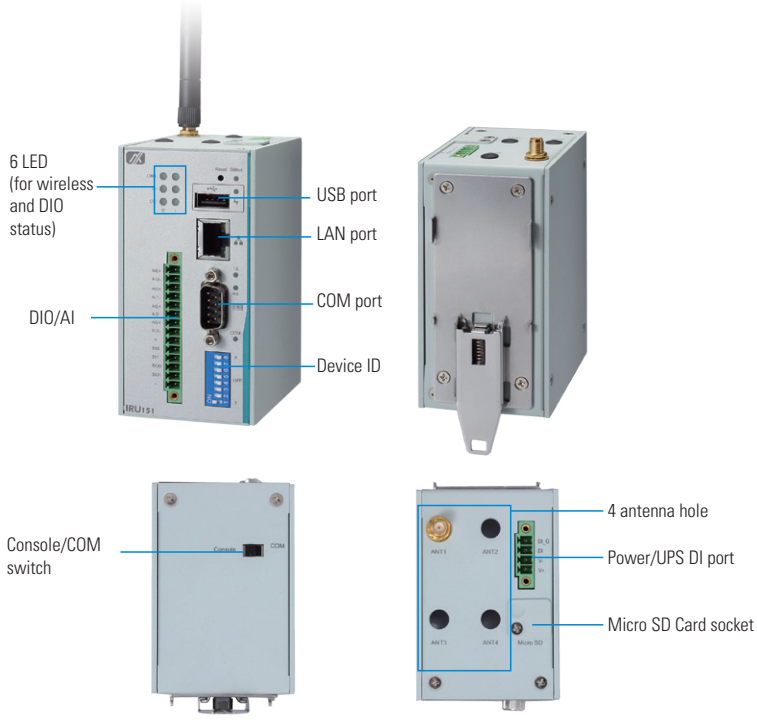
IRU151 NEW

Robust RISC-based DIN-rail Fanless Embedded System with i.MX 6UL Processor, COM, LAN, DIO (2-in/2-out), 4 AI Channels (16-bit, 100 S/s) and 2 Mini Card Slots

Features

- RISC-based (i.MX 6UltraLite) processor 528 MHz
- 512MB DDR3 SDRAM onboard
- 8GB eMMC flash onboard
- 2 Mini Card slots (Wi-Fi, 3G/4G or LoRa)
- 4 analog input channels (16-bit, 100 S/s)
- 1 isolated COM port
- 1 isolated DIO (2-in/2-out)
- Embedded Linux operating system (Yocto)
- Wide operating temperature range from -40°C to +70°C



i.MX6 UL | Ext. Temp | IP40 | Fanless | Low Power

Introduction

The IRU151 DIN-rail fanless embedded system utilizes a low power RISC-based (i.MX6 UL) processor, one RS-232/422/485 serial port, one LAN, two digital input channels, two digital output channels, four analog input channels, designed to withstand temperatures ranging from -40°C to +70°C for applications in extreme operating environment and industrial automation.

The IRU151 is an Ethernet-based gateway supporting two wireless sockets (Wi-Fi, 3G/4G or LoRa), acting as a simple transparent interface between Ethernet-based network and Modbus devices such as meters, monitors, protective relays, trip units, motor controls and other devices that communicate using Modbus protocol.

Also, the IRU151 can record digital/analog of devices and control digital devices. It can offer a simple, scalable web-based monitoring solution providing real-time data views, on-board data logging/trending, and simple control over Modbus devices. Embedded math function such as RMS and FFT are used to make advanced diagrams. The ready-to-run IRU151 is specially designed for remote control/monitoring management applications ideal in a unmanned control room, an industrial machine, an automatic parking lot, a traffic cabinet, just to name a few.

Specifications

Construction	Extruded aluminum and heavy-duty steel, IP40	
CPU	NXP i.MX 6UL processor, ARM® Cortex®-A7 @ 528 MHz	
System Memory	1 x DDR3-1600 onboard, 512 MB	
System I/O Outlet	Serial Port	1 x RS-232/422/485 Magnetic isolation protection 2KV
	LAN	1 x 10/100 Mbps Ethernet Magnetic isolation protection 1.5KV
	Analog Input	4 x AI (Isolation) channels: 4 Input Type Differential Input Range: (software probrammable) Bipolan : ±5V, ±10V Resolution:16-bit Sampling Rate : 100 S/s Overvoltage Protection : ±55V Trigger source : Analog or digital (software selectable)
	USB	1 x USB 2.0 (Type A)
	DIO	1 x DIO (2-in/2-out) with Isolation 2KV DI: Wet/Dry DO: Wet
System I/O Outlet	DIO	DI: Input channels: 2 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: 2, 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	Yes For user setting with debug
	EEPROM	1 x EEPPROM (2 Kb)
	Device ID	ID setting 0 ~ 255
	Wireless	2 x Mini Card slot 1 x SIM Card socket
Watchdog Timer	WDT 1: 0.5 to 128 sec. with a time resolution of 0.5 sec.	
RTC	Yes (RTC battery on board)	
LEDs	2 x LED for dual wireless status 2 x LED for DI status 2 x LED for DO status	
Storage	1 x eMMC 8GB flash onboard	
Power Supply	9 ~ 48 VDC power input range	
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	2 Gms @ (10 ~ 150Hz sine wave; operation)	
Dimensions	55 mm (2.16") (W) x 82 (3.23") mm (D) x 108 (4.25") (H)	
Weight (net/gross)	0.32 kg (0.71 lb)/0.53 kg (1.17 lb)	
Installation	DIN-rail	
Certificate	FCC Part 15 Heavy Industrial CE	

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

Software Specifications

OS	Linux Kernel 3.14.52 Yocto FIDO 1.8	
Support Protocol Types	ICMP, TCP/IP, UDP, ARP, Telnet, SNMP, HTTP, HTTPS, SSL, SMTP, FTP, TFTP NTP, DNS, PPP, PPPOE, DHCP, NFS	
Support Software Types	Serial Server	Supports TCP Server/TCP Client/ UDP/Pair/VC Supports IP filter Supports 32 TCP connections
	Modbus	Supports Modbus TCP/Modbus RTU/Modbus ASCII Supports TCP for multiple COM port
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
Alert Function	Yes	

Ordering Information

Standard	
IRU151-FL-DC	Robust DIN-rail fanless embedded system with i.MX 6UL processor, COM, LAN, DIO (2-in/2-out), 4 AI (16-bit, 100 S/s) and 2 Mini Card slots (-40°C ~ +70°C)

Optional
Wireless (3G/GPS or Wi-Fi) module

Dimensions