# QX520

Industrial Dual Band Dual SIM Cellular Router 5 Eth + 2 SIM + 1 RS232/485

# **INTRODUCTION**

QX520 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.

QX520 platform equipped with high-performance industrial 32-bit Communications Processor, Dual SIM Slot, 5 Ethernet ports, dedicated serial port(RS232/RS485), Wi-Fi interface, embedded LEDE Linux Operating System, provides safe, high-speed, stable, dual SIM backup connection on 3G/4G network . Which widely used in Video Conference, Financial System, Outdoor Live Broadcast, Emergency Command, Exhibition, Industrial Automation, etc.



### **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 Wall 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
- > ESD protection, avoid Static Electricity Shock
- LED indicators display the status of Wireless network signal

### **Network Characteristics**

Port flux detection

- Link real-time monitoring
- Support APN and VPDN private network access
- Multiple VPN protocols: PPTP, L2TP, IPSec, OPENVPN, N2N, GRE
- Serial port offer Data Transfer Unit(DUT) function and support Modbus RTU to TCP.
- Support multi online trigger ways, including ring, SMS, or data trigger
- Support QOS, UPnP protocol
- Port forwarding
- UDP broadcast relay

#### **Function Characteristics**

- Full bands 4G LTE, compatible with 3G/2G WCDMA GPRS, EDGE
- Failover, Backup, bonding and Load balance between Dual SIM and WAN
- Dual SIM card signal bonding enhance network connection, as multiple link data communication
- Various interface: 1xWAN+4xLAN or 5xLAN, RS232/485 serial port
- Wi-Fi radios, support IEEE802.11b/g/n

- Always keep online, reboot automatically if disconnected to ensure continual connection
- Support SNMP management protocol
- Support DHCP, DDNS, Firewall, NAT, and DMZ host
- Support ICMP, TCP, UDP, Telnet, SSH, FTP, HTTP, HTTPS protocol
- Support standard industrial grade SIM/UIM card
- 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/Beidou positioning (Optional)
- Support WAN port, wired and wireless mutual backup (Optional)
- WiFi advertising (Optional)
- Storage extension, 2GB to 64GB (Optional)

# **APPLICATION**

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 &	Telco infrastructure controllers, Automation controllers, Remote PLC, Remote AMR, Remote Monitoring and control, Remote data	
Enterprise	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@54Mpbs		
Interface			
LAN	4×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",4×" LAN", "WAN", "WiFi", "SIM1",		
	"SIM2" indicator lamps		
Antenna Interface	4 standard SMA antenna interface (2×4G, WIFI,		
	AUX/GPS), 50ΩSMA		

SIM/UIM slot	2×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/512Mb		
Shell	metal plate shell		
Dimension	152×104×25mm		
Weigh	About 425g		
Environmental			
Operating	-30 to 70°C		
Temperature			
Storage Temperature	-40 to 85°C		
Relative Humidity	< 95% no coagulation		
Approval	CCC,CE		

# ORDERING INFORMATION (Model: QX520)

Part Number	Bands	Region	Wi-Fi	GPS
QX520-N	FDD-LTE:B2/4/5/12/13/17/25/26 (1900/1700/850/700/1900MHz)	North America		
QX520-NW	TD-LTE:B41 (2500MHz)		٧	
QX520-NG	WCDMA:B2/4/5 (1900/1700/850MHz)			٧
QX520-NWG	EVDO:BCO/1 (800/1900MHz) ; GSM:850/1900		٧	٧
QX520-E	TDD-LTE:B38/B40/B41 (2600/2300/2500MHz)	Europe,Middle East, Africa,Korea, Thailand,Southeast Asia		
QX520-EW	FDD-LTE:B1/B3/B5/B7/B8/B20 (2100/1800/850/2600/900/800MHz)		٧	
QX520-EG	WCDMA:B1/B5/B8 (2100/850/900MHz)			٧
QX520-EWG	GSM:B3/B8 (1800/900MHz)		٧	٧
QX520-A	TDD-LTE:B40 (2300MHz)	Australia, New Zealand, Latin America, Taiwan		
QX520-AW	FDD-LTE:B1/B2/B3/B4/B5/B7/B8/B28 (2100/1900/1800/1700/850/2600/900/700MHz)		٧	
QX520-AG	WCDMA:B1/B2/B5/B8 (2100/1900/850/900MHz)			٧
QX520-AWG	GSM:B2/B3/B5/B8 (1900/1800/850/900MHz)		٧	٧
QX520-C	FDD-LTE:B1/B3/B5 (2100/1800/850MHz)	China Mainland		
QX520-CW	TD-LTE:B38/B39/B40/B41 (2600/1900/2300/2500MHz)		٧	
QX520-CG	WCDMA:B1 (2100MHz)			٧
QX520-CWG	TD-SCDMA:B34/B39 (2000/1900MHz); CDMA/EVDO:BC0 (800MHz); GSM:900/1800		٧	٧

#### Note:

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