MovingComm
Ease Your Networking



ComIn I2100 - PLUS

Industrial Grade 4G Wireless Router

- High Performance 32bit Industrial Grade Processor
- Industrial Grade 4G LTE Cat4 Modem Performance
- 12VDC Power Input and Wide Power Input Range 9V~36V
- Automatic System Recovery From System Failures
- Industrial Grade Interfaces with full ESD protection
- Support VPN Client Functions
- Support Multi Protocol Conversion
- Ruggedized Metal Casing and DIN-Rail Mountable
- Support 4G LTE FDD / TDD, 3G UMTS / HSPA, 2G GSM Bands

Product Description

In a networked world where everything is connected, the demand for smart communication will become much and much stronger, especially in the field of smart industrial application and control. The ComIn I2100-PLUS 4G router is also a new generation 4G wireless VPN router launched by Shenzhen Movingcomm Technology Co., Ltd. for industrial level application. The equipment provides users with fast Internet connection through 4G cellular data network and various high-speed broadband access services, fully adapting to the explosive growth of network access demand.

The ComIn I2100-PLUS also provides an Ethernet WAN RJ45 network port, an Ethernet LAN RJ45 network port, a set of industrial Phoenix terminal blocks (serial function and power supply function), a drawer type SIM / UIM card slot.ComIn I2100-PLUS can simultaneously connect serial ports, Ethernet ports, and Wi Fi for direct transmission.

The ComIn I2100-PLUS supports remote management via a cloud platform. The cloud platform has a simple graphical interface that can be quick to use. It can let you know the current status of the device anytime and anywhere. Such application is widely used in the M2M industry and the Internet of Things industry chain, such as smart grid, smart transportation, smart home, finance, Mobile POS terminals, supply chain automation, industrial automation, smart buildings, fire protection, public safety, environmental protection, meteorology, digital medical care, remote sensing surveys, military, area exploration, agriculture, forestry, water affairs, coal mines, petrochemicals and other industrial fields.

Features

■ Ruggedized Industrial Design

ComIn I2100-PLUS adopts industrial-grade 32-bit MIPS processor with stable performance, has enterprise-level data communication processing capability, 128MB system memory, Wi-Fi supports 2.4GHz 802.11n wireless protocol, and provides a maximum rate of up to 300Mbps. In addition, the product adopts a metal enclosure to provide isolation protection, which is especially suitable for industrial control field applications. It has a wide voltage input design of 9~36VDC, a standard 12VDC power input, and built-in power reverse protection.

■ Robustness and Stability

ComIn I2100-PLUS has dual auto recovery mechanism from system failure. The hardware and software watchdog in the system ensure high system stability of the device in a long operation application. The device has a well-designed failsafe mechanism to take care of the WAN / Cellular connection, improving uplink time and preventing lost in communication. All the Ethernet ports have built-in 1.5KV magnetic isolation protection and the SIM holder has built in 1.5KV ESD protection, the power Input has reverse-voltage and surge protection as well as lightning protection (optional) in the antenna connectors.

■ Easy to Use

ComIn I2100-PLUS provides standard RS232 / RS485, Ethernet, and Wi-Fi interfaces, which can make connections to a serial device, wired network device, and wireless devices via Wi-Fi. The wired WAN port supports standard PPPoE dialup protocol which can be directly connected to an ADSL modem or equipment. Furthermore, the ComIn I2100-PLUS is a smart data terminal device that can enter the data transmission mode after power on. It also supports a powerful and comprehensive cloud management platform that make multi-device management easier and very convenient (optional feature). The ComIn I2100-PLUS is easy to use, flexible, and support multiple working modes. It has

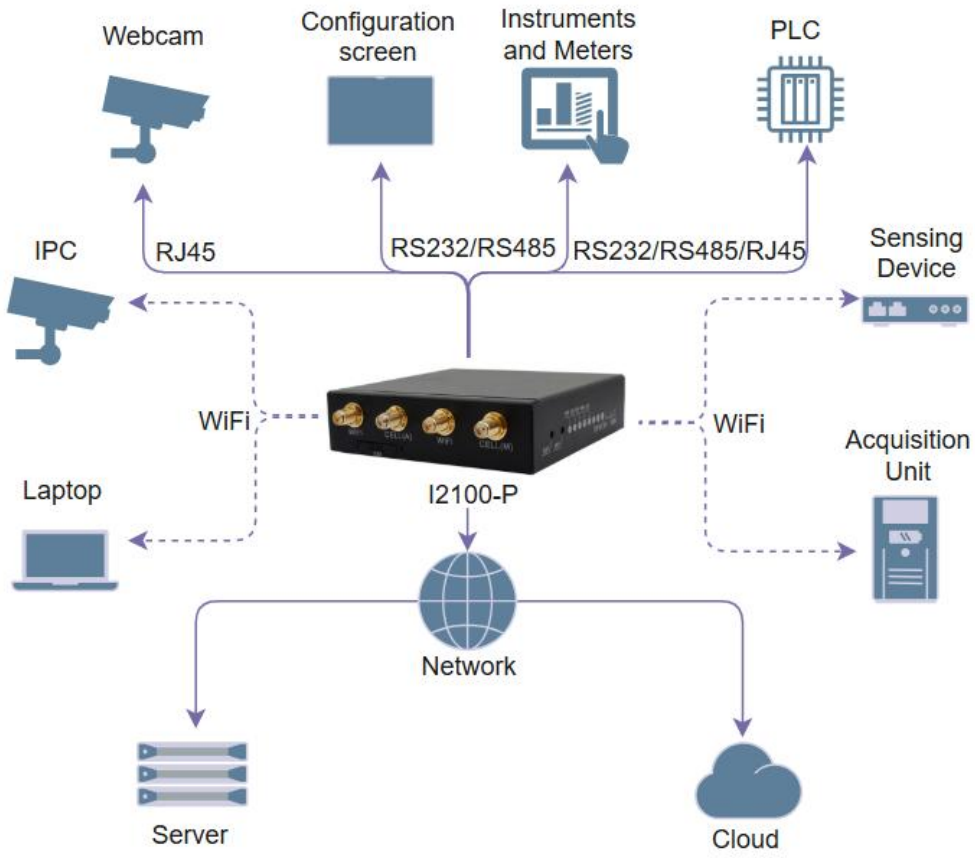
convenient system configuration and system maintenance by local web access, remote access and cloud platform management.

■ Multi Protocol Conversion

ComIn I2100-PLUS is a high-performance industrial router that supports data collection and forwarding for multiple industrial protocol devices, designed specifically to solve the challenges of device interconnection and data integration. Support downstream collection of Modbus RTU, Modbus TCP, DL / T645, IEC104 protocol devices; Supports upstream forwarding protocols Modbus TCP, IEC101, IEC104, MQTT.

【Collection】: Can connect a variety of industrial field devices, Support protocols:
- Modbus RTU(RS-232 / RS-485) / Modbus TCP(RJ45)
- IEC 104 (RJ45)
- DL / T 645 (China Power Standard RS-485)

【Forwarding】: Forward the collected data to the higher-level devices,Support protocols:
- Modbus TCP
- IEC 101 (RS-232 / RS-485) / IEC 104
- MQTT



Hardware Specifications

CPU	32-bit MIPS 24KEc Industrial Grade Chipset, Core Frequency 575 / 580MHz	
Flash	32MB SPI Flash (Optional 64MB Max)	
System Memory	128MB / Optional 256MB DDR2 RAM	
Wi-Fi	2.4GHz IEEE 802.11n MIMO up to 300Mbps	
	Detachable High Gain Wi-Fi Antennas	
Interfaces	WAN	1 x 10 / 100Mbps FE RJ45 Port, auto MDI / X, with 1.5KV magnetic isolation protection
	LAN	1 x 10 / 100Mbps FE RJ45 Port, auto MDI / X, with 1.5KV magnetic isolation protection
	Terminal Block	2.54mm Standard Phoenix Style terminal Block Connector, Support RS232 / RS485 Serial Connection. Include DC power Input Pin DI, DO
	SIM	1 x Standard Drawer-type SIM Card Holder (2FF) Support 1.8V / 3V SIM / UIM card, Built-in 15KV ESD Protection Support Built-in SIM Card(Option)
	Power	Standard DC Power Input Jack, Reverse-Voltage Protection And Surge Protection
	Reset	1 x PinHole Reset Button
	WPS	1 x WPS Button
	Antenna	2 x Standard SMA-Female Antenna Connector, 50 ohm (Cellular)
		2 x Standard RP-SMA-Male Antenna Connector, 50 ohm (Wi-Fi)
Indicators	PWR LED Indicator x 1 SYS LED Indicator x 1 Wi-Fi LED Indicator x 1 WAN LED Indicator x 1 LAN LED Indicator x 1 VPN LED Indicator x 1 NET LED Indicator x 1 SIM Card Status LED Indicator x 1 Cellular Signal Strength LED Indicator x 3	

Phoenix Terminal	Specifications: 7 x 2.54mm V+ (DC Input) V- (DC Input) DI (default 12V high-level) DO (0 / 5V~24V) GND (RS232) TXD / A+ (The default protocol is RS485) RXD / B- (The default protocol is RS485)	
Power Input	Power Type	12VDC / 1A
	Power Range	9~36VDC Wide Power Input
	Power Consumption	<450mA (12V), Average 170mA@12V
Hardware Watchdog	Included Hardware Watchdog, Support Device Operation Self-Check Technology, Auto Recovery from Device Failure	
EMC	Static Electricity	EN61000-4-2, Level4
	Radiated Electric Field	EN61000-4-3, Level4
	Pulse Electric Field	EN61000-4-4, Level4
	Surge	EN61000-4-5, Level3
	Conducted disturbance	EN61000-4-6, Level4
	Power Frequency Interference	EN61000-4-8, Horizontal / Vertical 400A / m (>Level 4)
	Shock Wave Immunity	EN61000-4-6, Level4
Enclosure	Ruggedized Metal Casing. The Casing and The System Are Safely Isolated, Especially Suitable for Industrial Control Field Applications.	
Product Dimensions	95mm x 106mm x 28mm (Excluding Antenna and Mounting Sets)	
Weight	Approx. 280g (Excluding Antenna and Mounting Sets)	
Environment	Operating Temperature: -35°C to 75°C	
	Storage Temperature: -40°C to 85°C	
	Operating Humidity: 10% to 95% RH Non-condensing	
	Storage Humidity: 5% to 95% RH Non-condensing	
Firmware	Linux SDK or OpenWRT	

4G / 3G / 2G Cellular Specifications

LTE Category	LTE Cat 4

Frequency*	CN Version	LTE-FDD: B1, B3, B5, B8 LTE-TDD: B34, B38, B39, B40, B41 WCDMA: B1, B5, B8 GSM: B3, B8
	EU Version	LTE-FDD: B1, B3, B5, B7, B8, B20, B28 LTE-TDD: B38, B40, B41 WCDMA: B1, B5, B8 GSM: B3, B8
	LATAM / AU Version (Custom)	LTE-FDD: B1, B2, B3, B4, B5, B7, B8, B28, B66 LTE-TDD: B40 WCDMA: B1, B2, B4, B5, B8 GSM: B2, B3, B5, B8
Data Rate	LTE	LTE-FDD: Max. 150Mbps (DL) / Max. 50Mbps (UL) LTE-TDD: Max. 130Mbps (DL) / Max. 30Mbps (UL)
	DC-HSPA+	Max. 21Mbps (DL) / Max. 5.76Mbps (UL)
	WCDMA	Max. 384Kbps (DL) / Max. 384Kbps (UL)
	EDGE	Max. 236.8Kbps (DL) / Max. 236.8Kbps (UL)
	GPRS	Max. 85.6Kbps (DL) / Max. 85.6Kbps (UL)
Transmitting Power	<24dBm	
	Class 4 (33dBm±2dB) for EGSM900 Class 1 (30dBm±2dB) for DCS1800 Class E2 (27dBm±3dB) for EGSM900 8-PSK Class E2 (26dBm±3dB) for DCS1800 8-PSK Class 3 (24dBm+1 / -3dB) for WCDMA bands Class 3 (23dBm±2dB) for LTE-FDD bands Class 3 (23dBm±2dB) for LTE-TDD bands	
Receive Sensitivity	<-109dBm	

Note *: The information about the supported standards and wireless bands may vary with the application of 4G modules. Before ordering, please ask and confirm with our sales representatives whether or not the required network standards and wireless frequency bands are met.

Wi-Fi Specifications

Wi-Fi Technology	IEEE 802.11b / g / n	
Frequency	2.4GHz (2.412-2.4835GHz)	
Wi-Fi Functions	2.4GHz Channel	1 – 13 Channel

	Channel Bandwidth	20MHz / 40MHz
TX / RX	2.4GHz: 1T1R (Optional 2T2R)	
MIMO	DL: 2X2 MIMO	
Modulation	11b: DBPSK, DQPSK and CCK and DSSS 11g: BPSK, QPSK, 16QAM, 64QAM and OFDM 11n: MCS0~15 OFDM	
Transmit Power	16±2dBm	
Receive Sensitivity	-90±2dBm in 802.11n HT20 MCS0	
Antenna Type	External Antenna	
Wi-Fi User Support	Max. 32 Users	
Wi-Fi Encryption	WPA / WPA2 Protected Encryption	

Software Specifications

Main Features	WAN	Static IP, DHCP, PPPoE
		Support Links Redundancy, and WAN-WWAN Failsafe
		Link detection, Heartbeat detection, and auto reconnection
	Wi-Fi	Client, AP Mode
		Support WPA / WPA2 Encryption, MAC Filter and others
	VPN	Support VPN Client PPTP / L2TP / OpenVPN / IPSec
	Management	SYSLOG / HTTP / Other Functions
		Support Local or Remote Firmware Upgrade, Import / Export configuration file
		Cloud Management, TR069
	Support APN / VPDN	
	Support IPv4 / IPv6	
	Support NTP	
	Support VLAN, MAC Address Clone	
	Support Multiple DHCP Server, DHCP Client, DHCP and MAC Address Binding, DDNS, Firewall, DMZ, Traffic Statistics and others	
	Support TCP / IP, UDP, HTTP and Other Network Protocols	
	Support Multiple Serial Pass-through Methods, UDP Client, TCP Client, Server	

Multi Protocol Conversion	Downward acquisition： Modbus TCP | Modbus RTU | IEC 104 | DL / T 645 Upstream forwarding ： Modbus TCP | IEC 101 | IEC 104 | MQTT

Product View



Order Information

Product Model	Product Packaging
ComIn I2100-PLUS	Product Packaging: 1 x I2100-PLUS Router Unit 1 x 4G Modem Module (Can choose without modem module) 2 x Spring Magnetic Cellular Antenna (4G), Optional Dipole Antenna (4G) 2 x Dipole Antenna (Wi-Fi), Optional Spring Magnetic Antenna (Wi-Fi) 1 x AC / DC Power Adapter 1 x Network Cable 1 x Industrial Phoenix Terminal Block Connector 1 x Mounting Set

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