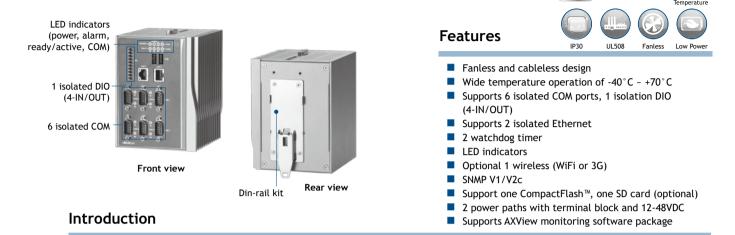# rBOX101-6COM

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor
Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPT Chipset,
6 Isolated COM and 1 Isolated DIO (4-IN/OUT)

Supports

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

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

1 isolated DIO
(4-IN/OUT)

6 isolated COM

Front view

Din-rail kit   **Rear view**

Features

- Fanless and cableless design
- Wide temperature operation of -40°C ~ +70°C
- Supports 6 isolated COM ports, 1 isolation DIO (4-IN/OUT)
- Supports 2 isolated Ethernet
- 2 watchdog timer
- LED indicators
- Optional 1 wireless (WiFi or 3G)
- 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

rBOX101-6COM 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 rBOX101-6COM is equipped with six isolated RS-232/422/485, one isolated 10/100/1000Mbps Ethernet & one isolated 10/100Mbps Ethernet and one isolated DIO port 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, rBOX101-6COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

The ready-to-run rBOX101-6COM 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 Board	RM820
System Memory	1 x 200-pin DDR2 SO-DIMM max. up to 2 GB

System I/O Outlet	Serial Port	6 x RS-232/422/485 (COM 1~6)
		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 6 serial port speed up to 921.6kbps
	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
	DIO	1 x DIO (4-IN/OUT)
		DI :
		Input channels : 4, source type
		Input voltage : 0 to 30VDC
		Digital input levels for dry contacts :
		-Logic level 0: close to GND
		-Logic level 1: open
		Digital input levels for wet contacts :
		-Logic level 0: +10V to +24V (DI to COM-)
		-Logic level 1: +3V max.
		DO :
		Output channels : 4, sink type
		Output current: Max. 200 mA per channel
		On-state voltage : 24VDC nominal, open collector to 30V
		Optical isolation protection 3 KV
	VGA	1 x DB15 connector
	Power Input block	2 x DC power input with terminal
	Alarm Contact	One relay output with current 0.5A @30VDC
	Wireless (upon request)	1 x Mini Card (Supports USB only)
		1 x SIM socket onboard

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 (option)
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: 1.05A @ 12V, 12.6W 0.53A @ 24V, 12.72W 0.36A @ 36V, 12.96W 0.28A @ 48V, 13.44W With full load on 2 USB ports: 1.48A @ 12V, 17.76W 0.74A @ 24V, 17.76W 0.50A @ 36V, 18W 0.38A @ 48V, 18.24W
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)	1.9 kg (4.18 lb)/ 2.24 kg (4.93 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	
ISO	Manufactured in an ISO9001 facility	
Safety Compliance	UL508 UL60950-1 EN60950-1 IEC60950-1	

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

EMI Compliance	FCC part 15, class A
	EN61000-6-4
	* EN55022
	* EN61000-3-2
	* EN61000-3-3
EMS Compliance	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	
rBOX101-6COM-FL 1.1G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 6 isolated COM ports (-40°C ~ +70°C)
rBOX101-6COM-FL 1.33G	Robust Din-rail fanless embedded system with Intel® Atom™ processor Z520PT 1.33 GHz and 6 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™	1 GB or above (with W.T. CF)
Wall mount kit	
Wireless (WiFi or 3G) upon request	

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

Dimensions