

User Manual

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UPOS-211

Intel® Celeron®J1900/Core™ i5 6300U/Core™ i3 6100U/Celeron® 3955U Processor-based Ubiquitous POS with 15" TFT LCD



Copyright

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If you suspect your product is defective, follow the steps outlined below.

- 1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages that are displayed when the problem occurs.
- 2. Call your dealer and describe the problem. Please have your manual, product, and any relevant information to hand.
- If your product is diagnosed as defective, obtain a return merchandize authorization (RMA) number from your dealer. This allows us to process your return more quickly.
- 4. Carefully pack the defective product, a completed Repair and Replacement Order Card, and a proof of purchase date (such as a photocopy of your sales receipt) into a shippable container. Products returned without a proof of purchase date are not eligible for warranty service.
- 5. Write the RMA number clearly on the outside and ship the package prepaid to your dealer.

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Warnings, Cautions, and Notes



Warning! Warnings indicate conditions that if not observed, can cause personal injury!



Caution! Cautions are included to help prevent hardware damage or data losses. For example.



"New batteries are at risk of exploding if incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions."

```
Note!
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Notes provide additional optional information.

Document Feedback

To assist us in improving this manual, we welcome any comments and constructive criticisms. Please send all feedback in writing to support@advantech.com

Technical Support and Assistance

- 1. Visit the Advantech website at http://support.advantech.com to obtain the latest product information.
- 2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before calling:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - Comprehensive description of the problem
 - The exact wording of any error messages

Packing List

Before setting up the system, check that the items listed below are included in the shipment and in good condition.

- **UPOS-211 Series**
 - Warranty card
 - Adaptor
 - User manual
 - 2 x COM Cable
 - 1 x HDD Bracket

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

Safety Instructions

- 1. Read these safety instructions carefully.
- 2. Retain this user manual for future reference.
- 3. Disconnect this equipment from all AC outlets before cleaning. Use only a damp cloth to clean. Do not use liquid or spray detergents.
- 4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
- 5. Protect this equipment from humidity.
- 6. Place this equipment on a reliable surface during installation. Dropping or letting the device fall may cause damage.
- 7. The openings on the enclosure are for air convection. Protect the equipment from overheating. Do not cover the openings.
- 8. Ensure the voltage is correct before connecting the equipment to a power outlet.
- 9. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
- 10. All cautions and warnings on the equipment should be noted.
- 11. If unused for a long time, disconnect the equipment from the power source to avoid damage from transient overvoltage.
- 12. Never pour liquid into an opening. This may cause fire or electrical shock.
- 13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- 14. If one of the following situations occurs, have the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated the equipment.
 - The equipment has been exposed to moisture.
 - The equipment is malfunctioning, or does not operate according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
- 15. Do not store this equipment in an environment where the temperature fluctuates below -20 °C (-4 °F) or above 60 °C (140 °F) as this may cause damage. The equipment should be stored in a controlled environment.
- 16. Batteries are at risk of exploding if incorrectly installed. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

The sound pressure level at the operator position does not exceed 70 dB (A) in accordance with IEC 704-1:1982.

DISCLAIMER: These instructions are provided according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Safety Precaution - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from your PC chassis before you work on it. Don't touch any components on the CPU card or other cards while the PC is on.
- Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

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General Information

This chapter provides basic information regarding UPOS-211.
Introduction
Specifications
Dimensions

1.1 Introduction

UPOS-211 is an all-in-one point-of-sale (POS) system that features a small footprint and dual-hinge design, making it ideal for countertops and limited-space installations. Powered by Intel® Celeron®J1900/Core™ i5 6300U/Core™ i3 6100U/Celeron® 3955U processors, UPOS-211 ensures high-performance computing and reliable data processing, while supporting flexible customization for diverse applications. The IP65-rated front panel is water and dust resistance. UPOS-211 is a competitive cost, and energy effective platform built for retail and hospitality.

1.2 Specifications

1.2.1 General Specifications

- Dimensions (W x H x D): 354x327x237 mm, stand: 237 x 200 mm
- Weight: 5.2 kg (Net Weight) / 6.9 kg (Gross Weight)
- Power supply:
 - 60W (100-240Vac,50-60Hz,1.5A) power adapter
- Storage: 1 x 2.5" SATA HDD/SSD connector
- CPU: Intel® Celeron®J1900/Core™ i5 6300U/Core™ i3 6100U/Celeron® 3955U processors.
- RAM: Support 1 x 204-pin DDR3L 1333 Mhz SO-DIMM, up to 8 GB/ 1 x 260-pin DDR4 2333 Mhz SO-DIMM, up to 16GB
- Serial ports:
 - External: 2 x COM RS232 ports via RJ-48 connector,
 - Internal: 4 x COM port, COM3 for touch, COM6 no power, COM4, 5 support 5V & 12V by order via box header
- USB:
 - UPOS-211F: 2xUSB3.0,3xUSB2.0
 - UPOS-211D: 1xUSB3.0,4xUSB2.0
- Front panel: IP65 sealed front panel with true flat touch screen
- **Cash drawer:** 1 x RJ11
- Ethernet: 1 x RJ-45 Gigabit LAN
- Display port: 1 x VGA, 1 x DP
- Expansion slot: 1 x Mini PCIe (for Wifi or 3G), shared with mini SATA connector
- Audio: 1 x Speaker
- **LPT port:** 1 LPT port (optional)

1.2.2 Environmental Specifications

- Operating Temperature: 0 ~ 40 °C (32 ~ 104 °F)
- **Relative humidity:** 10 ~ 90% @ 40 °C (non-condensing)
- Shock: 10 G peak acceleration (11 ms duration)
- Vibration: 5 ~ 500 Hz 0.5 Grms, random
- Certification: CCC, CE, UL, FCC, CB, BSMI

1.2.3 Touch Screen

- **Type:** True Flat, 5-Wire Resistive Touch / Projected CAP Touch
- Light Transmission: 80% +/-5% / 80%+/-3%

1.2.4 LCD Specifications.

- Display Type: 15" TFT LCD
- Max.Resolution: 1024 x 768
- Colors: 262 K
- Pixel Pitch (um): 297 (H) x 297 (W)
- View Angle: 80° (H) / 70° (V)
- Luminance: 250 cd/m2



The color LCD display installed in the UPOS-211 is high-quality and reliable. However, it may contain a few defective pixels which do not always illuminate. With current technology, it is impossible to completely eliminate defective pixels. Advantech is actively working to improve the technology.

1.3 Dimensions



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System Setup

This chapter details the system setup process for UPOS-211.

- Quick Tour of the Device
- Installation Procedures
- Installing System Software
- Installing the HDD
- Peripheral Cable Connection & Arrangement
- How to select Windows 7
- Jumpers and Connectors
- PenMount 6000 Multiple-Monitors set sop
- Capacitive touch extend display set sop
- Peripheral and base

2.1 Quick Tour of the Device

Before setting up the device, take a moment to familiarize yourself with the functions of the controls, drivers, connectors, and ports located on the front panel, as illustrated in the figures below.



Figure 2.1 Front view of UPOS-211

Turn the computer to view the I/O, as shown in Figure 2.2 and 2.3. The I/O interfaces include serial ports, USB slots, VGA port, Ethernet port, RJ-11, DP, and power inlet.



Figure 2.2 Rear view of UPOS-211



Figure 2.3 IO Connectors of UPOS-211

2.2 Installation Procedures

2.2.1 Connecting the Power Cord

This product only supports DC power (12 VDC, max. 60 W). Be sure to hold the plug end when plugging or unplugging the power cord.

2.2.2 Connecting the Mouse and Keyboard

Connect the mouse and keyboard via the USB ports located in the I/O section at the rear of the computer.

2.2.3 Activating the Power Source

Verify that the power cord is connected to the power input port of the device. Then connect the plug end of the power cord to the wall power outlet.

2.3 Installing System Software

Recent OS releases include setup programs that load automatically and guide users through the entire installation process. The steps necessary to install an operating system on the computer hard drive are explained below.



Some distributors and system integrators may have pre-installed system software before shipping the computer.

If necessary, insert the OS CD into the diskette until the release button pops up.

The system BIOS supports bootup directly from the USB-CDROM drive. Users can insert the OS CD directly into the USB-CDROM drive.

Power on the computer, or reset the system by pressing "Ctrl" + "Alt" + "Del" simultaneously.

Select Chipset->OS Selection to install the correct->Operation System Select to install the correct OS.

Aptio Setup Utility – (Chipset	Copyright (C) 2017 American	Megatrends, Inc.
OS Selection	[Windows 8.X]	OS Selection
XHCI Mode	[Enabled]	
Restore AC Power Loss Mini PCIE Socket Internal Speaker	[Power Off] [mSATA] [Enabled]	
	OS Selection Windows 8.X Windows 7	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Co	pyright (C) 2017 American M	egatrends, Inc.

After clicking "Save & Exit", the computer will automatically load the operating system from the diskette or USB-CDROM drive.

When presented with the opening screen of a setup/installation program, simply follow the onscreen instructions. The setup program guides users through configuring and installing the hard drive and operating system.

Note!

The drivers and utilities of UPOS-211 are subject to change without notice. If in doubt, check Advantech's website or contact our application engineers for the latest information regarding drivers and utilities.

2.4 Installing the HDD

1. Take the HDD bracket and screws out of the unit.



2. Assemble the HDD and fasten the screws.







3. Take out the POS system and push the screen upward.



4. Remove the plastic cover.



5. Remove the plates.



6. Install the HDD and fasten the screws.



7. Replace the plates and fasten the screws.



8. Replace the plastic cover.



9. Push the screen back to the original position.



2.5 Peripheral Cable Connection & Arrangement

1. Take out the POS system and push the screen upward.



Chapter 2 System Setup

2. Remove the plastic covers.



Note!

Please remove the cover in the direction indicated by the red arrow in the above and use your finger to pull the semicircle opening.

3. First, make the I/O cables traverse the base as shown below, then connect the cables to the I/O board of the screen.



4. Replace the plastic covers.





5. Push the screen back to the original position and straighten the cables.



2.6 How to select Windows 7

UPOS-211 supports Win 7 Pro, Win 8.1 Industry Pro & Win10 IoT. The default OS in BIOS is Win 8.1 & Win10. So, if a user wants to install Windows 7, just go to the BIOS Setup screen and select Windows 7, same with the other OS.

- 1. Connect a Keyboard to the USB port on UPOS-211 backside cover.
- 2. Power on UPOS-211, when you see the windows logo, press DEL to enter the BIOS setup window. Please click Chipset "South Bridge" OS Selection, then select Windows 7.

Aptio Setup Ut. Chipset	ility – Copyright (C) 2016 Ame	erican Megatrends, Inc.
OS Selection	[Windows 7]	OS Selection
XHCI Mode	[Smart Auto]	
Restore AC Power Loss Mini PCIE Socket Internal Speaker	(Power Off) [mSATA] [Enabled]	
	OS Selection Windows 8.X Windows 7	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.:	1246. Copyright (C) 2016 Ameri	ican Megatrends, Inc.

3. Press "F4" on the Keyboard to save the configuration. Then click YES. The device will be restarted and users can install Windows 7.

Aptio Setup Util Chipset	ity – Copyright (C) 2016 Americ	an Megatrends, Inc.
OS Selection	[Windows 7]	OS Selection
XHCI Mode	[Smart Auto]	
Restore AC Power Loss Mini PCIE Socket Internal Speaker	[Power Off] [mSATA] [Enabled]	
	Save & Exit Setup	+: Select Screen
	Yes No	4: Select Item nter: Select /-: Change Ont.
		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Wansion 2 17 12	46 Copupight (C) 2016 American	Negatranda Tra

2.7 Jumpers and Connectors

Connectors on the PCM-8518 motherboard link it to devices such as hard disk drives and a keyboard. In addition, the board has a number of jumpers used to configure your system for your application.

The tables below list the functions of each of the board jumpers and connectors.

Table 2.1: Jumpers						
Label	Function					
JP1	Clear CMOS	-				
JCOM1	RI/+5V/+12V select					
JCOM2	RI/+5V/+12V select					
JCOM4	RI/+5V/+12V select					
JCOM5	RI/+5V/+12V select					
CN34	LCD +3V/+5V select					

Later sections in this chapter give instructions on setting jumpers and gives instructions for connecting external devices to your motherboard.

JP1

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS CN34 PIN1 5v PIN2 LCD POWER PIN3 3.3V

COM RI/+5V/+12V Select (COM_RI)

This jumper allows you to select the power mode of COM PORT, default RI.



JP_CASHV1 PIN1 12V PIN2 cash drawer power Pin3 24V Note: PCB silkscreen " ▽ "mark pin1.

Table 2.2: Connect	ors
Label	Function
PCN1	Power in connector
CN1	Audio line out & Mic in
CN2	Power button & Power LED
CN8	Internal VGA connector
CN12	BIOS socket
CN34	LCD power choose
CN38	VGA connector
CN39 CN40 CN41 CN42	Internal USB connector
CN43	Real USB3.0+USB2.0
CN44	SATA power connector
CN45	LAN connector
CN46	Speaker connector
CN49	SATA data connector
CN50	Mini PCIE or Msata
CN52	LCD backlight
CN53	LVDS connector
CN55	DISPLAYPORT
CN58	12V power for 2nd display
CN59	12V power for power USB
CN60	R Touch connector
KBMS1	KBMS connector
LPT1	LPT connector
RJ11	Cash drawer connector
COM1,COM2	Real COM
COM4,COM5,COM6	Internal COM connector
DIMM1	Memory socket

Chapter 2 System Setup

2.8 PenMount 6000 Multiple-Monitors set sop

Before using multiple monitors you must have two or more monitors that are in extension mode.



Before you can use multiple monitors you need to map each monitor.



Enabling Multiple Monitors

Enable the multiple display function as follows:

1. In the PenMount Control Panel, under Multiple Monitors tag, check the "Multiple Monitor Support" box. Then click "Map Touchscreens" to assign touch controllers to displays.



2. When the mapping screen message appears, click "OK".



3. Touch each screen as it displays "Please touch this monitor. Press 'S' to skip".Follow this sequence and touch each screen to map the touchscreens.

Please touch this monitor. Press 'S' to skip.

- 4. After the setting procedure is finished, maybe you need to calibrate for each panel and controller
 - Note!
 1. The Rotating function is disabled if you use the Multiple Monitors function.

 2
 If you change the resolution of display or screen address, you have
 - 2. If you change the resolution of display or screen address, you have to redo **Map Touchscreens** so the system understands where the displays are.
 - 3. If you have multiple monitors but only one touchscreen, press 'S' to skip the mapping step.

Chapter 2 System Setup

2.9 Capacitive touch extends display setup

If you use Dual display, refer to the instructions below.

1. Open Control Panel, choose Tablet PC as below.

Control Panel + All Contro	ol Panel Ite	ems 🕨			▼ 49 Se	arch Control Panel	م
Adjust your computer's settings						View by: Large icons 🔻	
- Color Management		Credential Manager	-	Date and Time	۲	Default Programs	^
Desktop Gadgets	.	Device Manager	-	Devices and Printers	2	Display	
Ease of Access Center	K	Folder Options	A	Fonts		Getting Started	
🝓 HomeGroup		Indexing Options		Intel® HD Graphics	P.	Internet Options	
📚 Keyboard		Location and Other Sensors	Ĩ	Mouse	5	Network and Sharin Center	g
Notification Area Icons		Parental Controls	1	Pen and Touch		Performance Inform and Tools	ation
Yersonalization	(2)	Phone and Modem	٦	Power Options	ā	Programs and Featu	res ≡
Realtek HD Audio Manager	N.	Recovery	٩	Region and Language		RemoteApp and Des Connections	ktop
Sound	Ŷ	Speech Recognition	\bigcirc	Sync Center	N	System	
Tablet PC Settings		Taskbar and Start Menu		Troubleshooting	<u>.</u>	User Accounts	
Windows Anytime Upgrade	3	Windows CardSpace	盟	Windows Defender	1	Windows Firewall	
Windows Mobility Center	æ	Windows Update					-
						EN 🔺 🍡 📜 🕪 👖	:42 AM 7/2017

2. Double click "Tablet PC setup", choose Touch screen, then click setup.

Tablet PC Settings	 ✓ ✓
Display Other	Vit
Configure your pen and touch Setup e Tool:	s 🔣 AutoPlay 👋 B
Display options Display: 1. ch7511b	Date and Time
Details: 2. LCD MONITOR	Devices and Printers 🛛 🖉 D
🚱 Calibrate 😵 Reset	🗼 Fonts 📲 G
Choose the order in which your screen rotates. Go to Orientation	Intel® HD Graphics
Other	🏈 Mouse
OK Cancel Apply rols	Pen and Touch
Personalization 🧼 Phone and Modem	Power Options 👔 P
🖻 Realtek HD Audio Manager 🛛 🎉 Recovery	Region and Language 🥵 C
Sound Sound Sound	Sync Center 📃 S

3. UPOS-211D main screen will show the below picture. Please touch the main touch screen, then press "Enter" on the keyboard. On the second display (see same picture), if the second display has a touch function, touch it; if the second display no touch function, then just press "Enter".

Touch this screen to identify it as the touchscreen.

If this is not the Tablet PC screen, press Enter to move to the next screen. To close the tool, press Esc.

4. Then click "ok" to finish.

Tablet PC Settings			✓ ⁴ → Searce
A Display Other Configure			Vi
Configure your pen and touch displays.	🚱 Setup e Tools	AutoPlay	в 🐝
Display options Display: 1. ch7511b	Inager	Date and Time	ت 🌍
Details: Touch Input Available	ger	Devices and Printers	k
Choose the order in which your screen	Reset	Fonts	
Go to Orientation	ons	Intel® HD Graphics	🐏 I
-	Other	J Mouse	
ОК	Cancel Apply rols	Pen and Touch	P a
Personalization	Phone and Modem	Power Options	F
Realtek HD Audio Manager	Recovery	Region and Language	F 🛃
Sound	Speech Recognition	Sync Center	s 🔊

2.10 Peripheral and base

2.10.1 MSR

1. Remove the plastic cover.



2. Install the MSR.



3. Replace the plastic cover and fasten the screws.



2.10.2 VESA mount

1. Assemble the VESA mount and fasten the screws.



2.10.3 10-inch screen

1. Assemble the 10-inch screen.



2. Fasten the screws.



3. Adjust the angle of the 10-inch screen.



2.10.4 2nd display

1. Connect the cables to the I/O board.




2. Fasten the screws.



3. Assemble the plastic cover and fasten the screws.



2.10.5 VDF

1. Remove the plastic cover.



2. Connect the cables to the I/O board.



3. Fasten the screws.



4. Adjust the angle of the VDF.



2.10.6 Barcode scanner

1. Fasten the screws.



2. Connect the cables to the I/O board and fasten the screws.



3. Replace the plastic cover.



4. Push the screen back to the original position.



2.10.7 Wall mount

1. Assemble the wall mount and fasten the screws.



2. Clasp the UPOS-211 to the wall.





BIOS Setup (UPOS-211D) In most cases, the computer will have been setup and configured by the dealer or SI prior to delivery. However, some of the computer's BIOS (Basic Input-Output System) setup programs may need adjustment to set the system configuration data, such as the current date and time, or type of hard drive installed. The setup program is stored in read-only memory (ROM) and can be accessed when activating or resetting the computer, or by pressing "Delete" immediately after powering up the computer.

3.1 Introduction

With the AMI BIOS Setup program, you can modify BIOS settings to control the special features of your computer. The Setup program uses a number of menus for making changes. This chapter describes the basic navigation of the UPOS-211 setup screens.

3.2 BIOS Setup

UPOS-211D has AMI BIOS built in, with a SETUP utility that allows users to configure required settings or to activate certain system features. The SETUP saves the configuration in the FLASH of the motherboard. When the Power is turned off, the battery on the board supplies the necessary power to preserve the FLASH. When the power is turned on, press the or <Esc> button during the BIOS POST (Power-On Self Test) to access the CMOS SETUP screen.

Control Keys	
$\leftarrow >< \to >$	Select Screen
< ↑ >< ↓ >	Select Item
<enter></enter>	Select
<+/->	Change Opt
<f1></f1>	General help
<f2></f2>	Previous Values
<f3></f3>	Optimized Defaults
<f4></f4>	Save & Exit
<esc></esc>	Exit

3.2.1 Main Menu

Press or <Esc> to enter AMI BIOS CMOS Setup Utility, the Main Menu will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

Aptio Setup Util: Main Advanced Chipset Secur	<mark>ity – Copyright (C) 2017 Ameri</mark> o rity Boot Save & Exit	can Megatrends, Inc.
BIOS Information BIOS Vendor Core Version Compliancy Project Version Build Date and Time BayTrail SoC TXE FW Version System Date System Time	American Megatrends 5.0.1.0 0.19 x64 UEFI 2.4; PI 1.3 PCM 8518X007 02/06/2017 16:55:45 C0 Stepping 01.00.02.1060 [Wed 07/05/2017] [18:50:20]	Set the Date. Use Tab to switch between Date elements.
Access Level	Administrator	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend.

Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

System time / System date

Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.

3.2.2 Advanced BIOS Features

Select the Advanced tab from the setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as CPU Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.



3.2.2.1 ACPI Settings



- Enable ACPI Auto Configuration [Disabled]
 Enable or disable BIOS ACPI auto configuration.
 Enable Hibernation [Enabled]
- Enable Hibernation [Enabled] Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
- ACPI Sleep State [S3(Suspend to RAM)] Select ACPI sleep state the system will enter when the SUSPEND button is pressed.
- Lock Legacy Resources [Disabled] Enables or Disables Lock of Legacy Resources.

3.2.2.2 NCT6106D Super IO Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
NCT6106D Super IO Configuration		Set Parameters of Serial Port
Super IO Chip > Serial Port 1 Configuration > Serial Port 2 Configuration > Serial Port 3 Configuration > Serial Port 4 Configuration > Serial Port 5 Configuration > Serial Port 6 Configuration > Parallel Port Configuration	NCT6106D	1 (Conn)
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Co	pyright (C) 2017 American M	egatrends, Inc.

Super IO Chip [NCT6106D]

Serial Port 1 Configuration



- Serial Port [Enabled]
- Device Settings: IO=3F8h; IRQ =4

Chapter 3 BIOS Setup (UPOS-211D)

Serial Port 2 Configuration

Aptio Advanced	Setup Utility – Copyright	(C) 2017 American	Megatrends, Inc.
Serial Port 2 Config	guration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2F8h;	IRQ=3;	
			<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Vens.	ion 2.17.1246. Copyright (C	:) 2017 American Me	egatrends, Inc.

- Serial Port [Enabled]
- Device Settings: IO=2F8h; IRQ =3

Serial Port 3 Configuration

	Aptio Setup Utility – (Advanced	Copyright	(C) 2017 American	Megatrends, Inc.
Serial	Port 3 Configuration			Enable or Disable Serial Port
Serial Device	Part Settings	(Enabled) IO=3E8h;	IRQ=5;	
				<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	Version 2.17.1246. Co	oyright (C) 2017 American Me	egatrends, Inc.

- Serial Port [Enabled]
- Device Settings: IO=3E8h; IRQ =5

Serial Port 4 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2E8h; IRQ =7

Serial Port 5 Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
Serial Port 5 Configuration Serial Port Device Settings	[Enabled] IO=2FOh; IRQ=7;	Enable or Disable Serial Port (COM)
		++: Select Screen fl: Select Item Enter: Select
		+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
Version 2.17.1246. C	opyright (C) 2017 American M	legatrends, Inc.

- Serial Port [Enabled]
- Device Settings: IO=2F0h; IRQ =7

Serial Port 6 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2E0h; IRQ =10

Parallel Port Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2017 American	Megatrends, Inc.
Parallel Port Configuration		Enable or Disable Parallel Port (LET/LETE)
Parallel Port Device Settings	[Enabled] IO=378h; IRQ=6;	
Change Settings Device Mode	[Auto] [STD Printer Mode]	
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Co	opyright (C) 2017 American M	egatrends, Inc.

- Parallel Port [Enabled]
 To enable or disable Parallel Port
- Device Settings: IO=278h; IRQ =6
- Change Settings [Auto]
 To select an optimal setting for parallel port.
- Device Mode [STD Printer Mode]

3.2.2.3 Hardware Monitor

Aptio Setup Utility – Advanced	Copyright (C)	2017 American	Megatrends, Inc.
Pc Health Status			
CPU Temperature +12V +5V +3.3V	: +55 [°] C : +12.288 V : +4.985 V : +3.264 V		
			ti: Select Scheen ti: Select Item Enter: Select
			F1: General Help F2: Previous Values F3: Optimized Defaults
			F4: Save & Exit ESC: Exit
		047. onen in en W	

3.2.2.4 S5 RTC Wake Settings

Aptio Setup Advanced	Utility – Copyright (C) 2017 Americar	Megatrends, Inc.
Wake system from S5	[Disabled]	Enable or disable System wake on alarm event. Select FixedTime, system will wake on the hr::min::sec specified. Select DynamicTime , System will wake on the current time + Increase minute(s) ++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.	17.1246. Copyright (C) 2017 American ⊧	legatrends, Inc.

3.2.2.5 CPU Configuration



Intel Virtualization Technology [Enabled]

Enabled or Disable Intel Virtualization Technology.

3.2.2.6 PPM Configuration



3.2.2.7 IDE Configuration



- SATA Speed Support [Gen2] SATA Speed Support Gen1/Gen2.
- Serial-ATA Port 0 [Enable]
 Enable or disable SATA Function.
- Serial-ATA Port 1 [Enable]
 Enable or disable SATA Function.

3.2.2.8 CSM Configuration



Aptio Setup Ut Advanced	tility – Copyright (C) 2017 America	n Megatrends, Inc.
Compatibility Support Module Option ROM Messages	e Configuration [Force BIOS]	This option controls Legacy/UEFI ROMs priority
Boot option filter Option ROM execution	[UEFI and Legacy]	
Network Video Other PCI devices	[Do not launch] [Legacy] Boot option filter UEFI and Legacy Legacy only UEFI only	<pre>++: Select Screen 1J: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17	.1246. Copyright (C) 2017 American	Megatrends, Inc.

3.2.2.9 USB Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Devices: 1 Drive, 1 Keyboard, 1 Mouse, 1	2 Hubs	support if no USB devices are connected. DISABLE option will keep USB devices available
Legacy USB Support	[Enabled]	only for EFI applications.
XHCI Hand-off	[Enabled]	2 11
EHCI Hand-off	[Disabled]	
USB Mass Storage Driver Support	[Enabled]	
USB hardware delays and time-outs:		
USB transfer time-out	[20 sec]	
Device reset time-out	[20 sec]	
Device power-up delay	[Auto]	↔+: Select Screen
		↑↓: Select Item
Mass Storage Devices:		Enter: Select
USB Flash DISK 1100	[Auto]	+/−: Change Opt.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit
	unisht (0) 0017 Anariaan M	a da tra angle
version 2.17.1246. Co	pyright (C) 2017 American M	egatrends, Inc.

Legacy USB Support [Enabled]

Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected.

- XHCI Hand-off [Enabled]
- EHCI Hand-off [Enabled] This is just a workaround item under OS without EHCI hand-off support.
- USB Mass Storage Driver Support [Enabled]
- USB hardware delays and time-outs
 USB Device transfer & reset time-out and delay setting.
- Mass Storage Devices [Auto] Shows USB mass storage device information.

3.2.2.10 Security Configuration



3.2.3 Configuration Setting

Select the chipset tab from the BIOS setup screen to enter the Chipset Setup screen. Users can select any item in the left frame of the screen, such as North Bridge Configuration to go to the sub menu for that item. The Chipset Setup screens are shown below. The submenus are described on the following pages.

Aptio Setup Utility – Copyright (C) 2017 American M Main Advanced <mark>Chipset</mark> Security Boot Save & Exit	Megatrends, Inc.
▶ North Bridge ▶ South Bridge	North Bridge Parameters
	<pre>H: Select Screen I: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Copyright (C) 2017 American Meg	gatrends, Inc.

3.2.3.1 North Bridge Configuration Setting



Choose Intel IGD Configuration



Primary IGFX Boot Display [Auto] Boot display Auto/CRT/DP/LVDS.

3.2.3.2 South Bridge Configuration Setting

Aptio Setup Utility - Chipset	Copyright (C) 2017 American	Megatrends, Inc.
OS Selection	[Windows 8.X]	OS Selection
XHCI Mode	[Enabled]	
Restore AC Power Loss Mini PCIE Socket Internal Speaker	[Power Off] [mSATA] [Enabled]	
		<pre>++: Select Screen 1↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Co	opyright (C) 2017 American M	egatrends, Inc.

- OS Selection [Windows 8.x] OS selection Windows 8.x/Windows 7.
- XHCI Mode [Enabled] Enable or Disable XHCI mode.
- Restore AC Power Loss [Power off]
- AC power loss power off/Power on/Last State.
- Mini PCIE Socket [mSATA]
- The Socket Function choose mSATA/PCIE.

Internal Speaker [Enabled]

Enable or disable speaker function.







3.2.4 Security Configuration Setting



Administrator Password

Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the Administrator password.

User Password

Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the User Password.

3.2.5 Boot Configuration

Aptio Setup Utility – Copyright (C) 2017 American Megatrends, Inc. Main Advanced Chipset Security <mark>Boot</mark> Save & Exit		
Boot Configuration Setup Prompt Timeout Bootup NumLock State	1 [0n]	Set the order of the legacy devices in this group
Boot Option Priorities Boot Option #1 Boot Option #2 Boot Option #3 Hard Drive BBS Priorities	[UEFI: Built-in EFI] [USB Flash DISK 1100] [UEFI: USB Flash DIS]	
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Co	pyright (C) 2017 American M	egatrends, Inc.

Setup Prompt Timeout

User the <+> and <-> keys to adjust the number of seconds to wait for setup activation key.

- Bootup NumLock State [On] On or Off power on state for the NumLock.
- Boot Option #1/#2/#3
 Choose boot priority from boot device.

3.2.6 Save & Exit Configuration Setting



Save Changes and Reset

When users have completed system configuration, select this option to save changes, exit BIOS setup menu and reboot the computer to take effect all system configuration parameters.

- Select Exit Saving Changes from the Exit menu and press <Enter>. The following message appears: Save Configuration Changes and Exit Now? [Ok] [Cancel]
- 2. Select Ok or cancel.

Discard Changes and Reset

Select this option to quit Setup without making any permanent changes to the system configuration1. Select Reset Discarding Changes from the Exit menu and press <Enter>.

- 1. The following message appears: Discard Changes and Exit Setup Now? [Ok] [Cancel]
- 2. Select Ok to discard changes and reset. Discard Changes.

Select Discard Changes from the Exit menu and press <Enter>.

Restore Default

The BIOS automatically configures all setup items to optimal settings when users select this option. Defaults are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the defaults if the user's computer is experiencing system configuration problems. Select Restore Defaults from the Exit menu and press <Enter>.

Boot Override

Shows the boot device types on the system.



BIOS Setup (UPOS-211F)

4.1 Introduction

With the AMI BIOS Setup program, you can modify BIOS settings to control the special features of your computer. The Setup program uses a number of menus for making changes. This chapter describes the basic navigation of the UPOS-211 setup screens.

4.2 BIOS Setup

The UPOS-211F Series system has AMI BIOS built in, with a SETUP utility that allows Users to configure required settings or to activate certain system features.

The SETUP saves the configuration in the FLASH of the motherboard. When the Power is turned off, the battery on the board supplies the necessary power to preserve the FLASH. When the power is turned on, press the or <Esc> button during the BIOS POST (Power-On Self Test) to access the CMOS SETUP screen.

Control Keys	
$\leftarrow > < \to >$	Select Screen
< ↑ >< ↓ >	Select Item
<enter></enter>	Select
<+/->	Change Opt
<f1></f1>	General help
<f2></f2>	Previous Values
<f3></f3>	Optimized Defaults
<f4></f4>	Save & Exit
<esc></esc>	Exit

4.2.1 Main Menu

Press or <Esc> to enter AMI BIOS CMOS Setup Utility, the Main Menu will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

Aptio Setup Utility – Main Advanced Chipset Security	Copyright (C) 2017 American Boot Save & Exit	Megatrends, Inc.
BIOS Information BIOS Vendor Core Version Compliancy Project Version Build Date and Time Access Level Total Memory Memory Frequency	American Megatrends 5.0.1.1 0.30 x64 UEFI 2.4.0; PI 1.3 PCM 8519000U060T006 02/22/2017 09:21:43 Administrator 4096 MB 2133 MHz	Set the Date. Use Tab to switch between Date elements.
PCH Information Stepping ME FW Version ME Firmware SKU System Date System Time	21/C1 11.0.22.1000 Corporate SKU [Fri 07/07/2017] [15:50:29]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend.

Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

System time / System date

Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.

4.2.2 Advanced BIOS Features

Select the Advanced tab from the setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as CPU Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.

Aptio Setup Utility – Copyright (C) 2017 American Main <mark>Advanced C</mark> hipset Security Boot Save & Exit	Megatrends, Inc.
 ACPI Settings AMT Configuration PCH-FW Configuration NCT6106D Super IO Configuration Hardware Monitor SS RTC Wake Settings CPU Configuration SATA Configuration CSM Configuration USB Configuration 	System ACPI Parameters.
	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C) 2017 American Me	egatrends, Inc.

4.2.2.1 ACPI Settings



Enable ACPI Auto Configuration [Disabled] Enable or disable BIOS ACPI auto configuration. Enable Hibernation [Enabled] Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS. ACPI Sleep State [S3(Suspend to RAM)]

Select ACPI sleep state the system will enter when the SUSPEND button is pressed.
4.2.2.2 AMT Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
Intel AMT BIOS Hotkey Pressed MEBx Selection Screen Hide Un-Configure ME Confirmation Prompt MEBx Debug Message Output Un-Configure ME Amt Wait Timer ASF Activate Remote Assistance Process USB Provisioning of AMT PET Progress AMT CIRA Timeout WatchDog OS Timer BIOS Timer	<pre>[Enabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] 0 [Enabled] [Enabled] [Enabled] 0 0 [Disabled] 0 0</pre>	Enable/Disable Intel (R) Active Management Technology BIOS Extension. Note : iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Co	opyright (C) 2017 American M	egatrends, Inc.

4.2.2.3 PCH-FW Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
ME FW Version ME Firmware Mode ME Firmware Type ME Firmware SKU PTT Capability / State NFC Support ME Unconfig on RTC Clear State ME State ▶ Firmware Update Configuration	11.0.22.1000 Normal Mode Full Sku Firmware Corporate SKU 0 / 0 Disabled [Enabled] [Enabled]	Disabling this option will cause ME not to unconfigure on RTC clear ++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Cc	pyright (C) 2017 American M	egatrends, Inc.

4.2.2.4 NCT6106D Super IO Configuration

Super IO Chip [NCT6106D]

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	n Megatrends, Inc.
NCT6106D Super IO Configuration		Set Parameters of Serial Port 1 (COMA)
Super IO Chip > Serial Port 1 Configuration > Serial Port 2 Configuration > Serial Port 4 Configuration > Serial Port 5 Configuration > Serial Port 6 Configuration > Parallel Port Configuration	NCT6106D	tt: Salast Senson
		<pre>fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. Co	opyright (C) 2017 American M	Megatrends, Inc.

Serial Port 1 Configuration

Aptio Setup Utility - Advanced	- Copyright (C) 2017 American	n Megatrends, Inc.
Serial Port 1 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2EOh; IRQ=10;	(con)
		<pre> ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. (Copyright (C) 2017 American M	legatrends, Inc.

- Serial Port [Enabled]
- Device Settings: IO=2E0h; IRQ =10

Serial Port 2 Configuration

	Aptio Setup Utility –) Advanced	Copyright	(C) 2017 American	Megatrends, Inc.
Serial	Port 2 Configuration			Enable or Disable Serial Port
Serial Device	Port Settings	[Enabled] IO=2F0h;	IRQ=7;	(000)
				<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	Version 2.17.1255. Co	oyright (C) 2017 American Me	egatrends, Inc.

- Serial Port [Enabled]
- Device Settings: IO=2F0h; IRQ =7

Serial Port 4 Configuration

Serial Port 4 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=3E8h; IRQ=6;	(COM)
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255	. Copyright (C) 2017 Ameri	.can Megatrends, Inc.

- Device Settings: IO=3E8h; IRQ =6

Serial Port 5 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2F8h; IRQ =3

Serial Port 6 Configuration

Aptio Setup Utility - Advanced	- Copyright (C) 2017 America	n Megatrends, Inc.
Serial Port 6 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	(Enabled) IO=3F8h; IRQ=4;	
		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. (Copyright (C) 2017 American	Megatrends, Inc.
 Serial Port [Enabled] 		

- Device Settings: IO=3F8h; IRQ =4

Parallel Port Configuration



- Parallel Port [Enabled]
 To enable or disable Parallel Port
- Device Settings: IO=378h; IRQ =5
- Device Mode [EPP-1.9 and SPP Mode]

4.2.2.5 Hardware Monitor

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Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
Pc Health Status		
PC Health Status CPU Temperature +12V +5V +3.3V	: +50°C : +12.384 V : +4.985 V : +3.296 V	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F0:: F0:: F0::</pre>
Version 2.17.1255. C	opyright (C) 2017 American M	egatrends, Inc.

4.2.2.6 S5 RTC Wake Settings

Aptio Setup Util Advanced	ity – Copyright (C) 2017 Ame	erican Megatrends, Inc.
Wake system from S5	[Disabled]	Enable or disable System wake on alarm event. Select FixedTime, system will wake on the hr::min::sec specified. Select DynamicTime , System will wake on the current time + Increase minute(s)
		<pre> ++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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4.2.2.7 CPU Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
CPU Configuration	i	Enabled for Windows XP and Linux (OS optimized for
Intel(R) Core(TM) i5–6300U CPU @ 2.	40GHz	Hyper-Threading Technology)
Max CPU Speed	2400 MHz	and Disabled for other OS (OS
Min CPU Speed	400 MHz	not optimized for
CPU Speed	2300 MHz	Hyper–Threading Technology).
Processor Cores	2	When Disabled only one thread
Hyper Threading Technology	Supported	per enabled core is enabled.
Intel VT–x Technology	Supported	
Intel SMX Technology	Supported	
64-bit	Supported	
EIST Technology	Supported	
CPU C3 state	Supported	
CPU C6 state	Supported	↔: Select Screen
CPU C7 state	Supported	↑↓: Select Item
CPU C8 state	Supported	Enter: Select
CPU C9 state	Supported	+/−: Change Opt.
CPU C10 state	Supported	F1: General Help
		F2: Previous Values
L1 Data Cache	32 kB x 2	F3: Optimized Defaults
L1 Code Cache	32 kB × 2	F4: Save & Exit
L2 Cache	256 kB x 2	ESC: Exit
L3 Cache	3 MB	
L4 Cache	Not Present	
	•	

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Aptio Setup Utility - Advanced	- Copyright (C) 2017 America	n Megatrends, Inc.
Intel SMX Technology 64-bit EIST Technology CPU C3 state CPU C6 state CPU C6 state CPU C7 state CPU C8 state CPU C9 state CPU C10 state L1 Data Cache L1 Code Cache	Supported Supported Supported Supported Supported Supported Supported Supported Supported Supported S2 kB x 2 32 kB x 2	Enables or Disables Intel(R) TXT(LT) support.
L2 Cache L3 Cache L4 Cache Hyper-threading	3 MB Not Present [Enabled]	++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt.
Active Processor Cores Intel Virtualization Technology Intel(R) Speed Shift Technology Intel(R) SpeedStep(tm) Turbo Mode CPU C states Enhanced C-states	[A11] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Intel TXT(LT) Support	[Disabled]	

4.2.2.8 SATA Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2017 American	Megatrends, Inc.
SATA Mode Selection SATA Test Mode	[AHCI] [Disabled]	Determines how SATA controller(s) operate.
Serial ATA Port 0 Software Preserve Port 0 Serial ATA Port 1 Software Preserve Port 1 mSATA Software Preserve Port 2	Empty Unknown [Enabled] ST500LT012-1DG (500.1GB) SUPPORTED [Enabled] Empty Unknown [Enabled]	
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. C	opyright (C) 2017 American M	legatrends, Inc.

- SATA Mode Selection [AHCl] SATA Speed Support Gen1/Gen2.
- Serial-ATA Port 0 [Enable]
 Enable or disable SATA Function.
- Serial-ATA Port 1 [Enable]
 Enable or disable SATA Function.
- mSATA Port2 [Enable]
 Enable or disable mSATA Function.

Aptio Advanced	Setup Utility – Copyright (C) 2017 American	Megatrends, Inc.
Advanced SATA Mode Selection SATA Test Mode Serial ATA Port 0 Software Preserve Port 0 Serial ATA Port 1 Software Preserve Port 1 mSATA Software Preserve Port 2	[AHCI] [Disabled] Empty Unknown [Enabled] ST500LT012-1DG (500.1GB) SUPPORTED [Enabled] Empty SATA Mode Selection AHCI RAID	Determines how SATA controller(s) operate. ++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

4.2.2.9 CSM Configuration

Aptio Setup Util Advanced	ity – Copyright (C) 2017 Amer	rican Megatrends, Inc.
Compatibility Support Module Configuration		Enable/Disable CSM Support.
CSM Support	[Enabled]	
CSM16 Module Version	07.79	
GateA20 Active Option ROM Messages INT19 Trap Response	[Upon Request] [Force BIOS] [Immediate]	
Boot option filter	[UEFI and Legacy]	
Option ROM execution		++: Select Screen
Network Storage	[Do not launch] [Legacy]	↑↓: Select Item Enter: Select
Video Other PCI devices	[Legacy]	+/-: Change Opt.
Utilei 161 devices		F2: Previous Values
		F3: Optimized Defaults
		ESC: Exit
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4.2.2.10 USB Configuration



Legacy USB Support [Enabled]

Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected.

- XHCI Hand-off [Enabled]
- USB Mass Storage Driver Support [Enabled]
- Mass Storage Devices [Auto] Shows USB mass storage device information.

4.2.3 Chipset Configuration Setting

Select the chipset tab from the BIOS setup screen to enter the Chipset Setup screen. Users can select any item in the left frame of the screen, such as North Bridge Configuration to go to the sub menu for that item. The Chipset Setup screens are shown below. The submenus are described on the following pages.

Aptio Setup Utility – Copyright (C) 2017 American Main Advanced <mark>Chipset</mark> Security Boot Save & Exit	Megatrends, Inc.
 ▶ System Agent (SA) Configuration ▶ PCH-IO Configuration 	System Agent (SA) Parameters
	<pre> ++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

4.2.3.1 North Bridge Configuration Setting



Graphics Configuration

Aptio Setup Utility - Chipset	- Copyright (C) 2017 America	n Megatrends, Inc.
Graphics Configuration		Select the Video Device which
Primary IGFX Boot Display	[VBIOS Default]	Will be activated during POST. This has no effect if external graphics present.
Aperture Size	[256MB] [32M]	Secondary boot display selection will appear based on
DVMT Total Gfx Mem	[256M]	your selection.
LVDS LVDS Brightness Control	[Enabled] [100%]	only on primary display
		↔: Select Screen
		Enter: Select
		F1: General Help
		F3: Optimized Defaults
		ESC: Exit
Version 2.17.1255. C	Copyright (C) 2017 American H	Megatrends, Inc.

Primary IGFX Boot Display [VBIOS Default] Boot display VBIOS Default /LVDS/CRT/DP++.



Memory Configuration

Aptio Setup Ut. Chipset	ility – Copyright (C) 2017 An	merican Megatrends, Inc.
Memory Configuration		Maximum Value of TOLUD.
Memory Frequency Total Memory DIMM#0 DIMM#2 Max TOLUD	2133 MHz 4096 MB 4096 MB Not Present [Dynamic]	adjust TOLUD automatically based on largest MMIO length of installed graphic controller
		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.:	1255. Copyright (C) 2017 Amer	rican Megatrends, Inc.

4.2.3.2 PCH-IO Configuration Setting



Restore AC Power Loss [Power off]

AC power loss power off/Power on.

Wake on LAN [Enable] Enable or disable Wake on LAN function.



Chapter 4 BIOS Setup (UPOS-211F

4.2.4 Security Configuration Setting

Aptio Setup Utility – Copyright (C) 2017 American Megatrends, Inc. Main Advanced Chipset <mark>Security</mark> Boot Save & Exit		
Password Description		Set Administrator Password
If ONLY the Administrator's pa then this only limits access i only asked for when entering S If ONLY the User's password is is a power on password and mus boot or enter Setup. In Setup have Administrator rights. The password length must be in the following range: Minimum length	assword is set, to Setup and is Setup. s set, then this st be entered to the User will 3	
Administrator Password User Password	20	<pre>++: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. 51: Composition</pre>
HDD Security Configuration: P1:ST500LT012–1		F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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Administrator Password

Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the Administrator password.

User Password

Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the User Password.

4.2.5 Boot Configuration



Setup Prompt Timeout

User the <+> and <-> keys to adjust the number of seconds to wait for setup activation key.

- Bootup NumLock State [On] On or Off power on state for the NumLock.
- Boot Option #1/#2/#3
 Choose boot priority from boot device.

4.2.6 Save & Exit Configuration Setting



Save Changes and Reset

When users have completed system configuration, select this option to save changes, exit BIOS setup menu and reboot the computer to take effect of all system configuration parameters.

- Select Exit Saving Changes from the Exit menu and press <Enter>. The following message appears: Save Configuration Changes and Exit Now? [Ok] [Cancel]
- 2. Select Ok or cancel.

Discard Changes and Reset

Select this option to quit Setup without making any permanent changes to the system configuration1. Select Reset Discarding Changes from the Exit menu and press <Enter>.

- 1. The following message appears: Discard Changes and Exit Setup Now? [Ok] [Cancel]
- 2. Select Ok to discard changes and reset. Discard Changes. Select Discard Changes from the Exit menu and press <Enter>.

Restore Default

The BIOS automatically configures all setup items to optimal settings when users select this option. Defaults are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the Defaults if the user's computer is experiencing system configuration problems. Select Restore Defaults from the Exit menu and press <Enter>.

Boot Override

Shows the boot device types on the system.

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