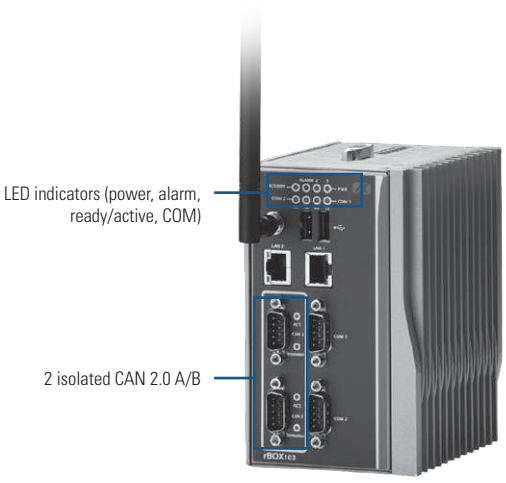
rBOX103

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPT Chipset and 2 Isolated CAN Bus



▲ Front view

Supports Intel Atom inside

EN60950-1 | Isolation | CAN Bus | UL508 | IP30 | Fanless | Low Power | Extended Temperature

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
- 2 isolated CAN 2.0 A/B
- 2 isolated Ethernet
- 2 watchdog timer
- LED indicators
- 1 wireless (3G/GPRS)
- SNMP V1/V2c
- Supports one CompactFlash™, one SD card (optional)
- 2 power paths with terminal block and 12-48VDC
- Supports AXView monitoring software package

Din-rail kit ▲ Rear view

Introduction

rBOX103 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 rBOX103 is equipped with two isolated CAN 2.0 A/B, two isolated Ethernet for offering magnetic isolation protection. Two power paths input minimize the risk of data loss in the event of a single power failure. rBOX103 is powered by IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance. Besides, it is also specially designed for remote control/ monitoring management applications like automatic parking lot, traffic cabinet and more.

rBOX103 features rich expansion for communication such as CAN bus in-vehicle network. The ready-to-run rBOX103 equipped with AXView monitoring software is a total solution for 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	2 x RS-232/422/485 (COM 1/2) (isolated COM as option) Interface select by software or BIOS Supports Auto Flow Control in RS-485 mode ESD protection 15 KV Serial port speed up to 115.2kbps
	LAN	1 x 10/100/1000Mbps Ethernet 1 x 10/100Mbps Ethernet Magnetic isolation protection 1.5 KV
	USB	2 x USB2.0 USB power distribution control by software
	CAN	2 CAN 2.0 A/B (DB9 connector) Meets ISO 11898 standard
System I/O Outlet	CAN	Sofeware control termination resistor 120 ohm Magnetic isolation protection 2.5KV Transmitter baud rate from 5kb/s to 1Mb/s
	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 (Full size, supports USB only) 1 x SIM socket onboard Supports 3G/GPRS
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), CAN (Act,Termination Indicator)
	Alarm	DC PWR1 or PWR2 is lost (default) User define event
Storage	Supports 1 x CompactFlash 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
	Power Protection	DC Version: OVP (over voltage protection) UVP (under voltage protection) Reverse protection
	Power Consumption (COM port link up)	With no load on 2 USB ports: 0.99A @ 12V, 11.88W 0.5A @ 24V, 12W 0.34A @ 36V, 12.24W 0.26A @ 48V, 12.48W with full load on 2 USB ports: 1.4A @ 12V, 16.88W

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

Specifications

Power Supply	Power Consumption (COM port link up)	0.7A @ 24V, 17W 0.47A @ 36V, 17.24W 0.36A @ 48V, 17.48W
Operating Temperature	-40°C ~ +70°C (-40°C ~ +158°C)	
Storage Temperature	-45°C ~ +85°C (-49°C ~ +185°C)	
Humidity	5% ~ 95%	
Weight (net/gross)	1.38 kg (3 lb)/1.72 kg (3.78 lb)	
Dimensions	81 mm (3.18") (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 Compliance	UL508, UL60950-1 Heavy Industrial CE, including: EN60950-1, IEC60950-1	
EMI Compliance	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3	
EMS Compliance	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	
rBOX103-FL1.1G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 2 isolated CAN 2.0 (-40°C ~ +70°C)
rBOX103-FL1.33G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z520PT 1.33 GHz and 2 isolated CAN 2.0 (-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)
Wall mount kit	
Wireless (3G/GPRS) module for rBOX series	

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

Dimensions