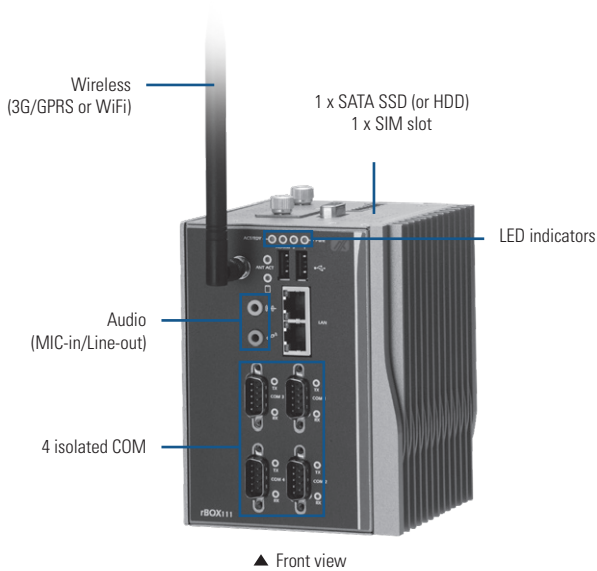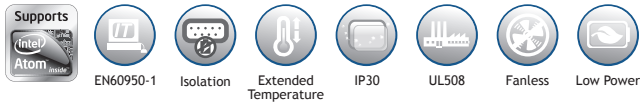# rBOX111-4COM

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPT Chipset, 4 Isolated COM, SATA SSD, Audio and RTC
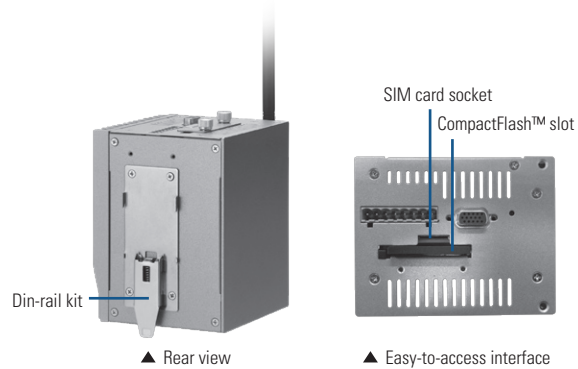
Wireless (3G/GPRS or WiFi)

1 x SATA SSD (or HDD)
1 x SIM slot

LED indicators

Audio (MIC-in/Line-out)

4 isolated COM

▲ Front view

| Supports Intel Atom inside | EN60950-1 | Isolation | Extended Temperature | IP30 | UL508 | Fanless | Low Power |

Features

- Fanless and cableless design
- Supports Intel® Atom™ processor Z510 PT 1.1 GHz or Z520 PT 1.33 GHz
- Wide temperature operation of -40°C ~ +70°C
- 4 isolated COM ports
- 2 isolated 10/100/1000Mbps Ethernet
- 2 watchdog timer
- RTC Battery function
- LED indicators
- 1 wireless (3G/GPRS or Wifi)
- SNMP V1/V2c
- Supports 1 x 2.5" SATA SSD (or HDD)
- Supports one CompactFlash™, one SD card (optional)
- 2 power paths with terminal block and 12-48VDC
- Supports AXView monitoring software package

SIM card socket
CompactFlash™ slot

Din-rail kit

▲ Rear view   ▲ Easy-to-access interface

Introduction

rBOX111-4COM din-rail fanless embedded field controller supports extra low power Intel® Atom™ processors Z510PT and Z520PT 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 rBOX111-4COM is equipped with 4 isolated RS-232/422/485, 2 isolated 10/100/1000Mbps Ethernet for offering magnetic isolation protection. Two power paths input minimize the risk of data loss in the event of a single power failure. Powered by IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, rBOX111-4COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

The ready-to-run rBOX111-4COM equipped with AXView 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 Z510 PT 1.1 GHz or Z520 PT 1.33 GHz
System Memory	1 x 200-pin DDR2 SO-DIMM max. up to 2 GB
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 Magnetic isolation protection 2KV 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 10/100/1000Mbps Ethernet 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 - 3G/GPRS or Wifi - Supports USB interface on 3G/GPRS or supports PCIe interface on WiFi 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	Supports 1 x 2.5" SATA SSD or HDD Supports 1 x CompactFlash™ (Easy-to-access) Supports 1 x SD card up to 32 GB (optional)	
Installation	Din-rail, wall mount	
Power Supply	2 power paths	
	Power Input Range 12-48VDC	

* All specifications and photos are subject to change without notice.

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)
Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)
Humidity	5% ~ 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, WinCE, Linux, Windows® 7 Embedded
ISO	Manufactured in an ISO9001 facility
Safety	Heavy Industrial CE, including: EN60950-1, IEC60950-1
Safety Compliance	UL60950-1, UL508
EMI	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
EMS Compliance	EN50121-4 (Railway application)
EMS	Heavy Industrial CE, including: EN61000-6-2 EN61000-4-2 (ESD standards) * Contact: +/- 6 KV; criteria B * Air: +/- 8 KV; criteria B EN61000-4-3 (radiated RFI standards) * 10V/m, 80 to 1000 MHz; 80% AM criteria A EN61000-4-4 (burst standards) * Signal ports: +/- 2 KV; criteria B * DC power ports: +/- 2 KV; criteria B EN61000-4-5 (surge standards) * Signal ports: +/- 1 KV; line-to-line; criteria B * DC power ports: +/- 0.5 KV; line-to-earth; criteria B

	EN61000-4-6 (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 EN61000-4-8 (magnetic field standards) * 30 A/m @ 50, 60 Hz; criteria A
Environmental Test Compliance	IEC60068-2-6 Fc (vibration resistance) 5 g @ 10 ~ 150 Hz, amplitude 0.35 mm (operation/storage/transport) IEC60068-2-27 Ea (shock) 25 g @ 11 ms (half-sine shock pulse; operation); 50 g @ 11 ms (half-sine shock pulse; storage/transport) IEC60068-2-32 Ed (free fall) 1 M (3.281ft)

Ordering Information

Standard

rBOX111-4COM-FL1.1G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 4 isolated COM ports (-40°C ~ +70°C)
rBOX111-4COM-FL1.33G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z520PT 1.33 GHz and 4 isolated COM ports (-40°C ~ +70°C)

Optional

DDR2 SODIMM	1 GB ~ 2 GB (with W.T. memory)
DDR2 SODIMM	1 GB ~ 2 GB (with 0°C ~ +85°C memory; operating temperature: 0°C ~ +70°C)
CompactFlash™	2 GB or above (with W.T. CF)
2.5" SATA SSD or HDD	
Wall mount kit	
Wireless (3G/GPRS or Wifi) module for rBOX series	

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

Dimensions

Overview

Embedded Systems

Embedded Systems for Transportation

Embedded Field Controllers

Embedded MicroBoxes

Industrial Barebone Systems

Industrial Chassis

Backplanes

Power Supplies

Peripherals & Accessories