CIR885R Series

5-Port Gigabit Din-Rail 5G Industrial Router



- Support 1 x 1G WAN port, 4 x 1G LAN ports, 2 x RS232/RS485 ports, 4 x 5G antenna connectors, and 1 x dual Nano SIM card slot
- Support 5G/4G/3G cellular wireless networks with WAN port wired network backup
- Support 5G LAN for stable local area network communication
- Enable networking of serial terminal devices, converts protocols including UDP, TCP, Modbus, HTTP/S, WebSocket, MQTT, and supports virtual serial ports
- Support firewall and service functions such as port mapping, DMZ, IP/MAC/domain name filtering, DDNS, VPN, SNMP, LLDP, and remote device management
- Support DC 9~60V power input with dual power redundancy and non-polarity
- High-strength aluminum alloy housing with IP30 protection rating, ensuring reliable operation in harsh industrial environments from -20°C to +70°C

Product Description

The CIR885R series is a 5-port Gigabit DIN-rail 5G industrial router specifically designed for industrial communication network applications. It integrates serial device networking, supports wired WAN or 5G cellular wireless networks, and utilizes an openWrt open architecture for user secondary development. This series provides 1 x Gigabit WAN port, 4 x Gigabit LAN ports, 2 x RS232 or RS485 serial ports, 4 x 5G antenna interfaces, and 2 x DC 9~60V power inputs. It utilizes standard DIN rail mounting to meet diverse field network requirements.

The CIR885R series supports web-based configuration for multiple network management functions, including WAN mode, PPPoE dialing, DHCP server, 5G network mode, 5G LAN, carrier lock/cell lock, APN, IP/MAC binding, static routing, link checking, network diagnostics, serial-to-network conversion, firewall, VPN, SNMP, LLDP, remote device management, and NTP. The system provides multi-level user management, supports local/remote log management, and enables scheduled reboots, configuration backup/restore, firmware upgrades, and factory reset. CIR885R supports DIP switch reboot or factory reset. Hardware features high-standard industrial protection design with premium industrial-grade components and a rugged high-strength aluminum alloy housing. Low-power consumption and wide-temperature design support operation from -20°C to +70°C (extended range: -40°C to +75°C). Passes stringent safety and EMC testing to meet demanding industrial applications. Widely applicable in industrial automation, integrated energy systems, smart cities, intelligent transportation, smart mining, and smart factories.

Product Features

- Support 5G/4G/3G cellular networks and wired WAN connections, with dual-network backup capability
- Features MIMO (Multiple-Input Multiple-Output) technology to enhance data transmission rates, expand network capacity and wireless coverage, and reduce packet loss
- WAN port supports DHCP, static IP, and PPPoE dial-up for external network connectivity, or functions as a LAN port for internal network access
- LAN port supports DHCP server for centralized dynamic management and configuration of user IP addresses
- Support 5G NR NSA and SA dual-mode networking, 5G/4G tri-network compatibility, dual-SIM single-standby, 5G LAN, carrier lock/cell lock, and APN
- Support static routing with manual rule addition for routing selection and packet forwarding
- Support link checking, periodically verifying 5G network link status and performing link recovery
- Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, and packet capture for network diagnostics or fault analysis
- Firewall features include SYN flood defense, port mapping, IP/MAC/domain filtering, custom iptables rules, NAT translation, DMZ isolation zone, UPnP, IP/MAC rate limiting, and QoS-based upload/download speed

throttling

- Support NTP client and server functionality for clock synchronization or providing a time source
- Logs multiple levels of kernel, application, and network information, supporting local download, scheduled saving, and remote monitoring
- Serial port supports UDP, TCP Client/Server, UDP Multicast, Modbus RTU Master/Slave, Modbus ASCII
- Master/Slave, Realcom MCP/CCP/MW, Pair Connection Master/Slave, Httpd Client, WebSocket Client,
- MQTT, and other serial conversion modes to enable serial-to-Ethernet conversion
- Support Dynamic DNS functionality for remote device login and management via designated domain names
- Supports VPN client and server for private network construction. Clients support PPTP, L2TP, GRE, GRETAP, OpenVPN, and other tunneling protocols. Servers support PPTP, L2TP, and IPSec protocols.
- Supports SNMPv1/v2c. Enables information querying, modification, and troubleshooting via MIB for centralized management.

Technical Specifications

Software	
Network Management	Support traffic statistics, operational status, network status, local address, and other status information Support static addresses, DHCP, PPPoE external connections, and WAN/LAN mode Support DHCP server, IP/MAC binding Support 5G/4G/3G networks, dual SIM management, multi-network card configuration, carrier/cell locking, APN, link checking Support static routing Support serial-to-network conversion, dynamic DNS, SNMP, LLDP, and remote device management Support PPTP/L2TP/GRE/GRETAP/TUN/TAP protocol VPN clients Support PPTP/L2TP/IPSec protocol VPN servers

Firewall	Support SYN flood defense, IP dynamic spoofing, MSS throttling, inbound/outbound data control Support WAN/LAN port TCP/UDP port mapping Support IP/MAC/domain name filtering, iptables, NAT, DMZ, UPnP, IP/MAC/QoS rate limiting
System Management	Support IPv4/IPv6 Ping, IPv4/IPv6 Traceroute, Nslookup, network packet capture Support time zone, NTP client/server, management port, scheduled tasks, remote/local logs Support user permission management, SSH access Support online reboot, scheduled reboot, configuration backup/restore, firmware flashing, factory reset
5G Cellular Network	
Network Format	5G NR SA, 5G NR NSA, LTE-FDD, LTE-TDD, WCDMA
Working Frequency	5G NR SA: n1/3/5/8/28A/41/77/78/79 5G NR NSA: n41/78/79 LTE-FDD: B1/3/5/8 LTE-TDD: B34/38/39/40/41 WCDMA: B1/5/8
MIMO	DL 4 × 4: n1/28A/41/77/78/79 UL 2 × 2: n41/77/78/79 DL 2 × 2: n3/5/8, LTE
Theoretical Transfer Rate	G SA Sub-6: DL 2Gbps / UL 1Gbps 5G NSA Sub-6: DL 2.2Gbps / UL 575Mbps LTE: DL 600Mbps / UL 150Mbps UMTS (DC-HSDPA/HSUPA): DL 42.2Mbps / UL 11Mbps WCDMA: DL / UL 384 kbps
TX Power	5G NR n1/3/5/8/41: 23dBm±2dB 5G NR n28A: 23dBm+2/-2.5dB 5G NR n77/78/79: 23dBm+2/-3dB 5G NR n41/77/78/79 HPUE: 26dBm+2/-3dB LTE: 23dBm±2dB WCDMA: 23dBm±2dB

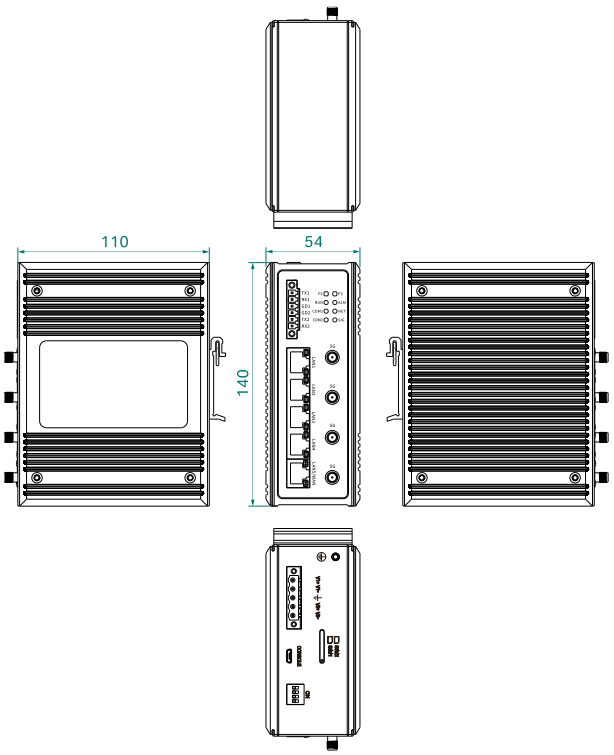
Interface	
1G WAN Port	1 x 10/100/1000Base-T(X) auto-sensing RJ45 WAN/LAN combo port Support full/half-duplex operation and auto MDI/MDI-X.
1G LAN Port	4 x 10/100/1000Base-T(X) auto-sensing RJ45 LAN ports Support full/half-duplex operation and auto MDI/MDI-X connection.
Serial Port	Serial Port: 2 x RS232/RS485 Connection Method: 6-pin 3.81mm pitch locking terminal block Baud Rate: 300bps-115200bps Data Bits: 5-bit, 6-bit, 7-bit, 8-bit Stop Bits: 1-bit, 2-bit Parity: None, Odd, Even RS485 Isolation Voltage: 2kVAC/3kVDC
Antenna Connector	4 x 5G cellular antenna ports using SMA-K (male threaded, female socket) connectors
SIM Card Slot	1 x dual Nano SIM card slot, dual SIM single standby,
CONSOLE	1 x CONSOLE port compliant with USB 2.0 specification, using Micro-B USB 2.0 socket
DIP Switch	RS485 terminating resistor, reboot or factory reset
Status LED	Power indicator, operation indicator, alarm indicator, serial port indicator, NET indicator, signal strength indicator, Ethernet port speed and connection/activity indicator
Power Supply	
Input Voltage	DC 9~60V, dual power supply redundancy
Power Consumption	< 12.2W @ DC 12V (full load)
Connection	5-position 5.08mm pitch locking terminal block
Protection	No polarity protection
Physical Characteristics	
Dimensions	140×54×110 mm (excluding the DIN rail mounting clip)
Installations	35mm standard DIN rail

IP Code	Aluminum alloy housing, IP30 rating
Weight	0.65 kg (excluding antennas)
Working Environment	
Operating Temp	-20°C ~+70°C (Extended Temperature: -40°C to +75°C).
Storage Temp	-40°C ~+85°C
Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMC	IEC 61000-4-2 (ESD): Contact discharge ±6kV, air discharge ±8kV IEC 61000-4-5 (Surge): Power supply: Common mode ±4kV, Differential mode ±1kV; RS232: Common mode ±4kV; RS485: Common mode ±4kV, Differential mode ±4kV; Ethernet port: Common mode ±4kV, Differential mode ±2kV IEC 61000-4-4 (EFT): Power supply: ±4kV; Communication ports: ±4kV

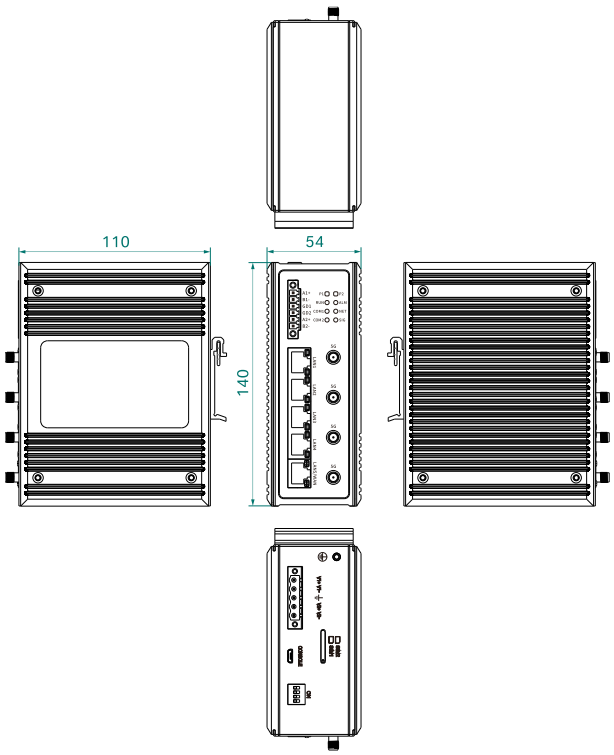
Dimensions

Unit: mm

CIR885R-2D232



CIR885R-2D485



Ordering Information

Standard Model	Gigabit WAN Port	Gigabit LAN Port	RS232	RS485	5G Antenna	Input Voltage
CIR885R-2D232	1	4	2	/	4	Dual DC9~60V
CIR885R-2D485	1	4	/	2	4	

Contact Us

COME-STAR COMMUNICATION(WUHAN) CO., LTD.

Address: Puneng Industrial Park, Fenghuang Garden 1st Road, East Lake High-Tech Development Zone, Wuhan, China.

Tel: +86-027-59257958

Mail: sales@come-star.com

Official site: www.come-star.com

Copyright © Come-Star All rights reserved