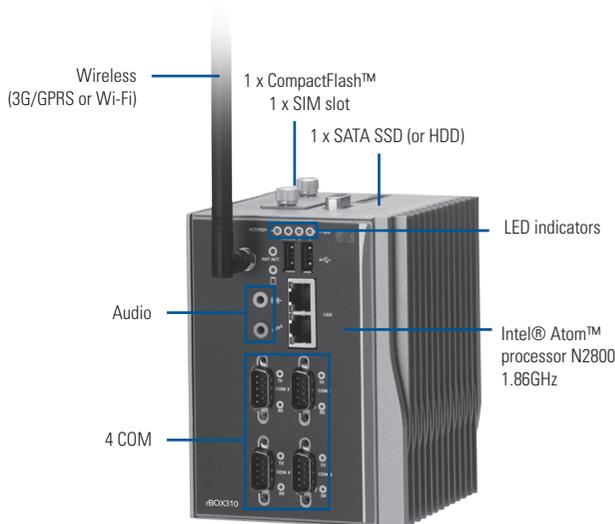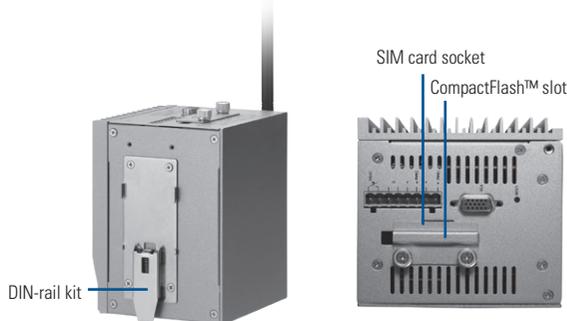# rBOX310-4COM

Robust DIN-rail Fanless Embedded System with Intel® Atom™ Processor N2800 1.86GHz, Intel® NM10, 4 COM, SATA SSD, Audio and RTC

Features

- Fanless and cableless design
- Intel® Atom™ processor N2800 1.86GHz dual core
- Wide operating temperature range from -40°C to +70°C
- 4 COM ports
- 2 isolated 10/100/1000 Mbps Ethernet ports
- 2 watchdog timer
- RTC Battery function
- LED indicators
- 1 wireless (3G/GPRS or Wi-Fi)
- SNMP V1/V2c
- One 2.5" SATA SSD (or HDD) and one CompactFlash™
- 2 power paths with terminal block and 12-48VDC
- Supports AXView remote monitoring software package

AXView

Isolation | Ext. Temp | IP30 | UL508 | Fanless | Low Power

Wireless (3G/GPRS or Wi-Fi)
1 x CompactFlash™
1 x SIM slot
1 x SATA SSD (or HDD)
LED indicators
Audio
Intel® Atom™ processor N2800 1.86GHz
4 COM

▲ Front view

SIM card socket
CompactFlash™ slot
DIN-rail kit

▲ Rear view   ▲ Easy-to-access interface

Introduction

The rBOX310-4COM DIN-rail fanless embedded field controller supports extra low power Intel® Atom™ processors N2800 1.86GHz with extended temperature range of -40°C to 70°C for use in extreme operating environments.

To prevent ESD and over-voltage, this super compact-size rBOX310-4COM is equipped with 4 RS-232/422/485, 2 isolated 10/100/1000Mbps Ethernet for rugged work environment. Two power paths input minimize the risk of data loss in the event of a single power failure. In addition, the RTC battery (battery onboard & gold-capacity onboard) reduces maintenance efforts and is ideally suited to vibration environment. Powered by IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, the rBOX310-4COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

The ready-to-run rBOX310-4COM equipped with AXView remote monitoring software is a total solution for power plant automation, facility monitoring systems, intelligent transportation systems, and more.

Specifications

Standard Color	Sliver-Black	
Construction	Extruded aluminum and heary-duty steel, IP30	
CPU	Intel® Atom™ processor N2800 1.86GHz Dual Core	
System Memory	1 x DDR3-800/1066 SO-DIMM, up to 4GB	
System I/O Outlet	Serial Port	4 x RS-232/422/485 (COM 1~4) Interface select by software or BIOS Supports Auto Flow Control in RS-485 mode ESD protection 15 KV COM 1 & COM 2 speed up to 115.2kbps COM 3 ~ COM 4 serial port speed up to 921.6kbps

System I/O Outlet	LAN	2 x 10/100/1000 Mbps (Intel® i210IT) Magnetic isolation protection 1.5 KV
	USB	2 x USB 2.0 USB power distribution control by software
	Audio	1 x Audio (Line-in/Line-out)
	RTC	Battery onboard & Gold capacity onboard (1st backup battery when power shut-down)
	VGA	1 x DB15 connector
	Power Input	2 x DC power input with terminal block
	Alarm Contact	One relay output with current 0.5A @30VDC
	Wireless	1 x Mini Card - USB interface on 3G/GPRS or - PCIe interface on Wi-Fi 1 x SIM socket (Easy-to-access)
Watchdog Timer	2 WDT WDT 1: one step is 1 sec, 255 levels WDT 2: one step is 250ms, 255 levels	
LEDs	System	Power, Alarm, Ready/Active, COM (TXD, RXD)
	Alarm	DC PWR1 or PWR2 is lost (default) User define event
Storage	1 x 2.5" SATA SSD or HDD 1 x CompactFlash™ (Easy-to-access)	
Installation	DIN-rail, wall mount	
Power Supply	2 power paths	
	Power Input Range	12-48 VDC
	Power Input Rating	12-48 VDC, 1.88-0.47A

Specifications

Power Protection	DC Version: OVP (over voltage protection) UVP (under voltage protection) Reverse protection
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)
Humidity	10% ~ 95%
Weight (net/gross)	1.5 kg (3.3 lb)/1.88 kg (1.14 lb)
Dimensions	100.6 mm (3.96") (W) x 110 mm (4.33") (D) x 135 mm (5.31") (H)
EOS Support	XPE, Linux support package, Windows® 7 Embedded
ISO	Manufactured in an ISO9001 facility
Safety	Heavy Industrial CE, including: EN 60950-1, IEC 60950-1
Safety Compliance	UL 60950-1, UL 508
EMI	FCC Part 18 Heavy Industrial CE, including: EN 61000-6-4, EN 61000-3-2, EN 61000-3-3
EMS	Heavy Industrial CE, including: EN 61000-6-2 EN 61000-4-2 (ESD standards) * Contact: +/- 6 KV; criteria B * Air: +/- 8 KV; criteria B EN 61000-4-3 (radiated RFI standards) * 10V/m, 80 to 1000 MHz; 80% AM criteria A EN 61000-4-4 (burst standards) * Signal ports: +/- 2 KV; criteria B * DC power ports: +/- 2 KV; criteria B EN 61000-4-5 (surge standards) * Signal ports: +/- 1 KV; line-to-line; criteria B * DC power ports: +/- 0.5 KV; line-to-earth; criteria B
	EN 61000-4-6 (induced RFI standards) * Signal ports: 10 Vrms @ 0.15 ~ 80 MHz; 80% AM criteria A * DC power ports: 10 Vrms @ 0.15 ~ 80 MHz; 80% AM criteria A EN 61000-4-8 (magnetic field standards) * 30 A/m @ 50, 60 Hz; criteria A
Environmental Test	IEC 60068-2-6 Fc (vibration resistance) 5 g @ 10 ~ 150 Hz, amplitude 0.35 mm (operation/storage/transport) IEC 60068-2-27 Ea (shock) 25 g @ 11 ms (half-sine shock pulse; operation); 50 g @ 11 ms (half-sine shock pulse; storage/transport) IEC 60068-2-32 Ed (free fall) 1 M (3.281ft)

Ordering Information

Standard	
rBOX310-4COM-FLL-DC	Robust DIN-rail fanless embedded system with Intel® Atom™ processor N2800 1.86GHz dual core and 4 COM ports (-40°C ~ +70°C)

Optional	
DDR3 SODIMM	1GB ~ 4GB (with W.T. memory)
DDR3 SODIMM	1GB ~ 4GB (with 0°C ~ +85°C memory; operating temperature: 0°C ~ +70°C)
CompactFlash™	2GB or above (with W.T. CF)
2.5" SATA SSD or HDD	
Wall mount kit	
Wireless (3G/GPRS or Wi-Fi) module for rBOX series	

*Specifications and certifications are based on options and may vary.

Dimensions