

QR310

Industrial Cellular Router Remote Gateway

2 Eth + 1 SIM + 1 RS232/485

INTRODUCTION

QR310 series industrial cellular router designed for Internet of Things (IoT) and Machine to Machine(M2M) applications, support wide standard frequency bands such as FDD/TDD LTE, WCDMA, HSUPA, HSPA+, EV-DO, GSM, etc. It provides a secure, flexible, reliable, high-speed network connectivity.

QR310 platform equipped with high-performance industrial 32-bit Communications Processor, two Ethernet ports, dedicated serial port(RS232/RS485), Wi-Fi interface, embedded LEDE Linux Operating System, provides safe, high-speed, stable connection on 3G/4G network.

Remote networking function is ideal for Multiple Industrial PLC and Human Machine Interface(HMI) remote access, program upload and download, online monitoring. And it also widely used in Network Machine, Serial Port Device and Video Surveillance for data collection and communication.



KEY FEATURES

Industrial-grade Design

- High-performance industrial wireless module
- High-performance industrial 32-bit processor
- Support low-consumption mode, including sleep mode, scheduled online/offline mode
- Metal housing, excellent heat dissipation
- Desktop or Din Rail mount, Protection degree IP41(Max IP51)
- Wide voltage:7.5V~32V DC(Max36V)

Stable and Reliable

- Hardware and Software WDT and multi-link detection make it self-recovery from unexpected failure and guarantee reliable communication
- Port ESD protection, avoid Static Electricity Shock
- LED indicators display the status of Wireless network signal

APPLICATION

Network Characteristics

- Port flux detection
- Link real-time monitoring
- Support APN and VPDN private network access
- Support multi online trigger ways, including ring, SMS, or data trigger
- Support QOS, UPnP protocol
- Port forwarding
- UDP broadcast relay

Function Characteristics

- PLC/HMI/IPC Remote networking with Superlink software, support peer-to-peer(P2P), peer-to-multiple peer(PMP) transmission
- RS232/RS485 serial port offer DTU function, support wireless transparent transmission and Modbus RTU to Modbus TCP protocol
- Full bands 4G LTE, compatible with 3G/2G WCDMA GPRS, EDGE
- Failover, Backup and Load balance between

WAN and Cellular network

- Various interface: 1xWAN+1xLAN or 2xLAN, RS232/485 serial port
- Wi-Fi radios, support IEEE802.11b/g/n
- Always keep online, reboot automatically if disconnected to ensure continual connection
- Support DHCP, DDNS, Firewall, NAT, and DMZ host, SNMP management protocol
- Support ICMP, TCP, UDP, Telnet, SSH, FTP, HTTP, HTTPS protocol
- Support scheduled reboot

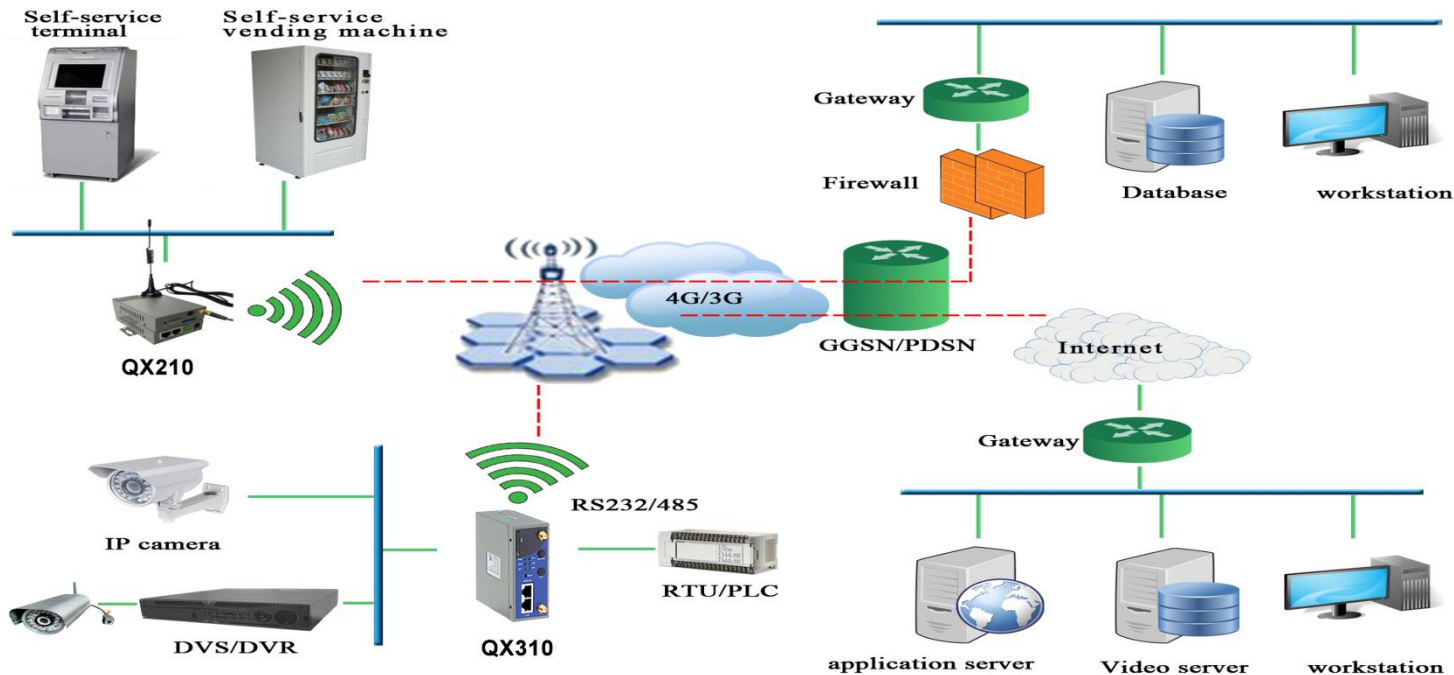
Cloud-Based Platform Management

- Remote parameter configuration
- Remote parameter backup
- Remote reboot and log query
- Remote device upgrades
- On-line monitoring

Extensions

- Support GPS positioning (Optional)
- Support WAN port, wired and wireless mutual backup (Optional)

Retail	ATM, POS(Point-of-Sale), Vending Machine, Lottery Machine, Branch network, Digital Signage
Transportation	Wi-Fi on Board(Bus, Yacht, Train), Vehicle video surveillance, Fleet tracking, Bus Advertising
Energy	Digital Oil Field, Coal Mine, Solar, Smart Grid
Smart City	Charging station, Water conservancy, Traffic, Street lighting, Security monitoring equipment, Guest and employee Wi-Fi, Environment monitoring, Video Surveillance, Smart Parcel Locker, Building and process automation controllers, IP cameras and access controllers
Industry & Enterprise	Telco infrastructure controllers, Automation controllers, Remote PLC, Remote AMR, Remote Monitoring and control, Remote data loggers, flow meters and sensing equipment (Telemetry, Tanking, Fire alarm, Meteorological monitoring), remote offices



SPECIFICATION

Cellular	
Theoretical Bandwidth	FDD LTE:50/150Mbps HSPA:5.76/21Mbps EVDO:1.8/3.1Mbps
Transmit Power	<24dBm
Receiving Sensitivity	<-109dBm
Wi-Fi	
Standard	IEEE802.11b/g/n, Max up to 150Mbps
Security encryption	WEP, WPA, WPA2, Optional WPS function
Transmit Power	16-17dBm(11g), 18-20dBm(11b), 15dBm(11n)
Receiving Sensitivity	<-72dBm@54Mbps
Interface	
LAN	1×Ethernet interface(RJ45), Auto MDI/MDIX, built-in ESD
WAN	1×Ethernet interface(RJ45), Auto MDI/MDIX, built-in ESD, WAN can be converted to LAN
Serial Port	1×RS232(optional RS485)port
LED Indicators	With "PWR", "LAN", "WAN", "NET", "SYS", "WiFi" indicator lamps
Antenna Interface	2 standard SMA antenna interface (WIFI/GPS and 3G/4G) , 50ΩSMA

SIM/UIM slot	SIM/UIM card mounting plate to protect falling. 1.8V/3V automatic detection
Power Input	7.5V-32V(standard DC12V/1A), built-in power transient overvoltage protection
Reset Button	Reset configuration parameter to default values
Power Supply	
Standard power	DC 12V/1A
Physic	
CPU	560MHz
Flash/RAM	128Mb/1024Mb
Shell	metal plate shell
Dimension	102×100×41mm
Weigh	About 355g
Environmental	
Operating Temperature	-30 to 70°C
Storage Temperature	-40 to 85°C
Relative Humidity	< 95% no coagulation
Approval	CCC,CE

ORDERING INFORMATION (Model QR310)

Part Number	Bands	Region	Wi-Fi	GPS
QR310-N	FDD-LTE:B2/4/5/12/13/17/25/26 (1900/1700/850/700/1900MHz)	North America		
QR310-NW	TD-LTE:B41 (2500MHz)		√	
QR310-NG	WCDMA:B2/4/5 (1900/1700/850MHz)			√
QR310-NWG	EVDO:BC0/1 (800/1900MHz) ; GSM:850/1900		√	√
QR310-E	TDD-LTE:B38/B40/B41 (2600/2300/2500MHz)	Europe,Middle East, Africa,Korea, Thailand,Southeast Asia		
QR310-EW	FDD-LTE:B1/B3/B5/B7/B8/B20 (2100/1800/850/2600/900/800MHz)		√	
QR310-EG	WCDMA:B1/B5/B8 (2100/850/900MHz)			√
QR310-EWG	GSM:B3/B8 (1800/900MHz)		√	√
QR310-A	TDD-LTE:B40 (2300MHz)	Australia,New Zealand,Latin America,Taiwan		
QR310-AW	FDD-LTE:B1/B2/B3/B4/B5/B7/B8/B28 (2100/1900/1800/1700/850/2600/900/700MHz)		√	
QR310-AG	WCDMA:B1/B2/B5/B8 (2100/1900/850/900MHz)			√
QR310-AWG	GSM:B2/B3/B5/B8 (1900/1800/850/900MHz)		√	√
QR310-C	FDD-LTE:B1/B3/B5 (2100/1800/850MHz)	China Mainland		
QR310-CW	TD-LTE:B38/B39/B40/B41 (2600/1900/2300/2500MHz)		√	
QR310-CG	WCDMA:B1 (2100MHz)			√
QR310-CWG	TD-SCDMA:B34/B39 (2000/1900MHz); CDMA/EVDO:BC0 (800MHz); GSM:900/1800		√	√

Note:

1. If request other frequency band model, please consult sale person
2. Please specify when order if request other optional features