

F3X36Q Industrial Router User Manual	Document Version	Security Classification
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F3X36Q Industrial Router User Manual

This user manual is suitable for the following model:

Model	Type
F3X36Q	LTE WIFI Industrial Router
F3X36Q-SIM2	LTE WIFI Industrial Router



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Product Picture



Note: There may be differences between models of accessories and interfaces, actual products shall prevail.

Contents

Chapter 1 Brief Introduction of Product	1
1.1 General	1
1.2 Working Principle Diagram	2
1.3 Specification	2
Chapter 2 Installation Introduction	4
2.1 Overview	4
2.2 Encasement List	4
2.3 Installation and Cable Connection	5
2.4 About Power	9
2.5 LED Indicator	10
2.6 Reset Button	10
Chapter 3 Configuration and Management	11
3.1 Configuration Connection	11
3.2 Access the Configuration Page	11
3.2.1 PC IP Address Setting(Two Methods)	11
3.2.2 Login to Configuration Page	12

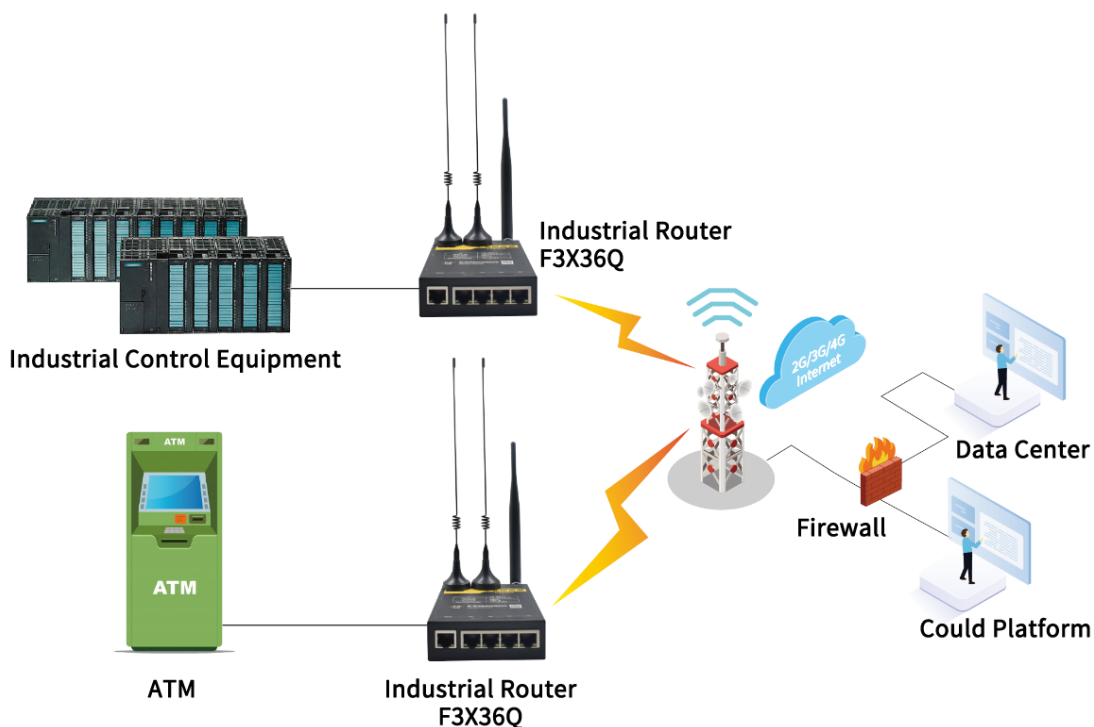
Chapter 1 Brief Introduction of Product

1.1 General

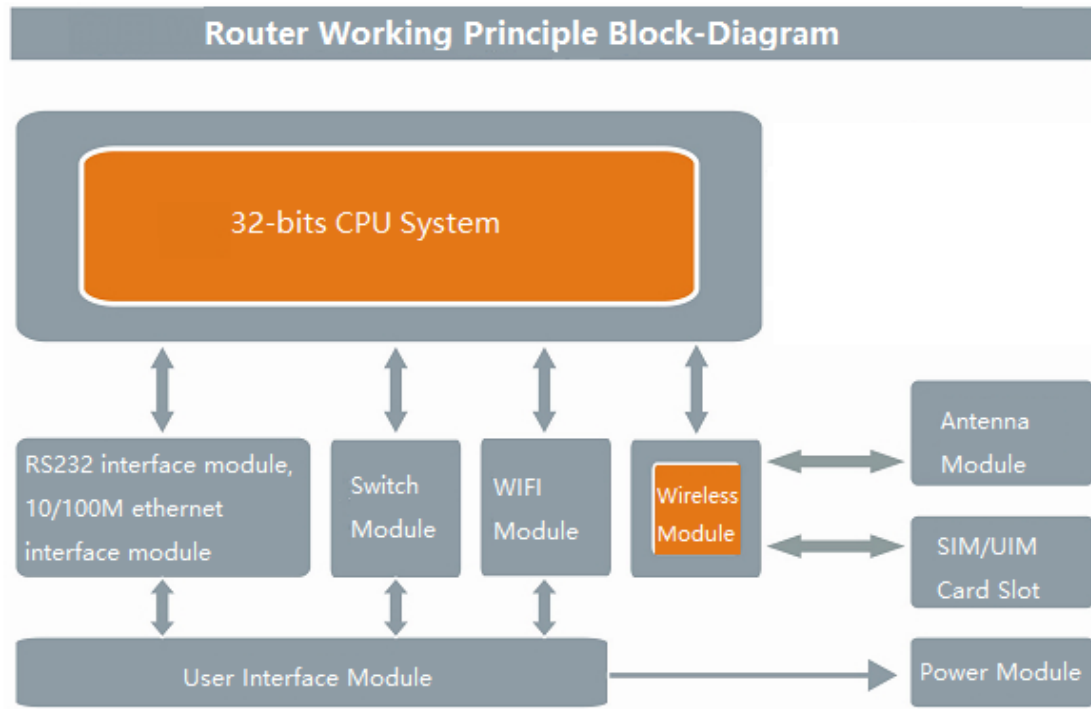
F3X36Q Industrial Router is an IoT wireless communication router. It is using public cellular network GPRS/CDMA/WCDMA/EVDO/LTE to provide long distance, wireless and large data transmission function for users.

The product uses the high-performance industrial-grade CPU and wireless module, with the embedded real-time operating system as the software support platform. It provides a RS232 (or RS485), 1 ethernet LAN, 1 ethernet WAN and a WIFI, can be connected to the serial device, ethernet devices and WIFI devices at the same time, achieve data pass-through function.

The product has been widely used in the M2M industry of the IoT industrial chain, such as smart grid, intelligent transportation, smart home, finance, mobile POS terminals, supply chain automation, industrial automation, intelligent building, fire protection, public safety, environmental protection, meteorology, digital medical, telemetry, agriculture, forestry, water, coal, petrochemical and other related fields.

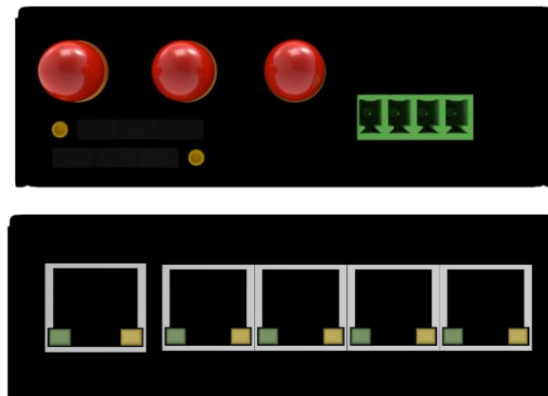


1.2 Working Principle Diagram



1.3 Specification

Product Interface



Note: There may be differences between models of accessories and interfaces, actual products shall prevail.

Power

Item	Content
Input Voltage	DC 12V/1.5A
Accepted Voltage Range	DC 5~36V

Power Consumption

Work Mode	Consumption
Standby	95~135mA@12VDC
Communicating	165~220mA@12VDC

Physical Properties

Item	Content
Casing	Metal casing, IP30 protection level, suitable for most industrial control applications.
Dimensions	126x89x30mm (excluding antennas and mountings)
Weight	345g

Others

Item	Content
Operating Temperature	-35~+75°C
Storage Temperature	-40~+85°C
Relative Humidity	95% (non-condensing)

Chapter 2 Installation Introduction

2.1 Overview

Router must be installed correctly before they achieve the designed features, the device must be installed by the guidance of a qualified engineer who recognized by the Company.

- *Warning:*
Please do not install the device while powered on.

2.2 Encasement List

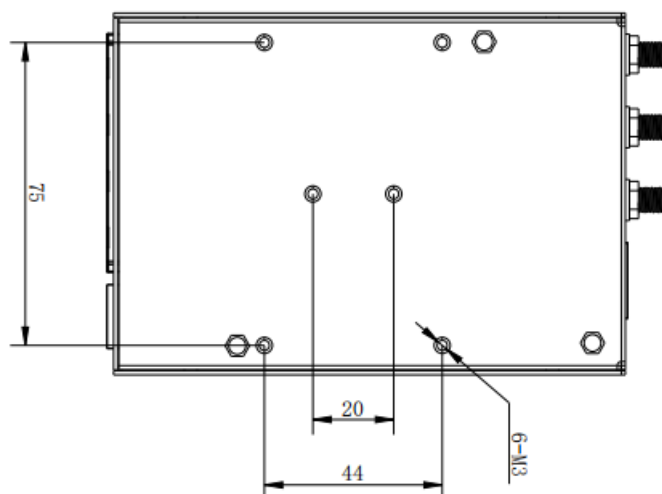
To transport safety, you will need a reasonable packaging. After you unpack the device, please keep the packaging materials for future transport needs.

It includes the following components:

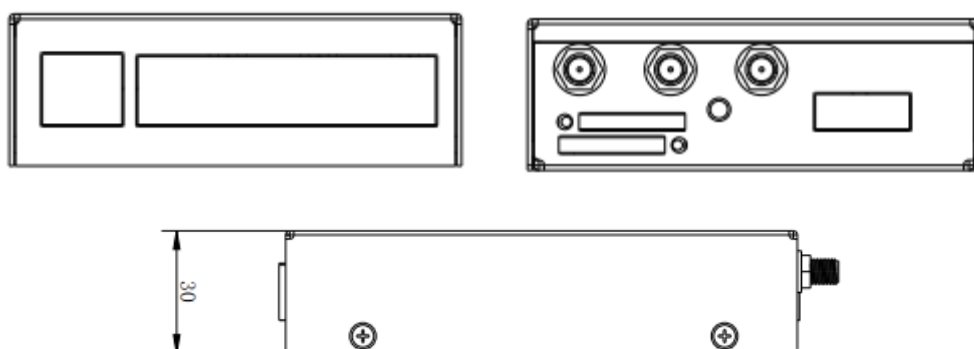
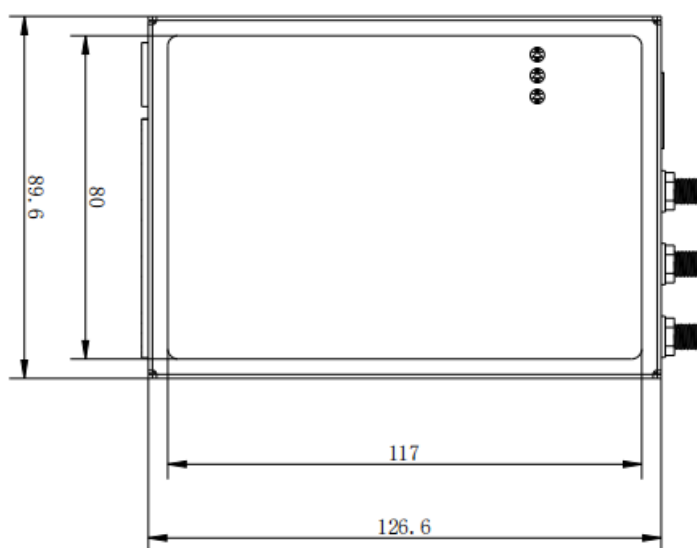
- ✧ 1 Host Device
- ✧ Wireless cellular antenna (SMA male head)
- ✧ 1 WIFI antenna (SMA female head)
- ✧ 1 power cable
- ✧ 1 ethernet cable
- ✧ 1 RS232 console cable (optional)
- ✧ Product certification
- ✧ Warranty card
- ✧ User manual CD-ROM

2.3 Installation and Cable Connection

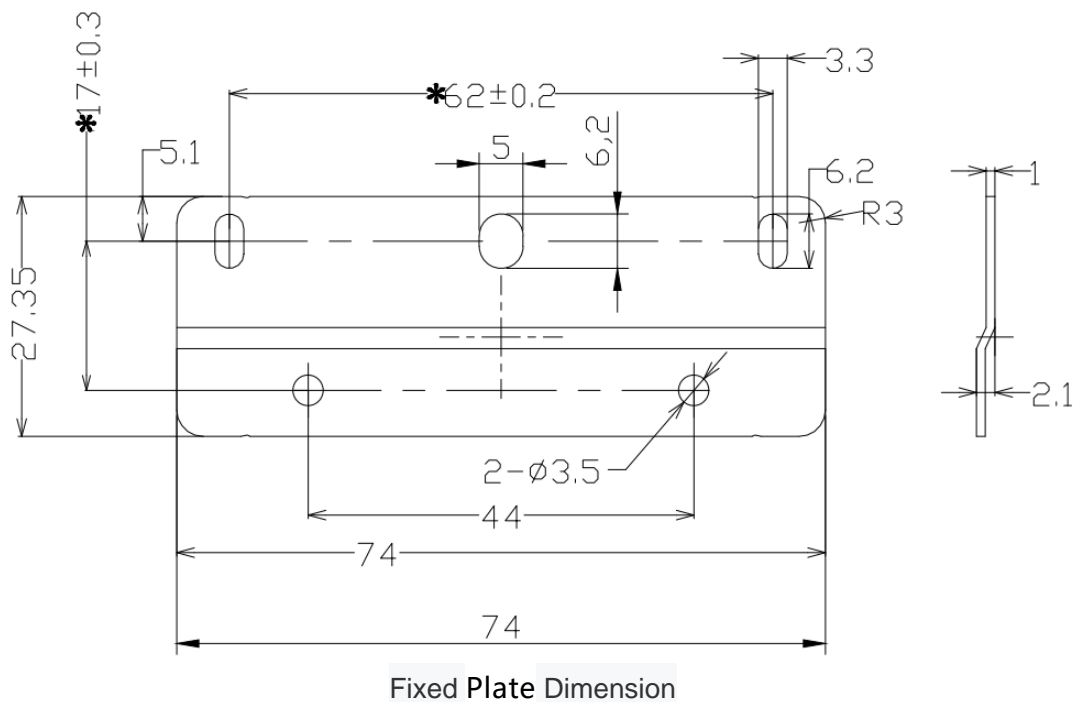
Dimension(unit: mm)



DIN Rail Installing Position



Router Dimension



Note: This router device uses DIN Rail to install, use M3 screw to secure the clip, the depth is 3-4mm.

Antenna Installation:

Wireless WAN antenna interface is a standard SMA female antenna interface (marked as 'ANT'), put the cellular antenna on the interface, make sure it has been tightening to avoid affect the signal quality.

Wireless LAN antenna interface is a standard SMA male antenna interface (marked as 'WIFI'), put the WIFI antenna on the interface, make sure it has been tightening to avoid affect the signal quality.

Note: The wireless cellular antenna cannot be mixed up with WIFI antenna, otherwise the device cannot work properly.

SIM/UIM Card Installation:

Gently press the eject button (the round dot on the left side of the card slot) with a pen or pin, SIM/UIM slot will pop up. When installing SIM/UIM card, put the card into the card slot and make sure the metal chip surface is facing outside, then insert the card slot in to the device.

(Following is an example for single card version)



Ethernet Cable Connection:

Connect one side of the ethernet cable to the LAN port on the router, the other side to the user device's ethernet port. The cable's definition is as following:

RJ45-1	RJ45-2	Color
1	1	White/Orange
2	2	Orange
3	3	White/Green
4	4	Blue
5	5	White/Blue
6	6	Green
7	7	White/Brown
8	8	Brown



3.5mm Terminal Block Interface Definition:

The 5-pin terminal block includes POWER and RS232(RS485) function. The definition is as following:

No.	Definition	Description	Extension
1	PWR	Device power supply positive	
2	GND	Device power supply negative	
3	GND	RS232 GND	
4	RXD	RS232 receiving	RS485 A
5	TXD	RS232 sending	RS485 B

Serial port connection: (When needed)

Connect the serial cable to the router with the terminal block interface, the DB9 side connect to the user's device. The cable's definition is as following:

Terminal block	Color	Definition	DB9F	Description	On router's end
1	Brown	TXD	2	Sending	Sending
2	Blue	RXD	3	Receiving	Receiving
3	Black	GND	5	GND	



2.4 About Power

The F3X36Q router is usually used in complex external environments. To fit the environment and improve the system stability, the router uses advanced power technology. User can use standard 12VDC/1.5A power adapter which come with the device, or use any DC 5-36V power to provide power supply directly for the device. When user use extra power supply, it must be stable (the ripple should less than 300mV, and the instantaneous voltage should not exceed 36V), and ensure the power is greater than 8W.

We recommend using the standard 12VDC/1.5A power adapter which come with the device.

2.5 LED Indicator

Router has the following LED indicators: 'PWR', 'Online', 'LAN', 'WAN/LAN', 'WIFI'.

Indicator	Status	Description
PWR	On	Power supply is fine
	Off	No power
Online	On	Device is online
	Off	Device is offline
LAN	Off	No connection on LAN
	On/Flashing	Detected LAN connection/Communicating
WAN/LAN	Off	WAN/LAN no connection
	On/Flashing	WAN/LAN already connected/Communicating
WIFI	Off	WIFI is not on
	On	WIFI is on

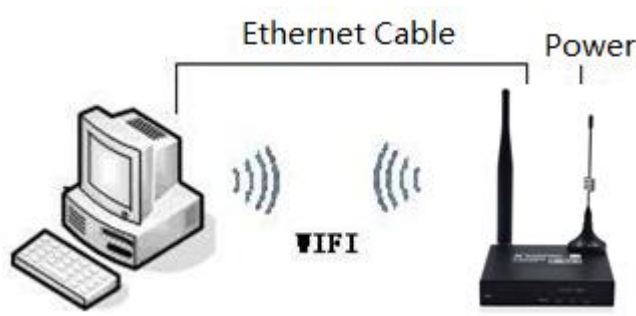
2.6 Reset Button

Router has a reset button, marked as 'Reset'. This button is used for restoring the device back to factory setting. Use a pen or pin and push the reset button for 15 seconds and release, the router will reset all the setting. After 10 seconds, the router will automatically reboot (the 'System' LED indicator will go off for 10 seconds and back to normal status).

Chapter 3 Configuration and Management

3.1 Configuration Connection

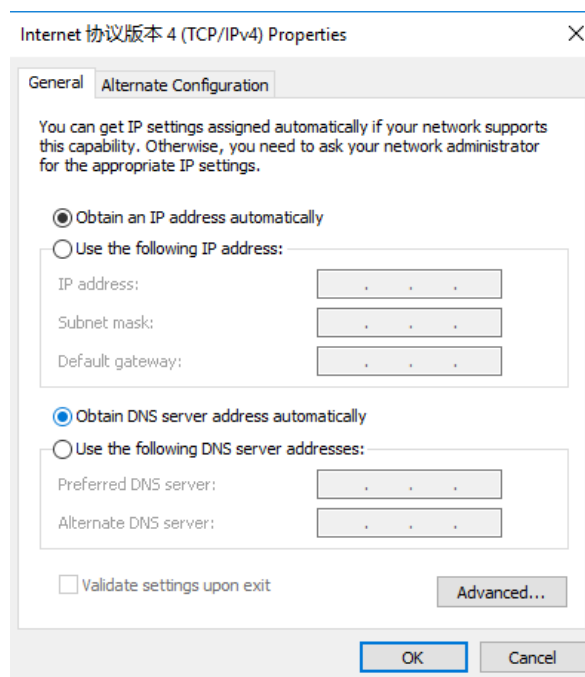
The router should be connected to the PC with the supplied ethernet cable or WIFI connection before doing the configuration for the router. When using the wired connection method, insert the ethernet cable into any LAN port of the router, insert the other side of the cable into the ethernet port on your PC. When using the WIFI connection method, the default SSID is 'FOUR-FAITH', no password.



3.2 Access the Configuration Page

3.2.1 PC IP Address Setting (Two Methods)

First method: Automatically obtain IP address



Second method: static IP

Set the PC IP address as 192.168.1.9 (or other IP address in the same 192.168.1 segment), subnet mask is 255.255.255.0, default gateway is 192.168.1.1. DNS can be set to any DNS server available in that area.

3.2.2 Login to Configuration Page

This chapter will introduce the main functions for all the setting pages. Users can use web browser on the connected PC to access the router's configuration portal. There are 11 main pages: Setup, Wireless, Services, VPN, Security, Access Restrictions, NAT, QoS Setting, Applications, Administration, Status.

To access the web-based configuration tool, open IE or other browser and type in the default router IP address 192.168.1.1, then press enter. When access to the web configuration page first time, the following page will show up, ask user whether to change the default username and password or not. Click 'Change Password' to proceed to the next step.

You will see a page which similar as the following page after clicking the button.

Menu		System Information	
Setup		Router	
Wireless		Router Name	Four-Faith
Services		Router Model	Four-Faith Router
VPN		LAN MAC	54:D0:84:00:00:22
Security		WAN MAC	54:D0:84:00:00:23
NAT		Wireless MAC	54:d0:b4:00:00:24
Access Restrictions		WAN IP	0.0.0.0
QoS Setting		BKUP WAN IP	0.0.0.0
Applications		LAN IP	192.168.1.1
Administration			
Status			
		Services	
		DHCP Server	Enabled
		ff-radauth	Disabled
		USB Support	Enabled
		Memory	
		Total Available	121.8 MB / 128.0 MB
		Free	75.1 MB / 121.8 MB
		Used	46.8 MB / 121.8 MB
		Buffers	4.8 MB / 46.8 MB
		Cached	15.9 MB / 46.8 MB
		Active	12.0 MB / 46.8 MB
		Inactive	10.8 MB / 46.8 MB
		Wireless	
		Radio	Radio is On
		Mode	AP
		Network	Mixed
		SSID	Four-Faith
		Channel	2 (2417 MHz)
		TX Power	100 mW
		Rate	Auto
		Wireless Packet Info	
		Received (RX)	0 OK, no error
		Transmitted (TX)	0 OK, 1787 errors
		DHCP	
		DHCP Clients	
		Host Name	IP Address
		MAC Address	Client Lease Time
		vivo-Y66	192.168.1.141
		HUAWEI_Mate_10-896abba07	192.168.1.113
		CAA3B3W6N1X0K55	192.168.1.143
			1 day 00:00:00
			1 day 00:00:00
			1 day 00:00:00

User may need to type in username and password in order to access any items of the menu.

Username	<input type="text" value="admin"/>
Password	<input type="password" value="....."/>
	<input type="button" value="Sign in"/> <input type="button" value="Cancel"/>

Type in the correct username and password, then click Submit. the default username is admin, password is admin. You can change it under the Management section.