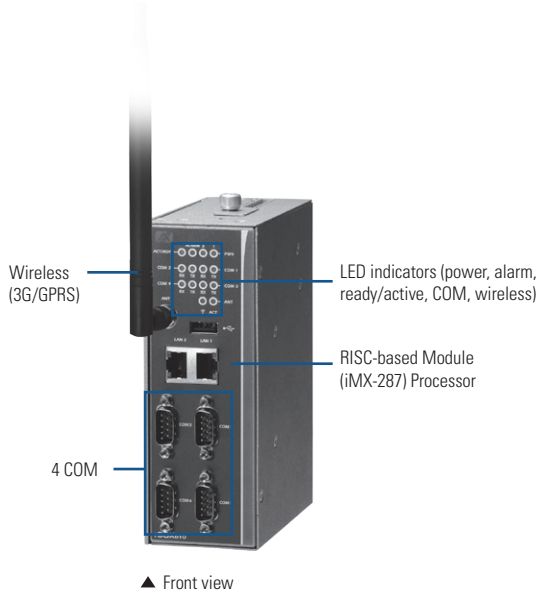


# rBOX610

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



## Introduction

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.

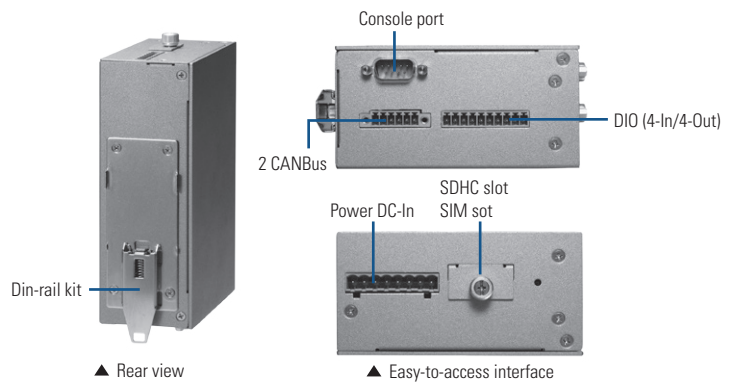
rBOX610 features 4 RS-232/422/485 serial ports, dual LANs, 4 digital input channels, 4 digital output channels, 2 CAN bus and 1 eMMC onboard 4 GB & 1 x SDHC socket for storage expansion (easy to access) in a compact, IP40 protected, industrial-strength robust case. Two power paths input minimize the 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	iMX-287, ARM9 16-bit RISC CPU, 454 MHz	
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 managr)
- 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)	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
	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 kg	
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

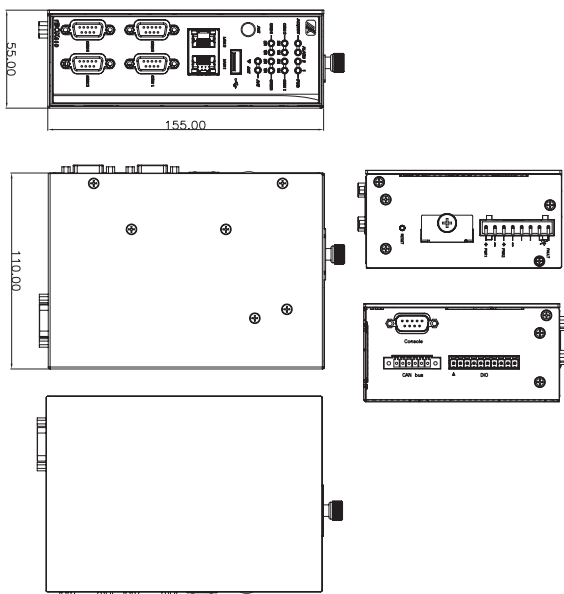
### Standard

rBOX610-FL	Robust Din-rail fanless embedded system with Q7-RISC Module (iMX-287), 4 COM, 2 CAN & DIO (-40°C ~ +70°C)
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### Optional

Wall mount kit  
Wireless (3G/GPS or WiFi) 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	Overview
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	Embedded Systems Embedded Systems for Transportation Embedded Field Controllers Embedded MicroBoxes
Setting configuration	SNMP: Supports V1/V2C/V3 Supports SNMP Private MIB Supports read/write http /https: Supports SSL Supports Import/export Supports FW update	Industrial Barebone Systems Industrial Chassis
Remote Manager	Remote Log Email SNMP Supports Trap	Backplanes
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	Power Supplies Peripherals & Accessories
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	