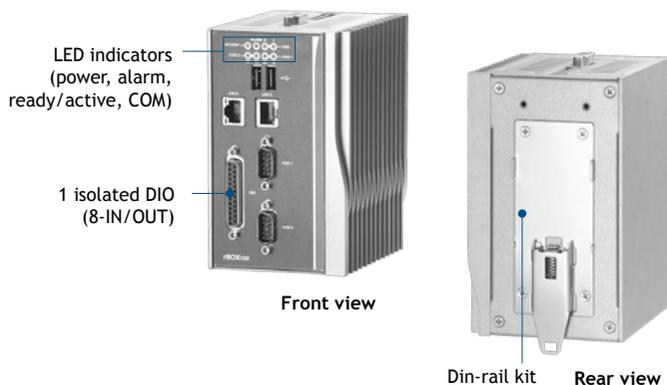# rBOX100

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor
Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPT Chipset
and 1 Isolated DIO (8-IN/OUT)

Supports
Atom (intel)
EN60950
Extended Temperature
IP30
UL508
Fanless
Low Power

LED indicators
(power, alarm,
ready/active, COM)

1 isolated DIO
(8-IN/OUT)

Front view

Din-rail kit   **Rear view**

Features

- Fanless and cableless design
- Wide temperature operation of -40°C ~ +70°C
- Supports 1 isolated DIO (8-IN/OUT)
- Supports 2 isolated Ethernet
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Support one CompactFlash™, one SD card (optional)
- 2 power paths with terminal block and 12-48VDC
- Supports AXView monitoring software package

Introduction

rBOX100 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.

Its 8-IN/OUT DIO port provides users with the digital devices connection, and its redundant Ethernet connection provides greater availability and reliability. Two power paths input minimizes the risk of data loss in the event of a single power failure. Besides, rBOX100 is also specifically built for rugged work environments,

has met Safety Agency requirements and passed heavy industrial EMI/EMS testing. The robust rBOX100 is specifically built for remote control/ monitoring management applications like unmanned control room, industrial machine, automatic parking lot, traffic cabinet and more.
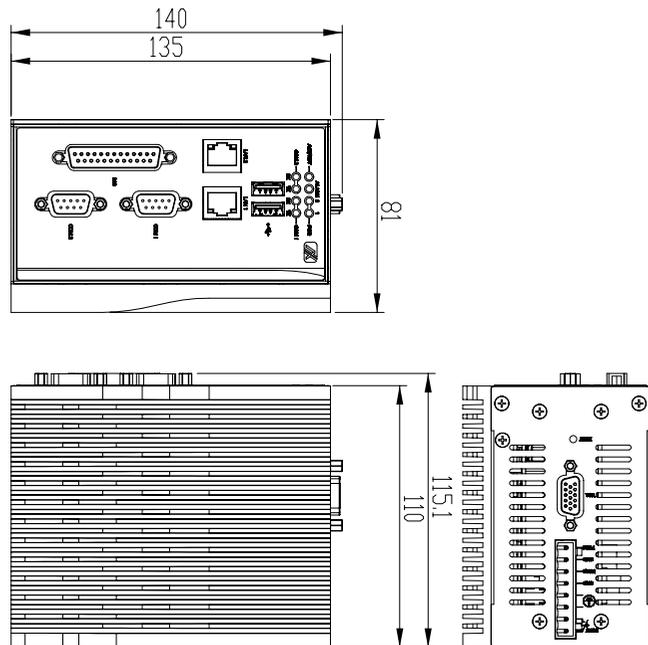
The ready-to-run rBOX100 equipped with AXView monitoring software is a total solution for power plant automation, facility monitoring systems, intelligent transportation systems, and more.

Specifications

Standard Color	Sliver-Black		Storage	Supports 1 x CompactFlash™	
Construction	Extruded aluminum and heary-duty steel, IP30			Supports 1 x SD card up to 32 GB (optional)	
CPU	Intel® Atom™ processor Z510 PT (1.1 GHz) or Z520 PT (1.33 GHz)		Installation	Din-rail, wall mount	
System Board	RM820		Power Supply	2 power paths	
System Memory	1 x 200-pin DDR2 SO-DIMM max. up to 2 GB			Power Input Range	12-48VDC
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		Power Protection	DC Version: OVP (over voltage protection) UVP (under voltage protection) Reverse protection
	LAN	1 x 10/100/1000Mbps Ethernet 1 x 10/100Mbps Ethernet Magnetic isolation protection 1.5 KV		Power Consumption	With no load on 2 USB ports: 0.77A @ 12V, 9.24W 0.39A @ 24V, 9.36W 0.29A @ 36V, 10.44W 0.20A @ 48V, 9.6W With full load on 2 USB ports: 1.25A @ 12V, 15W 0.62A @ 24V, 14.88W 0.42A @ 36V, 15.12W 0.32A @ 48V, 15.36W
	USB	2 x USB2.0 USB power distribution control by software			
	DIO	1 x DIO (8-IN/OUT) DI: Input range : 0~30 VDC Logic level 0 : +/- 3V max. Logic level 1 : +/- 10V min. (COM to DI) DO: Max. 200 mA per channel, current sink type 24VDC normal, open collector to 30V Optical isolation protection 3 KV			
			Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)	
			Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)	
			Humidity	5% ~ 95%	
	VGA	1 x DB15 connector		Weight (net/gross)	1.38 kg (3 lb)/1.72 kg (3.78 lb)
	Power Input	2 x DC power input with terminal block		Dimensions	81 mm (3.18") (W) x 110 mm (4.33") (D) x 135 mm (5.31") (H)
	Alarm Contact	One relay output with current 0.5A @30VDC		EOS Support	XPE, WinCE, Linux, Windows® 7
			ISO	Manufactured in an ISO9001 facility	
Watchdog Timer	2 WDT WDT 1: one step is 1 sec, 255 levels WDT 2: one step is 250ms, 255 levels		Safety	UL508 EN60950-1 IEC60950-1	
			Safety Compliance	UL60950-1	
LEDs	System	Power, Alarm, Ready/Active, COM (TXD,RXD)		EMI	FCC part 15, class A EN61000-6-4 * EN55022 * EN61000-3-2 * EN61000-3-3
	Alarm	DC PWR1 or PWR2 is lost (default) User define event (option)			

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

EMS	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	
rBOX100-FL 1.1G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 2 isolated DIO (8-IN/OUT) (-40˚C ~ +70˚C)
rBOX100-FL 1.33G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z520PT 1.33 GHz and 2 isolated DIO (8-IN/OUT) (-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™	1 GB or above (with W.T. CF)
Wall mount kit	

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

Dimensions