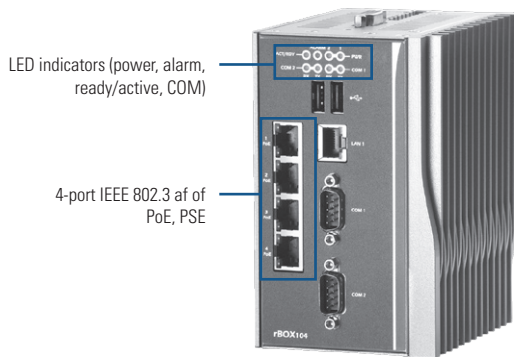
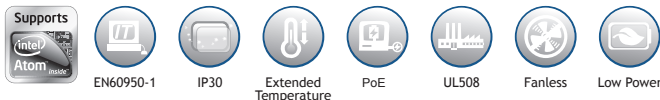


# rBOX104

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPT Chipset and 4-port PoE



▲ Front view



## Introduction

rBOX104 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.

The fanless design increases reliability, extends MTTR, and ultimately reduces maintenance efforts. Front accessible I/O cabling is very convenient for wiring and maintenance. The rBOX104 Din-rail computer features a redundant Ethernet LAN connection for greater availability and reliability. Supporting Power-over-Ethernet on ports 1 to 4, the rBOX104 Din-rail computer can power IEEE802.3af compliant devices and transmit data simultaneously, which helps save wiring costs and makes it ideally suited for outdoor applications such as PoE IP camera, PoE Access Point and intercoms. Two power paths input minimize the risk of data loss in the event of a single power failure. The rBOX104 Din-rail computer meets Safety Agency requirements and has passed heavy industrial EMI/EMS testing.

The ready-to-run rBOX104 equipped with AXView monitoring software is a total solution for intelligent transportation systems, power plant automation, intelligent transportation systems, facility monitoring systems, IP video surveillance, APs, intercoms, and more.

## Specifications

|                   |  |   |
|-------------------|--|---|
| Standard Color    | Sliver-Black   |   |
| Construction      | Extruded aluminum and heavy-duty steel, IP30             |   |
| CPU               | Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 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)<br>Interface select by software or BIOS<br>Supports Auto Flow Control in RS-485 mode<br>ESD protection 15 KV<br>Serial port speed up to 115.2kbps |
|                   | LAN  | 1 x 10/100/1000Mbps Ethernet<br>Magnetic isolation protection 1.5 KV  |
|                   | PoE  | 4 x PoE (IEEE802.3af)<br>Magnetic isolation protection 1.5 KV   |

## Features

- Fanless and cableless design
- Supports Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 1.33 GHz
- Wide temperature operation of -40°C ~ +70°C
- 4-port IEEE802.3af Power over Ethernet (PoE) Power Sourcing Equipment (PSE)
- 1 isolated 10/100/1000Mbps Ethernet
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports one CompactFlash™, one SD card (optional)
- 2 power paths with terminal block and 48VDC
- Supports AXView monitoring software package



Din-rail kit ▲ Rear view

|                                      |   |  |
|--------------------------------------|---|--|
| System I/O Outlet                    | USB   | 2 x USB2.0<br>USB power distribution control by software   |
|                                      | 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  |
| Watchdog Timer                       | 2 WDT   | WDT 1: one step is 1 sec, 255 levels<br>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)<br>User define event   |
| Storage                              | Supports 1 x CompactFlash™<br>Supports 1 x SD card up to 32 GB (optional) |  |
| Installation                         | Din-rail, wall mount  |  |
| Power Supply                         | 2 power paths   |  |
|                                      | Power Input Range   | 48VDC  |
|                                      | Power Protection  | DC Version:<br>OVP (over voltage protection)<br>UVP (under voltage protection)<br>Reverse protection |
| Power Consumption (PoE port link up) | With no load on 2 USB ports:<br>1.70A @ 48V, 81.6W                        |  |
|                                      | With full load on 2 USB ports:<br>1.81A @ 48V, 86.88W                     |  |
| 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)                   | 1.38 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                                       |  |

## Specifications

|                   |   |
|-------------------|---|
| Safety Compliance | UL508, UL60950-1<br>Heavy Industrial CE, including:<br>EN60950-1, IEC60950-1  |
| EMI Compliance    | FCC Part 18<br>Heavy Industrial CE, including:<br>EN61000-6-4, EN61000-3-2, EN61000-3-3   |
| EMS Compliance    | Heavy Industrial CE, including:<br>EN61000-6-2<br>EN61000-4-2 (ESD standards)<br>* Contact: +/- 6 KV; criteria B<br>* Air: +/- 8 KV; criteria B<br>EN61000-4-3 (radiated RFI standards)<br>* 10V/m, 80 to 1000 MHz; 80% AM criteria A<br>EN61000-4-4 (burst standards)<br>* Signal ports: +/- 2 KV; criteria B<br>* DC power ports: +/- 2 KV; criteria B<br>EN61000-4-5 (surge standards)<br>* Signal ports: +/- 1 KV; line-to-line; criteria B<br>* DC power ports: +/- 0.5 KV; line-to-earth; criteria B<br>EN61000-4-6 (induced RFI standards)<br>* Signal ports: 10 Vrms @ 0.15 ~ 80 MHz; 80% AM criteria A<br>* DC power ports: 10 Vrms @ 0.15 ~ 80 MHz; 80% AM criteria A<br>EN61000-4-8 (magnetic field standards)<br>* 30 A/m @ 50, 60 Hz; criteria A |

|                               |  |
|-------------------------------|--|
| Environmental Test Compliance | IEC60068-2-6 Fc (vibration resistance)<br>5 g @ 10 ~ 150 Hz, amplitude 0.35 mm (operation/storage/transport)<br>IEC60068-2-27 Ea (shock) 25 g @ 11 ms (half-sine shock pulse; operation); 50 g @ 11 ms (half-sine shock pulse; storage/transport)<br>IEC60068-2-32 Ed (free fall) 1 M (3.281ft.) |
|-------------------------------|--|

## Ordering Information

| Standard         |   |
|------------------|---|
| rBOX104-FL 1.1G  | Robust Din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 4 PoE (-40°C ~ +70°C)  |
| rBOX104-FL 1.33G | Robust Din-rail fanless embedded system with Intel® Atom™ processor Z520PT 1.33 GHz and 4 PoE (-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   |   |

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

## Dimensions

