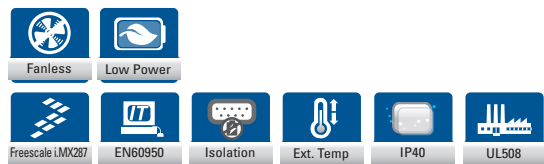# rBOX610

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

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)
- 12-48 VDC wide range power input with terminal block
- Ready-to-run embedded Linux operating system
- Wide operating temperature range from -40°C to +70°C

Wireless (3G/GPRS)
LED indicators (power, alarm, ready/active, COM, wireless)
RISC-based Module (iMX-287) Processor
4 COM

▲ Front view

Console port

2 CANBus
DIO (4-In/4-Out)

Power DC-In
SDHC slot
SIM sot

DIN-rail kit

▲ Rear view   ▲ Easy-to-access interface

Fanless	Low Power

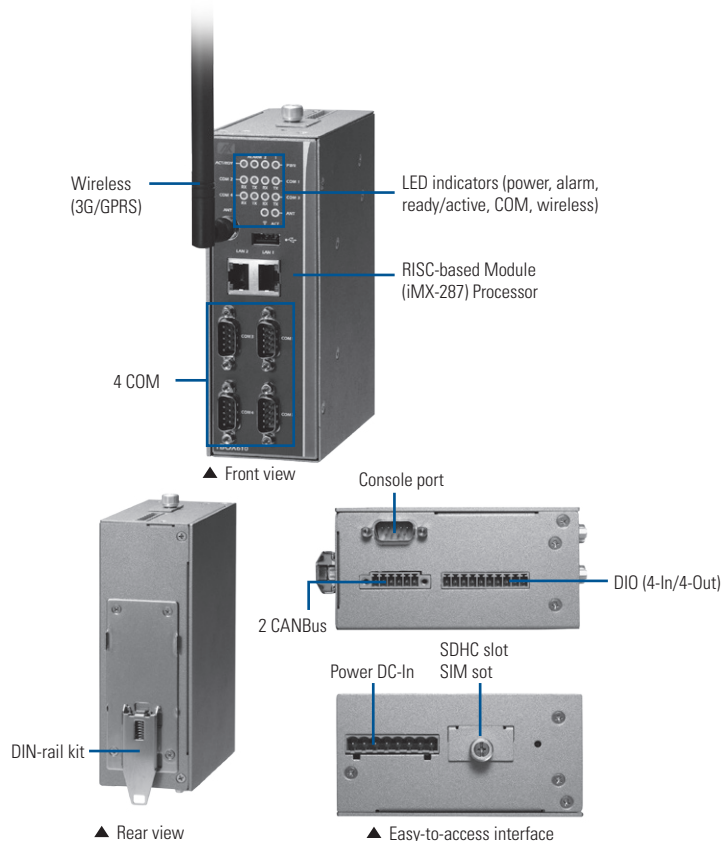| Freescale i.MX287	EN60950	Isolation	Ext. Temp	IP40	UL508

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 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 DDR2-667 SDRAM onboard, 128MB	
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 10/100 Mbps Ethernet Magnetic isolation protection 1.5KV

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	1 x DIO (4-IN/4-OUT) DI: Input channels : 4, source type Input voltage : 0 to 30 VDC 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 : 24 VDC nominal, open collector to 30 V 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@30 VDC

Hardware Specifications

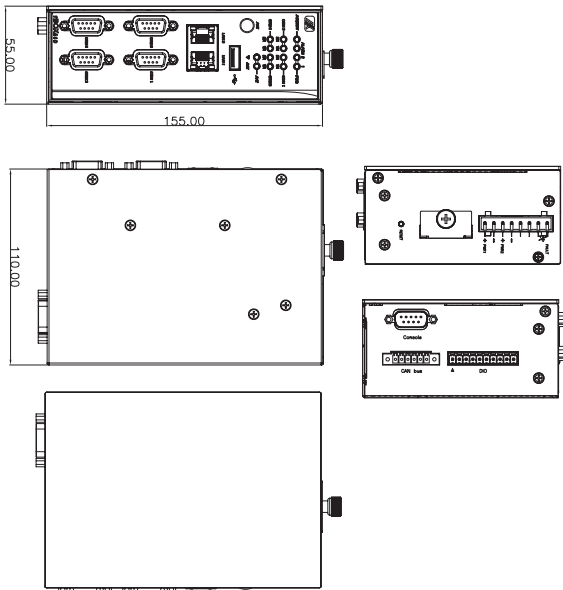| System I/O Outlet	Wireless	1 x Mini Card (supports USB interface on 3G/GPRS) 1 x SIM socket by outside access and is easy plug/pull
Watchdog Timer	WDT 1: one step is 1 sec, 255 levels	
LEDs	System	Power, Alarm, Ready/Active, COM (TX, RX), Wireless
	Alarm	DC PWR1 or PWR2 is lost
Storage	1 x eMMC 4 GB 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	12-48 VDC
	Power Input Rating	12-48 VDC, 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)	
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)	
OS Linux	Linux (Pre-installed)	
Certificate	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 Yocto 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

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Embedded Box Computers *category:*

Click to view products by Axiomtek *manufacturer:*

Other Similar products are found below :

tBOX312-870-FL-i7-DC tBOX313-835-FL-RJ-DC UPOS-3150-R0W0E ARK-20-S8A1E R2224WTTYSR BXNUC9i5QNX

BXNUC9i5QNX1 BKNUC9V7QNX BKNUC9V7QNX1 2-A0DF-2001 BKCMB1ABB BKCMB1ABA EM3000-3845-8-128-WL-U-1

TANK-870AI-i5/8G/2A-R10 PRFE21000038 EM5000-I3-8-128-WL-W7-1 EM3000-3845-8-128-WL-W7-1 PRFE21000039 AMOS-825-

1Q10A1 UPS-EDAI-X70864-U01-DC01 UPX-EDGEI7-A10-1664-F01 MXE-211/M8G PXIe-3985/M16G PXIe-3987/M16G/SSD AIMB-

T1215DA-00Y0E AIMB-T12315A-00Y0E AMAX-5580-54000A APAX-5580-474AE ARK-6322-Q0A2E DS-100GF-S8A1E DS-100GL-

S8A1E EPC-R4680CQ-XAA1E ESRP-CSS-UNO2484 ITA-1611-10A1E ITA-1711-10A1E MIC-710AI-00A1 MIC-720AI-00A1 UNO-247-

J1N1AE UTX-3115FS-S6A2E AMI220AF-4L-7500 ELIT-1200 AIE100-903-FL EBOX671-517-FL-DC MVS900-511-FL AMS200 SE-92-

I7 SI-606 SI-60E TANK-760-HM86i-i5/4G-R10 BKCM8i7CB8N