI Express slot.

Specifications

CPU Support
- On-board Intel® Atom® Dual Core D525 (1.8GHz, 1M Cache) processor

Main Memory
- 1x 204-pin DDR3 SO-DIMM socket, DDR3 800 2GB max., non-ECC and un-buffered

Platform Control Hub
- Intel® NH82801HBM (ICH8M)

BIOS
- AMI System BIOS
- Plug and play support

On-board LAN
- 3x Realtek 8111L Gigabit Ethernet controller
- Support boot from LAN and wake on LAN
- 3x RJ45 with LED

Display
- Intel® D525 integrated graphic engine, support Directx*9, with Intel® Clear Video Technology on MPEG2 hardware acceleration
- Analog VGA interface: 1x DB15 VGA port, support up to 2048 x 1563 @ 60Hz
- LVDS interface: support single 18/ 24-bit LVDS channel

Audio
- Realtek ALC888 CODEC for High Definition
- 1x phone jack for Line-out
- 1x phone jack for Mic-in

Expansion
- 1x Mini-PCIe socket
- 1x PCI32 slot

I/O Interface
- Serial port: 4 ports
- 2x RS232 DB9 connector (COM1, 2)
- 1x RS232/422/485 DB9 connector (COM3)
- 1x RS232 2x 5 pin box header connector (COM4)
- USB 2.0: 6 ports
- 2 ports with USB 2.0 connector
- 4 ports with 1 x 6-pin JST connector
- 8x GPIO, 10-pin pin header, (GPI 0~3 and GPO0~3) with TTL Level (0/ 5V)
- Onboard power LED and HDD active LED pin header
- 1x 26-pin connector for parallel port
- 1x 3-pin fan connector (for CPU)
- 1x Mini-din connector for PS2 keyboard and mouse
- Onboard buzzer/ SMBus2.0/ reset
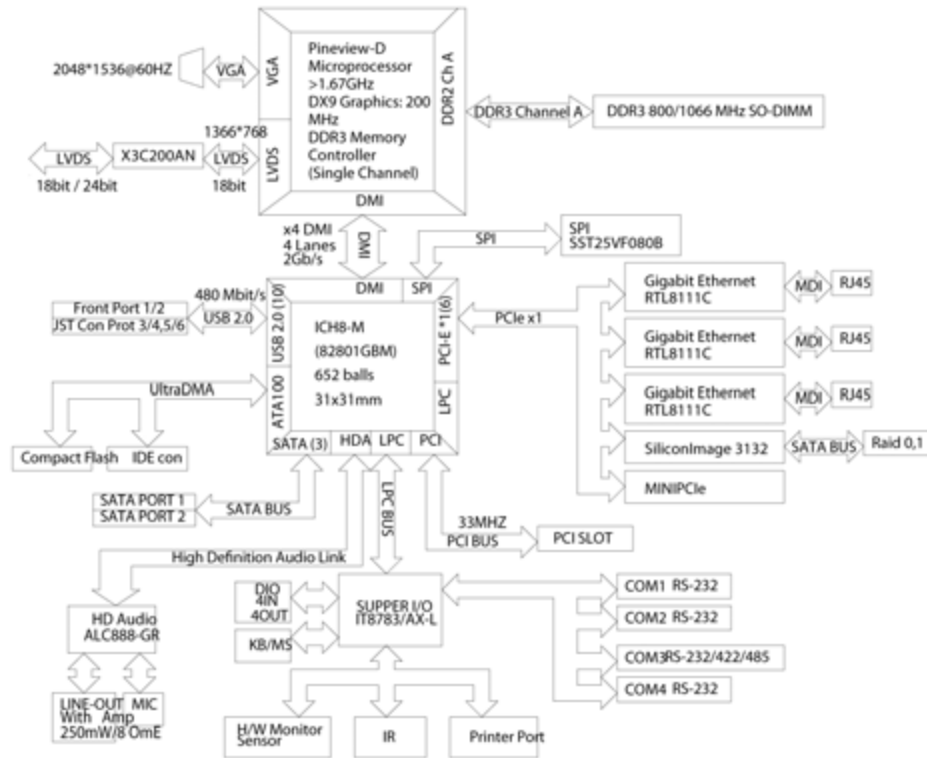
Block Diagram

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 2x SATA connectors (from ICH8M)
- 2x SATA connectors (from Silicon Image 3132 SATA RAID controller, support RAID 0, 1)

System Monitor
- 4 voltages (+3.3V, +5V, +12V, Vcore)
- 2 temperatures (for CPU and 2 external temperature sensors)
- 2 fan speed monitors

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode (ATX as the default)

Power Requirements
- Power requirement: +24V DC Input
- One 4-pin power connector

Dimensions
- Mini-ITX form factor
- 170mm (L) x 170mm

Environment
- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 8°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 608 (P/N: 10G00060800X0)**
  Mini-ITX, Intel® Atom™ Dual Core D525 processor, 1x DDR3 SO-DIMM, 3x GbE, 4x COM, 1x Mini-PCIe, 1x PCI, 24VDC input

- **CPU Cooler Kit NEX 608 (P/N: 10G00060803X0)**
  Optional CPU cooler kit for NEX 608

NEX 609

Mini-ITX, 3rd Generaion Intel® Core™ i7/i5/i3 Celeron® with HM76(QM77), Two 48-bit LVDS (Option LVDS2), 2x GbE/ 10x USB/ 6x COM/ mSATA, Dual 12VDC/ 24VDC Input

Main Features

- 3nd generation Intel® Core™ processor family
- Intel® HM76 chipset (QM77 option)
- Two 204-pin SO-DIMM socket supports up to 16GB DDR3 1333/ 1600 MHz SDRAM
- Display: DVI-I/ HDMI/ Dual 48bit LVDS (Option LVDS2)
- 1x Mini-PCIe support mSATA or 3G/ SIM, and optionl TPM

- 4x SATA with RAID 0,1,5,10
- 2x Intel Gbe Ethernet
- 10x USB, 4-in/ 4-out GPIO, Mic-in, Line-out
- Serial port: 5 x RS232, 1x RS232/422/485 port
- Support AT/ ATX mode and Dual +12VDC/ +24VDC input
- 1x PCIe x16 slot 2x PCIex1 on edge golden finger

Product Overview

The NEX 609 is a Mini-iTX board with 3nd generation Intel® Core™ processor family, which supports DDR3 1333/ 1600 memory, along with Integrated graphics controller, Intel® HD Graphics 4000, along with integrated graphics for large display application to support Multiple Display. Intel® HM76/QM77 chipset provides Four SATA, Six serial ports, Ten USB 2.0 ports, two Gigabit Ethernet LAN port,One PCIe x16 slot, One Mini-PCIe with 3G/ Wi-Fi / MSATA interface, dual 12V/ 24V input for Kiosk/ digital signage/ gamming/ applications.

Specifications

CPU Support
- 3rd generation Intel® Core™ processor

Main Memory
- Two 204- pin SO- DIMM socket supports up to 16 GB DDR3 1333/1600MHz SDRAM

Chipset
- Intel® HM76/ QM77 chipset (option)

BIOS
- AMI BIOS
- Plug and play support
- Advanced Power Management
- Advanced Configuration & Power Interface

On-board LAN
- 2x Intel® PCI Express Gigabit Ethernet
- Support Boot From LAN (PXE)
- 2x RJ45 with LED

Display
- 3rd generation Intel® Core™ processor integrated Intel® HD Graphics 4000 engine, Intel® HD Graphics integrates high-performance graphics and media processing right on the processor ,delivers sophisticated graphics for large display application, three independent display support.
- DVI-I interface: Analog VGA support

- HDMI interface:
  - Resolution:
    Up to 2560 x 1600 @60Hz for 1st display port
    Up to 1920 x 1600 @60Hz for 2st display port
    Up to 1920 x 1200 @60Hz for 3st display port
  - LVDS1 interface:
    48bit LVDS interface, 2x DF13 20-pin LVDS connector for internal connection.
    LVDS2 interface (option, Through SDVO w/ CH7308).
    48bit LVDS interface, 2x DF13 20-pin LVDS connector for internal connection.
  - CCFL interface:
    2x CCFL for LCD Panel Backlight Inverter with Analog & PWM dimming control.
- Analog VGA interface: 1x DB15 VGA port, support up to 2048 x 1563 @ 60Hz
- LVDS interface: support single 18/ 24-bit LVDS channel

Audio
- Realtek ALC886 CODEC for High Definition
  1x Phone Jack for Mic-In
  1x Phone Jack for Line out
  1x phone jack for Line In
  1x 5 pin 2.0 pitch pin header for speak-out

Block Diagram
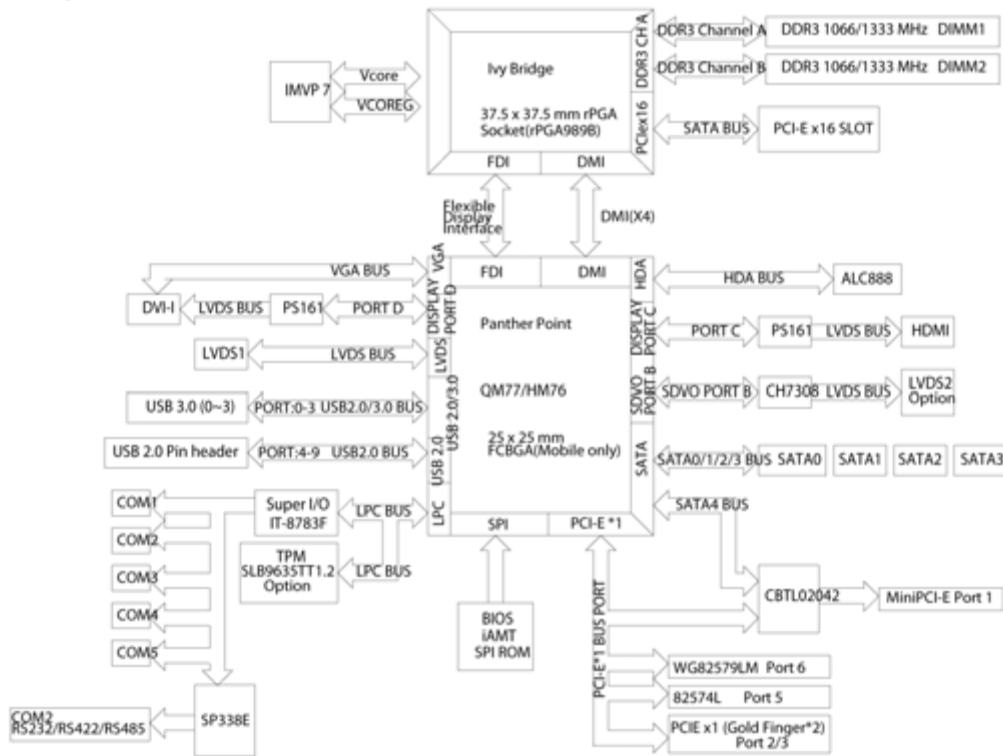
Expansion
- 1x Mini-PCIe
- 1x PCIe x16
- 2x PCIe x1 golden finger

I/O Interface
- Serial port: 6 port
  COM1,6: RS232 DB-9 male connector on edge I/O
  COM2: RS232/422/485 DB-9 male connector on edge I/O
  COM3,4,5: RS232 1x 6 2.0mm JST connector
- USB 2.0/ 3.9: 10 ports
  USB 3.0 x4 ports edge connector
  USB 2.0 x6 ports by 2.0mm pin connector
- 8 GPIO lines via header (GPI 0 ~ 3 and GPO0 ~ 3) TTL Level (0/ 5 V)
- Onboard Power LED and HDD Active LED Pin Header
- 1x 4-pin fan connector (for CPU)
- 1x 3-pin fan connector (for System)
- 1x Keyboard/Mouse pin header
- On board Buzzer/ SMBus2.0/ Reset SW/ On &Off switch button

Edge I/O Interface
- 1x dual stack DB9 male + DB9 male for COM1 & COM2
- 1x HDMI
- 1x DVI-I + DB9 male FOR COM6
- 2x RJ45 + dual stack USB
- 1x Line-Out/ MIC-in/ Line-in

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 4x SATA port with RAID 0,1,5,10 function. (option)

System Monitor
- Monitoring of 4 voltages and 2 temperatures and 2 Fans speed detection

- 4 Voltage (Vcore, +12V, +3.3V, 5V)
- 2 Temperatures (CPU, System)
- 2 Fan Speed detection

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode

Power Requirements
- Power requirement: Dual +12V & 24V DC Input
- One 4-pin power connector

Dimensions
- Mini-ITX M/B form factor
- 170mm (L) x 170mm(W)

Environment
- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 609 (P/N: 10G00060900X0) RoHS Compliant**
  Mini ITX, Intel® 3rd generation Intel® Core™ processor family with DVI-I/ HDMI / Two 48-bit LVDS interface/ 2x Gigabit LAN/ 10x USB/ 6x COMs/ TPM (option)/ MSATA/ Dual 12 & 24 Power input)

- **CPU Cooler For NEX 609 (P/N: 5050300544X00)**
  Optional CPU cooler for NEX 609 rPGA 988 socket

NEX 611

Mini-ITX, AMD Embedded G-Series APU T48E/ A50M/ 2x DDR3/ SO-DIMM, 2HDMI/ VGA, PCIe x4/ mPCIe, 2GbE/ 4x SATA3.0/ 14x USB/ 6x COM/ mSATA

Main Features

- AMD Embedded G-Series APU T48E/ A50M Express Chipset
- Optional T56N/ or T40E
- Single channel 2 x DDR3/ SO-DIMMs 1066/ 1333MHz up to 8GB
- Support HDMI/ LVDS (shared 2nd. HDMI/ VGA dual displays
- 2 x Intel® GbE, 4 x SATA3.0, 14 x USB2.0, 6 x COM, 8 x GPIO
- 1 x PCIex4, 1 x mPCIe, 1 x mSATA
- Support AT/ ATX mode by ATX Power Input

Product Overview

NEX 611 is an industrial motherboard with Mini-ATX form factor, which onboard AMD G-series T48E (optional T56N/ T40E) onboard A50M chipset. NEX 611 support single channel 2 x DDR3/ SO-DIMMs 1333/ 1066MHz memory up to 32GB system memory. The embedded A55E support dual displays by legacy VGA and 1st. HDMI or 2nd. HDMI/ shared by dual Channel 24-bit with max resolution 1920 x 1200. The A55E chipset manages up to 4 x SATA 3.0 with software RAID 0/ 1/ 5/ 10 supported and performs up to 14 x USB 2.0) ports. NEX 611 support PCIex4 amd mPCIe, dual Intel GbE ports and up to 6x Series ports incl. 2 x RS-232/ 422/ 485 pre-selected in BIOS setting. NEX 611 could be integrated into 1U/ 2U/ 4U rack mounted chassis or Desktop Tower as completed system solution for widely industrial applications in the new era of digital infrastructure with NEXCOM.

Specifications

CPU Support
- Onboard AMD G-Series T48E : 2x1.4GHz/ 512MB/ max. TDP 18W/ AMD RadeonTM HD6310, 520Mhz/ Fansink
- Optional T56N : 2 x 1.65GHz/ 512MB/ max. TDP 18W/ AMD RadeonTM HD6320 500Mhz/ Fansink
- Optional T40E : 2 x 1GHz/ 512MB/ max. TDP 6.4W/ AMD RadeonTM HD6250 280Mhz/ Fan-less

Main Memory
- 2 x 204-pin single channel DDR3/ SO-DIMM 1066/ 1333Mhz up to 32GB system memory

Chipset
- AMD® A55E Chipset

BIOS
- AMI BIOS UEFI
- Plug and play support

On-board LAN
- 2 x Realtek RTL8111E PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2 x RJ45 with LED

Display
- T48E: AMD RadeonTM HD 6310
  (T56N:AMD RadeonTM HD6320, T40E:AMD RadeonTM HD 6250)
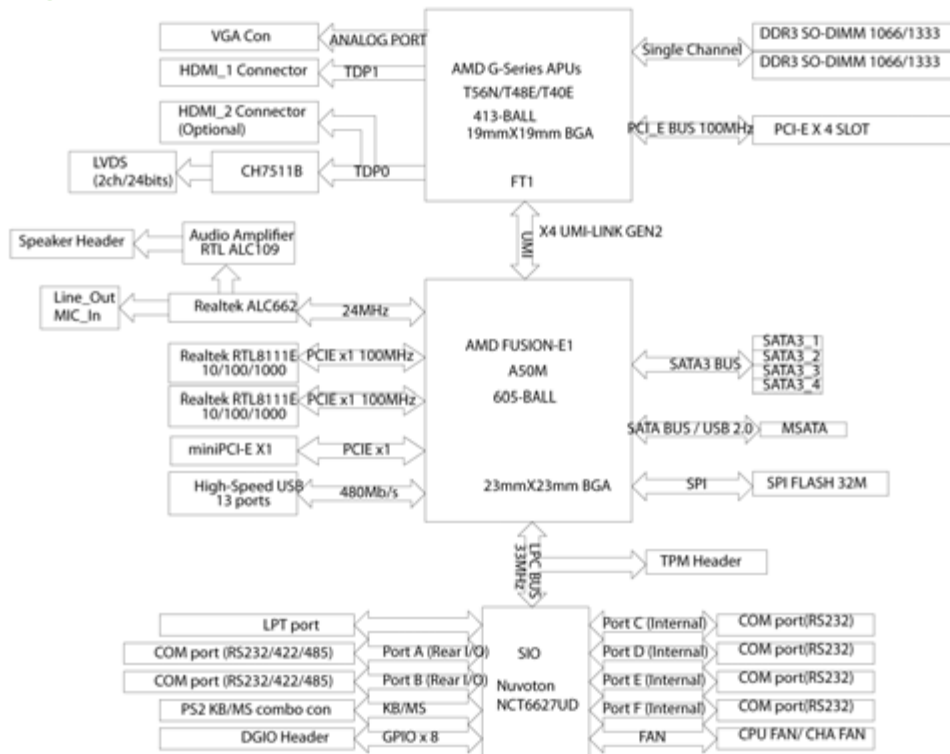- 2 x HDMI
- 1 x VGA

Expansion
- 1 x PCIex4
- 1 x mPCIe

Edge I/O Interfaces
- 1 x Combo for PS2 KB/ MS with dual stack USB 2.0
- 2 x stack DB9 for COM1 & COM2
- 1 x HDMI and 2nd. HDMI shared with dual channel 24-bit LVDS
- 1 x VGA
- 2 x RJ45 with dual stack USB 2.0
- Line-In/ Line-Out/ MIC phone jack

Block Diagram

I/O Interface

- USB 2.0: 14 ports (6 x USB2.0 on edge I/O, 6 x internal box-header, 1 x vertical Type A, 1 x for mPCIe)
- Serial: 6 ports (default 2 x RS-232 pre-selected RS422/ 485 in BIOS, 4 x RS-232 by internal pins-header)
- SATA 3.0 HDD: 4 ports, port 0, 1, 2, 3, and 1 x SATA Power by 1 x 4Pins
- Support Software RAID 0/ 1/ 5/ 10 and Intel® Matrix Storage
- GPIO: Supports 4 x GPI and 4 x GPO with TTL level (5V or 12V by Jumper)

Edge I/O Interface

- On- board buzzer x 1
- 9 x pins system header for Power LED/ Power On/ Reset/ HDD LED
- 1 x 4-pin fan connector (for CPU); 1 x 3-pin fan connectors (for CPU or System)
- On-chip RTC with battery/ CR2032 backup holder onbo

System Monitor

- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (For CPU and System)
- 3 FAN speed monitors (1 for CPU and 2 for Chassis Fan/ System)

Power Input

- Support AT/ ATX mode
- ATX 4-pin connector for +12V

Dimensions

- Mini- ATX
- Dimension: Lx W, 170mm x 170mm; 6.7"x 6.7" inches

Environment

- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: 10% to 90%, (Non-condensing)

Certifications

- Meet CE
- Meet FCC

Ordering Information

- **NEX 611-20PBK (P/N : 10G00061101X0)**
  Bulk-Packed 20 x pcs Mini-atx, AMD onboard T48E/ A50M, 2DDR3/ SO-DIMM, 2HDMI/ VGA PCIe x4/ mPCIe, 4SATA3.0, 14USB2.0, 2Gbe, 6COM, mSATA, 4pin ATX Power Input

NEX 880

Micro ATX, support 2nd Generation Intel® Core™ Desktop processors
with Dual Display/ 1x PCIe x8/ 1 x PCIe x4/ 2x PCIe x1/ 2x GbE

Main Features

- Support 2nd generation Intel® Core™ desktop processors
- 4x DDR3 DIMM Socket up to 32 GB
- VGA + DVI dual displays
- 2x Intel® Gigabit Ethernet
- Support Intel® AMT 7.0

- 1x PCIe x16(with PCIe x8 signals), 1x PCIe x8(with PCIe x1 signals), 1x PCIe x4(with PCIe x4 signals) slot, 1x PCIe x4 (with PCIe x1 signals) slot
- Support SATA 3.0, 2x RS232

Product Overview

NEX 880 is an industrial motherboard with Micro ATX form factor, which Support 2nd generation Intel® Core™ Desktop processors with Hyper-Threading technology.

The 2nd generation Intel® Core™ Desktop processors support dual channel non-ECC DDR3 1066/1333 MHz memory in four DIMM slots and integrated HD graphics controller. The Q77 PCH manages SATA 3.0 ports and USB 2.0 ports. Furthermore, it supports other versatile I/O ports such as two serial ports, ten USB ports, and two Intel PCI Express Gigabit LAN ports. It offers a great solution for advanced industrial application that requires superb display and processing performance.

Specifications

CPU Support
- LGA1155, 2nd generation Intel® Core™ Desktop processors

Main Memory
- 4 x 240-pin DIMM, for up to 32GB dual channel non-ECC un-buffered DIMM 1066/ 1333 SDRAM

Chipset
- Intel® Q77 Platform Controller Hub

BIOS
- AMI BIOS
- Plug and play support

On-board LAN
- 1x Intel® 82579LM PHY for AMT 7.0
- 1x Intel® 82583 PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- 2nd generation Intel® Core™ Desktop processors Integrated HD graphics
- 1x VGA
- 1x DVI-D

Expansion
- 1x PCIe x16 (with PCIe x8 signals) slot
- 1x PCIe x8 (with PCIe x1 signals) slot
- 1x PCIe x4 (with PCIe x1 signals) slot
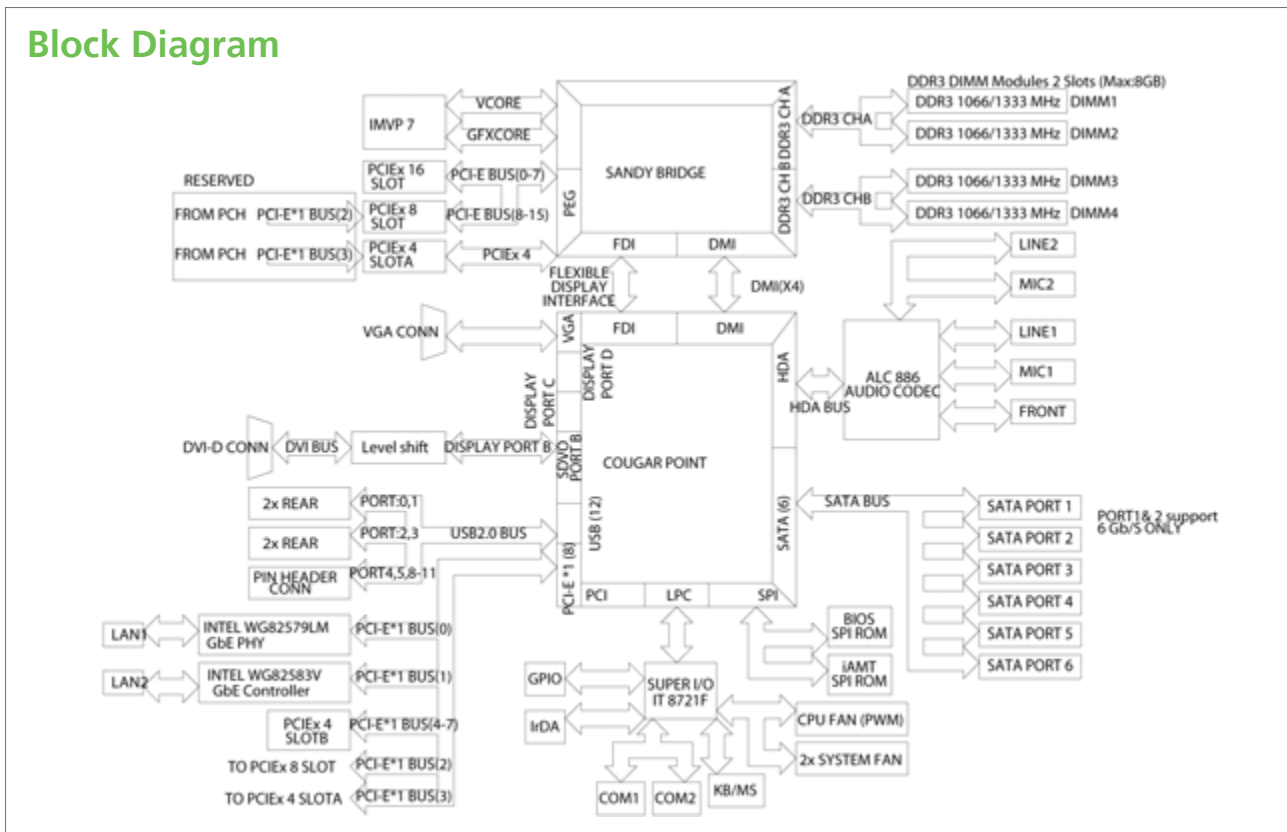- 1x PCIe x4 (with PCIe x4 signals) slot

Edge I/O Interfaces
- 1x dual stack Mini DIN 6-pin connector for PS/2 KB/MS
- 1x dual stack DB9 male connector for COM1 & COM2
- 1x DVI + DB15 female connector VGA
- 2x RJ45 with dual stack USB connectors
- Line-In/ Line-Out/ MIC phone jack

I/O Interface
- USB 2.0: 10 ports
  (6 onboard pin header, 4 with type A connector for external)
- Serial port: 2 port, with 2 x 5pin headers (COM 1 and COM 2)
- SATA HDD: 6 ports, port 1, 2 support SATA 3.0, port 3, 4, 5, 6 support SATA 2.0
- Support RAID 0/ 1/ 5/ 10 and Intel® Matrix Storage
- IrDA: on board pin header
- GPIO: Supports 4 sets general purpose I/O each with TTL level (5V) interface
- On-board buzzer x1
- Power LED/ Power On/ Reset/ HDD LED pin header

328   Indutrial Mother Board

NEXCOM

Block Diagram

- 1x 4-pin fan connector (for CPU); 2x 3-pin fan connectors (for System)
- On-chip RTC with battery backup
- 1x External Li-Ion battery

System Monitor
- 4 voltages (+3.3V, +5V, +12V, Vcore)
- 2 temperatures (For CPU and System)
- 3 fan speed monitors (1 for CPU and 2 for system fan)

Power Input
- Support ATX power supplies
- Standard ATX 24-pin connector for +12V/ +5V/ +3.3V/ +5Vsb/ -12V
- ATX 8-pin connector for +12V

Dimensions
- Micro ATX
- Dimension: 244mm (L) x 244mm (W)

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: 10% to 90%, (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 880 (P/N : 10G00088000X0)**

  Micro ATX, LGA1155, 2nd generation Intel® Core™ Desktop processors, Q77 DDR3 DIMM x4, VGA, DVI-D, 2x GbE, PCIe x8/ PCIe x4/ 2x PCIe x1, 2x RS232

NEX 883

Micro-ATX, Socket LGA1155 3rd/ 2nd Generation Intel® Core™ i7/i5/i3, Q77
4x DDR3, DP/ HDMI/ DVI-I, PCIe x16/ PCIe x4/ 2x PCI/ mPCIe, mSATA

Main Features

- Support Socket 1155 for 3rd./ 2nd. Generation Intel® Core™ i7/i5/i3, Celeron Processors
- 4x DDR3 DIMM Socket up to 32 GB
- Support HDMI/ DVI-I/ DisplayPort dual displays

- 2x Intel® GbE, 4x SATA3.0/ 2.0, mSATA, 12x USB3.0/ 2.0, 6x COM, 8x GPIO
- 1x PCIe x16, 1x PCIe x4, 1x mPCIe, 2x PCI (v2.3)
- Support AT/ ATX mode by ATX Power Input

Product Overview

NEX 883 is an industrial motherboard with Micro-ATX form factor, which support 3rd and 2nd Generation Intel® Core™ i7/i5/i3 and Celeron® processors. NEX 883 support dual channel DDR3 2133/1600/1333/1066MHz memory in four long DIMM slots up to 32GB system memory and PCIex16 (3.0/ 2.0 by CPU)

The Q77 PCH support multiple displays by three DDI (digital display interfaces) for HDMI/ DVI-I (VGA) / DP (shared LVDS) ports. Intel Q77 PCH manages up to 2 x SATA 3.0/ 2 x SATA 2.0 with software RAID 0/ 1/ 5/ 10 supported and performs up to 12 x USB (4 x USB3.0/ 8 x USB2.0) ports. NEX 883 support PCIex4, mPCIe, legacy 2 x PCI slots, dual Intel GbE ports and up to 6x Series ports incl. 2x RS-232/ 422/ 485 pre-selected in BIOS setting. NEX 883 could be integrated into 1U/ 2U/ 4U rack mounted chassis or Desktop Tower as completed system solution for widely industrial applications in the new era of digital infrastructure with NEXCOM.

Specifications

CPU Support
- Socket LGA1155, 3rd or 2nd Generation Intel® Core™ i7/i5/i3, Celeron® processors

Main Memory
- 4x 240-pin dual channel long DIMMs support DDR3 1066/1333/1600/2133Mhz up to 32GB system memory

Chipset
- Intel® Q77 Platform Controller Hub

BIOS
- AMI BIOS UEFI
- Plug and play support

On-board LAN
- 1x Intel® 82579V/ LM PHY for AMT 8.0
- 1x Intel® 82583V PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- 3rd or 2nd Generation Intel® Core™ socket LGA1155 processors Integrated HD graphics 1x VGA
- 1x HDMI
- 1x DVI-I
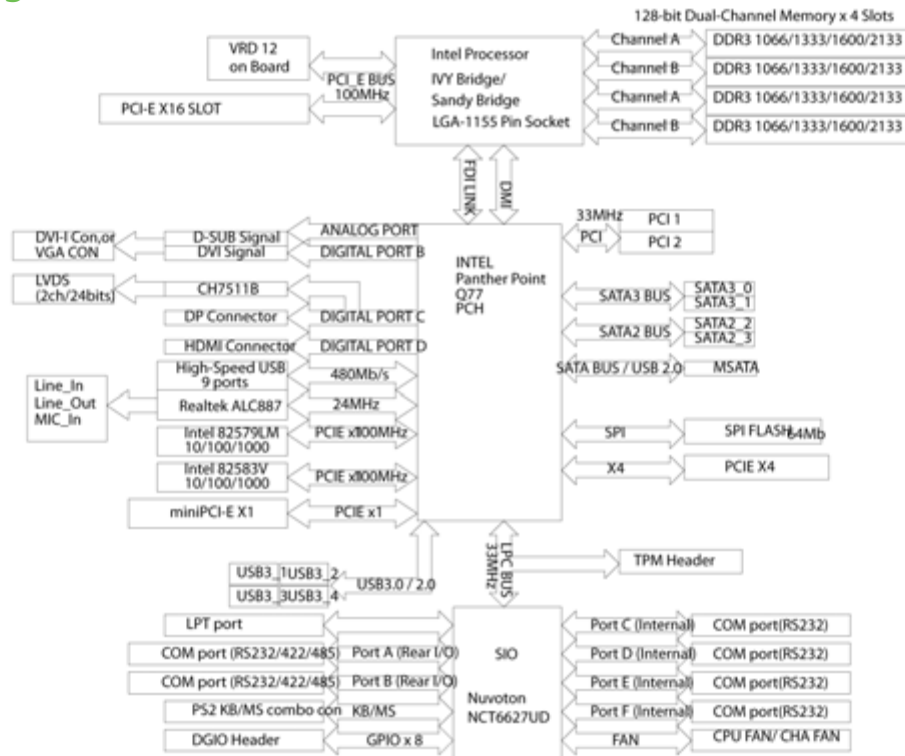- 1x DisplayPort

Expansion
- 1x PCIe x16 (Gen. 3.0/ 2.0 by CPU)
- 1x PCIe x4
- 2x PCI (v2.3)

Edge I/O Interfaces
- 1x Combo for PS2 KB/ MS
- 2x stack DB9 for COM1 & COM2
- 1x HDMI with dual stack USB 2.0 (black)
- 1x DVI-I
- 2x RJ45 with dual stack USB 3.0 (blue) and dual stack USB 2.0 (black) connectors
- Line-In/ Line-Out/ MIC phone jack

NEXCOM

Block Diagram

I/O Interface
- USB 3.0: 4 ports (2x USB3.0 on edge I/O, 2x internal box-header)
- USB 2.0: 8 ports (4x USB2.0 on edge I/O, 4x internal box-header)
- Serial: 6 ports (default 2x RS232 pre-selected RS422/485 in BIOS, 4 x RS232 by internal pins-header)
- SATA HDD: 4 ports, port 0, 1 support SATA 3.0, port 2, 3 support SATA 2.0, dual SATA Power by 2x 4Pins
- Support Software RAID 0/ 1/ 5/ 10 and Intel® Matrix Storage
- GPIO: Supports 4 x GPI and 4 x GPO with TTL level (5V or 12V by Jumper)

Interface:
- On-board buzzer x1
- 9x pins system header for Power LED/ Power On/ Reset/ HDD LED
- 1x 4-pin fan connector (for CPU); 1x 3-pin fan connectors (for CPU or System)
- On-chip RTC with battery/ CR2032 backup holder onboard

System Monitor
- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (For CPU and System)
- 3 FAN speed monitors (1 for CPU and 2 for Chassis Fan/ System)

Power Input
- Support AT/ ATX mode
- Standard ATX 24-pin connector for +12V/ +5V/ +3.3V/ +5Vsb/ -12V
- ATX 4-pin connector for +12V

Dimensions
- Micro ATX
- Dimension: Lx W, 244mm x 244mm; 9.6"x 9.6"

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
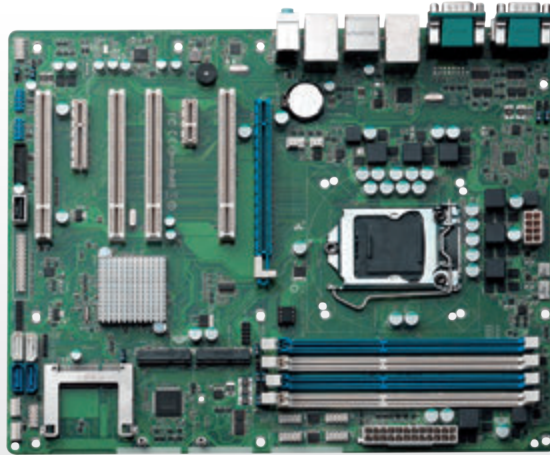- Relative humidity: 10% to 90%, (Non-condensing)

Certifications
- Meet CE
- Meet FCC

Ordering Information

- **NEX 883-10PBK (P/N : 10G00088301X0)**

  Bulk-Packed 10x pcs u-ATX, LGA1155 3rd/ 2nd Generation Intel® Core™ i7/ i5/ i3, Celeron processors, Q77 with 4x DDR3/ DIMM, HDMI/ DP/ DVI-I, PCIe x16/ PCIe x4/ 2PCI/ mPCIe, 2x SATA3.0/ 2x SATA 2.0, 4x USB 3.0/ 8x USB 2.0, 2GbE, 6COM, mSATA, ATX Power Input

NEX 890

Main Features

- Support 2nd generation Intel® Core™ Workstation processors
- 4x DDR3 DIMM Socket up to 32 GB, support ECC SDRAM
- VGA + DVI dual displays
- 2x Intel® Gigabit Ethernet

- Support Intel® AMT 7.0
- 1x PCIe x16 (with PCIe x8 signals), 1x PCIe x8, 2x PCIe x4 slots
- Support SATA 3.0, 2x RS232

Product Overview

NEX 890 is an industrial motherboard with Micro ATX form factor, which Support 2nd generation Intel® Core™ Workstation processors with Hyper-Threading technology.

The 2nd generation Intel® Core™ Workstation processors support dual channel ECC DDR3 1066/1333 MHz memory in four DIMM slots and integrated HD graphics controller. The C206 PCH manages SATA 3.0 ports and USB 2.0 ports. Furthermore, it supports other versatile I/O ports such as two serial ports, ten USB ports, and two Intel PCI Express Gigabit LAN ports. It offers a great solution for advanced industrial application that requires superb display and processing performance.

Specifications

CPU Support
- LGA1155, 2nd generation Intel® Core™ Workstation processors

Main Memory
- 4x 240-pin DIMM, for up to 32GB dual channel ECC DDR3 1066/1333 SDRAM

Chipset
- Intel® C206 Platform Controller Hub

BIOS
- AMI BIOS
- Plug and play support

On-board LAN
- 1x Intel® 82579LM PHY for AMT 7.0
- 1x Intel® 82583 PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LED

Display
- 2nd generation Intel® Core™ Desktop processors Integrated HD graphics
- 1x VGA
- 1x DVI-D

Expansion
- 1x PCIe x16 (with PCIe x8 signals) slot
- 1x PCIe x8 slot
- 2x PCIe x4 slots

Edge I/O Interfaces
- 1x dual stack Mini DIN 6-pin connector for PS/2 KB/MS
- 1x dual stack DB9 male connector for COM1 & COM2
- 1x DVI + DB15 female connector VGA
- 2x RJ45 with dual stack USB connectors
- Line-In/ Line-Out/ MIC phone jack

I/O Interface
- USB 2.0: 10 ports
  (6 on board pin header, 4 with type A connector for external)
- Serial port: 2 port, with 2x 5pin headers (COM 1 and COM 2)
- SATA HDD: 6 ports, port 1, 2 support SATA 3.0, port 3, 4, 5, 6 support SATA 2.0
- Support RAID 0/ 1/ 5/ 10 and Intel® Matrix Storage
- IrDA: on board pin header
- GPIO: Supports 4 sets general purpose I/O each with TTL level (5 V) interface
- On-board buzzer x1
- Power LED/ Power On/ Reset/ HDD LED pin header
- 1x 4-pin fan connector (for CPU); 2x 3-pin fan connectors (for System)

Block Diagram
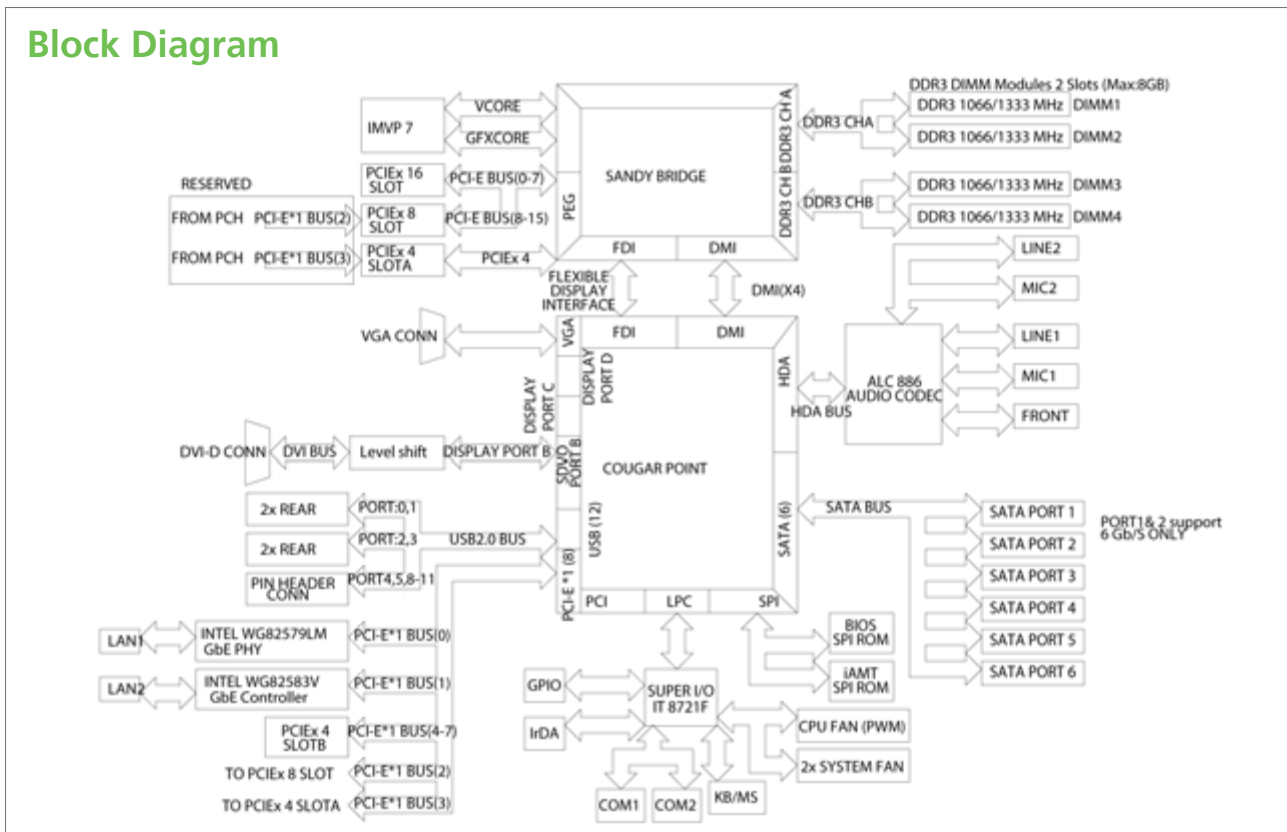
- On-chip RTC with battery backup
- 1x External Li-Ion battery

System Monitor
- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (For CPU and System)
- 3 FAN speed monitors (1 for CPU and 2 for System FAN)

Power Input
- Support ATX power supplies
- Standard ATX 24-pin connector for +12V/ +5V/ +3.3V/ +5Vsb/ -12V
- ATX 8-pin connector for +12V

Dimensions
- Micro ATX
- Dimension: 244mm (L) x 244mm (W)

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: 10% to 90%, (Non-condensing)

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 890 (P/N : 10G00089000X0)**

  Micro ATX, LGA1155, 2nd generation Intel® Core™ Workstation processors, C206, DDR3 DIMM x4, VGA, DVI-D, 2x GbE, PCIe x8/ PCIe x4/ 2 x PCIe x1, 2x RS232

NEX 980

Main Features

- Support Socket LGA 1155 for 3rd/ 2nd Generation Intel® Core™ i7/i5/i3, Celeron Processors
- 4x DDR3 DIMM Socket up to 32 GB
- Support DisplayPort/ HDMI/ VGA dual displays

- 2x Intel® GbE, 4x SATA3.0/ 2.0, mSATA, CFast, 12x USB3.0/ 2.0, 6x COM, 8x GPIO
- 1x PCIe x16, 1x PCIe x4, 1x PCIe x1, 1x mPCIe, 4x PCI (v2.3)
- Support AT/ ATX mode by ATX Power Input

Product Overview

NEX 980 is an industrial motherboard with Standard ATX form factor, which support 3rd and 2nd generation Intel® Core™ i7/i5/i3 Celeron® processors. NEX 980 support dual channel DDR3 2133/1600/1333/1066MHz memory in four long DIMMs up to 32GB system memory and PCIex16 (3.0/ 2.0 by CPU)

The Q77 PCH support multiple displays by three DDI (digital display interfaces) by HDMI/ DP ports as well as legacy VGA. Intel Q77 PCH manages up to 2x SATA 3.0/ 2x SATA 2.0 with software RAID 0/ 1/ 5/ 10 supported and performs up to 12x USB (4x USB3.0/ 8x USB2.0) ports. NEX 980 support PCIe x4, PCIe x1, mPCIe, legacy 4x PCI slots, dual Intel GbE ports and up to 6x COM incl. 2x RS232/422/485. NEX 980 could be integrated into 1U/ 2U/ 4U rack mounted chassis or Desktop Towers as completed system solution for widely industrial applications in the new era of digital infrastructure with NEXCOM.

Specifications

CPU Support
- Socket LGA1155, 3rd or 2nd Generation Intel® Core™ i7/ i5/ i3, Celeron® processors

Main Memory
- 4x 240-pin dual channel long DIMMs support DDR3 1066/1333/1600/2133Mhz up to 32GB system memory

Chipset
- Intel® Q77 Platform Controller Hub

BIOS
- AMI BIOS UEFI
- Plug and play support

On-board LAN
- 1x Intel® 82579V/ LM PHY for AMT 8.0
- 1x Intel® 82583V PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LEDs

Display
- 3rd or 2nd generation Intel® Core™ socket LGA1155 processors Integrated HD graphics
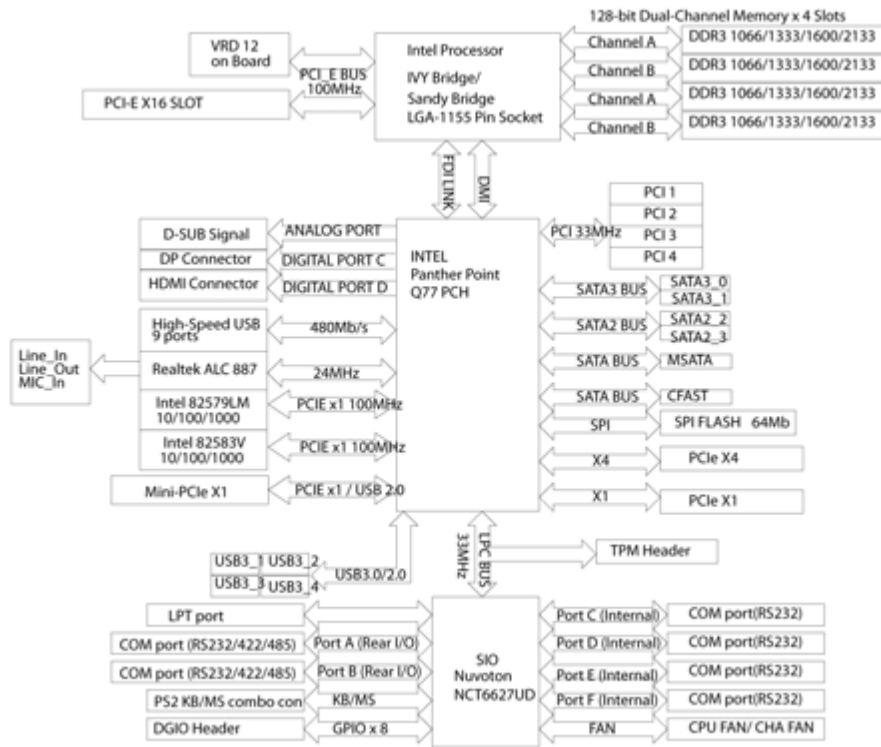- 1x HDMI
- 1x DisplayPort
- 1x VGA

Expansion
- 1x PCIe x16 (Gen. 3.0/ 2.0 by CPU)
- 1x PCIe x4
- 1x PCIe x1
- 4x PCI (v2.3)

Edge I/O Interfaces
- 1x Combo for PS2 KB/MS
- 2x stack DB9 for COM1 & COM2
- 1x DisplayPort
- 1x HDMI with dual stack USB 2.0 (black)
- 1x VGA
- 2x RJ45 with dual stack USB 3.0 (blue) and dual stack USB 2.0 (black) connectors
- Line-In/ Line-Out/ MIC phone jack

Block Diagram

I/O Interface

- USB 3.0: 4 ports (2x USB3.0 on edge I/O, 2x internal box-header)
- USB 2.0: 8 ports (4x USB2.0 on edge I/O, 4x internal box-header)
- Serial: 6 ports (default 2x RS232 pre-selected RS422/485 in BIOS, 4x RS232 by internal pins-header)
- SATA HDD: 4 ports, port 0, 1 support SATA 3.0, port 2, 3 support SATA 2.0, dual SATA Power by 2 x 4xpins
- Support Software RAID 0/ 1/ 5/ 10 and Intel® Matrix Storage
- GPIO: Supports 4x GPI and 4x GPO with TTL level
  (5V or 12V by Jumper)

Interface:

- Onboard buzzer x1
- 9x pins system header for Power LED/ Power On/ Reset/ HDD LED
- 1x 4-pin fan connector (for CPU); 1x 3-pin fan connectors (for CPU or System)
- On-chip RTC with battery/ CR2032 backup holder onboard

System Monitor

- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (For CPU and System)
- 3 FAN speed monitors (1 for CPU and 2 for Chassis Fan/ System)

Power Input

- Support AT/ ATX mode
- Standard ATX 24-pin connector for +12V/ +5V/ +3.3V/ +5VSB/ -12V
- ATX 4-pin connector for +12V

Dimensions

- Micro ATX
- Dimension: Lx W, 305mm x 244mm; 12"x 9.6"

Environment

- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
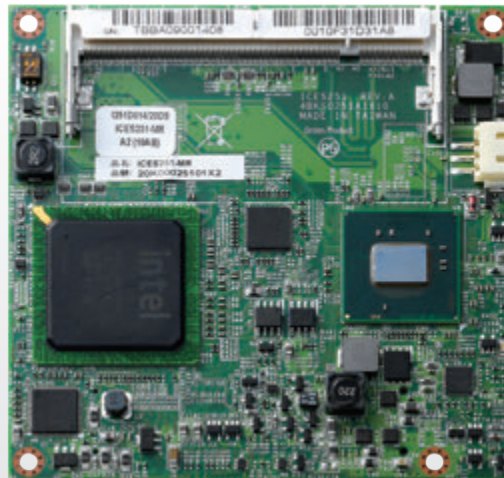- Relative humidity: 10% to 90%, (Non-condensing)

Certifications

- Meet CE
- Meet FCC

Ordering Information

- **NEX 980-10PBK (P/N : 10G00098001X0)**

  Bulk-Packed 10 x pcs ATX, LGA1155 of 3rd/ 2nd Generation Intel® Core™ i7/ i5/ i3, Celeron processors, Q77 with 4x DDR3/ DIMM , HDMI/ DP/ VGA, PCIe x16/ PCIe x4/ PCIe x1/ 4PCI/ mPCIe, 2x SATA3.0/ 2x SATA 2.0, 4x USB3.0/ 8x USB 2.0, 2x GbE, 6x COM, mSATA, CFast and ATX Power Input

ICES 251X

COM Express Type 2 Compact Module with Intel® Atom™ N450 1.66GHz

DDR2, Extended -40°C to + 85°C

Main Features

- Support Wide Range Operating Temperature
- Low Power COM Express CPU Module
- Onboard Intel® Atom™ N450 1.66GHz Processor
- Intel® ICH8M Chipset
- Support DDR2 667 SO-DIMM up to 2GB

- Intel® PCI Express GbE 82574L
- Support 3x SATA, 1x IDE, 8x USB2.0 for Fast Peripherals
- Compact COM Express Type II Supports up to 5 Express Lanes, 32 bit PCI Interface and One IDE and Gigabit LAN

Product Overview

The ICES 251X is a COM Express Type 2 compact module that features Extended -40°C to + 85°C operating temperature with Intel® Atom™ N450 1.66GHz and ICH8M in small foot print. ICES 251X supports operating temperature form -40°C to 85°C. It also provides outstanding performance in the combination of high computing power and low thermal dissipation. ICES 251X supports DDR2 667 SO-DIMM memory up to 2GB, and supports 3x SATA, 1x IDE, 8x USB2.0 for fast peripherals. ICES 251X is type 2 COM Express Module support up to 5 Express lanes, 32 bit PCI interface and one IDE and Gigabit LAN.

Specifications

CPU Support
- Onboard Intel® Atom™ N450 1.66GHz processor

Main Memory
- Support one un-buffered non-ECC DDR2 SO-DIMM 667 up to 2GB

Chipset
- Intel® ICH8M chipsets

BIOS
- AMI System BIOS
- SPI ROM
- Plug and play support
- Advanced power management and advanced configuration & power interface support

On-board LAN
- Intel® PCI Express GbE 82574L x 1
- Support PXE LAN boot function
- Support Wake on LAN function

Display
- Intel® N450 integrated graphics solution with dynamic video memory allocation
- Analog monitor with pixel resolution up to 1400 x 1050 @60Hz
- Support Single channel for 18 bit
- LFP (local fl at panel) LVDS interface

Audio
- HD configurable audio bus interface

Storage
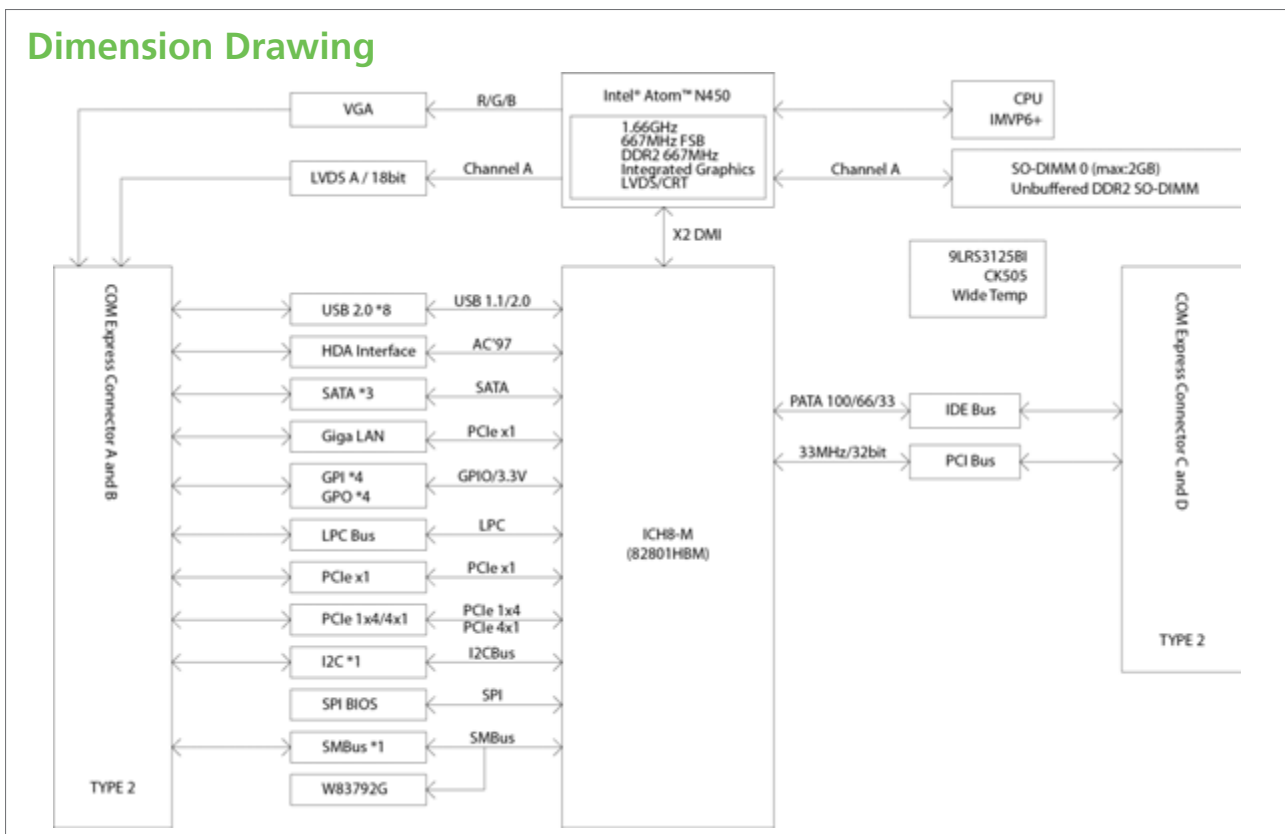- 3x SATA
- 1x IDE

I/O Interface
- Reset signal
- 8 GPIO lines (GPI 0~3 and GPO0~3), CMOS Level (0/ 3.3V)
- I2C interface/ SMbus interface
- USB2.0 x8
- PATA

Other Interfaces
- One 3pin fan connector (90℃, 12V)

NEXCOM

Dimension Drawing

COM Express Connector

- AB connector
  VGA/ LVDS/ 8 x USB/ HD audio interface/ 3 x SATA/ LAN/ GPIO (3.3V)/ LPC bus
- 1x PCIe x4/ 1x PCIe x1/ SMBus/ I2C/ SPI BIOS
- CD connector, IDE, PCI

System Monitor

- Monitoring of 4 voltages, 2 temperatures and 1 fan speed
- 4 voltages (For +5V, +12V, Vcore, +3.3V)
- 2 temperatures (CPU and one external temperature sensor)

Power Requirements

- +12VDC, 3.3V battery, +5VSB power input
- Support both AT and ATX power supply mode

Power Management

- ACPI 2.0 compliant with battery support. Also supports suspend to RAM (S3)

Carrier Board

- ICEB 8050

Dimensions

- 95mm (W) x 95mm (L)

Environment

- Operating temperature: -40°C to 85°C
- Storage temperature: -40°C to 85°C
- Relative humidity:
  10% to 97% (operating, non-condensing)
  5% to 97% (non-operating, non-condensing)

Certifications

- CE approval
- FCC Class A

Ordering Information

- **ICES 251X (P/N:10K00025102X0)**
  COM Express Type 2 Compact Module Extended -40°C to + 85°C with Intel® Atom™ N450 1.66GHz DDR2/ PCIe/ PCI/ IDE/ GbE/ LVDS/ audio interface

- **ICEB 8050 (P/N:10KB0805000X0)**
  COM Express Type 2 evaluation board with PCIe/ PCI/ SATA/ CF/ IDE/ COM/ USB/ LVDS/ VGA/ LAN

EBC 310X

Wide Operating Temperature,
3.5" ECX Intel® Atom™ E640 1.0GHz CPU, Onboard DDR2-1GB
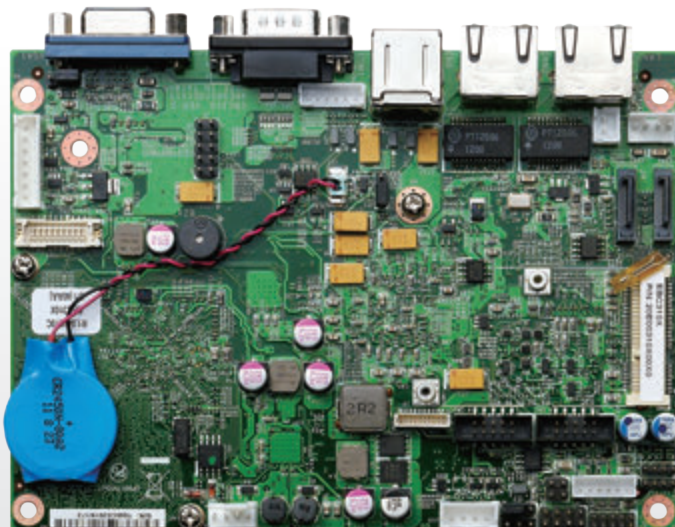
Main Features

- Support Wide Range Operating Temperature
- Support Intel® E640T Ultra Low Power Consumption SoC
- On-board DDR2 1GB Main Memory
- Support VGA/ LVDS Display
- Two Gigabit Ethernet
- Support Video Decode (MPEG2, MPEG4, H.264, VC1, WMV9) / Encode (MPEG4, H.264)
- One CAN Controller
- 3x COMs, 5x USB 2.0, 2x SATA
- Single 12VDC Power Input

Product Overview

The EBC 310X is a 3.5" ECX embedded board with an on-board Intel® Atom™ E640T 1.0GHz SoC with L2 cache 512 KB and extreme low power consumption 3.6 watts. It supports operating temperature form -40°C to 85°C. The EBC 310X features DDR2 1GB memory onboard, dual display application to support independent CRT and LVDS interface and build-in HD video decoder/ encoder. Intel® PCH EG20T PCH supports 1 x CAN and USB 2.0 controller. The EBC 310X embedded board supports a various operation systems such as Windows 7 and XP embedded, Win CE and Linux.

Specifications

CPU Support
- Onboard Intel® Atom™ E640T 1.0GHz SoC (System-on-Chip)

Main Memory
- Onboard DDR2 800-MHz 1GB, non-ECC and un-buffered

Chipset
- Intel® EG20T (PCH)

BIOS
- AMI System BIOS
- Plug and play support

On-board LAN
- 1x Intel® 82574L Gigabit Ethernet controller
- 1x Realtek 8211CL Gigabit Ethernet controller
- Support Boot from LAN and Wake on LAN
- 2x RJ45 with LED

Display
- Intel® Atom™ E600 series integrated graphic engine, support video decode (MPEG2, MPEG4, H.264, VC1, WMV9)/ encode (MPEG4, H.264)
- Analog VGA interface: 1 x DB15 VGA port, support resolution up to 1280 x 1024
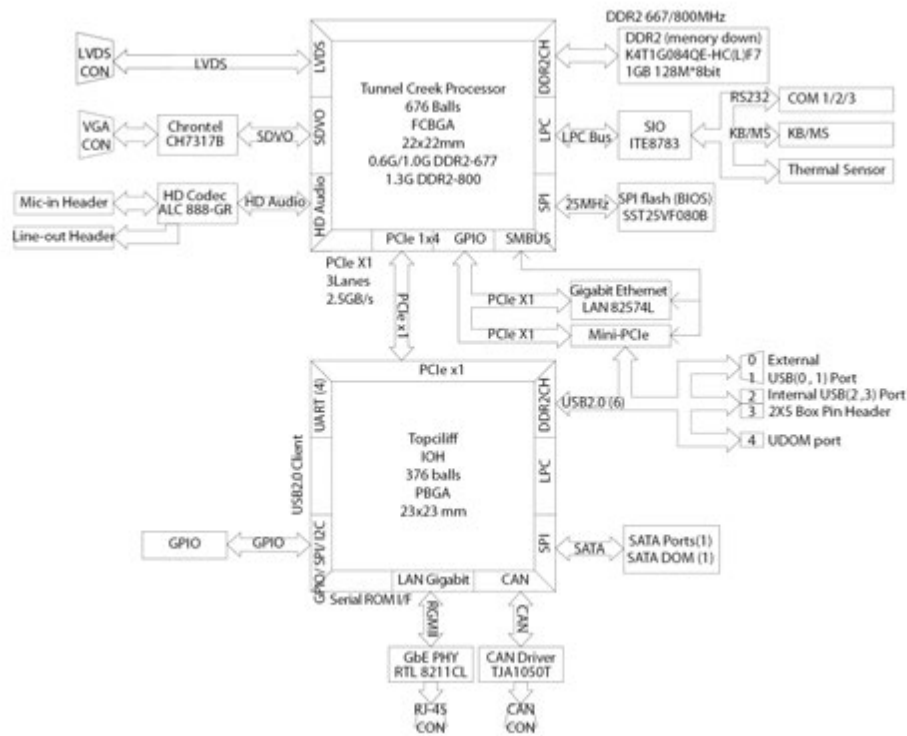- LVDS interface: support single 18/ 24-bit LVDS channel, resolution up to 1280 x 768

Audio
- Realtek ALC886 CODEC for High Definition
- 1x Mic-in and 1x Line-out pin header

Expansion
- 1x Mini-PCIe socket

338 Extended Temperature Solutions NEXCOM

Dimension Drawing

I/O Interface
- Serial port: 3 ports
- 1x RS232 DB9 Connector (COM1)
- 1x RS232 with 10-pin box header, 2.0mm pitch (COM3)
- 1x RS232/422/485 (COM2) with 10-pin box header, 2.0mm pitch
- USB 2.0: 5 ports
  2 ports with USB 2.0 connector
  2 ports with 2x 5-pin header, 2.0mm pitch
  1 port supports USB DOM
- CAN:
  Integrated CAN 2.0 Controller supporting IEEE1588 over CAN
  External CAN Bus Driver – TJA1050
  2x 2-pin header, 2.54mm pitch
- 8 x GPIO, 10-pin pin header, (GPI 0~3 and GPO0~3) with TTL Level (0/5 V)
- Onboard Power LED and HDD Active LED Pin Header
- 1x 4-pin fan connector (for CPU)
- 6-pin JST connector for PS2 keyboard/ mouse
- Onboard buzzer/ SMBus2.0/ reset/ On & Off switch button

Watchdog Timer
- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage
- 2x SATA connector (support 1x SATA DOM)

System Monitor
- Monitoring of 5 voltages and 2 temperature
- 5 voltages (12, 5, 3.3, VNN, Vcore)
- 2 temperature (CPU, system)

On-board RTC
- On-chip RTC with battery backup
- 1x External Li-Ion battery

Power Input
- Support AT and ATX mode (ATX as the default)

Power Requirements
- Power requirement: +12VDC Input
- One 4-pin power connector

Dimensions
- 3.5"ECX form factor
- 146mm (L) x 105mm (W) (5.7"x4.1")

Environment
- Operating temperatures: -40°C to 85°C
- Storage temperature: -40°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **EBC 310X (P/N: 10E00310X00X0) RoHS Compliant**
  Ultra Low power embedded board with Intel® Atom™ E640T processor, on-board DDR2 1GB memory, VGA/ LVDS, 1x CAN, 2x GbE, 1x Mini-PCIe, 3x COM, 6x USB 2.0, 12VDC input

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