# Installation and Configuration Quick Guide QX210

Industrial Cellular Router

(2 Eth + 1 SIM + 1 RS232/485)

# Package Contents

Before installing your QX210 Router, please verify the kit contents as following. 1 x QX210 Industrial Cellular Router 1 x power adapter(12V DC/1A) 1 x Quick Start Guide

1 x Ethernet Cable1 x SMA Cellular antenna (magnet/stubby optional)1 x SMA Wi-Fi antenna (magnet/stubby optional)

\*If any of the above items is missing or damaged, please contact your sales representative.

# **Environmental Requirements**

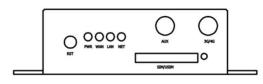
Input voltage: 7.5V-32V(standard DC12V/1A) Operating temperature: -30 to +70 °C Storage temperature: -40 to 85°C Relative humidity: < 95% (no condensation)

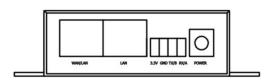
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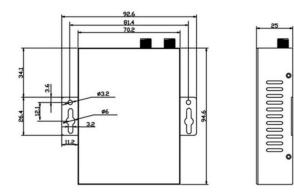
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# Hardware Introduction

## 1. Overview







# 2. LED Indicators

Name	Color	Status	Description	
PWR	Green	On	Router is powered on	
		Off	Router is powered off	
WAN	Green	On, blinking	Link connection is working	
		(100 mSec blink		
		time)		
		Off	Link connection is not working	
LAN	Green	On, blinking	Link connection is working	
		(100 mSec blink		
		time)		
		Off	Link connection is not working	
NET	Green	On, solid	Network is joined successfully	
			and worked in an optimum one	
		On, blinking	Network is joined successfully	
			but worked in a lower-level	
			than standard	
		Off	Network is not joined	

## 3. Reset Button

1 0

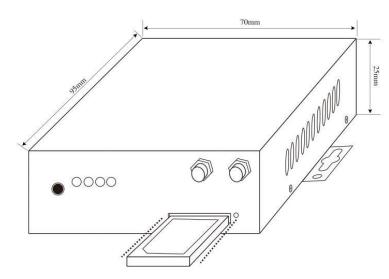
After powered up the router, press and hold the RST button for 10 seconds, and release the button to return the router to factory defaults.

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# Hardware Installation

# 1. Insert or Remove SIM Card



Insert or remove the SIM card as shown in the following steps.

✓ Insert SIM card

1) Make sure router is powered off.

2) To open the SIM card slot, use a card removal pin plug in the card hole.

3) To insert SIM card, press the card with finger until your hear a click and then push back the sim card slot

✓ Remove SIM card

1) Make sure router is powered off.

2) To open the SIM card slot, use a card removal pin plug in the card hole.3) To remove SIM card, press the card with finger until it pops out and then

take out the card.4) To push back the sim card slot.

#### Note:

1) Use the specific card when the device is working in extreme temperature (temperature exceeding 40 °C), because the regular card for long-time working in harsh environment will be disconnected frequently.

2) Do not forget to push back the card to avoid being lost.

3) Do not touch the metal of the card surface in case information in the card will lose or be destroyed.

4) Do not bend or scratch the card.

5) Keep the card away from electricity and magnetism.

6) Make sure router is powered off before inserting or removing the card.

# 2. Attach External Antenna (SMA Type)

Attach external SMA antenna to the router's antenna connector and twist tightly. Make sure the antenna is within the correct frequency range provided by the ISP and with 50 Ohm impedance.

## 3. Mount the Router

The router can be placed on a desktop or mounted to a wall.

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Use 2 pieces of drywall screws to mount the router with the wall mounting kit on the wall.

## 4. Connect the Router to a Computer

Connect an Ethernet cable to the LAN port of the router, and connect the

# **PC Configuration**

other end of the cable to your computer.

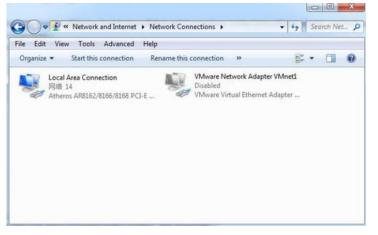
## 5. Power Supply

Connect the power adapter to the power input interface of the router. Note:Voltage input is during 7.5V-32V DC..

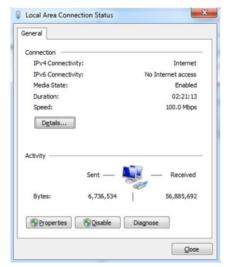
There are two methods to get IP address for the PC. One is to obtain an IP address automatically from "Local Area Connection", and another is to configure a static IP address manually within the same subnet of the router. Please refer to the steps below.

Here take Windows 10 as example, and the configuration for windows system is similar.

1. Click Start > Control panel, click Network and Internet, click Network and Sharing Center, click Change Adapter Settings, and then double-click Local Area Connection (Ethernet).

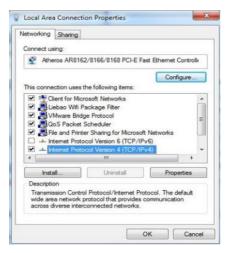


2. Click **Properties** in the window of **Local Area Connection (Ethernet)** Status.



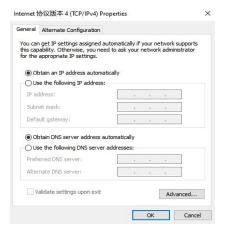
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3. Choose Internet Protocol Version 4 (TCP/IPv4) and click Properties.



#### 4. Two ways for configuring the IP address of PC.

#### 1) Obtain an IP address automatically:



#### 2.) Use the following IP address

Configured a static IP address manually within the same subnet of the router, router default IP address is 192.168.1.1, so static IP address set as 192.168.1.xxx (XXX can be any number between  $2\sim$ 254).

eneral	
	d automatically if your network supports need to ask your network administrator
Obtain an IP address auto	matically
• Use the following IP addre	55:
IP address:	192.168.1.2
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.1
Obtain DNS server address	a notematically
Use the following DNS server	2 C
Preferred DNS server:	192.168.1.1
Alternate DNS server:	
Validate settings upon exi	t Advanced

5. Click **OK** to finish the configuration.

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# **Router Configuration**

# 1. Log in the Router

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To log in to the management page and view the configuration status of your router, please follow the steps below.

1) On your PC, open a web browser such as Internet Explorer, Google or Firefox etc.

2) From your web browser, type the IP address of the router into the address bar and press enter. The default IP address of the router is **192.168.1.1**, though the actual address may vary.



3) In the login page, enter the username and password, then click **Login**. The default username and password are "**admin**".



4) After logging in, the home page of the QX210 Router's web interface is

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#### displayed, for example.

System Status > 🔸	C.				
asic Network >	Status				
dvanced Network >					
PN Configuration	System				
	Router Name	M2M		Product Name	ZR2721S
ystem Management >	Firmware Version	Premium Wireless Router v1.1.2.0302		Product ID	1120ZR22004080001
ogout	Local Time	Sun Apr 19 17:19:50 2020		Hardware Class	Single Model Single Carr
	Uptime	0h 45m 33s		MAC Address	34.0ar68:25:0brcc
	Load Average	0.16, 0.08, 0.20		WAN Mode	3G/4G and Wired
	3G/4G WAN Status				
	Interface		Mobile Network1		
	Address		10.45.82.104		
	Gateway		10.45.82.105		
	DNS		202.96.128.86 / 202.96.134.133		
	Modem Type		LTE/WCDMA/TD-SCDMA/EVD0/CDMA/GSM		

# 2. Configure the Cellular Connection

There are two methods to dial up for cellular connection of this router.

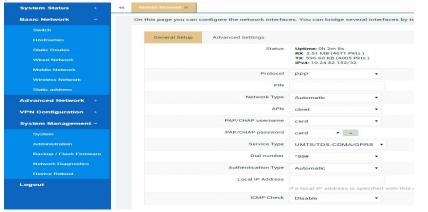
#### 1) DHCP dial-up (Default)

Click **Basic Network > Mobile Network,** choose "**DHCP client**" as the Protocol, don't change other default settings, click **SAVE & APPLY** button.

System Status		44	Mobile Network 🕿 👘			
Basic Network			nterfaces - 3GWA			
		0	on this page you can o	onfigure the network interfac	es. You can bridge several ir	nterfaces by ticking the "brid
			General Setup	Advanced Settings		
Wired Network				Status	Uptime: 1h 6m 2s MAC: 22-88-47-E3-DB-A5	
					RX: 72.63 MB (70252 Pkts.)	
					TX: 5.84 MB (54215 Pkts.) IPv4: 10.45.82.104/28	
				Protocol	DHCP client	-
Advanced Network			Hostname t	o send when requesting DHCP	MSM	
VPN Configuration				PIN		
System Manageme	nt >			Network Type	Automatic	•
Logout				APN	ctnet	-
				PAP/CHAP username	oard	•
				PAP/CHAP password	card • -	
				Authentication Type	CHAP	-
				ICMP Check	Disable	-

#### 2) PPP dial-up

When you don't want to dial up with DHCP, this router also provide PPP dial-up option. Click **Basic Network > Mobile Network**, choose "**PPP**" as the Protocol, click **SWITCH PROTOCOL** button, no need to change the default parameter, click **SAVE & APPLY** button.



#### 3) Check the cellular connection status

Click **System Status > 3G/4G WAN Status** to view the status of the cellular connection, the details status information will be displayed.

System Status 🛛 👻	44 Mobile Network × Overview ×	
Overview	3G/4G WAN Status	
Routes	Interface	Mobile Network1
System Log	Address	10.6.114.224
Kernel Log	Gateway	10.6.114.225
Kerner Log	DNS	202.96.134.33 / 202.96.128.166
Realtime Graphs	Modem Type	LTE/WCDMA/TD-SCDMA/EVD0/CDMA/GSM
Load Balancing	Modem IMEI	863879043609893
Basic Network >	Modem IMSI	460030787067217
	Network Operator	China Telecom
Advanced Network >	Current Network Standard	FDD LTE
VPN Configuration	USIM Status	simready
	RSSI	31 🚚 (-51 dBm / 100%)
System Management >	ConnectStatus	connected 0h 1m 23s
Logout		

#### Note:

A) This router support IoT and VPDN card of multiple carriers.

B) Generally, this router will identify APN information automatically. When dail-up fail with some IoT card and VPDN card, please contact your carrier and fill in the AP data such as username, password to configure then get cellular connection.

C) This router support wired connection, the configuration is similar with cellular network. Click **Basic Network > Wired Network > WAN**, choose "**DHCP client**" (Optional PPPoE, Static address) as the Protocol, click **SAVE & APPLY** button.

# 3. Configure the WiFi Connection (WiFi Client Mode)

Besides Wired Ethernet and Cellular connection, this router also support WiFi connect to internet (WiFi Client Mode)

#### > Click Basic Network > Wireless Network, click SCAN button

System Status	66 WiteHiss Defects 8					39 Tab operation -
Basic Network 👻						
Switch	radic0: Client "ZUWL-HUAWD"					
Hottoms	Wireless Overview					
Math: Rocks	≡ radic0	Generic 802.11bgn Wireless Controller Channel: 7 (7 GHz)   Bitrate: 7 Mbit/s			RESTART	SCAN
Wred Network		contract ( cour) and a rest of				
Mobile Network		SSID: ZUM_HUKWEI   Mode: Client Wiveless is disabled			ENABLE	EDIT
Wreisss Notwork		Province of Construction				
Slats address	Associated Stations					
Advanced Network	Network	MAC-Address	Host	Signal / Noise	RX R	ate / TX Rate
VPN Configuration			No informatio	on available		
System Management >					Browned by Observices (Mark W) Tackender	gy Co.1.1d. / Premium Windess Router v1.1.2.0002
Logout						g visse / remain marrie signifier a source

> Select the WiFi network you want to join, click **JOIN NETWORK** button

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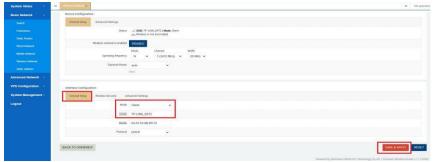
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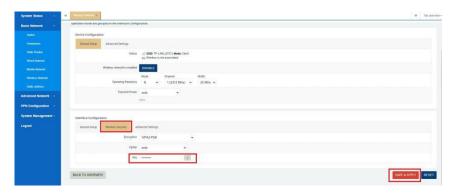
System Status 🔹 🔲	Western Balance B						34 Tati open
Basic Network	Join Network: Wireless	Scan					
Selec							
Hechanics	Signal	SSID	Channel	Mode	85510	Encryption	
State Rootes	A 70%	JHR (1888)		Master	02:0A EB 9F80:60	WFM2_P1K	JOIN NETWORK
Weed Network						NUOR-LUN	Contract of Contract
Mobile Network	4.68%	TP-LINK 0972	1	Master	54 A7 03 GB D9 72	mined WPA/WPA2 - PSK	JOIN NETWORK
Western Notwork							
Third address	4 60%	LEFENG_AT09	10	Master	BC 52-C2-CE-A7-DA	mined WPA/WPA2 - PSK	JOIN NETWORK
Advanced Network							
VPN Configuration	4 55%	ChinaNet-broeH	11	Master	80.857527.80.58	mined WPA_WPA2 - PSK	JOIN NETWORK
System Management >							-
Logout	4.52%	chafe 2.40	7	Master	48-06-00 11-20-35	mand WPA/WPA2 - PSK	JOIN NETWORK
	4,51%	st.		Master	FC 70.02 20-61 00	miand WPA/WPA2 - PSK	JOIN NETWORK
	4.57%	308	7	Master	840F38E9.0710	mond WPA/WPA2 - PSK	JOIN NETWORK

#### > Full in password in WPA passphrase, click SUBMIT button

System Status	46 Weeker Bahmati at	Tab operation =
Basic Network 👻	Joining Network: "TP-LINK_D972"	
Switch		
Hadmaners	Regilez-winiers configuration	
State Room	under site spinster in unterim one structure grand notific from their system.	
Wired Noteon	W/M postpleter	
Mobile Network	splany me secur olizybaln key nee	
Winness Network	Name of the rewinterterk wavam	
fittille address	The already characters are adjusted and just an	
Advanced Network	Crastic / Assign frevall-some water wassign (generation (Generatio) (Generation (Generation (Generatio) (Generatio) (Generatio	
VPN Configuration	Obease the fermal zone you want to assays to this interface. Telest unspectively to remove the enterface from the associated zone of fill out the cytate field to define a new zone and stack the interface to it.	
System Management >	BACK TO SCAN RESULTS	SUBMIT
Logout	Provend by therades Children Collink (CT Submitting Coll.11) / Premium Works	a finance with 2 GBD2

> Interface Configuration > Mode Select "Client", double check ESSID and Wireless Security (Key) is correct, click SAVE & APPLY button.





> Check WiFi connection status, click System Status > Overview > Wireless to view the status of the WiFi connection, the details status information will be displayed.

- H. Course					 Tall operatio
	DESKTOP-OB7DOIT	f6c5;d60e:2656;a00/128	0001000126c67ceb00e070b1325e	expired	
Wreless					
Generic MA	C80211 802 11bgn Wireless Controller (radiod)	SSID: TP-L Mode: Clie			
		Channel: 1 Bitrate: 15	(2.412.0Hz) Motos		
			A 68 25 08 CB WPV2 PSK (CCMP)		
		72% Encryption Address 1 Gateway 1	(2.166.1.10) (2.166.1.1) 116.116.116		
		DNS 1: 11 DNS 2: 221 Uptime: 01	5.05.05		
		upone o			
Associated	Stations				
	MAC-Address	Signal Noise	RX Rate	TX Rate	
4	54 A7 93 58 D9 72	-59 dBm -95 dB	1 162.0 Mbit/s, MCS 12, 40MHz	15.0 Mbis/x, MCS 8, 40MHz	
Load Balan	cing				
	Interface: you	face: 3gvan1			
		ua: Disabled			

## 4.Connect PC and Terminal to Router

There are two methods to connect PC and terminal to this router. One is connect with Ethernet cable, another is connect through Wireless Access Point. Please refer to the steps below.

1) Ethernet cable connection (Wired)

Connect an Ethernet cable to the LAN port of the router, and connect the

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other end of the cable to your computer or terminal. Obtain an IP address automatically from "**Local Area Connection**", or to configure a static IP address manually, detail please refer to page 4 "PC Configuration"

2) Wireless Access Point (WiFi AP)

To log in to the router management page, please refer to Page 6 "Router Configuration"

Click Basic Network > Wireless Network> Wireless Overview, click EDIT button

System Status >	· ·					an 10 service
Basic Network -						
(2000)	radial: Moder Testex0400*					
and the second s	Wireless Overview					
	Band	Generic 802.11bgn Wireless Controller			RESTART	SCAN
The Index		Channel 5 (2 AST Ginz) ( Binate: 1 Stbl/s				
Millio Service	200	SSD terrentiktit (Made Manw			DISABLE	103
Transmit Materials		8080: 24154-58 25108 CE   Broryption: WP42 PSK (2014P)				
	Associated Stations					
Lovanced Network	Network	MAC-Address	-	Eignal / Noise	RX Rate /	TX Rate
TN Configuration			No informatio	e available		

> General Setup, Choose "Access Point" as Mode, fill in ESSID, click SAVE & APPLY button.

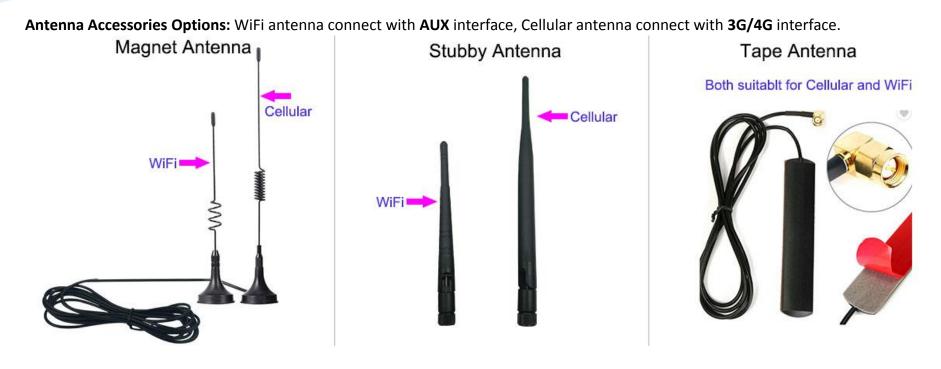
System Status	44	Wentern Richwolt M.				
Basic Network 🛛 👻		Status	Mode: Master   SSID:			
		Sietus	0% BSSID: 34 0A 68 25 0 Encryption: WPA2 PS	BICE STREET		
			Channel: 6 (2.437 GH Tx-Power: 20 dBm			
			Signal: 0 dBm   Noise Bitrate: 0.0 Mbit/s   0			
		Wireless network is enabled	DISABLE			
			Mode Chan		width	
		Operating frequency		2437 MHz) *	20 MHz ·	
		Transmit Power	auto			
Advanced Network			dBm			
VPN Configuration						
System Management >		Interface Configuration				
Logout		General Setup Wireless Security M	AC-Filter Advanced S	ettings		
		Mode	Access Point			
				_		
		ESSID	Router Test			
		Hide ESSID	8			

> Wireless Security, recommend choose "WPA-PSK/WPA2-PSK Mixed
Mode" as Encryption, set password in key, click SAVE & APPLY button.

System Status	•	 Wholess Network ×
Basic Network		Mode Channel Width
		Operating frequency N • 6 (2437 MHz) • 20 MHz •
		Transmit Power auto
Static Routes		d0m
Wired Network		
Mobile Network		Interface Configuration
Wireless Network		General Setup Wireless Security MAC-Filter Advanced Settings
Static address		Encryption WPA-PSK/WPA2-PSK Mixed Mode •
Advanced Network		Cipher auto +
VPN Configuration		Key
System Managemen	t)	802, 11r Fast Transition
Logout		Enables fast roaming among access points that belong to the same Mobility Domain
		802.11w Management Frame Protection Disabled (default) •
		Requires the "full" version of wpad/hostapd and support from the wifi driver (as of Feb 2017; ath/ak and ath10k, in LEDE also mwhwfi and mt76)
		Enable key reinstallation (KRACK)

When finished, use your computer or terminal scan available Wireless Access Point, choose your ESSID and key in password, then enjoy the high speed, stability, flexibility network.

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GuangZhou QiXiang Technology Co.,Ltd is a professional provider of machine-to-machine (M2M) and Internet of Things (IoT) connectivity products and services. Qi Xiang has been focusing on providing Industrial Cellular Router, Cellular Serial Modem, Network Print Server, Serial Device Server (DTU), Android Industrial Motherboard, Embedded Router Board, M2M Cloud Platform, etc.

With the powerful R&D team, efficient manufacturing plant, professional engineer and QA function, our rugged products offer mobile, high speed, reliable, flexible, 24\*7 hours connectivity for multiple fields such as Oil Field, Smart Grid, Smart City, Transportation, Industry Automation, Telco Infrastructure, Retail, Video Surveillance, etc. Our products had been passed strict quality control according to CCC, CE, ISO 9001 regulations and implemented in many well-known companies such China Mobile, China Telecom, China Unicom, KingLong Bus, UnionPay, Hive Box, etc.

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