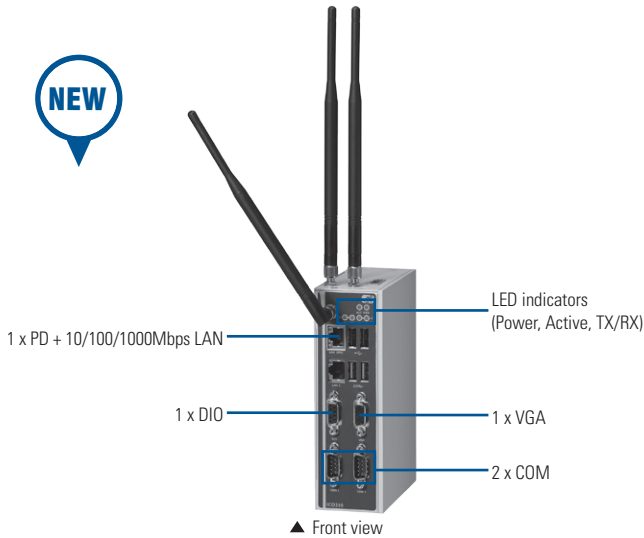


# ICO310

Robust Din-rail Fanless Embedded System with Intel® Celeron® Processor N3060/ N3160, 2 COM, 4 USB, 2 Gigabit LAN (1 PoE PD), DIO and RTC



EN60950

## Specifications

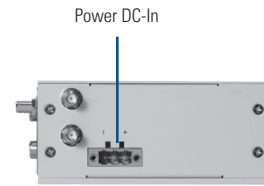
Standard Color	White	
Construction	Extruded aluminum and heavy-duty steel, IP40	
CPU	Intel® Celeron® processor N3060 (1.6 GHz/2-core) or N3160 (1.6 GHz/4-core)	
System Board	SBC87887	
System Memory	DDR3L SO-DIMM max. up to 8 GB	
BIOS	AMI UEFI BIOS	
System I/O Outlet	Serial Port	2 x RS-232/422/485 (COM 1/2) with DB9 connectors Interface select by BIOS Supports Auto Flow Control in RS-485 mode LED indicator (TX/RX) for COM 1/2
	USB	2 x USB 3.0 2 x USB 2.0
	RTC	Battery onboard
	Storage	1 x mSATA 1 x SATA SSD (or HDD)
	LAN	2 x 10/100/1000 Mbps Ethernet 1 x PoE PD compliant with IEEE 802.3at standard through LAN 1 (ICO310-N3060-PD-DC, ICO310-N3160-PD-DC)
	Power Input	DC terminal block: 12-24V DC-In PoE: IEEE 802.3at
	Display	VGA
	Wireless	2 x full-size Mini Card slot 1 x SIM socket 3 x Antenna (PS: One of Mini Card slot co-lay mSATA, so mSATA with wireless can be either one)

## Features

- Fanless design
- Supports Intel® Celeron® processor N3060 (1.6 GHz/2-core) or N3160 (1.6 GHz/4-core)
- 2 RS-232/422/485 ports
- 4 USB ports
- 2 isolated 10/100/1000Mbps Ethernet ports
- 1 PoE PD is compliant with IEEE 802.3at standard through LAN 1
- 1 DIO port
- 2 wireless (3G/GPRS & Wi-Fi)
- Supports 1 mSATA & SATA SSD (or HDD)
- Wide range 12-24V DC-In



▲ Rear view



▲ Top view

Watchdog Timer	255 levels, 1~255 sec.
System Indicator	Power, active, COMs (TX/RX)
Power Supply	Power Input Range: 12-24VDC Power Input Rating: 12-24VDC, 2.09-1.09A Power Protection: DC Version OVP, Reverse protection
Operating Temperature	-20°C ~ +60°C (-4°F ~ +140°F) *The frequency of CPU will down when system operating temperature over 55°C (ICO310-N3060, ICO310-N3060-PD, ICO310-N3160) or over 50°C (ICO310-N3160-PD)
Storage Temperature	-40°C ~ +85°C (-49°F ~ +185°F)
Humidity	10% ~ 95%
Vibration Endurance	2g @ 5 ~ 500Hz, amplitude 0.35 mm (operation/storage/transport)
Weight	1.0 kg (2.2 lb)/1.50 kg (3.3 lb)
Certification	CE, FCC
Dimensions	48 mm (1.88") (W) x 110 mm (4.33") (D) x 155 mm (6.1") (H)
Mounting	Din-rail mounting Wall mounting
OS Support	Windows® 7 Embedded Windows® 8 Embedded Windows® 8, Windows® 10 Linux support package
Remote Management Software	AXView 2.0 Intelligent Remote Management Solution for IoT

\* mSATA and wireless can be either one.

Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78

Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

## Ordering Information

### Standard

IC0310-N3060-DC	Robust din-rail fanless embedded system with Intel® Celeron® processor N3060 (1.6 GHz/2-core), 2 COM, 2 LANs (-20°C ~ +60°C)
IC0310-N3060-PD-DC	Robust din-rail fanless embedded system with Intel® Celeron® processor N3060 (1.6 GHz/2 core), 2 COM, 1 LAN, 1 PoE PD+LAN (-20°C ~ +60°C)
IC0310-N3160-DC	Robust din-rail fanless embedded system with Intel® Celeron® processor N3160 (1.6 GHz/4-core), 4 COM, 2 LANs (-20°C ~ +60°C)
IC0310-N3160-PD-DC	Robust din-rail fanless embedded system with Intel® Celeron® processor N3160 (1.6 GHz/4 core), 2 COM, 1 LAN, 1 PoE PD+LAN (-20°C ~ +60°C)

### Optional

2.5" SATA SSD or HDD (with W.T. SSD or HDD)

mSATA 16 GB ~ 512 GB (with W.T. mSATA)

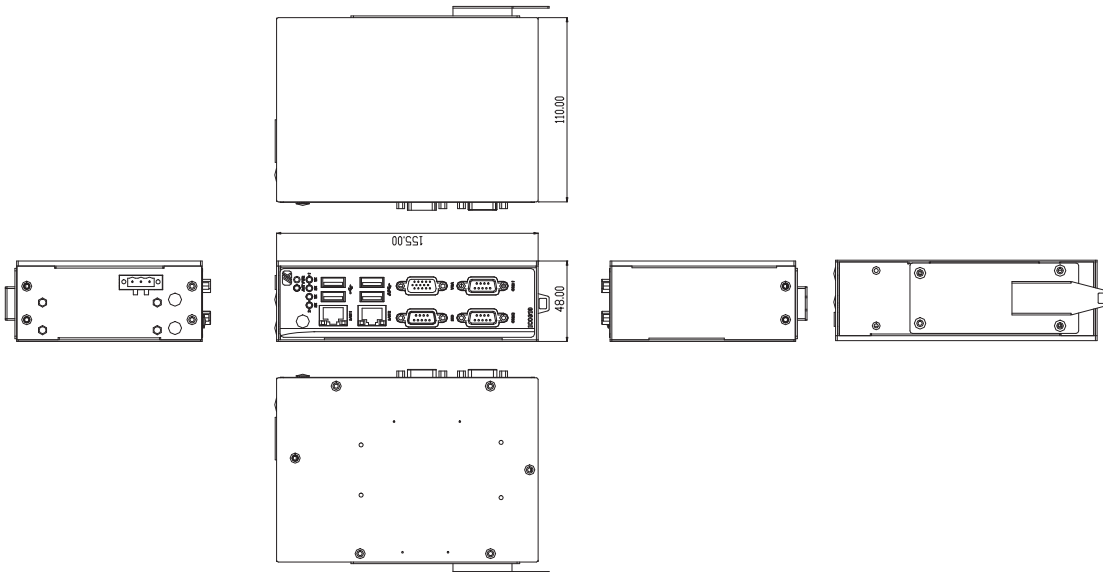
DDR3L SO-DIMM 2 GB ~ 8 GB (with W.T. memory)

Wall mounting kit

Wireless (3G/GPRS or Wi-Fi) module

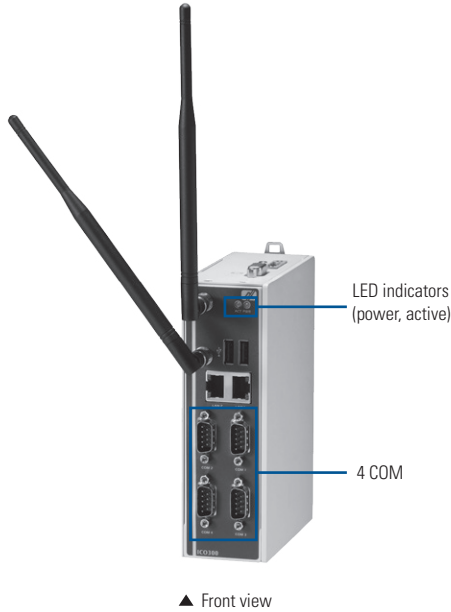
\*Specifications and certifications are based on options and may vary.

## Dimensions



# ICO300

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor E3815/E3827, 4 COM, 2 LANs, DIO and RTC

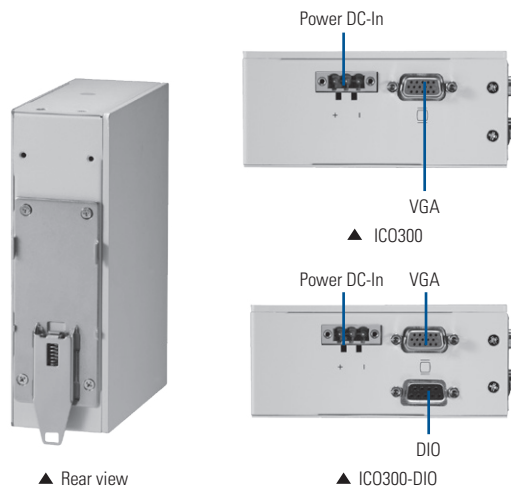


## Specifications

Standard Color	White
Construction	Extruded aluminum and heavy-duty steel, IP40
CPU	Intel® Atom™ processor E3815 (1.46 GHz) or E3827 (1.75 GHz)
System Board	SBC87842
System Memory	DDR3L-1066 MHz SO-DIMM up to 4 GB (E3815) or up to 8 GB (E3827)
BIOS	AMI UEFI BIOS
System I/O Outlet	Serial Port 4 x RS-232/422/485 (COM 1~4) Interface select by BIOS Supports Auto Flow Control in RS-485 mode
	USB 2 x USB 2.0
	RTC Battery onboard
	Storage Supports 1 x CF (or mSATA*) Supports 1 x SATA SSD (or HDD)
	LAN 2 x 10/100/1000 Mbps Ethernet (Intel® i211-AT for ICO300) (Intel® i210-IT for ICO300-WT)
	VGA 1 x DB15 connector
	DIO (ICO300-DIO) 1 x DI/DO (8-bit programmable, DB9 female connector) Voltage is 5V TTL-level ESD protection corresponds to IEC6100-4-2 (± 8KV (Air); ± 4KV (contact)) Programming: I/O sink current is 10mA (max.) Input/output can be programming
	Power Input 1 x DC power input with terminal block
	Wireless 1 x full size PCI Express Mini Card slot supports wireless (3G/GPRS or Wi-Fi) 1 x SIM socket 2 x Antenna

## Features

- Fanless design
- Supports Intel® Atom™ processor E3815 (1.46 GHz) or E3827 (1.75 GHz)
- 4 RS-232/422/485 ports
- Supports Windows® 10 IoT Solution
- 2 isolated 10/100/1000Mbps Ethernet ports
- 1 DIO port
- Supports wireless (3G/GPRS or Wi-Fi)
- Supports 1 CF (or mSATA) and SATA SSD (or HDD)
- Wide range 12 - 24V DC-In



Watchdog Timer	255 levels, 1~255 sec.
System Indicator	Power, Active
Power Supply	Power Input Range : 12-24VDC Power Input Rating : 12-24VDC, 1.21-0.66A (ICO300-E3815) 12-24VDC, 1.42-0.74A (ICO300-E3827) Power Protection : DC Version, OVP, Reverse protection
Operating Temperature	-20°C ~ +70°C (-4°F ~ +158°F)
Storage Temperature	-40°C ~ +85°C (-40°F ~ +185°F)
Humidity	10% ~ 95%
Vibration Endurance	2g@5-500Hz, amplitude 0.35 mm (operation/storage/transport)
Weight (net/gross)	1.0 kg (2.2 lb)/1.50 kg (3.3 lb)
Certificate	CE, FCC
Dimensions	48 mm (1.88") (W) x 110 mm (4.33") (D) x 155 mm (6.1") (H)
EOS Support	Windows® 7 Embedded Windows® 8 Embedded Linux support package Windows® 10 IoT core pro

\* mSATA and wireless can be either one.

\*\* mSATA and CF can be either one.

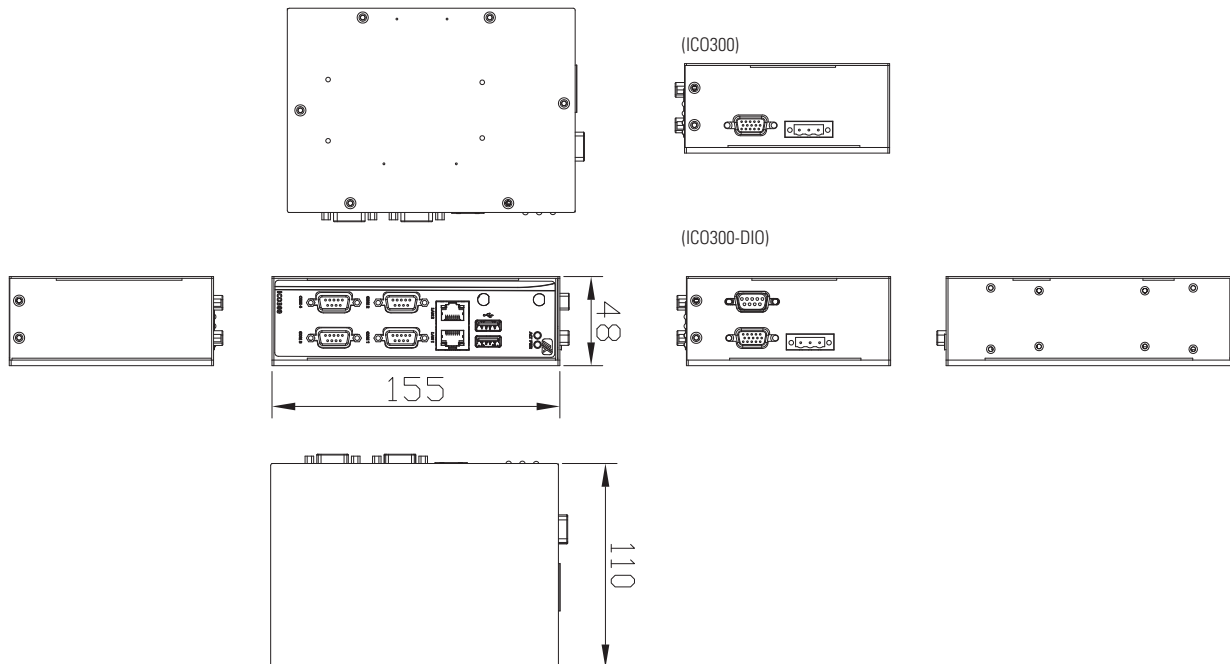
## Ordering Information

Standard	
IC0300-E3815-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor E3815 1.46 GHz and 4 COM ports (-20°C ~ +70°C)
IC0300-E3815-WT-DC (Optional)	Robust din-rail fanless embedded system with Intel® Atom™ processor E3815 1.46 GHz and 4 COM ports (-40°C ~ +70°C)
IC0300-E3827-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor E3827 1.75 GHz and 4 COM ports (-20°C ~ +70°C)
IC0300-E3815-DIO-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor E3815 1.46 GHz, 4 COM ports and DIO (-20°C ~ +70°C)
IC0300-E3827-DIO-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor E3827 1.75GHz, 4 COM ports and DIO (-20°C ~ +70°C)

Optional	
CompactFlash™	4 GB or above (with W.T. CF)
2.5" SATA SSD or HDD (with W.T. SSD or HDD)	
DDR3L SO-DIMM	2 GB ~ 8 GB (with W.T. memory)
Wall mounting kit	
Wireless (3G/GPRS or Wi-Fi) module	

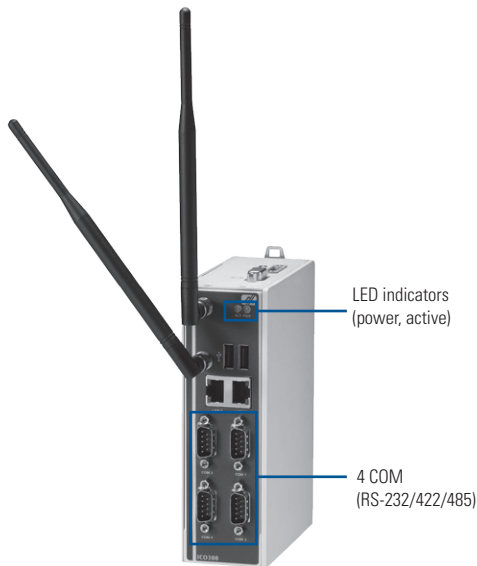
\* Specification and certifications are based on requirements and may vary.

## Dimensions

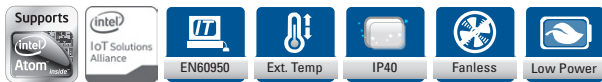


# ICO300-MI

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor E3815 as an Intel® IoT Gateway Solution



▲ Front view

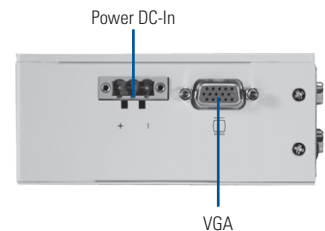


## Features

- Supports Intel® IoT Gateway Technology with Wind River Intelligent Device Platform XT 3.1
- Fanless and robust design
- Supports Intel® Atom™ processor E3815 (1.46 GHz)
- 4 RS-232/422/485 COM ports
- 2 isolated 10/100/1000 Mbps Ethernet ports
- 1 wireless (3G/GPRS)
- Supports CompactFlash™ (or mSATA) and SATA SSD (or HDD)
- Extended temperature range from -20°C to +70°C
- Wide range 12 - 24V DC-In
- RTC battery support



▲ Rear view



## Introduction

The ICO300-MI based on Intel® Gateway Technology has been upgraded with Wind River Intelligent Device Platform XT v3.1. The reliable din-rail embedded IoT gateway platform utilizes the low power Intel® Atom™ processor E3815 and supports DDR3L system memory maximum up to 4 GB, delivering high performance and low power consumption. It provides enterprise-grade security and intelligent manageability, yet simplifies the development process and gateway deployment for IoT applications. The intelligent ICO300-MI is a perfect solution for industrial IoT applications such as smart energy, smart factory automation, facility monitoring systems and more.

The ICO300-MI, Axiomtek's application-ready IoT gateway platform based on Intel® Gateway Technology, provides the opportunity to accelerate the IoT development and ensures security to help protect the device and data. It features low power Intel® Atom™ processor, wireless connectivity, rich expansions and ultra-light weight and compact design. Furthermore, this intelligent IoT gateway system is well suited for extreme environments with its IP40-rated housing and wide operating temperatures range from -20°C to +70°C. The ICO300-MI is ideal for machine or factory automation and smart IIoT solutions.

## Specifications

Standard Color	White
Construction	Extruded aluminum and heavy-duty steel, IP40
CPU	Intel® Atom™ processor E3815 (1.46 GHz)
System Memory	DDR3L-1066 MHz SO-DIMM up to 4 GB (E3815)
BIOS	AMI UEFI BIOS

System I/O Outlet	Serial Port	4 x RS-232/422/485 (COM 1-4) Interface select by BIOS Supports Auto Flow Control in RS-485 mode
	USB	2 x USB 2.0
	RTC	Battery onboard
	Storage	1 x CF* (or mSATA*) 1 x SATA SSD (or HDD)
	LAN	2 x 10/100/1000 Mbps Ethernet
	VGA	1 x DB15 connector
	Power Input	1 x DC power input with terminal block
	Wireless	1 x full-size Mini Card slot Supports wireless* (3G/GPRS) 1 x SIM socket 2 x Antenna
Watchdog Timer		255 levels, 1~255 sec.
System Indicator		Power, Active
Power Supply		Power Input Range : 12-24 VDC Power Input Rating : 12-24 VDC, 1.21-0.66A Power Protection : DC Version, OVP, Reverse protection
Operating Temperature		-20°C ~ +70°C (-4°F ~ +158°F)
Storage Temperature		-40°C ~ +85°C (-40°F ~ +185°F)
Humidity		10% ~ 95%
Vibration Endurance		2g @ 5-500 Hz, amplitude 0.35 mm (operation/storage/transport)
Weight (net/gross)		1.0 kg (2.2 lb)/1.50 kg (3.3 lb)
Certificate		CE, FCC, UL
Dimensions		48 mm (1.88") (W) x 110 mm (4.33") (D) x 155 mm (6.1") (H)

\* mSATA and wireless can be either one.

\* mSATA and CF can be either one.

## Ordering software for the Intel® IoT Gateway from Intel® marketplace website

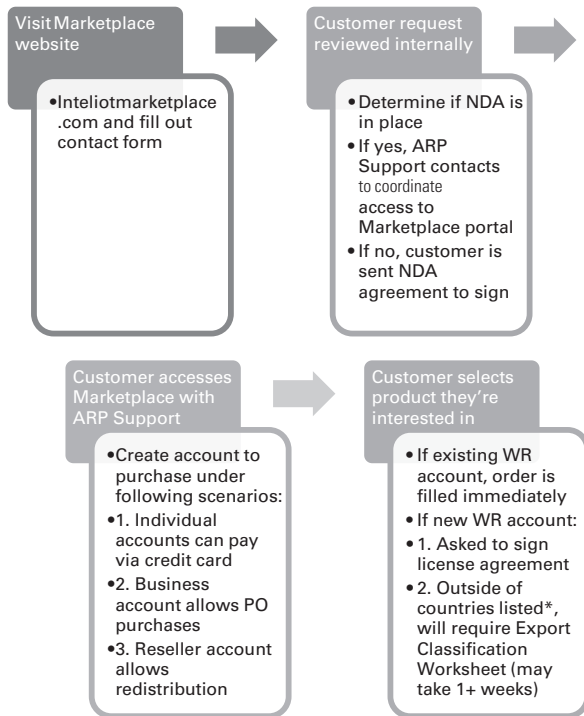
Source: <http://inteliotmarketplace.com/>

	Flex	Pro Pilot	Pro (Atom/Quark)	Pro ( Core™ )	Support Services for Pro Pilot
Licensing Term	Unlimited	6 months	perpetual	perpetual	-
Dev Seats	0	5	20	20	5
Redistribution	unlimited	<= 25 nodes	varies	varies	-
Support Term	n/a	Available separately	12 mos (renewable)	12 mos (renewable)	6 months
1	\$0.00	\$450.00	n/a	n/a	\$10,000
2+	n/a	quote	n/a	n/a	-
500 nodes	n/a	quote	\$42.00 per node	\$79.00 per node	-
501 - 1500 nodes	n/a	quote	\$38.00 per node	\$66.00 per node	-
1501+ nodes	n/a	quote	quote	quote	-
<b>Feature Set</b>					
IoT Support Services for Gateways			X	X	X
McAfee Embedded Control Essential	X				
McAfee Embedded Control Pro		X	X	X	
Wind River IDP XT 3.1	X	X			
Wind River Development tools, including Workbench 4		X	X	X	

\* Above quotation is for reference only. The correct quotation is still base on Intel® official website.

## Marketplace Order Process

Expedite this process! Intel Account representatives may submit customer names to ARP and they can be added to the preapproved list for Marketplace access.



\*Export Classification Worksheet is NOT required for Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

## Ordering Information

### Standard

ICO300-E3815-MI3-DC Robust din-rail fanless embedded system with Intel® Atom™ processor E3815 1.46 GHz, 4 COM ports and Intel® IoT gateway solution supported (-20°C ~ +70°C)

### Optional

CompactFlash™ 4 GB or above (with W.T. CF)

2.5" SATA SSD or HDD (with W.T. SSD or HDD)

DDR3L SO-DIMM 2 GB-4 GB (with W.T. memory)

Wall Mounting Kit

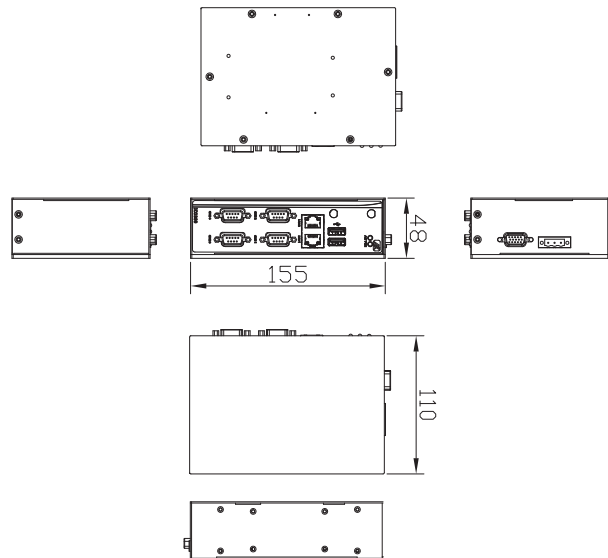
Wireless (3G/GPRS) module

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

## Benefit of ICO300-MI

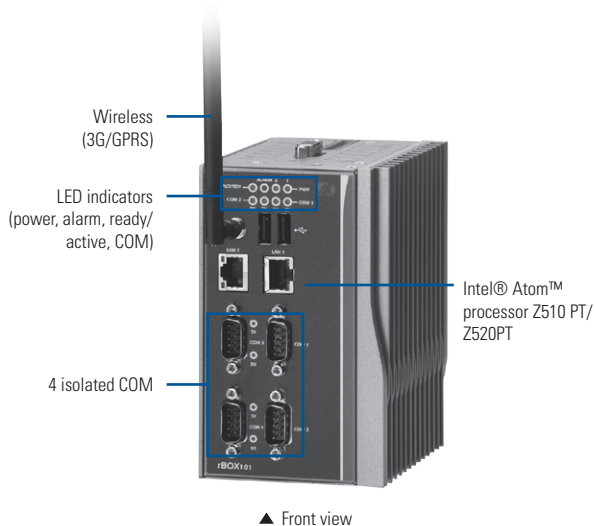
	Performance at the edge
	Advanced security
	Scalability
	Manageability
	Faster, more flexible deployment

## Dimensions



# rBOX101-4COM

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



▲ Front view



## Features

- Fanless and cableless design
- Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 1.33 GHz
- Wide temperature operation of -40°C ~ +70°C
- 4 isolated COM ports
- 2 isolated Ethernet ports
- 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 remote monitoring software package



Din-rail kit ▲ Rear view

## Introduction

The rBOX101-4COM 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 rBOX101-4COM is equipped with four isolated RS-232/422/485, one isolated 10/100/1000Mbps Ethernet & one isolated 10/100Mbps Ethernet for offering magnetic isolation protection. Two power paths input minimize the risk of data loss in the event of a single power failure. Featuring IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, the rBOX101-4COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

The ready-to-run rBOX101-4COM equipped with AXView remote 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 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	4 x Isolated 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 2 KV COM 1 & COM 2 speed up to 115.2kbps COM 3 & COM 4 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 USB 2.0 USB power distribution control by software

System I/O Outlet	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	Wireless	1 x MiniCard (Full size, supports USB only) 1 x SIM socket onboard Supports 3G/GPRS
	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 CompactFlash™ 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 Input Rating	12-48VDC, 1.5-0.4A
	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	10% ~ 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 support package, Windows® 7 Embedded	
ISO	Manufactured in an ISO9001 facility	
Safety Compliance	UL508, UL60950-1 Heavy Industrial CE, including: EN60950-1, IEC60950-1	

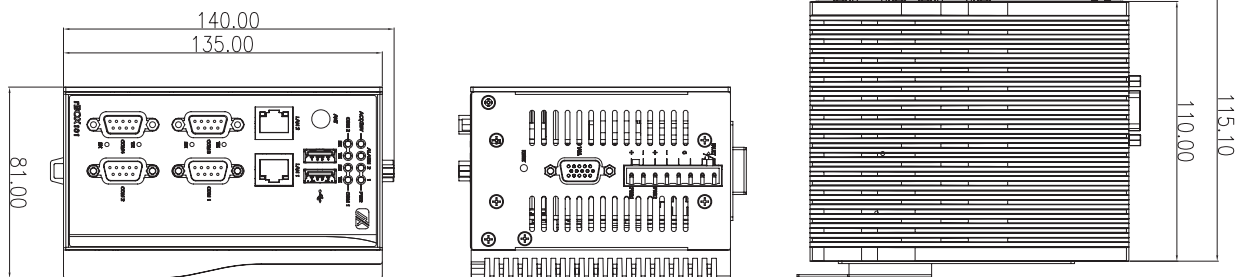
## Specifications

EMI Compliance	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
EMS Compliance	EN50121-4 (Railway application) 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	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	
rBOX101-4COM-FL1.1G-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 4 isolated COM ports (-40°C ~ +70°C)
rBOX101-4COM-FL1.33G-DC	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 SO-DIMM	1 GB ~ 2 GB (with W.T. memory)
DDR2 SO-DIMM	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





# rBOX101-6COM(ATEX)

ATEX Anti-Explosion Certified Robust Din-rail Fanless Embedded System



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

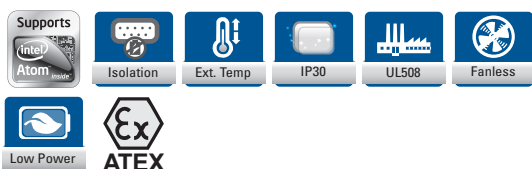
1 isolated DIO (4-IN/4-OUT)

6 isolated COM



Intel® Atom™ processor Z510 PT/ Z520PT

▲ Front view



## Features

- ATEX anti-explosion type "nA" zone 2 group II Certification
- Fanless and cableless design
- Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 1.33 GHz
- Wide temperature operation of -40°C ~ +70°C
- 6 isolated COM ports, 1 isolation DIO (4-IN/4-OUT)
- 2 isolated Ethernet ports
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports one CompactFlash™, one SD card (optional)
- 2 power paths with terminal block and 12-48VDC
- Supports AXView remote monitoring software package



Din-rail kit ▲ Rear view

## Introduction

The rBOX101-6COM(ATEX) 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(ATEX) 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, the rBOX101-6COM(ATEX) is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

The ready-to-run rBOX101-6COM(ATEX) equipped with AXView remote monitoring software is a total solution for power plant automation, facility monitoring systems, intelligent transportation systems, and more.

## Specifications

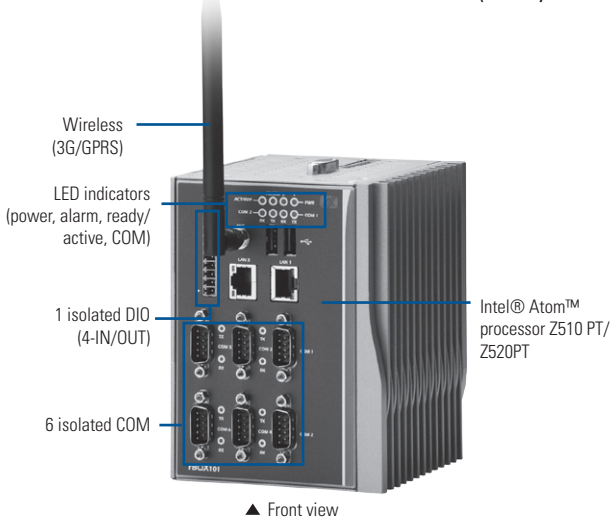
Standard Color	Sliver-Black
Construction	Extruded aluminum and heavy-duty steel, IP30
CPU	Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 1.33 GHz
System Memory	1 x 200-pin DDR2 SO-DIMM max. up to 2 GB
System I/O Outlet	Serial Port 6 x Isolated RS-232/422/485 (COM 1-6) Interface select by software or 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 USB 2.0 USB power distribution control by software

System I/O Outlet	DIO	1 x DIO (4-IN/4-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	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 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



# rBOX101-6COM

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



## 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
- 6 isolated COM ports, 1 isolation DIO (4-IN/4-OUT)
- 2 isolated Ethernet ports
- 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 remote monitoring software package



## Introduction

The 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, the 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 remote 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 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 6 x Isolated 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 USB 2.0 USB power distribution control by software

System I/O Outlet	DIO	1 x DIO (4-IN/4-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 2 KV
	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)
	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

## Specifications

Power Supply	2 power paths
	Power Input Range 12-48VDC
	Power Input Rating 12-48VDC, 1.5-0.4A
	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	10% ~ 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 support package, 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	EN50121-4 (Railway application) 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

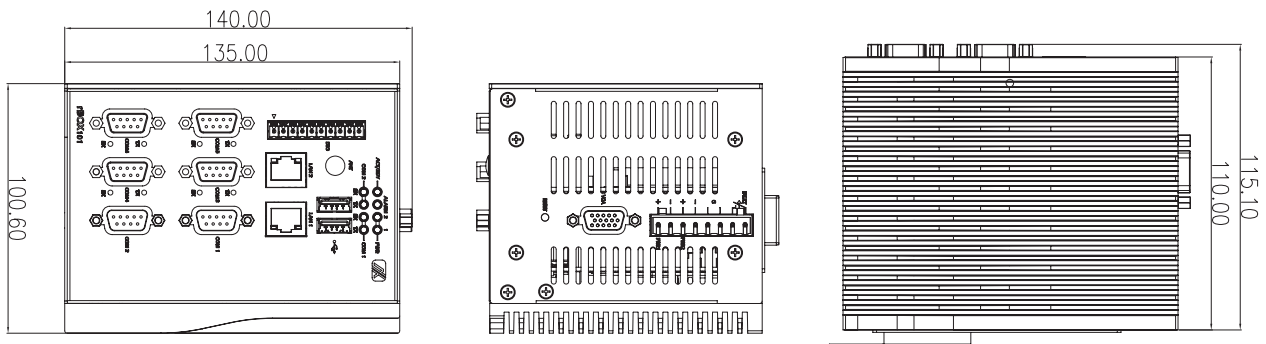
Environmental Test	IEC60068-2-6 Fc (vibration resistance) 5 g @ 10 ~ 150 Hz, amplitude 0.35 mm (operation/storage/transport)
	IEC60068-2-27 Ea (shock) 25 g @ 11 ms (half-sine shock pulse; operation); 50 g @ 11 ms (half-sine shock pulse; storage/transport)
	IEC60068-2-32 Ed (free fall) 1 M (3.281ft)

## Ordering Information

Standard	
rBOX101-6COM-FL1.1G-DC	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-FL1.33G-DC	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	2 GB or above (with W.T. CF)
Wall mount kit	
Wireless (3G/GPRS) module for rBOX series	

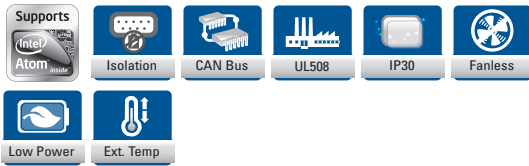
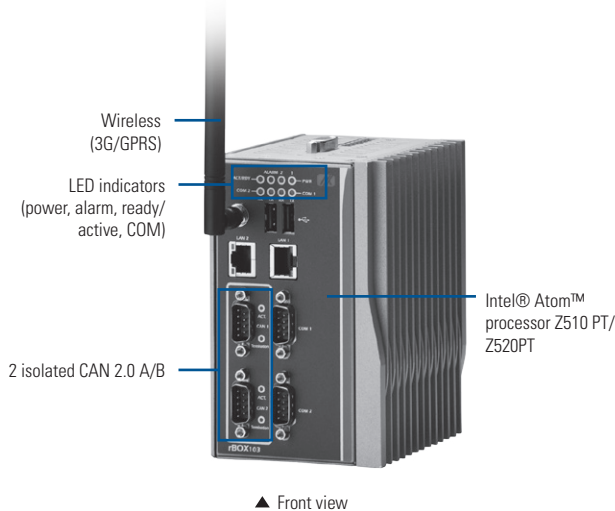
\*Specifications and certifications are based on options and may vary.

## Dimensions



# rBOX103

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



## Features

- Fanless and cableless design
- Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 1.33 GHz
- Wide temperature operation of -40°C ~ +70°C
- 2 isolated CAN 2.0 A/B
- 2 isolated Ethernet ports
- 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 remote monitoring software package



## Introduction

The 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.

The rBOX103 features rich expansion for communication such as CAN bus in-vehicle network. The ready-to-run rBOX103 equipped with AXView remote monitoring software is a total solution for facility monitoring systems, intelligent transportation systems, 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) 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 USB 2.0 USB power distribution control by software
CAN	2 CAN 2.0 A/B (DB9 connector) Meets ISO 11898 standard

System I/O Outlet	CAN	Software 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 Input Rating	12-48VDC, 1.4-0.4A
	Power Protection	DC Version: OVP (over voltage protection) UVP (under voltage protection) Reverse protection
Power Supply	Power	0.7A @ 24V, 17W
	Consumption (COM port link up)	0.47A @ 36V, 17.24W 0.36A @ 48V, 17.48W

## Specifications

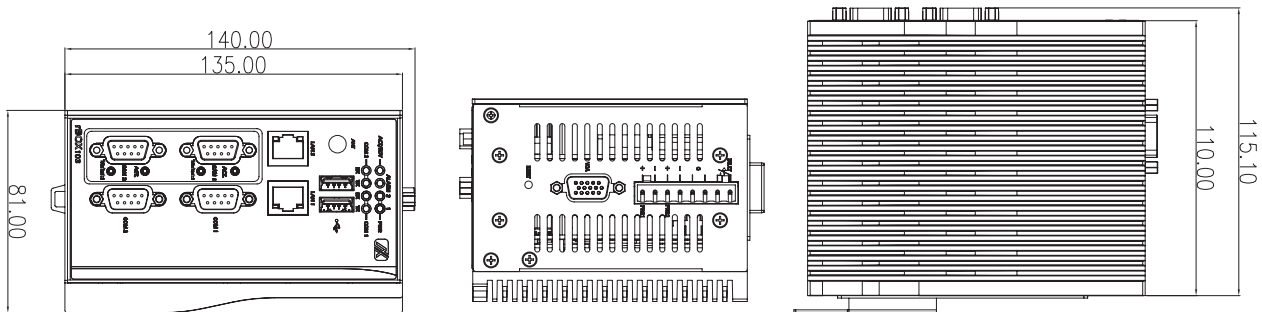
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)
Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)
Humidity	10% ~ 95%
Weight (net/gross)	1.38 kg (3 lb)/1.72 kg (3.78 lb)
Dimensions	81 mm (3.18") (W) x 110 mm (4.33") (D) x 135 mm (5.31") (H)
EOS Support	XPE, WinCE, Linux support package, Windows® 7 Embedded
ISO	Manufactured in an ISO9001 facility
Safety	UL508, UL60950-1
Compliance	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	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-DC	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-DC	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	

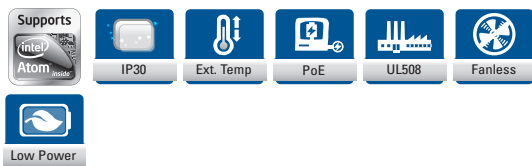
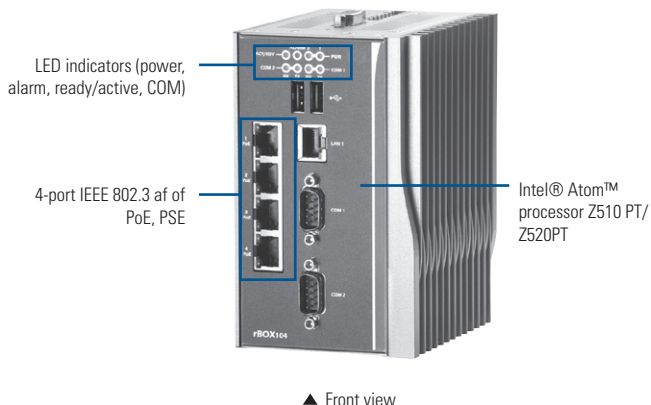
\*Specifications and certifications are based on options and may vary.

## Dimensions



# rBOX104

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPPT and 4-port PoE



## Features

- Fanless and cableless design
- 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 port
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports 1 CompactFlash™, 1 SD card (optional)
- 2 power paths with terminal block and 48VDC
- Supports AXView remote monitoring software package



Din-rail kit ▲ Rear view

## Introduction

The 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 remote 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) 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 Magnetic isolation protection 1.5 KV
	PoE	4 x PoE (IEEE802.3af) Magnetic isolation protection 1.5 KV

System I/O Outlet	USB	2 x USB 2.0 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 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 CompactFlash™ 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 Input Rating	48VDC, 1.8A
	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	10% ~ 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 support package, Windows® 7 Embedded	
ISO	Manufactured in an ISO9001 facility	
Safety Compliance	UL508, UL60950-1 Heavy Industrial CE, including: EN60950-1, IEC60950-1	

## Specifications

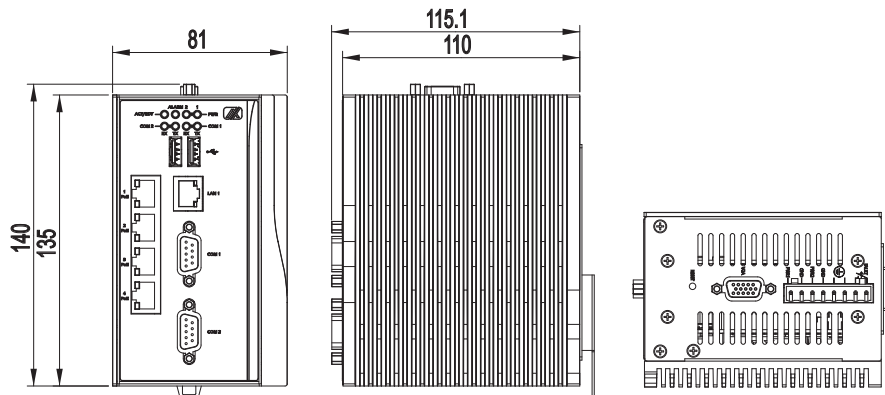
EMI Compliance	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
EMS Compliance	Heavy Industrial CE, including: EN61000-6-2 EN61000-4-2 (ESD standards) * Contact: +/- 6 KV; criteria B * Air: +/- 8 KV; criteria B EN61000-4-3 (radiated RFI standards) * 10V/m, 80 to 1000 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	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	
rBOX104-FL 1.1G-DC	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-DC	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.

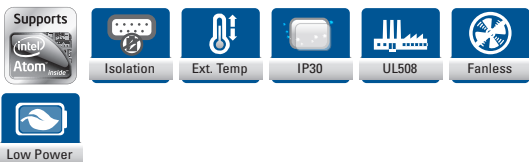
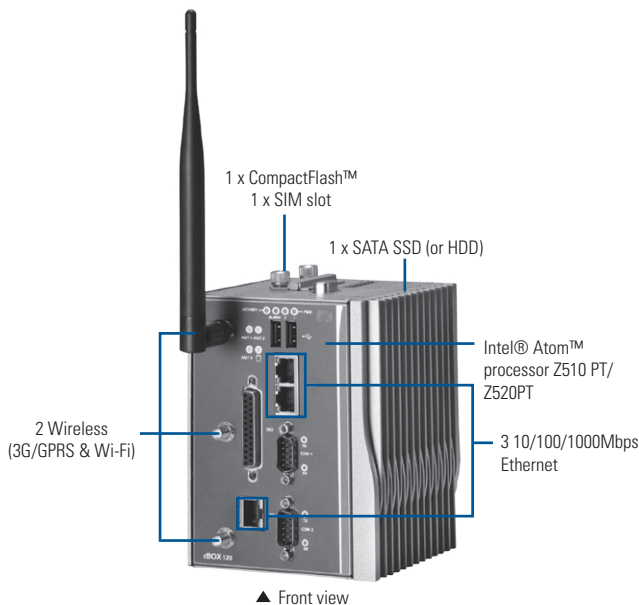
## Dimensions





# rBOX120-2COM

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor Z510PT/ Z520PT up to 1.33 GHz, Intel® US15WPT, 2 Isolated COM, SATA SSD, LANs and RTC



## Introduction

The rBOX120-2COM 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 rBOX120-2COM is equipped with 2 isolated RS-232/422/485, 3 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. In addition, the RTC battery (battery onboard & gold-capacity onboard) reduces maintenance efforts and is ideally suited to vibration environment. Powered by IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, the rBOX120-2COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

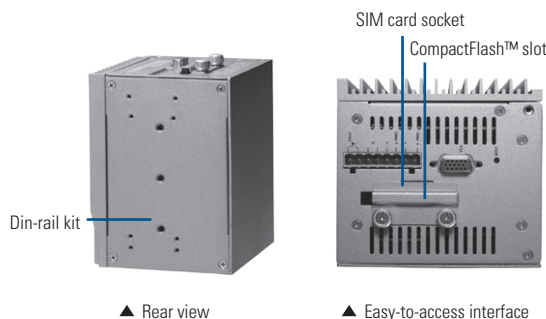
The ready-to-run rBOX120-2COM equipped with AXView remote monitoring software is a total solution for power plant automation, facility monitoring systems, intelligent transportation systems, and more.

## Specifications

Standard Color	Sliver-Black	
Construction	Extruded aluminum and 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 Isolated RS-232/422/485 (COM 1~2) 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

## Features

- Fanless and cableless design
- Intel® Atom™ processor Z510PT 1.1 GHz or Z520PT 1.33 GHz
- Wide temperature operation of -40°C ~ +70°C
- 2 isolated COM ports
- 3 isolated 10/100/1000Mbps Ethernet ports
- 1 isolated DIO (8-In/ 8-Out)
- 2 watchdog timer
- RTC Battery function
- LED indicators
- 2 wireless (3G/GPRS & Wi-Fi)
- SNMP V1/V2c
- Supports 1 x 2.5" SATA SSD (or HDD)
- Supports 1 CompactFlash™, 1 SD card (optional)
- 2 power paths with terminal block and 12-48VDC
- Supports AXView remote monitoring software package



System I/O Outlet	LAN	3 x 10/100/1000Mbps Ethernet Magnetic isolation protection 1.5 KV
	USB	2 x USB 2.0 USB power distribution control by software
DIO		1 x DIO (8-In/8-Out) DI : Input channels : 8 source type Input voltage : 0 to 24VDC Digital input level 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 XIN_ COM-) -Logic level 1 : +3V max. DO : Output channels : 8 sink type Output current : Max. 200mA per channel On-state voltage : 24VDC nominal, open collector to 30V Optical isolation protection 2KV
	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		2 x Mini Card - 3G/GPRS and Wi-Fi - Supports USB interface on 3G/GPRS and supports PCIe interface on Wi-Fi 1 x SIM socket (Easy-to-access)

## Specifications

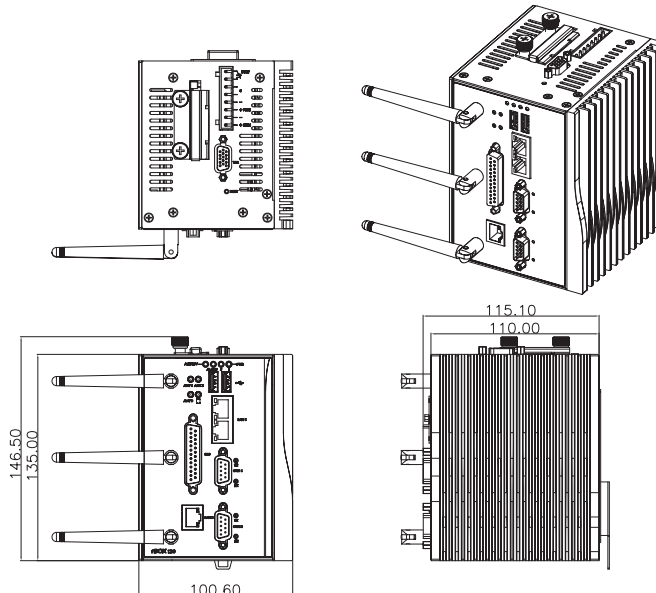
Watchdog Timer	2 WDT WDT 1: one step is 1 sec, 255 levels WDT 2: one step is 250ms, 255 levels	
LEDs	System	Power, Alarm, Ready/Active, COM (TXD, RXD), wireless (3G/GPRS/Wi-Fi)
	Alarm	DC PWR1 or PWR2 is lost (default) User define event
Storage	Supports 1 x 2.5" SATA SSD or HDD Supports 1 x CompactFlash™ (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
	Power Input Rating	12-48VDC, 1.51-0.41A
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	10% ~ 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 support package, 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	

Environmental Test	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
	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

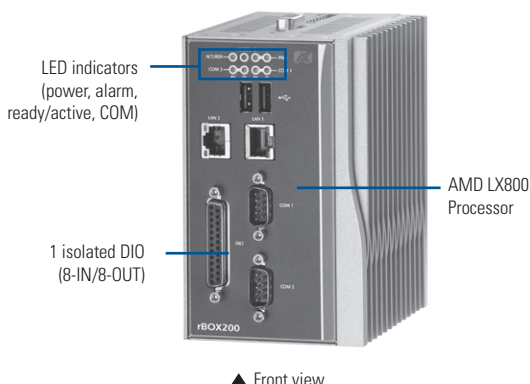
Standard	
rBOX120-2COM-FL1.1G-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor Z510PT 1.1 GHz and 2 isolated COM ports (-40°C ~ +70°C)
rBOX120-2COM-FL1.33G-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor Z520PT 1.33 GHz and 2 isolated COM ports (-40°C ~ +70°C)
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 Wi-Fi) module for rBOX series	
*Specifications and certifications are based on options and may vary.	

## Dimensions



# rBOX200

Robust Din-rail Fanless Embedded System with AMD LX800 + CS5536AF and 1 Isolated DIO (8-IN/8-OUT)



## Features

- Fanless and cableless design
- Supports AMD LX800 processor
- Wide temperature operation of -40°C ~ +70°C
- 1 isolated DIO (8-IN/8-OUT)
- 2 isolated 10/100Mbps Ethernet ports
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports one CompactFlash™
- 2 power paths with terminal block and 12-48VDC
- Supports AXView remote monitoring software package



## Introduction

The rBOX200 cost-effective din-rail fanless embedded system utilizes the low power AMD LX800 processor and is designed to withstand temperatures ranging from -40°C to +70°C for use in extreme operating environments.

Its 8-IN/8-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. With its built-in VGA output interface, the rBOX200 is suitable for use with SCADA systems. The robust rBOX200 is specifically designed for remote control/ monitoring management applications like unmanned control room, industrial machine, automatic parking lot, traffic cabinet and more.

The ready-to-run rBOX200 equipped with AXView remote 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	AMD LX800 processor	
System Memory	1 x 200-pin DDR400 SO-DIMM max. up to 1 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	2 x 10/100Mbps Ethernet Magnetic isolation protection 1.5 KV

System I/O Outlet	USB	2 x USB 2.0 USB power distribution control by software
	DIO	1 x DIO (8-IN/8-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 2KV
	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 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 CompactFlash™	
Installation	Din-rail, wall mount	
Power Supply	2 power paths	
	Power Input Range	12-48VDC
	Power Input Rating	12-48VDC, 1.3-0.3A
	Power Protection	DC Version: OVP (over voltage protection) UVP (under voltage protection) Reverse protection

## Specifications

Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)
Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)
Humidity	10% ~ 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 support package
ISO	Manufactured in an ISO9001 facility
Safety	Heavy Industrial CE, including: EN60950-1, IEC60950-1
Safety Compliance	UL508, UL60950-1
EMI	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
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	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)
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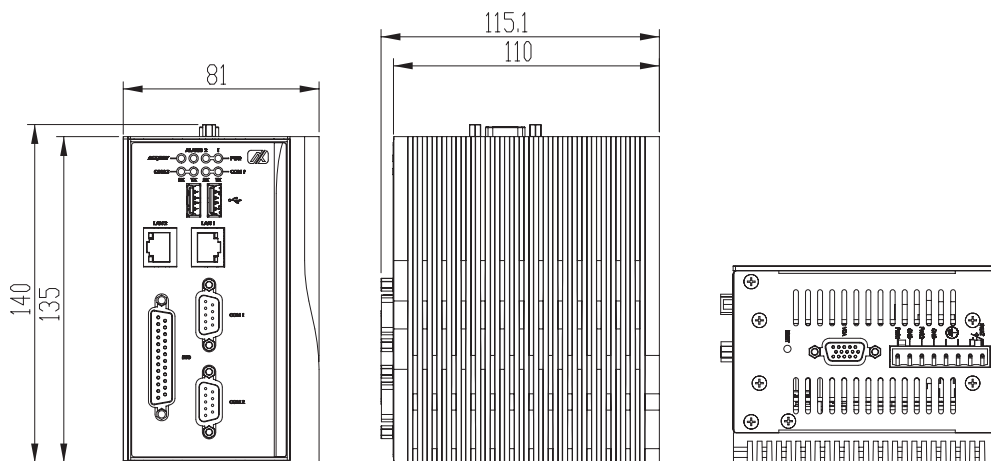
## Ordering Information

Standard	
rBOX200-FL-DC	Robust din-rail fanless embedded system with AMD LX800 proceor and 1 isolated DIO (8-IN/8-OUT) (-40°C ~ +70°C)

Optional	
DDR SO-DIMM	512 MB ~ 1 GB (with W.T. memory)
CompactFlash™	2 GB or above (with W.T. CF)
Wall mount kit	

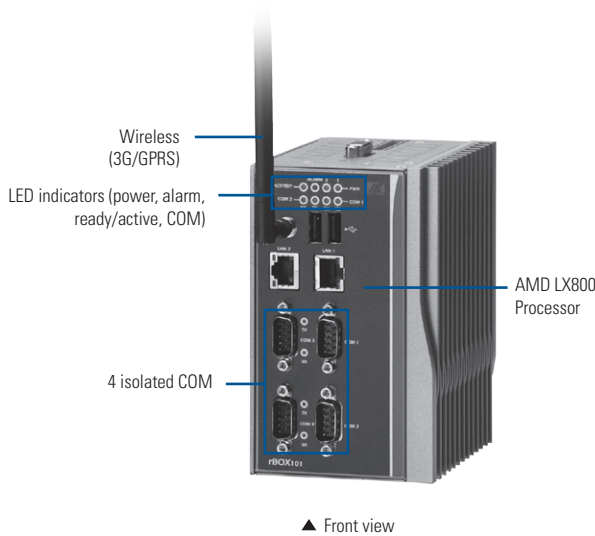
\*Specifications and certifications are based on options and may vary.

## Dimensions



# rBOX201-4COM

Robust Din-rail Fanless Embedded System with AMD LX800 + CS5536AF and 4 Isolated COM



## Features

- Fanless and cableless design
- Supports AMD LX800 processor
- Wide temperature operation of -40°C ~ +70°C
- 4 isolated COM ports
- 2 isolated 10/100Mbps Ethernet ports
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports 1 CompactFlash™
- 2 power paths with terminal block and 12-48VDC
- Supports AXView remote monitoring software package



## Introduction

The rBOX201-4COM cost-effective din-rail fanless embedded system utilizes the low power AMD LX800 processor and is designed to withstand temperatures ranging from -40°C to +70°C for use in extreme operating environments.

To prevent ESD and over-voltage, this super compact-size rBOX201-4COM is equipped with four isolated RS-232/422/485, two isolated 10/100Mbps Ethernet for offering magnetic isolation protection. Two power paths input minimizes the risk of data loss in the event of a single power failure. IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, the rBOX201-4COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more. Besides, the rBOX201-4COM is also specially designed for remote control/monitoring management applications like unmanned control room, industrial machine, automatic parking lot, traffic cabinet and more.

The ready-to-run rBOX201-4COM equipped with AXView remote 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 heavy-duty steel, IP30	
CPU	AMD LX800 processor	
System Memory	1 x 200-pin DDR400 SO-DIMM max. up to 1 GB	
System I/O Outlet	Serial Port	4 x Isolated 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 2 KV COM 1 & COM 2 speed up to 115.2kbps COM 3 & COM 4 serial port speed up to 921.6kbps
	LAN	2 x 10/100Mbps Ethernet Magnetic isolation protection 1.5 KV

System I/O Outlet	USB	2 x USB 2.0 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
	Wireless	1 x Mini Card (Full size, supports USB only) 1 x SIM card 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)
	Alarm	DC PWR1 or PWR2 is lost (default) User define event
Storage	Supports 1 x CompactFlash™	
Installation	Din-rail, wall mount	
Power Supply	2 power paths	
	Power Input Range	12-48VDC
	Power Input Rating	12-48VDC, 1.5-0.4A
	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	10% ~ 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 support package	

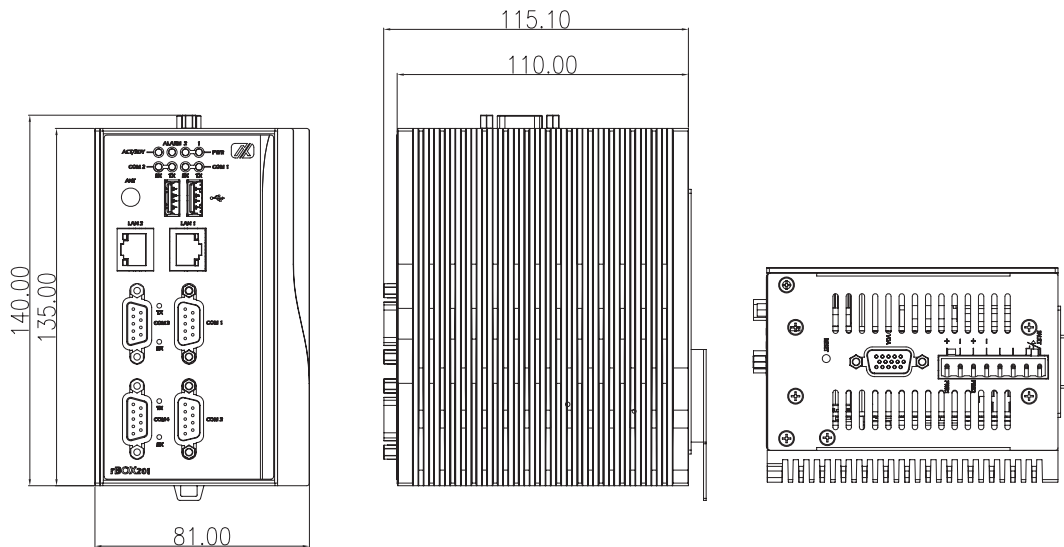
## Specifications

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	EN50121-4 (Railway application) 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	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

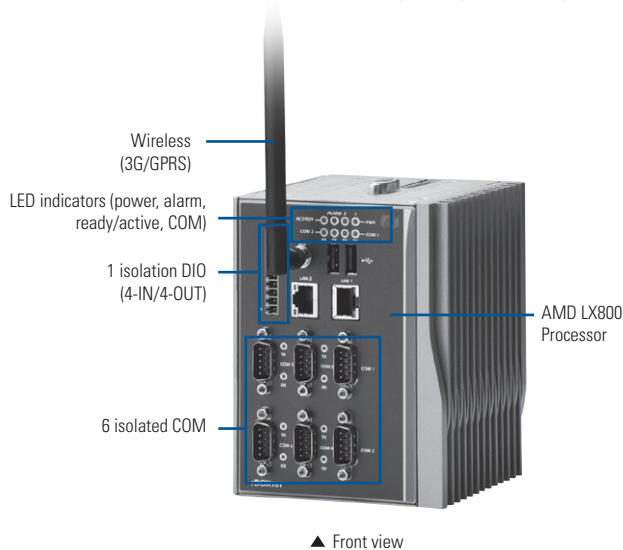
<b>Standard</b>	
rBOX201-4COM-FL-DC	Robust din-rail fanless embedded system with AMD LX800 processor and 4 isolated COM ports (-40°C ~ +70°C)
<b>Optional</b>	
DDR SO-DIMM	512 MB ~ 1 GB (with W.T. memory)
CompactFlash™	2 GB or above (with W.T. CF)
Wall mount kit	
Wireless (3G/GPRS) module for rBOX seriesit	
*Specifications and certifications are based on options and may vary.	

## Dimensions



# rBOX201-6COM

Robust Din-rail Fanless Embedded System with AMD LX800 + CS5536AF, 6 Isolated COM and 1 Isolated DIO (4-IN/4-OUT)



## Introduction

The rBOX201-6COM cost-effective din-rail fanless embedded system utilizes the low power AMD LX800 processor and is designed to withstand temperatures ranging from -40°C to +70°C for use in extreme operating environments.

To prevent ESD and over-voltage, this super compact-size rBOX201-6COM is equipped with six isolated RS-232/422/485, two isolated 10/100Mbps Ethernet and one isolated DIO port for offering magnetic isolation protection. Two power paths input minimizes the risk of data loss in the event of a single power failure. IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, the rBOX201-6COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more. Besides, the rBOX201-6COM is also specially designed for remote control/ monitoring management applications like unmanned control room, industrial machine, automatic parking lot, traffic cabinet and more.

The ready-to-run rBOX201-6COM equipped with AXView remote 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 heavy-duty steel, IP30	
CPU	AMD LX800 processor	
System Memory	1 x 200-pin DDR400 SO-DIMM max. up to 1 GB	
System I/O Outlet	Serial Port	6 x Isolated 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	2 x 10/100Mbps Ethernet Magnetic isolation protection 1.5 KV
	USB	2 x USB 2.0 USB power distribution control by software

## Features

- Fanless and cableless design
- Supports AMD LX800 processor
- Wide temperature operation of -40°C ~ +70°C
- 1 isolated DIO (4-IN/4-OUT)
- 6 isolated COM ports
- 2 isolated 10/100Mbps Ethernet ports
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports 1 CompactFlash™
- 2 power paths with terminal block and 12-48VDC
- Supports AXView monitoring software package



System I/O Outlet	DIO	1 x DIO (4-IN/4-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 2 KV
	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 card 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)
	Alarm	DC PWR1 or PWR2 is lost (default) User define event
Storage	Supports 1 x CompactFlash™	
Installation	Din-rail, wall mount	
Power Supply	2 power paths	
	Power Input Range	12 - 48VDC
	Power Input Rating	12-48VDC, 1.5-0.4A
	Power Protection	DC Version: OVP (over voltage protection) UVP (under voltage protection) Reverse protection

## Specifications

Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)
Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)
Humidity	10% ~ 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 support package
ISO	Manufactured in an ISO9001 facility
Safety	UL508, UL60950-1
Compliance	Heavy Industrial CE, including: EN60950-1, IEC60950-1
EMI	FCC Part 18
Compliance	Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
EMS	EN50121-4 (Railway application)
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	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)
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## Ordering Information

### Standard

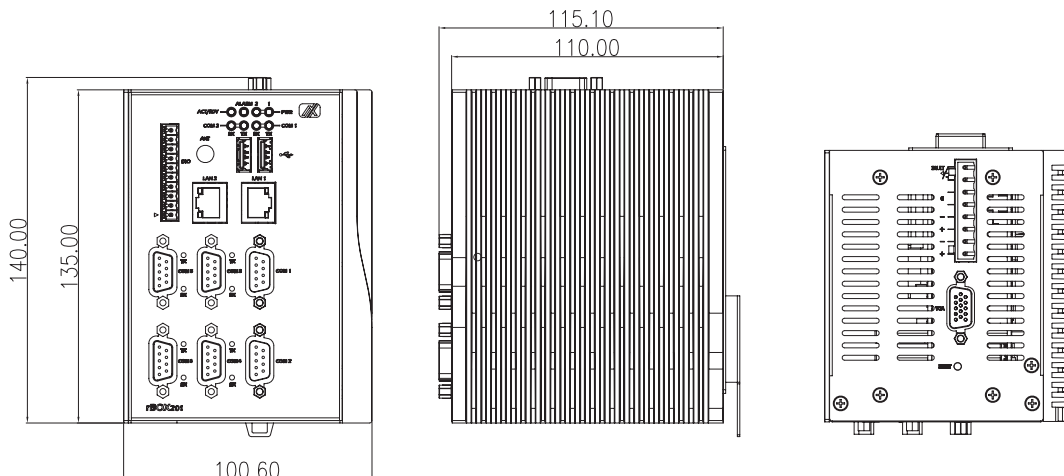
rBOX201-6COM-FL-DC	Robust din-rail fanless embedded system with AMD LX800 processor and 6 isolated COM ports (-40°C ~ +70°C)
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### Optional

DDR SO-DIMM	512 MB ~ 1 GB (with W.T. memory)
CompactFlash™	2 GB or above (with W.T. CF)
Wall mount kit	
Wireless (3G/GPRS) module for rBOX seriesit	

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

## Dimensions



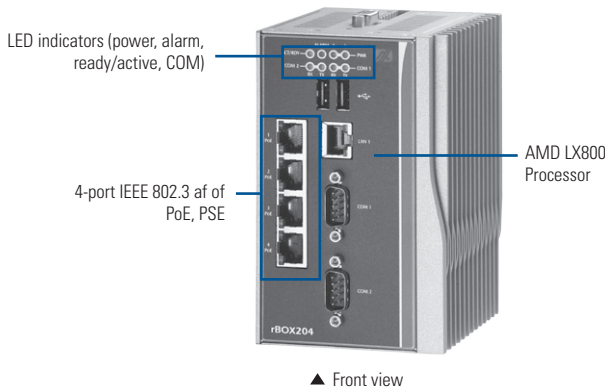


# rBOX204

Robust Din-rail Fanless Embedded System with AMD LX800 + CS5536AF and 4-port PoE

## Features

- Fanless and cableless design
- Supports AMD LX800 processor
- Wide temperature operation of -40°C ~ +70°C
- 4-port IEEE802.3af Power over Ethernet (PoE) Power Sourcing Equipment (PSE)
- 1 isolated Ethernet port
- 2 watchdog timer
- LED indicators
- SNMP V1/V2c
- Supports 1 CompactFlash™
- 2 power paths with terminal block and 48VDC
- Supports AXView remote monitoring software package



## Introduction

The rBOX204 cost-effective din-rail fanless embedded system utilizes the low power AMD LX800 processor and is designed to withstand temperatures ranging from -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 rBOX204 Din-rail computer features a redundant Ethernet LAN connection for greater availability and reliability. Supporting Power-over-Ethernet on ports 1 to 4, the rBOX204 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 minimizes the risk of data loss in the event of a single power failure. The rBOX204 Din-rail computer meets Safety Agency requirements and has passed heavy industrial EMI/EMS testing

The ready-to-run rBOX204 equipped with AXView remote 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	AMD LX800 processor
System Memory	1 x 200-pin DDR400 SO-DIMM max. up to 1 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 10/100Mbps Ethernet Magnetic isolation protection 1.5 KV

System I/O Outlet	PoE	4 x PoE (IEEE802.3af) Magnetic isolation protection 1.5 KV
	USB	2 x USB 2.0 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 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 CompactFlash™	
Installation	Din-rail, wall mount	
Power Supply	2 power paths	
	Power Input Range	48VDC
	Power Input Rating	48VDC, 1.8A
	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	10% ~ 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 support package	
ISO	Manufactured in an ISO9001 facility	

## Specifications

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	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.)
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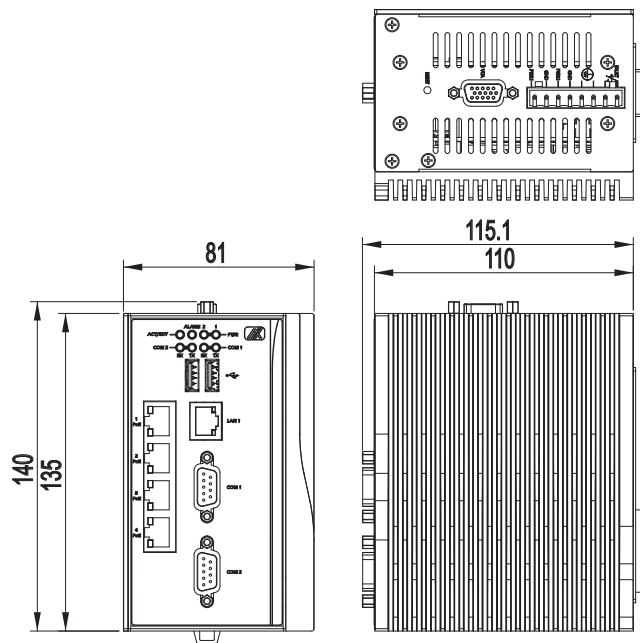
## Ordering Information

Standard	
rBOX204-FL-DC	Robust din-rail fanless embedded system with AMD LX800 processor and 4-port PoE (-40°C ~ +70°C)

Optional	
DDR SO-DIMM	512 MB ~ 1 GB (with W.T. memory)
CompactFlash™	2 GB or above (with W.T. CF)
Wall mount kit	

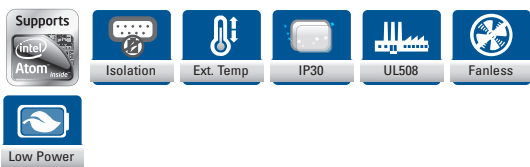
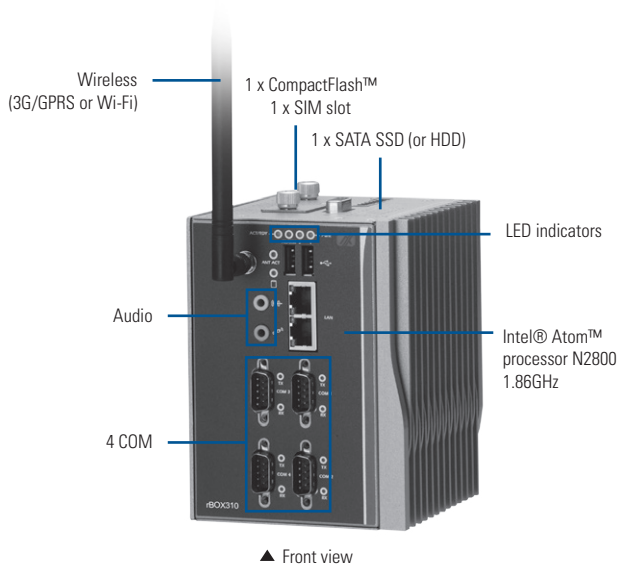
\*Specifications and certifications are based on options and may vary.

## Dimensions



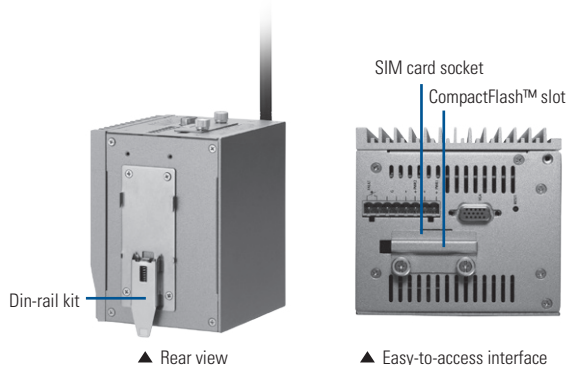
# rBOX310-4COM

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor N2800 1.86GHz, Intel® NM10, 4 COM, SATA SSD, Audio and RTC



## Features

- Fanless and cableless design
- Supports Intel® Atom™ processor N2800 1.86GHz dual core
- Wide temperature operation of -40°C ~ +70°C
- 4 COM ports
- 2 isolated 10/100/1000Mbps Ethernet ports
- 2 watchdog timer
- RTC Battery function
- LED indicators
- 1 wireless (3G/GPRS or Wi-Fi)
- SNMP V1/V2c
- Supports one 2.5" SATA SSD (or HDD)
- Supports 1 CompactFlash™
- 2 power paths with terminal block and 12-48VDC
- Supports AXView remote monitoring software package



## Introduction

The rBOX310-4COM din-rail fanless embedded field controller supports extra low power Intel® Atom™ processors N2800 1.86GHz 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 rBOX310-4COM is equipped with 4 RS-232/422/485, 2 isolated 10/100/1000Mbps Ethernet for rugged work environment. Two power paths input minimize the risk of data loss in the event of a single power failure. In addition, the RTC battery (battery onboard & gold-capacity onboard) reduces maintenance efforts and is ideally suited to vibration environment. Powered by IP30 housing, wide operating temperature range and Safety/EMI/EMS compliance, the rBOX310-4COM is ideal for intelligent computing and communication solutions in critical environments such as power utility, transportation and more.

The ready-to-run rBOX310-4COM equipped with AXView remote 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 heavy-duty steel, IP30
CPU	Intel® Atom™ processor N2800 1.86GHz Dual Core
System Memory	1 x DDR3 SO-DIMM 800/1066MHz up to 4 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 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
Watchdog Timer	Wireless	1 x Mini Card - 3G/GPRS or Wi-Fi - Supports USB interface on 3G/GPRS or supports PCIe interface on Wi-Fi 1 x SIM socket (Easy-to-access)
	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)
Installation		Din-rail, wall mount
Power Supply		2 power paths
		Power Input Range 12-48VDC
		Power Input Rating 12-48VDC, 1.88-0.47A

## 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	10% ~ 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, Linux support package, 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	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	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

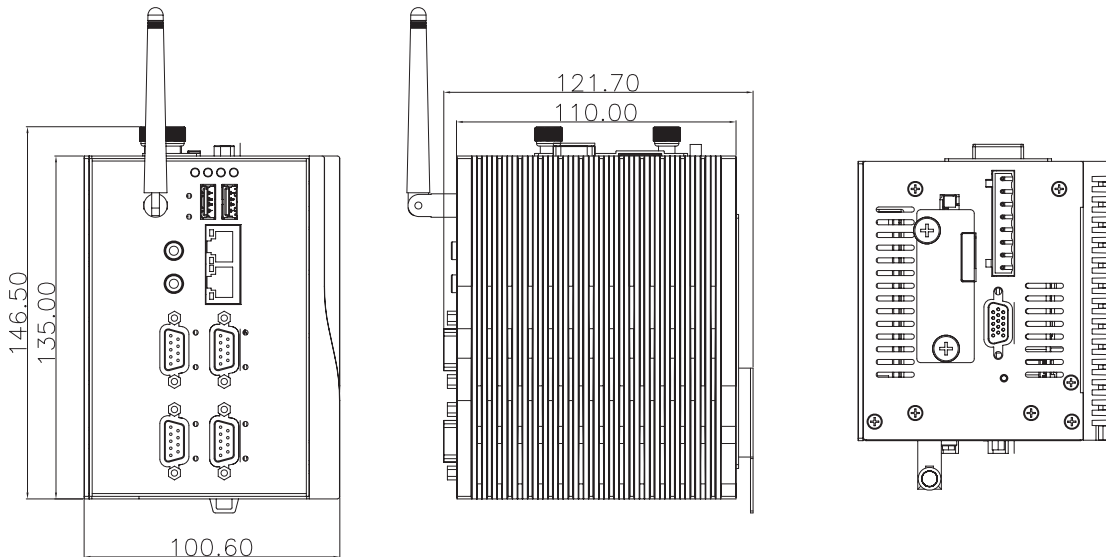
rBOX310-4COM-FLL-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor N2800 1.86GHz dual core and 4 COM ports (-40°C ~ +70°C)
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### Optional

DDR3 SODIMM	1 GB ~ 4 GB (with W.T. memory)
DDR3 SODIMM	1 GB ~ 4 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 Wi-Fi) module for rBOX series	

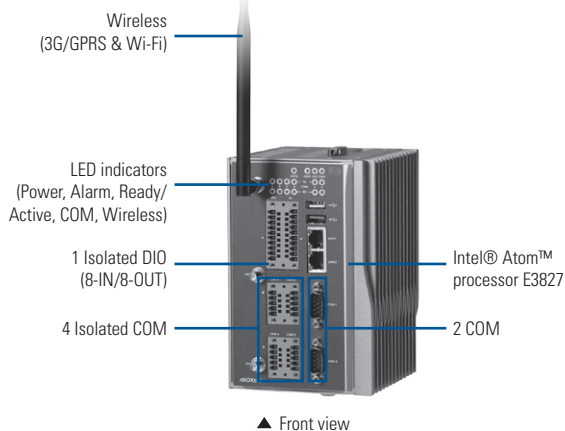
\*Specifications and certifications are based on options and may vary.

## Dimensions



# rBOX510-6COM

Robust Din-rail Fanless Embedded System with Intel® Atom™ Processor E3827 (1.75 GHz), 6 COM, SATA SSD, DIO, 2 GbE LANs and RTC

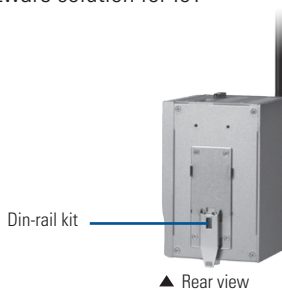


## Specifications

Standard Color	Sliver-Black	
Construction	Extruded aluminum and heavy-duty steel, IP30	
CPU	Intel® Atom™ Processor E3827 (1.75GHz) Dual Core	
System Board	CEM840	
System Memory	DDR3L 4GB onboard	
BIOS	AMI UEFI BIOS	
System I/O Outlet	Serial Port	2 x RS232/422/485 (COM1~2) 4 x Isolation RS232/422/485 (COM3~6) 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
	USB	1 x USB 3.0 & 1 x USB 2.0 USB power distribution control by software
	RTC	Battery onboard & Gold capacity onboard (1st backup battery when power shut-down)
	Storage	Supports 1 x 2.5" SATA SSD/HDD (default) or 1 x mSATA (by BIOS selectable) Supports 1 x CompactFlash™ (easy-to-access)
	LAN	2 10/100/1000 Ethernet Magnetic isolation protection 1.5KV
	VGA	1 x DB15 connector
	Power Input	1 x DC power input with terminal block

## Features

- Fanless and cableless design
- Supports Intel® Atom™ processor E3827 (1.75GHz) dual core
- Wide temperature operation of -40°C ~ +70°C
- 4 isolated RS-232/422/485 COM ports & 2 RS-232/422/485 COM ports
- 2 isolated 10/100/1000Mbps Ethernet ports
- 2 watchdog timer
- RTC Battery function
- LED indicators
- 3 wireless (3G/GPRS & Wi-Fi)
- Supports 1 x 2.5" SATA SSD/HDD (or mSATA), 1 CompactFlash™
- Wide range 12-48 VDC-In with terminal block
- Supports AXView 2.0 intelligent remote monitoring software solution for IoT



System I/O Outlet	Wireless	3 x Full size Mini Card slot supports 3G/GPRS and Wi-Fi 2 x SIM card socket 3 x Antenna 3 x LED
	DIO	1 isolated DIO (8-IN/ 8-OUT) , DI : Input channels : 8 source type Input voltage : 0 to 30VDC Digital input Digital input levels for dry/wet contacts DO : Output channels : 8 sink type Output current : Max. 200mA per channel External Voltage:10 to 30 VDC Open Collector to 30V Optical isolation protection 3 KV
Watchdog Timer	2 WDT WDT 1 : one step is 1 sec, 255 levels WDT 2 : one step is 1 sec/1 min, 255 levels	
System Indicator	Power, Alarm, Ready/Active, COM, Wireless	
Power Supply	Power Input Range : 12-48VDC Power Input Rating : 12-48VDC, 1.36-0.45A Power Protection : DC version, OVP, UVP, Reserve Protection	
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)	
Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)	
Humidity	10% ~ 95%	
Vibration Endurance	5g@10~150Hz, amplitude 0.35mm (operation/storage/transport)	
Weight (net/gross)	1.5 kg (3.3 lb)/ 1.88 kg (4.14 lb)	
Dimensions	100.6 mm (3.96") (W) x 110 mm (4.33") (D) x 135 mm (5.31") (H)	
EOS Support	Windows 7 Embedded ,Windows 8 Embedded Linux support package	
Remote Management Software	AXView 2.0 Intelligent Embedded Solution for IoT -Local Hardware Monitoring -Local SRAM Backup -Remote Management -Store Apps -Service Cloud -SNMP, MQTT, MODBUS, SNMP Trap & Email	

\* W.T.: Wide Temperature. All W.T. supported products have to be sorted by AXIOMTEK.

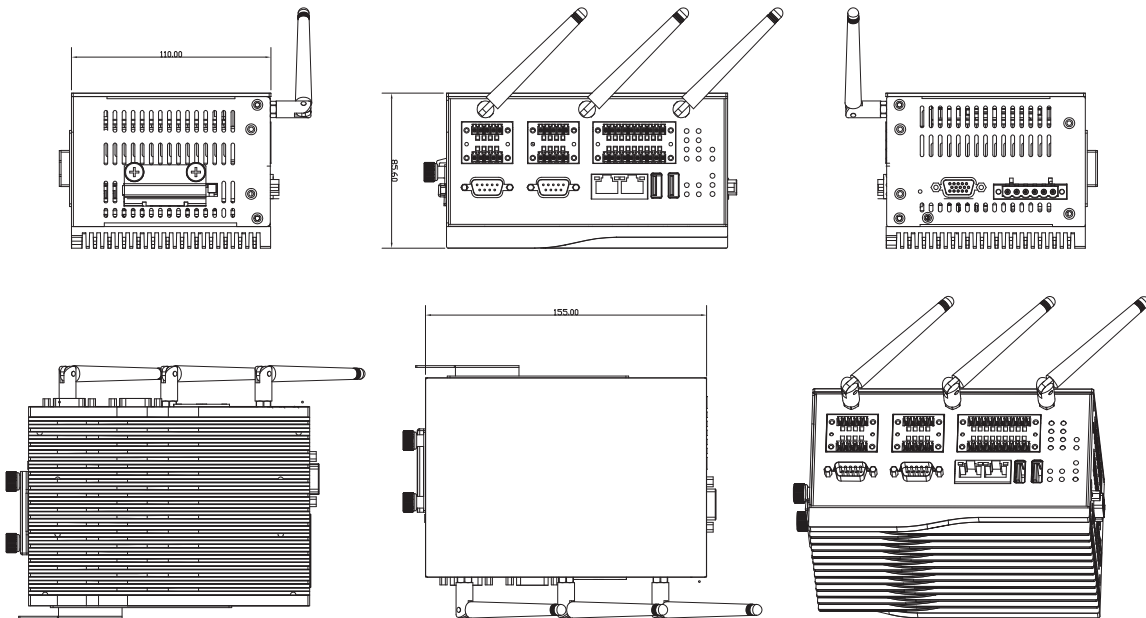
## Specifications

ISO	Manufactured in an ISO9001 facility
Safety	UL60950-1 Heavy Industrial CE, including: EN60950-1, IEC60950-1
EMI	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
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 * 1400~2000 MHz, 3 V/m, 80% AM (1 kHz) * 2000~2700 MHz, 1 V/m, 80% AM (1 kHz) 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

<b>Standard</b>	
rBOX510-6COM-FL-DC	Robust din-rail fanless embedded system with Intel® Atom™ processor E3827 1.75 GHz dual core and 6 COM ports (-40°C ~ +70°C)
<b>Optional</b>	
CompactFlash™	8 GB or above (with W.T. CF)
2.5" SATA SSD or HDD	
m-SATA WT	
Wall Mounting Kit	
Wireless (3G/GPRS or Wi-Fi) module for rBOX series	
*Specifications and certifications are based on options and may vary.	

## Dimensions



# rBOX510-6COM(ATEX/C1D2)

ATEX & CID2 Anti-Explosive Certified Robust  
Din-rail Fanless Embedded System with  
Intel® Atom™ Processor E3827 (1.75GHz)

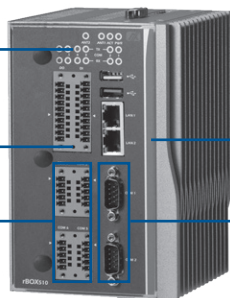
## Features



LED indicators  
(Power, Alarm, Ready/  
Active, COM, Wireless)

1 Isolated DIO  
(8-IN/8-OUT)

4 Isolated COM



▲ Front view



Intel® Atom™  
processor E3827

2 COM



- ATEX & CID2 anti-explosive certification
- Fanless and cableless design
- Supports Intel® Atom™ processor E3827 (1.75GHz) dual core
- Wide temperature operation of -40°C ~ +70°C
- 4 isolated RS-232/422/485 COM ports & 2 RS-232/422/485 COM ports
- 2 isolated 10/100/1000Mbps Ethernet ports
- 2 watchdog timer
- RTC Battery function
- LED indicators
- Supports one 2.5" SATA SSD, 1 CompactFlash™
- Wide range 12-48 VDC-In with terminal block
- Supports AXView 2.0 intelligent remote monitoring & management software solution for IoT application



▲ Rear view

## Specifications

Standard Color	Sliver-Black	
Construction	Extruded aluminum and heavy-duty steel, IP30	
CPU	Intel® Atom™ processor E3827 (1.75GHz) dual core	
System Board	CEM840	
System Memory	DDR3L 4 GB onboard	
BIOS	AMI UEFI BIOS	
System I/O Outlet	Serial Port	2 x RS-232/422/485 (COM 1 ~ 2, w/o Isolation), 4 x RS-232/422/485 (COM 3 ~ 6, default w/ Isolation) 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
	USB	1 x USB 3.0 & 1 x USB 2.0 USB power distribution control by software
	RTC	Battery onboard & Gold capacity onboard (1st backup battery when power shut-down)
	Storage	Supports 1 x 2.5" SATA SSD 1 x CompactFlash™ (easy-to-access)
	LAN	2 10/100/1000 Ethernet Intel® i210IT Magnetic isolation protection 1.5KV
	VGA	1 x DB15 connector
	Power Input	1 x DC power input with terminal block

System I/O Outlet	DIO	1 isolated DIO (8-IN/ 8-OUT) , DI: Input channels: 8 source type Input voltage: 0 to 30VDC Digital input Digital input levels for dry/wet contacts DO: Output channels: 8 sink type Output current: Max. 200mA per channel External Voltage: 10 to 30 VDC Open Collector to 30V Optical isolation protection 3 KV
Watchdog Timer	2 WDT WDT 1: one step is 1 sec, 255 levels WDT 2: one step is 1 sec/1 min, 255 levels	
System Indicator	Power, Alarm, Ready/Active, COM, Wireless	
Power Supply	12~48V DC-In;±10 % DC Version: OVP, UVP, Reverse protection	
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)	
Storage Temperature	-45°C ~ +85°C (-49°F ~ +185°F)	
Humidity	10% ~ 95%	
Vibration Endurance	5g@10~150Hz, amplitude 0.35mm (operation/storage/transport)	
Weight (net/gross)	1.5 kg (3.3 lb)/ 1.88 kg (4.14 lb)	
Dimensions	100.6 mm (3.96") (W) x 110 mm (4.33") (D) x 135 mm (5.31") (H)	
EOS Support	Windows 7 Embedded, Windows 8 Embedded Linux support package	
Remote Management Software	AXView 2.0 Intelligent Remote Management Solution for IoT -Local Hardware Monitoring -Local SRAM Backup -Remote Management -Store Apps -Service Cloud -SNMP, MQTT, MODBUS, SNMP Trap & Email	

\* W.T.: Wide Temperature. All W.T. supported products have to be sorted by Axiomtek.

## Specifications

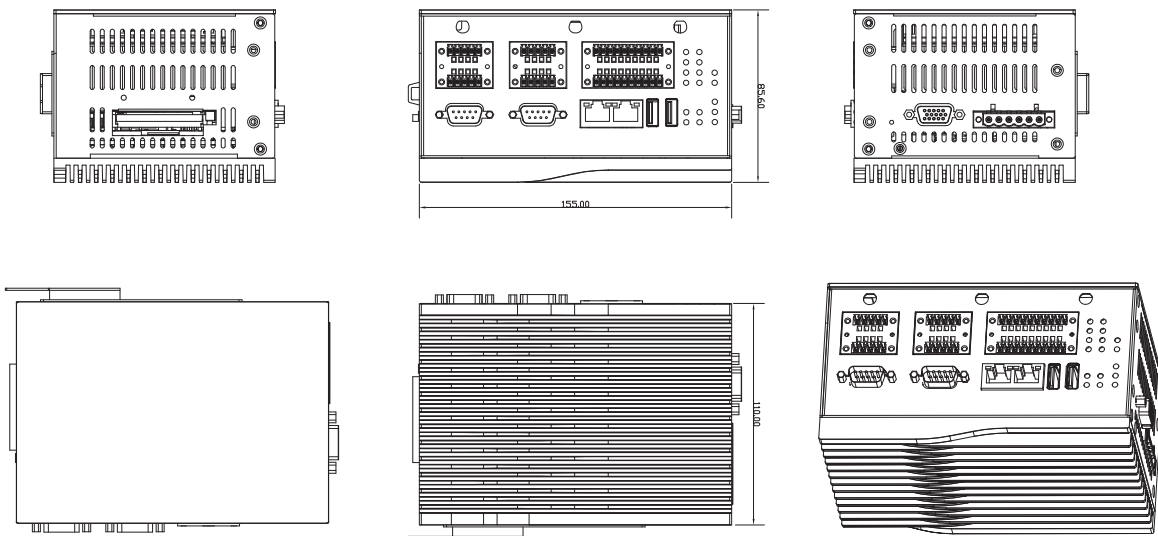
ISO	Manufactured in an ISO9001 facility
Anti-Explosive	ATEX & C1D2 Anti-Explosive Type "nA" Zone 2 Group II & class I, Division 2 Certification
Safety	UL60950-1 Heavy Industrial CE, including: EN60950-1, IEC60950-1
EMI	FCC Part 18 Heavy Industrial CE, including: EN61000-6-4, EN61000-3-2, EN61000-3-3
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 *1400-2000 MHz, 3 V/m, 80% AM (1 kHz) *2000-2700 MHz, 1 V/m, 80% AM (1 kHz) 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

<b>Standard</b>	rBOX510-6COM(ATEX/ C1D2)-FL1.75G	Robust Din-rail fanless embedded system with Intel® Atom™ E3827 1.75 processor dual core and 6 COM ports (-40°C ~ +70°C)
<b>Optional</b>	CompactFlash™ 2.5" SATA SSD Wall Mounting Kit	8 GB or above (with W.T. CF)

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

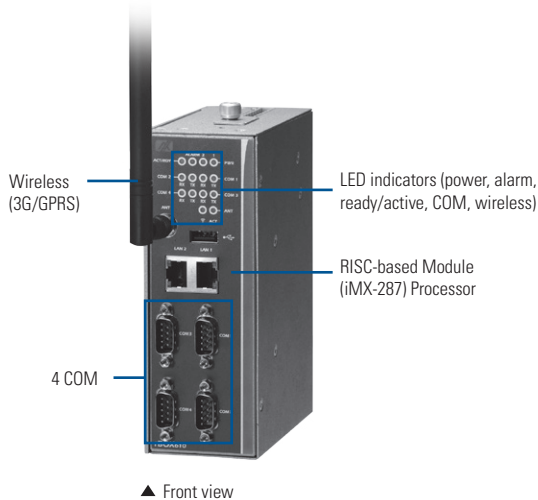
## Dimensions





# rBOX610

Robust Din-rail Fanless Embedded System with RISC-based (iMX-287) Processor  
4 COM, 2 CAN Bus and DIO



## Introduction

The rBOX610 cost-effective din-rail fanless embedded system utilizes the low power RISC-based module (iMX-287) processor and is designed to withstand temperatures ranging from -40°C to +70°C for using in extreme operating environment and industrial automation applications.

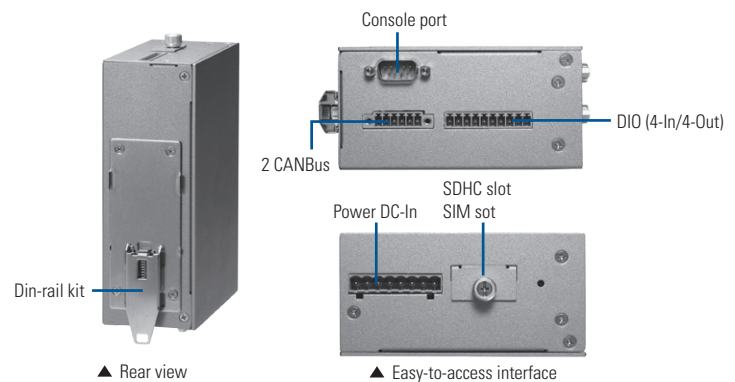
The rBOX610 features 4 RS-232/422/485 serial ports, dual LANs, 4 digital input channels, 4 digital output channels, 2 CAN bus and 1 eMMC onboard 4 GB & 1 x SDHC socket for storage expansion (easy to access) in a compact, IP40 protected, industrial-strength robust case. Two power paths input minimize the risk of data loss in the event of a single power failure. Its vertical din-rail form factor makes it easy to install the system in a small cabinet. Due to the RISC-based architecture, rBOX610 will not generate a lot of heat while being operated. The ready-to-run the rBOX610 is specially designed for remote control/monitoring management applications like unmanned control room, industrial machine, automatic parking lot, traffic cabinet and more.

## Hardware Specifications

Standard Color	Sliver-Black	
Construction	Extruded aluminum and heavy-duty steel, IP40	
CPU	i.MX287, ARM926EJ-S™ processor, 454MHz	
System Board	Q7M100	
System Memory	1 x DDR2 128 MB SDRAM onboard	
System I/O Outlet	Serial Port	4 x RS-232/422/485 (COM 1 ~ 4) COM 1-3 with TX/RX/RTS/CTS signals RS-232/422/485 interface select by software
	LAN	2 x 10/100Mbps Ethernet Magnetic isolation protection 1.5KV

## Features

- Fanless design
- RISC-based module (iMX-287) processor
- 128MB DDR2 SDRAM onboard
- 4GB eMMC onboard
- Completed Industrial AP development software (Serial server, Modbus gateway, SNMP, Remote manager)
- Wide range DC power input (12 - 48V) with terminal block
- Ready-to-run embedded Linux operating system
- Wide temperature operation of -40°C ~ +70°C



System I/O Outlet	USB	1 x USB 2.0 USB power distribution control by software
	CAN	2 CAN 2.0 B (Phoenix connector, non-isolation) Meets ISO 11898 standard Software control termination resistor 120 ohm can high speed up to 1Mbit/s for transmit/receive
DIO	DIO (4-IN/4-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 2 KV
	Console Port	DB9 connector For user setting with debug
RTC	Battery onboard Provides power for the internal real time clock & calendar Ideal for vibration environment & reduces maintenance efforts	
Alarm Contact	One relay output with current 0.5A@30VDC	

## Hardware Specifications

System I/O Outlet	Wireless	1 x Mini Card (supports USB interface on 3G/GPRS) 1 x SIM socket by outside access and is easy plug/pull
Watchdog Timer	WDT 1: one step is 1 sec, 255 levels	
LEDs	System	Power, Alarm, Ready/Active, COM (TX, RX), Wireless
	Alarm	DC PWR1 or PWR2 is lost
Storage	1 x eMMC 4 GB onboard (for boot disk) Supports 1 x SDHC Card (easy-to-access, for store only.)	
Installation	Din-rail	
	Wall mount	
Power Supply	Power Input	2 power paths with terminal block
	Power Input Range	12-48VDC
	Power Input Rating	12-48VDC, 0.68-0.19A
	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%	
Vibration Endurance	5G @ 10-150Hz, amplitude 0.35ms	
Weight (net/gross)	1.0 kg (2.2 lb)/1.50 kg (3.3 lb)	
Dimensions	55 mm (2.16") (W) x 155 mm (6.10") (D) x 110 mm (4.33") (H)	
EOS Support	Linux (Pre-installed)	
Certification	FCC Part 18	
	Heavy Industrial CE	

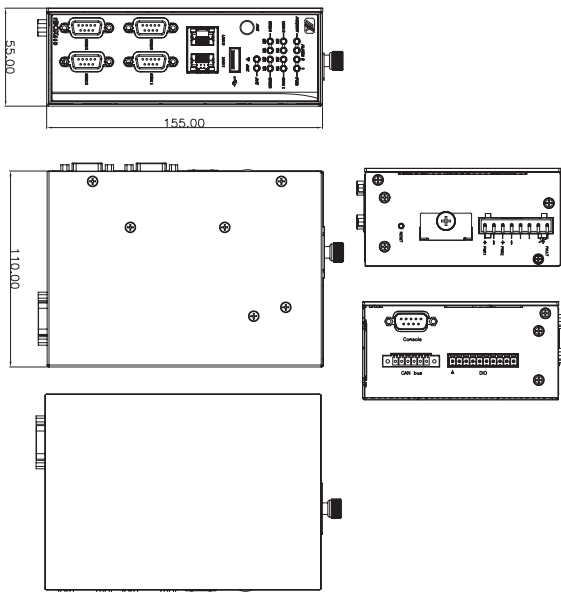
## Ordering Information

Standard	
rBOX610-FL-DC	Robust din-rail fanless embedded system with Q7-RISC module (iMX-287), 4 COM, 2 CAN and DIO (-40°C ~ +70°C)

### Optional

Wall mount kit  
Wireless (3G/GPS or Wi-Fi) module for rBOX series

## Dimensions

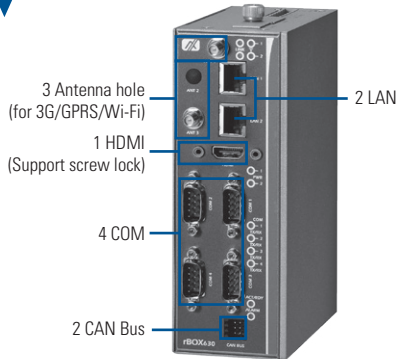


## Software Specifications

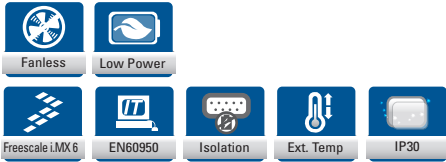
OS: Linux	Host OS/ Development OS : Ubuntu 10.04 LTS Toolchain/ Cross compiler : Freescale LTIB Kernel : 2.6.35.3 (with Freescale and Axiomtek hardware modified patch)
Support protocol types	ICMP, TCP/IP, UDP,DHCP,Telnet,SNMP,HTTP,HTTPS,SSL,SMTP,ARP, NTP,DNS,PPP,PPPOE,FTP,TFTP
Support software types	Serial Server: Supports TCP Server/TCP Client/UDP/Pair/VC Supports IP filter Supports 32 TCP connections Supports QOS  Modbus gateway: Supports Modbus TCP/Modbus RTU/Modbus ASCII Supports IP filter Supports 32 connections Supports TCP for multiple com port Supports QOS
Setting configuration	SNMP: Supports V1/V2C/V3 Supports SNMP Private MIB Supports read/write  http /https: Supports SSL Supports Import/export Supports FW update
Remote Manager	Remote Log Email SNMP Supports Trap
Serial Port Redirector for window	XP/2003 32-64/Win7 32-64/Vista 32-64/2008 32-64 Real com (visual com) Centralized management Import/Export for real com
HW's lib	DI/DO: Supports Read-DI/write DO  CAN: Supports Open/write /read/Close  3G: Supports setting number connection Supports User name/password Supports detecting signal strength  GPS: Supports detecting signal strength Supports satellite positioning  Watch Dog Timer: Supports setting enable Supports setting clean Supports setting timer  COM: Supports setting RS-232/422/485 Default Reading: Supports default reading for MAC, IP, Model

# rBOX630

Robust Din-rail Fanless Embedded System with RISC-based (i.MX 6) Processor  
4 COM, 2 CAN Bus and DIO

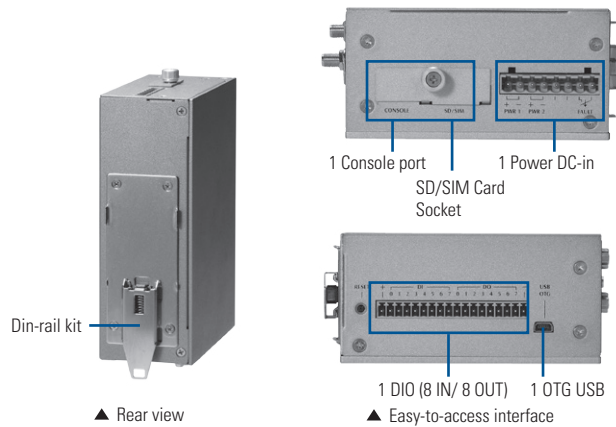


▲ Front view



## Features

- Fanless design
- RISC-based module (i.MX 6) processor
- 1 GB DDR3 SDRAM onboard
- 4 GB eMMC onboard
- Completed industrial AP development software
- Wide range DC power input (12 - 48V) with terminal block
- Ready-to-run embedded Linux operating system
- Wide temperature operation of -40°C ~ +70°C



▲ Rear view

▲ Easy-to-access interface

## Introduction

The rBOX630 cost-effective din-rail fanless embedded system utilizes the low power RISC-based module (i.MX 6) processor and is designed to withstand temperatures ranging from -40°C to +70°C for using in harsh environment and industrial automation applications.

The rBOX630 features 4 RS-232/422/485 serial ports, dual LANs, 8 digital input channels, 8 digital output channels, 2 CAN bus and 1 eMMC onboard 4 GB & 1 x SDHC socket for storage expansion (easy to access) in a compact, IP30 protected, industrial-strength robust case. Two power paths input minimize the risk of data loss in the event of a single power failure. Its vertical din-rail form factor makes it easy to install the system in a small cabinet. Because of ARM's low power consumption architecture, rBOX630 generate little heat while being operated. The ready-to-run rBOX630 is specially designed for industrial machine, automatic parking lot, traffic cabinet and more.

## Hardware Specifications

Standard Color	Silver-Black	
Construction	Extruded aluminum and heavy-duty steel, IP30	
CPU	i.MX 6, Cortex-A9 RISC CPU, 800MHz	
System Board	Q7M120	
System Memory	1 GB DDR3 Onboard	
System I/O Outlet	Serial Port	4 x RS-232/422/485 (COM 1 ~ 4) COM 1-4 with TX/RX/RTS/CTS signals RS-232/422/485 interface select by software
	LAN	1 x 10/100/1000Mbps, 1 x 10/100Mbps Ethernet Magnetic isolation protection 1.5KV

System I/O Outlet	HDMI	1 x HDMI (Support screw lock)
	USB	1 x USB 2.0 OTG
	CAN	2 CAN 2.0 B (Phoenix connector, non-isolation) Meets ISO 11898 standard Software control termination resistor 120 ohm can high speed up to 1Mbit/s for transmit/receive
DIO	1 x DIO ( 8 IN/ 8 OUT ) with Isolation 2KV DI : Wet/Dry DO : Wet DI : Input channels : 8, 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 : 8, sink type Output current: Max. 200 mA per channel On-state voltage : 24VDC nominal, open collector to 30V Optical isolation protection 2 KV	
Console Port	DB9 connector For user setting with debug	
RTC	Battery onboard Provides power for the internal real time clock & calendar Ideal for vibration environment & reduces maintenance efforts	
Alarm Contact	One relay output with current 0.5A@30VDC	

## Hardware Specifications

System I/O Outlet	Wireless	1 x Mini card socket (supports USB interface) with 1 x SIM Socket by outside access and is easy plug/pull. 1 x Mini card socket (supports USB&PCIE interface) with 1 x SIM Socket by inside
Watchdog Timer	WDT 1: one step is 1 sec, 255 levels	
LEDs	System	Power, Alarm, Ready/Active, COM (TX, RX), Wireless
	Alarm	DC PWR1 or PWR2
Storage	1 x eMMC 4 GB onboard (for boot disk) Supports 1 x SDHC Card (easy-to-access, for store only.)	
Installation	Din-rail Wall mount	
Power Supply	Power Input	2 power paths with terminal block
	Power Input Range	12-48VDC
	Power Input Rating	12-48VDC, 0.74-0.23A
	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	10% ~ 95%	
Vibration Endurance	5G @ 10-150Hz, amplitude 0.35ms	
Weight (net/gross)	0.9 kg (2 lb)/1.3kg (2.87 lb)	
Dimensions	55 mm (2.16") (W) x 155 mm (6.10") (D) x 110 mm (4.33") (H)	
EOS Support	Linux Host OS/ Development OS : Ubuntu 12.04 Yocto Dora LTS Toolchain/ Cross compiler : Freescale LTIB Kernel : 3.0.35 (with Freescale and Axiomtek hardware modified patch)	
Certification	FCC Part 18 Heavy Industrial CE	

## Ordering Information

<b>Standard</b>	
rBOX630-FL-DC	Robust din-rail fanless embedded system with Q7-RISC module (i.MX 6), 4 COM, 2 CAN and DIO (-40°C ~ +70°C)
<b>Optional</b>	
Wall mount kit	
Wireless (3G/GPS or Wi-Fi) module	

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