

# 5G Industrial Router FNR410

# User Manual

V1.0.0

\* This manual is applicable to the following products: : FNR410-00W6

Xiamen Four-Faith Communication Technology Co., Ltd. www.four-faith.com



# **Document Revision History**

Date	Version	Note	Author
2024-11-06	V1.0.0	Initial Chinese Version	CHY
2024-12-23	V1.0.1	Initial English Version	Larry





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



# **Copyright Notice**

All contents in the files are protected by copyright law, and all copyrights are reserved by Xiamen Four-Faith Communication Technology Co., Ltd. Without written permission, all commercial use of the files from Four-Faith are forbidden, such as copy, distribute, reproduce the files, etc., but noncommercial purpose, downloaded or printed by individual (all files shall be not revised, and the copyright and other proprietorship notice shall be reserved) are welcome.

## **Trademark Notice**

Four-Faith, 四信, 『 Four-Faith , Four-Faith 『 , " are all registered trademarks of Xiamen Four-Faith Communication Technology Co., Ltd., illegal use of the name of Four-Faith, trademarks and other marks of Four-Faith is forbidden, unless written permission is authorized in advance.

### Contact Us

#### Address:

11th Floor, A-06 Area, No.370, Chengyi Street, Jimei District, Xiamen City, Fujian Province, China **Website:** www.fourfaith.com **Tel:** +86-592-5907276, 5907277 **Fax:** +86-592-5912735 **Post Code:** 361021 **E-mail:** 

info@four-faith.com



# Contents

Chapter 1 Product Introduction	1
1.1 Product Overview	1
1.2 Block Diagram of Working Principle & Key Feature	2
Chapter 2 Installation	3
2.1 Overview	
2.2 Packing List	
2.3 Installation and Cable Connection	4
2.4 Power Supply	8
2.5 Indicator Specification	
2.6 Reset Button Specification	
Chapter 3 Parameter Configuration	
3.1 Configuration Connection	
3.2 Access the Configuration Web Page	
3.2.1 PC IP Address Settings(Two Methods)	
3.2.2 Login to Configuration Page	
3.3 Boot Guide	
3.4 Navigation Bar	
3.5 Home(Operation Status)	
3.6 Data Acquisition	
3.6.1 Child Device	
3.6.2 Cloud Service	
3.6.3 Interface Setting	
3.6.3.1 Serial Ports Parameter	
3.6.4 Protocol Conversion	
3.7 Network	
3.7.1 WAN	
3.7.1.1 WAN	
3.7.1.2 Global Setting	
3.7.2 LAN	
3.7.3 WiFi	
3.7.3.1 WiFi	
3.7.3.2 Virtual Interface	
3.7.4 VPN	
3.7.4.1 PPTP	
5./.4.2 L217	



3.7.4.3	OPENVPN	
3.7.4.4	IPSEC	
3.7.4.5	GRE	
3.7.4.6	GRETAP	50
3.7.4.7	VXLAN	
3.7.4.8	EOIP	
3.7.4.9	FRP	
3.7.5 NAT		52
3.7.5.1	Port Forward	
3.7.5.2	DMZ	
3.7.5.3	Virtual IP Setting	
3.7.6 VLAI	N	56
3.7.7 Bride	ge	56
3.7.8 Adva	anced Routing	58
3.7.9 5G L	AN Setting	61
3.7.10 MA	C Clone	61
3.8 Application		61
3.8.1 Activ	ve Policy	
3.8.2 Secu	rity	
3.8.2.1	IP Restrictions	
3.8.2.2	URL Restrictions	
3.8.2.3	MAC Restrictions	
3.8.2.4	Firewall	
3.8.2.5	WEB Access	
3.8.3 QOS	5	
3.9 Maintenanc	ce	67
3.9.1 Diag	inosis	
3.9.2 Netv	work Tools	68
3.9.3 Com	nmands	
3.9.4 Log		
3.9.5 Traff	fic	71
3.9.6 Stora	age	
3.9.7 Rem	ote Management	
3.9.7.1	SSH	
3.9.7.2	Telnet	72
3.9.7.3	SNMP	
3.10 Cloud	Management	74
3.11 Syster	n	74
3.11.1 Sys	tem Settings	74
3.11.2 Log	ain Management	
	, , ,	



3.11.3	Restore	75
3.11.4	Backup	76
3.11.5	Upgrade	76



# **Chapter 1 Product Introduction**

# **1.1 Product Overview**

FNR410 is a wireless communication router for the Internet of Things, which uses public 4G/5G networks to provide users with wireless long-distance big data transmission functions.

The product adopts high-performance industrial-grade 32-bit communication processor and industrial-grade wireless module, with embedded real-time operating system as the software support platform, and provides 1 RS232 and 1 RS485 + 3 Gigabit Ethernet LAN + 1 Ethernet , which can connect serial devices, Ethernet devices and WIFI devices at the same time to realize data transparent transmission and WiFi 6 routing functions.



This product has been widely used in the M2M industry on the Internet of Things industry chain, such as smart grid, smart transportation, smart home, finance, mobile POS terminals, supply chain automation, industrial automation, smart buildings, fire protection, public safety, environmental protection, meteorology, Digital medical treatment, remote sensing survey, military, space exploration, agriculture, forestry, water affairs, coal mine, petrochemical and other fields.



# 1.2 Block Diagram of Working Principle & Key Feature



5G Router Block Diagram as follow:

The main functions of the product are as follows:

- Support 5G LAN function
- Support input power failure alarm
- Support alarm for abnormal device temperature
- Support FRP intranet penetration
- Support POE+ power receiving
- Support network port on-off detection, rate reporting, delay reporting, etc.
- Support 4G/5G and wired WAN dual-link intelligent handover and backup function
- Support VPN PPTP/L2TP/GRE/IPSEC/OPENVPN
- Support remote management, SYSLOG, SNMP, TELNET, SSHD, HTTPS
- Support SPI firewall, VPN traversal, access control, URL filtering
- WiFi supports WEP, WPA, WPA2 and other encryption methods, MAC address filtering
- SIM/UIM card interface with built-in 15KV ESD protection
- Support frequency locking, cell locking, EOIP, bridge mode, VXLAN, virtual IP, GRETAP and other functions
- Support multi-channel DHCP server and DHCP bundle MAC address, DDNS, firewall, NAT, DMZ host and other functions
- Support VLAN, MAC address cloning, PPPOE server
- Support Four-Faith Cloud Docking, making O&M more convenient
- Support a variety of online and offline trigger modes, serial port data, network data trigger online and offline mode



# **Chapter 2** Installation

# 2.1 Overview

5G routers must be installed correctly to achieve the designed functions. Usually the installation of the equipment must be carried out under the guidance of qualified engineers approved by the company.

Notes: Please do not install a 5G router with power.

# 2.2 Packing List

When you open the box, please keep the packing materials, so that you can use it when you need to transfer in the future.

The list is as follows:

- 1 x 5G router host
- 4 x 5G wireless cellular antennas (SMA male) / 2 x 5G wireless cellular antennas(Redcap Version)
- · 2 x WIFI antenna (SMA female)
- 1 x Matching power supply
- 1 x Ethernet direct connection
- 1 serial port wiring for 1-in-3 power supply
- · 3 IP68 Ethernet Ports Protective Covers
- Easy Operation Guide for the Product
- 1 x Warranty card

43



**Dimensions(mm):** 

# 2.3 Installation and Cable Connection

# 



#### **Antenna Installation:**

The 5G antenna interface is an SMA female socket (Identifier "5GX", where X is "1-4"). Screw the SMA male of the matching wireless cellular antenna to the antenna interface and make sure to tighten it. To increase the isolation of the 5G antenna, try to keep the antenna at an angle of 30 degrees to enhance signal quality. As Follow.



The WIFI antenna interface is an SMA male socket(Identify as "WIFI1", "WIFI 2"). Screw the SMA female of the matching WIFI antenna to the antenna interface and make sure to tighten it. In addition, to increase the isolation of the

www.fourfaith.com



Wi-Fi antenna, it is recommended that the two Wi-Fi are placed at a 90-degree angle.



#### SIM/UIM Card Installation



Install SIM Card

Install Cover

When installing or removing the SIM/UIM card, first use a pointed object to gently hold the eject button, and the SIM/UIM card sleeve will pop out. Put the SIM/UIM card into the card holder first, and make sure that the metal contact surface of the SIM/UIM card is facing outward, then insert the SIM/UIM card holder into the drawer.

Install the card sleeve and lock the screws on both sides of the card sleeve with a screwdriver to achieve the waterproof and anti-theft effect.

#### **Connecting Ethernet Cables:**

Plug one end of the network direct cable into any port of LAN1~LAN3 of the 5G router, and plug the other end into the Ethernet interface of the user device. The network direct connection signal connection is as follows: Connecting



Ethernet Cables: Plug one end of the network direct cable into any port of LAN1~LAN3 of the 5G router, and plug the other end into the Ethernet interface of the user device. The network direct connection signal connection is as follows: :

RJ45-1	RJ45-2	Wire	
		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	

#### Definition of power supply and serial cables:

It adopts a one-to-three power serial port line, and one end is a round end connected to the "power/serial port" interface, including power supply, RS232, RS485 functions, which are defined as follows:

No.		Definition	Signal Recognition	Note
1	Power Cable ( Round head )	VCC	The positive pole of the power supply end of the device	Red+
2		GND	The negative pole of the power supply end of the device	Black-
3	RS232 Cable ( Green Terminal )	ТХ	RS232 Send	Wire identification "1"
4		RX	RS232 Receive	Wire identification "2"
5		GND	RS232 Groud	Wire identification "3"
6	RS485 Cable ( Green Terminal )	А	RS485 A	Wire identification "+"
7		В	RS485 B	Wire identification

The wire styles are as follows:





#### Connect the console cable(connect when using the serial port):

Connect the stripped end of the terminal serial port cable to the green terminal interface (GND RX TX) of the Router, and plug the DB9 end into the RS232 serial port interface of the user device. The signal connection of the terminal serial port cable is as follows:

Terminal serial line								
	signal							
		definitio	n(RS232)					
No.	Wire	Signal	DB9	Signal				
	Color	Definition	F	Definition				
1	Black	GND	5	Ground				
2	Blue	RX	3	Receive				
	Data							
3	Brown	ТХ	2	Send Data				



# 2.4 Power Supply

5G routers are usually used in complex external environments. To adapt to the complex application environment and improve the stability of the system, the router adopts advanced power supply technology. Users can use the standard 12VDC/1.5A power adapter to power the 5G router, or directly use the DC 9~36V power supply to power the router. When the user uses an external power supply to power the router, the stability of the power supply must be ensured (the ripple is less than 300mV, and the instantaneousvoltage does not exceed 36V), and the power supply must be greater than 8W.

A standard 12VDC/1.5A power supply is recommended

## **2.5 Indicator Specification**



5G Router provide indicators as below : "Power", "System", "WiFi", "ONLINE", "5G" :

Indicator	Status	Definition	
Lights			
PWR	On	Device Power Normal	
	Off	The device is not powered on	
SYS	Blink	System is Running Normally	
	Off	System is Running Abnormally	
WiFi	On	WiFi On ( 2.4G or 5.8G or Both is Turn On )	

www.fourfaith.com

Copyright @ Four-Faith 2024



	Off	WiFi Off ( 2.4G and 5.8G are Both Off )
Online On Device SIM1 is Logged in to the Network		Device SIM1 is Logged in to the Network
	Off	Device SIM1 is Not Logged in to the Network
5G ( Tri-color	Green	The signal strength is excellent (Greater than
Light )		-90dbm )
	Yellow	The signal strength is moderate (-90dbm~-105dbm)
	Red	The signal strength is Week ( Less Than-105dbm )

#### 2.6 Reset Button Specification

5G routers have a reset button that is identified as "RST". What this button does is to restore the parameter configuration of the 5G router to factory values. Here's how to do it: Insert the "RST" hole with a sharp object, and gently press and hold the reset button for about 15 seconds before letting go, at this time, the 5G router will automatically restore the parameter configuration to the factory value, and after about 10 seconds, the 5G router will automatically restart (the auto-restart phenomenon is as follows: the "SYS" indicator turns off for about 10 seconds, and then works normally again).



# **Chapter 3 Parameter Configuration**

# **3.1 Configuration Connection**

Before configuring a 5G router, the 5G router and the PC used for configuration need to be connected via a factory-configured network cable or WiFi. When connected with a network cable, one end of the network cable is connected to one of the Ethernet ports of the 5G router's "Local Network" (hereinafter referred to as the LAN port), and the other end is connected to the Ethernet port of the PC. When connected with WiFi, the default SSID of the 5G router is "Four-Faith" or "Four-Faith-5G", and the password is "admin" for verification.



# **3.2 Access the Configuration Web Page**

# 3.2.1 PC IP Address Settings(Two Methods)

The first way:

Get an IP address automatically



You car this cap	a get IP settings assigned aut bability. Otherwise, you need	omatically if to ask your r	your n	etwork su k adminis	ipports trator
for the	appropriate IP settings.				
00	otain an IP address automatic	ally			
OU	e the following IP address:				
<u>I</u> P ad	idress:		4	i.	
Sybr	iet mask:	34 	- 32	45	]
Defa	ult gateway:			12	]
00	ntain DNS server address aut	omatically			
OUs	e the following DNS server a	ddresses:			
Pref	erred DNS server:				]
Alter	nate DNS server;		37	10	]
Ξ.	alidate settinos upon exit			Adva	nced

The second way:

Specify the IP address Set the IP address of the PC to 192.168.1.9 (or the IP address of another 192.168.1 network segment), and set the subnet mask to: 255.255.255.0, the default router is set to 192.168.1.1. DNS is set to the router address or a locally available DNS server Utensil.

ſ	nternet Protocol Version 4 (TCP/IPv4) Properties	<
	General	
h	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	
E	O Obtain an IP address automatically	
L F	● Use the following IP address:	
C	IP address: 192 . 168 . 1 . 9	
	Subnet mask: 255 . 255 . 255 . 0	
	Default gateway: 192 . 168 . 1 . 1	
C	Obtain DNS server address automatically	
l	● Us <u>e</u> the following DNS server addresses:	
l	Preferred DNS server: 8 . 8 . 8 . 8	
	Alternate DNS server:	
	Validate settings upon exit	
1	OK         Cancel           00-1-X 반가로 가 만기다	

### 3.2.2 Login to Configuration Page

The chapter is to present main functions of each page. Users visit page tool via web browser after connecting users' PC to the Router. There are eleven main pages: Home, Network, Data Acquisition, Application, Maintenance, Cloud Management, System. Users enable to browse slave pages by click one main page.



Users can open IE or other explorers and enter the Router's default IP address of 192.168.1.1 on address bar, then press the button of Enter to visit page Web management tool of the Router. The user' s login in the web page at the first name, there will display a page shows as blow to tip users to modify the default username and password of the Router. Users must click "change password" to make it work if they modify username and password.

			Auto 中文 English
	A admin d <sup>e</sup> Passwo	Router Login Please	
		Logn	

After access to the information main page



# 3.3 Boot Guide

(1) The default address of the router is 192.168.1.1, before that, please set your computer to the same network segment corresponding to it, or set the computer to automatically obtain the IP mode, as shown in the figure for the first time to configure the boot guide page of the router, the default account and password for the first login are admin

▲ 不安全 192.168.1.1/#/login?redirect=%2F	९ 🕁 🙎 :
	Auto 492 English
	<b>型号XX</b> 欢迎登录
	♀ admin ♂* 会母
	92

(2) Users can change the login password as needed

kouter				XII XII 🗜 🔌	🛞 🚨	🕂 🙁 admin 🔻
Cha	inge Login Password	WAN	Wireless Setting	Initialization Comple	ted	
	The login password is the pase and configured. The password	sword used to access the device ma I needs to be reset when the device i	nagement page. With this password, all o first used.	device parameters can be viewed		
		* Password Can not	be empty			
		Previous Nex	Skip user guide			

(3) Initialize the configuration according to the network environment, if the router uses the mobile phone card to access the Internet, select Cellular Network, if the router uses wired Internet access, select Ethernet, and if you select Ethernet, you can access the Internet after the correct configuration is carried out according to the corresponding IP field.

° °						
Four-Faith					FNR410 User N	Manual
Router				xulo xulo 🔁 👟 😣	📃 🗛 🕘 admin 🝷	
с	Change Login Password	WAN •	Wireless Setting	Initialization Completed		
	Please choose to use cellular of to ensure that the device can a	or Ethernet networks based on the access the internet normally.	current device network environment, and set the	e correct network parameters		
		* Internet Access	silular Network			
		Previous	thernet			

(4) Users can choose whether to enable the WiFi hotspot and password according to their needs

Router						xul xul	臣 🔌	🛞 📮	A	🙁 admin 🔹
C	hange Login Password		WAN	Wireless :	Setting )	Initialization	n Complete	d		
	Configure wireless settings.									
		_2.4G								
			Enable							
			* SSID	ssid						
	:	5G								
			Enable							
			* SSID	ssid_5G						
			Geounty Mode	open						
			Previous	Next Skip user guide						

(5) After the initialization is completed, the device already has the basic network function, and more refined configurations need to be set in different sections.



# 3.4 Navigation Bar



From left to right, there are cellular signals, cloud platform connection flags, restart buttons, language options, and a jump button to return to the legacy routing page

# 3.5 Home(Operation Status)

The home page is the running status of the router, on this page, you can see the status parameters of all modules in an integrated manner, and the following is an introduction to each module.



🕁 Router	Ξ Home / Home		XII XII P 🔌 🥴 🛛
⊠ Home	WELCOME!		
B Data Acquisition	Sys Time: 2024-12-27 11:30:10 Sys Uptime: 4days 00:47:58	IP: 10.168.1.100 Mask: 255.255.255.0 Geteenen: 10.168.1.1	DNS: 223.5.5.5 119.29.29.29 Diagnosis>>
Application		IPv6:	
Cloud MGT	Wireless	Setup >> LAN Port	Connected Idle Setup >>
System	2.4G Access Point 5G Acce	LAN1 LAN2	
	Password: ***** Password: ***** Encryption: Open Encryption: Open		
	Devices: 0 Devices: 0 More>> More>	MAC: 1A:25:30:40:5F IP Address: 192.168.4.1 Mask: 255.255.255.0 Local DNS: 0.0.0.0	IP Start: 192.168.4.100 IP End: 192.168.4.150 Devices: 0
	40/50 Collular Natural	Seriel	
	46/56 Celidiar Network	Setup >> Serial	Used Idle Setup >>

#### **Real-time operating parameters:**

In the top bar, you can see the CPU usage, memory usage, and real-time uplink and downlink rate of Internet access, which are displayed with the dynamic changes of the device.

CPU 1.5% Bemory (66.68MB/500.22MB) 13.3% [1] Up Rate:731.1B/s Down Rate:317.0B/s

#### **Device Information:**

Name: The name of the device, which can be changed in System Management - System Settings

Model: displayed according to the specific device model

SN: the SN of the router, which uniquely identifies the router

Network: The link that is currently connected to the Internet, if it is wired, Ethernet is displayed

MAC: the MAC address of the device

Firmware: The current firmware version

System Time: The current system time



#### System Uptime: How long has the Device being running

Device Info	
Name: Router	
Model: Router	
SN: FI7270443324	in the second se
Network: Ethernet	
MAC: 1A:2B:3C:4D:5F:84	- W
Firmware: (Nov 12 2024 10:47:05) std	
Sys Time: 2024-12-27 11:39:12	
Sys Uptime: 4days 00:57:00	

#### **Internet Networking**

This module is the WAN port networking information

Main link: If it is green, it is connected normally, and if it is gray, it is not connected Protocol: The type of device connected to the WAN port IP: WAN IP address

Subnet mask: The subnet mask of the device that goes online

Router: The IP address of the router configured on the device

DNS: the DNS address configured by the device

On-line time: the duration of the WAN dial-up Internet connection



Click Settings to set the Internet link, as shown in the figure

VAN Global Settings				
Dual Link Option				
Enable WAN Failover				
Main				
* Connection Type	DHCP V			
* Keep Online Detection	Ping ~			
* Detection Interval	120 S	* Main Detection	on IP 223.5.5.5	
* Backup Detection IP	208.67.220.220			
		> Advance		
		> Advance		

Click Network Diagnostics to perform detailed network analysis.

#### Wireless

Display the relevant information of dual-band WiFi, click Settings, you can enter more detailed wireless (WiFi) settings, WiFi support AP and client relay bridging mode, etc., you can also view the information of sub-devices connected to WiFi

Wireless			Setup >>
2.4G	Access Point	5G	Access Point
SSID: ssi	d	SSID: s	sid_5G
Password: ***	***	Password: *	****
Encryption: Op	ben	Encryption: C	Open
Devices: 0		Devices: 0	)
М	ore>>	,	More>>

F	1°		
Four	Faith	FNR410 User Mar	nual
	Router	E Network / WiRi / WiRi 🕹 🔛 👟 🍪 🗏 🖾 admin *	
	I Home	O         CPU         1.2%         B         Memory (54.43MB/500.22MB)         10.9%         11         Up Rate:1.9KB/s         Down Rate:1022.5B/s	
	Network	WIFI Virtual Interface	
	WAN	2.4G	
	LAN	Enable	
	WIFI	* Wireless Mode Access Point ~	
	VPN	*SSID ssid *Security Mode Open ~	
	NAT	* Signal Through Walls V Hide SSID	
	IPV6	> Advance	
	VLAN		
	Bridge	5G	
	Routing	Enable 💽	
	5GLAN Setting	* Wireless Mode Access Point  Access Point	
	MAC Clone		
		Save Apply	

#### LAN Port

If the port is green, it means that there are devices accessing the LAN port, and if it is gray, there is no device access MAC address: the MAC address of the LAN port IP Address: The IP address of the router itself in the LAN Subnet Mask: The subnet mask of the router Client: Tap to view information about connected devices Settings: Click Setup to enter the detailed LAN port parameter settings

LAN Port		C	Connected 🗌 Idle	Setup >>
LAN1	LAN2	LAN3	LAN4	
MAC: 1A	:2B:3C:4D:5F:8	33	DHCP: Enable	
IP Address: 19	2.168.4.1		IP Start: 192.168.4	100
Mask: 25	5.255.255.0		IP End: 192.168.4	150
Local DNS: 0.0	0.0.0		Devices: 0	

#### Click to view the device

Click Setup to view the configuration:



🕁 Router	E Network / LAN			Xulo Xulo 🗜 🔌	🤲 📃 📧 🙁 adr
☑ Home		CPU 1.0%	B Memory ( 54.59MB/500.22MB) 10.9%	1 Up Rate:595.	7B/s Down Rate:191.6B/s
Network	Router IP				
WAN	* LAN IP	192.168.4.1	* Mask	255.255.255.0	
LAN	* Gateway	0.0.0.0	Local DNS	0.0.0.0	
WIFI					
VPN	DHCP			_	
NAT	* DHCP Type	DHCP Server	DHCP Server		
IPV6	* IP Start	192.168.4 100	* Maximum DHCP Users	50	
VLAN			> Advance		
Bridge	Multiple LAN IP				
Routing	~			V Select All	+ Add 🗈 Delete
5GLAN Setting	No.	IP Address	Mask		Operation
MAC Clone			No Data		
ver.12252M			Save Apply		

#### 4G/5G Cellular :

When the main link is set to cellular, if the dial is successful, the relevant cellular information will be displayed, click more to view the detailed cellular information, if the main link is set to wired mode, then there is no dial there and no relevant cellular information can be seen

4G/5G Cellular Network		Setup >>
SIM2		
SIM1	Not Dialed	
Operator:	IMSI:	
Network:	BAND:	
Signal:	More>>	

#### **Serial Ports**

When there is a connected device on the serial port and a sub-device is successfully added, the color of the serial port is green, otherwise it is gray. The parameters of each serial port are displayed at the bottom, as well as the number of connected devices, click to view the details



	Serial			Used	ldle	Setup >>
	Serial1	Serial2	Serial3	Seria	14	Serial5
В	aud Rate: Data Bits: Parity: Stop Bits:	115200 8 None 1		Name: Devices:	RS232 0	/A1B1

# 3.6 Data Acquisition

# 3.6.1 Child Device

On this page, you need to add a device, for example, the device is connected to a temperature and humidity sensor, and the device with a temperature and humidity sensor is added here, and the device is added to the MODBUS RTU-based sensor docking.

(1) Add the device, the device name is recommended in English, because it needs to be transmitted to the MQTT server later, as shown in the figure

🕁 Router			ː비 ː ː비 문 🔌 🍪 🔳 🔯 🛎 admin 🔻
I Home	CPI	J 6.6% Bernory ( 54.85MB/500.22MB) 11.0%	1 Up Rate:756.4B/s Down Rate:700.7B/s
Network	Child Device New Device	×	
Data Acquisition ^	* Name		Variable Confi Operation
Child Device	• Channel	Ethernet	guration
Cloud	* Manufacturer	Modbus	
Proto Conv	* Device Type	Modbus TCP	
Redevelope	* IP Address		
S Application	* Port	502	
Maintenance      Y	* Station	1	
♀ Cloud MGT ✓		Advance	
I System ✓		Cancel	
		Save Apply	

(2) Add variables to the device, because there are many variables that need to be reported under a sensor or a certain device, as shown in the figure



Router	🗉 Data Acquisition / Child Device 🛛 🖓 😓 🖉 🕘 admin
🖾 Home	0 CPU 1.8% B Memory (54.93MB/500.22MB) 11.0% II Up Rate:785.2B/s Down Rate:592.4B/s
Network	
Data Acquisition	Present device name ⊂ reset
Child Device	guration
Cloud	1 1 sss Modbus TCP 192.168.1.100: 自 区 面
I/F Setting	Total 1 10/page v < 1 > Go to 1
Proto Conv	
Redevelope	
S Application	
Maintenance	
♀ Cloud MGT ∨	
System	
	Save Apply

Router		🏭 📲 陀 🔌 🥵 🔳 🛯 😂 admin 🔻
I Home	CPU 1.8% Remory (54.95MB/500.22MB) 1	1.0% Up Rate:1.1KB/s Down Rate:1.1KB/s
Network	Variable Point Table: ss New Virtual Variable	
Data Acquisition ^	Please enter vancee nem  Variable Name  Variable Name	+ Virtual Vanable Visted All + Add Bibleton Read/Wr Acq Tim
Child Device	* Data Type 16-Bit Unsigned	ite 🗢 e
Cloud		
I/F Setting	* Read/Write  • Read Only	1
Proto Conv	* Data Operation None V	
Redevelope		
S Application	Cancel OK	
Maintenance		
Sector MGT		
ver.12252M	Back Save Apply	



needs to be reported to the MQTT server, and other parameters can be set according to the MODBUS RTU parameters of the device.

- (3) After adding the device and adding the variables, you can send MQTT data, please see the cloud service section for MQTT.
- (4) When you click Edit Variable, you can convert the data collected by the variable to the following operations: Select a custom formula to convert the data through the variable \* magnification ± offset value, as shown in the figure (click Help for more details)

0					+ Virt
tus	* Variable Name	hum			
	* Data Type	16-Bit Unsigned			
	* Read/Write	Read Only			
	* Data Operation	Custom Formula		0	1
	<u>555</u>				
			Cancel	ок	



1	Help	$\times$	
	The formula format is written as an infix expression, and formulas in parentheses ar		
1	e calculated first, and nesting is supported.		
	Ine remaining operations are performed according to the operation priority (the smaller the priority value, the higher the priority)		
	smatter the priority value, the higher the priority,		
	Variables:		
	\${device name, variable name} refers to other variables		
	Basic operator: Help		
	+ plus (priority 3)		
	- Minus (Priority 3)		
	<pre>* multiplied by (priority 2)</pre>		
	/divide (priority 2)		
	to the power (priority 2)		
	Example 1: The variable at this point is reduced by 2 times, and a positive 30 o		
	ffset		
	\${this} / 2 + 30		
	Example 2: Multiply variable at this point by variable at other point		
	<pre>\${this} * \${Device 1. Voltage 1}</pre>		
	Basic functions		
			-

# 3.6.2 Cloud Service

This page adds MQTT server forwarding to the device, and forwards the variable data of the variable monitoring module to the MQTT server so that the platform can subscribe to it. There are 2 steps in total about this module

#### 1. Add an MQTT Server

Add an MQTT server, fill in the server parameters, such as server address, port, account and password (if necessary), select the topic you want to subscribe to or publish (the topic is set in the message management in the upper right corner), and then click Apply, as shown in the figure



Router	Data Acquisition /	Cloud / Cloud Service Config		, III	×ill₂ ⅊ ≌	🛛 🥴 🔒	🕂 🙁 admin 🔻
I Home		© CPU 1.6%	B Memory ( 55.14MB/5	500.22MB) 11.0%	1 Up Rate:59	95.5B/s Down Ra	ate:164.0B/s
Network	Parameter Conf					Me	essage Management
Data Acquisition	Enable Cloud		Autor				ĥ
Ohlid Davida	* Cloud Name		* Timeout(s)	10			
Child Device	Cloud Type	Standard MQTT	* Keep Alive (s)	60			
Cloud			SSL/TLS	Enable O Disable			
I/F Setting	* Address						
Proto Conv	* Port	1883					
Redevelope	* Client ID						
Se Application	MQTT Username						
Maintenance	MOTT Password						
유 Cloud MGT	marrr assertio						
System	* Upload Cycle(s)	10					
	Change Report	Disable					
			Back Save A	pply			

When selecting a cloud platform type, you can use standard MQTT as normal, and use the rest to interconnect with Ali Cloud and HUAWEI Cloud.

🕁 Router		Cloud / Cloud Service Config		×	šulo 🗜 🔌	🕴 😂 🔲 🗛 🕒 admin 🔹
🖾 Home		(B) CPU 1.4%	B Memory ( 55.13MB/5	i00.22MB) <b>11.0%</b>	1 Up Rate:59	5.3B/s Down Rate:398.3B/s
Network	Parameter Conf					Message Management
Data Acquisition	Enable Cloud		Advance			
Child Device	* Cloud Name	12	* Timeout(s)	10		
Cloud	Cloud Type	Standard MQTT $\sim$	* Keep Alive (s)	60		
I/F Setting	* Address	broker-cn.empx.io	SSL/TLS	Enable Olisable	e	
Proto Conv	* Port	1883				
Redevelope	Client ID	12				
	MOTT Username					
Maintenance	Wight Osername					
육 Cloud MGT ~	MQTT Password					
· System ∨	<ul> <li>Upload Cycle(s)</li> </ul>	10				
			Back Save A	pply		

1. The data cache in the page means that when the device is offline, the collected point data will be stored in the memory first, and the offline content will be sent when the device is online

2. Clear reported data: This indicates that if necessary, disable the cache clear function, and the data that can be downloaded from the device to the cache database.

#### 2. Import Variables

After adding the MQTT server, you need to import variables to report data to the MQTT server, www.fourfaith.com 25 Copyright @ Four-Faith 2024



#### as shown in the figure.

	kouter	프 Data Acquisition / Cloud 🏻 🏭 🗗 🔌 🤀 🗐 🐼 😵 admin *
~	Home	CPU 1.4% Remory (59.57MB/500.22MB) 11.9% Up Rate:763.3B/s Down Rate:339.8B/s
\$	Network	Cloud I New Variable
8	Data Acquisition	All      Please enter variable name     C Reset     Select All
	Child Device	Variable Name A Device Name Read/Write ≑ Data Type ≑
	Cloud	
	I/F Setting	Variable No Data
	Proto Conv	Total 0 10/page ∨ < 1 > Go to 1 ange RP ⊕ Operation
	Redevelope	Cancel
0))	Application Y	
۲	Maintenance ~	Total 0 10/page V C 1 V Go to 1
Ģ	Cloud MGT ~	
۱	System ~	
		Seve Appy
	N Pouter	
	a Router	
		E Data Acquisition / Cloud
	Home	Data Acquisition / Cloud
2	Home Network	Data Acquisition / Cloud     CPU 1.0%     Remony (59.60MB/500.22MB) 11.9%     Up Rate:755.38/s Down Rate:1.9KB/s      Cloud List
•	Home Network ~ Data Acquisition ~	Data Acquisition 7 Cloud
•	Home Network C Data Acquisition C Child Device	Data Acquisition / Cloud     Data Acquisition / Cloud     CPU 1.0%     Remony (59.60MB/500.22MB) 11.9%     11 Up Rate:755.3B/s Down Rate:1.9KB/s     Cloud List     Cloud List     Address:broker-cn.ampx.ib     Address:broker-cn.ampx.ib
•	Home Child Device Cloud	Data Acquisition 7 Cloud     Cloud List     Cloud List     Standard MQTT     Address:broker-cn.empx.io     Add Cloud
•	Home Network 2 Data Acquisition 2 Child Device Cloud UF Setting	Data Acquisition 7 Cloud     The Acquisition 7 Cloud     CPU 1.0%   Memory (59.60MB/500.22MB) 11.9%  1 Up Rate:755.3B/s Down Rate:1.9KB/s      Cloud List     Standard MOTT     Address:broker-on.empx.io     Variable List
	Home Pata Acquisition Cloud Cloud UF Setting Proto Conv	Data Acquisition 7 Cloud     CPU 1.0%    Memory (59.60MB/500.22MB) 11.9%    Up Rate:7.55.3B/s Down Rate:1.9KB/s      Cloud List     Standard MQTT     Address:broker-on.empx.io     Add Cloud     Variable List     All      Please enter variable name     Reset     Setect At     + Ad3     C Deels
	Home Network $\sim$ Data Acquisition $\sim$ Child Device Cloud $\downarrow$ UF Setting Proto Conv Redevelope	Data Acquisition 7 Cloud   Image: Acquisition 7 Cloud     Image: Acquisition 7 Cloud     Image: Cloud List     Image: Cloud List <
	Home Network C Data Acquisition C Child Device Cloud UF Setting Proto Conv Redevelope Application C	Data Acquisition 7 Cloud   Image: Cloud Image: Cloud     Image: Cloud List     Image: Cloud List </th
	Home Fewer Constraints of the second	Data Acquisition 7 Cloud   Image: Cloud Image: Cloud     Image: Cloud List     Image: Cloud Cloud     Image: Cloud Cloud     Image: Cloud List     Image: Cloud Cloud     Image: Cloud Cloud Cloud     Image: Cloud Cloud Cloud Cloud     Image: Cloud Cloud Cloud Cloud Cloud Clo
	Home Network C Data Acquisition C Child Device Cloud UF Setting Proto Conv Redevelope Application C Maintenance C Cloud MGT	Data Acquisition 7 Cloud    Image: Acquisition 7 Cloud     Image: Acquisition 7 Cloud
	Home  Network  Child Device Child Device UF Setting Proto Conv Redevelope Application Aduatenance Cloud MGT System	Data Acquisition 7 Cloud   Image: Cloud Image: Cloud     Image: Cloud List     Image: Cloud Cloud     Image: Cloud List     Image: Cloud Cloud     Imag

Finally, you can go to the MQTT server to subscribe to the device data, as shown in the figure



wyq QoS 0	<pre>("sn":"FDC170804767","ct_id":"12","datasource":"periodic_report","ctime":"2023-09-01 17:23:26","subdev":("sensor":("ctime":"2023-09-01 17:23:26","data":("hum":249))))</pre>	
	2023-09-01 17:23:33:102	
	Topic.wyq QoS:0 {"sn":"FDC170804767","ct_id":"12","datasource":"periodic_report","ctime":"2023-09-01 17:24:06","subdev":{"sensor":{"ctime":"2023-09-01 17:24:06","data":{"hum":248}}}	
	2023-09-01 17:24:15:900	
	Topic wyq QoS:0 {"sn":"FDC170804767","ct_id":"12","datasource":"periodic_report","ctime":"2023-09-01 17:24:16","subdev":{"sensor":{"ctime":"2023-09-01 17:24:16","data":{"hum":248}}}	
	2023-09-01 17:24:22:972	
	Topic.wyq QoS:0 {"sm":"FDC170804767","ct_id":"12","datasource":"periodic_report","ctime":"2023-09-01 17:24:26","subdev":("sensor":("ctime":"2023-09-01 17:24:26","data":("hum":248))))	
	2023-09-01 17:24:35:131	
	Payload: Base64 V QoS: 0 V C Retain Meta	~
		$\boldsymbol{\epsilon} = \boldsymbol{\varTheta}$

#### MQTT format

{"sn":"FDC170804767","ct\_id":"12","datasource":"periodic\_report","ctime":"2023-09-01 17:26:16","subdev":{"sensor":{"ctime":"2023-09-01 17:26:16","data":{"hum":248}}} The above is the format of publishing data to an MQTT server through a cloud service The fields have the following meanings:

SN: SN of the router

ctime: the collection time

Sensor: The sensor here is the device name, if the name is other, the other will be displayed, so it is recommended to use the English name when adding the device

data: the nest of collected data

hum: This is the variable, and the variable name is different here

#### 3.6.3 Interface Setting

#### 3.6.3.1 Serial Ports Parameter

When the device is connected to the sub-device through the serial port, you need to set the serial port parameters, remember that you need to set the same serial port parameters as the connected sub-device to send and receive serial port data, and remember to click Apply after the parameters are set.



	🕁 Router		Data Acquis	sition / I/F Setting / Serial C	Config		til til til	P 🔌 🥴 🗖 🛛	😽 🙁 admin 🔻
$\sim$	Home				😐 CPU 1.5%	Memory ( 59.59MB/500.22	2MB) 11.9% 🚺 Up	p Rate:595.0B/s Down Rate	:248.7B/s
Φ	Network		Serial Config	IO Config					
8	Data Acquisition		RS232/A1B1		A2B2		A3B3		
	Child Device		Baud Rate	115200 ~	Baud Rate	115200 ~	Baud Rate	115200	
	Cloud		Data Bits	8 ~	Data Bits	8 ~	Data Bits	8	
	I/F Setting		Parity	None $\vee$	Parity	None $\sim$	Parity	None	
	Broto Conv		Stop Bits	1 ~	Stop Bits	1 ~	Stop Bits	1	
	PIOLO CONV		A4B4		A5B5				
	Redevelope		Baud Rate	115200 ~	Baud Rate	115200 ~			
8	Application		Data Bits	8 ~	Data Bits	8 ~			
0	Maintenance	~	Parity	None $\sim$	Parity	None $\sim$			
~	01-11107		Stop Bits	1 ~	Stop Bits	1 ~			
396	Cloud MG1								
۲	System	~							
						Save Apply			

If you do not know the detailed parameters of the docking sub-device, you can perform the following tests, in most serial port equipment, the basic use of 8N1 mode, that is, 8 data bits, 1 stop bit, no verification.

#### 3.6.4 Protocol Conversion

The main function of the protocol conversion is to convert the device data collected as the master into slave data, and then connect to other devices for transmission, here is also the sensor data collected based on modbusRTU mentioned above as an example, the sensor data has been collected as the master station, and it needs to be sent as a slave here, and the operation is as follows

(1) Select modbusTCP and set the port and station number, that is, the slave address. The IP address of modbusTCP is the local IP address, as shown in the figure

► <b>1</b> °		
Four-Faith	FNR410 User Manua	al
Router	🗉 Data Acquisition / Proto Conv 🛛 👔 🖟 😨 🔹 admin 🔹	
🖾 Home	CPU 1.2% Remory (59.86MB/500.22MB) 12.0% 11 Up Rate:731.8B/s Down Rate:2.3KB/s	
Wetwork	Modbus TCP Modbus RTU IEC 104 IEC 101 DNP 3.0 OPC UA HJ212	
Data Acquisition     Child Device     Cloud     I/F Setting     Proto Conv	Slave Conng       Enable       TCP Mode       TCP Server       * Listen Port       502	
Redevelope	Variable Name      Device Name     Data Type      Register Address      Read/Write     Mapling Address      Operation	
Maintenance	No Data	
유 Cloud MGT ~	Total 0 10/page ~ < 1 > Go to 1	
System		

(2) The map point table, if used as the master station to collect data based on modbusRTU, is shown in the figure

Router	Data Acquisition / Proto Conv     X	🏪 🔌 🥵 🗐 🕂 🕃 admin 🔻
🖾 Home	CPU 2.0% Remory (60.36MB/500.22MB) 12.1%	Up Rate:595.5B/s Down Rate:220.2B/s
Network	Modbut New Variable	
😑 Data Acquisition 🗠	* Start Maping Address 01(0x) V 0	
Child Device	TCP	
Cloud	All         ✓         Please enter variable name         C         Reset         ✓         Select All	
I/F Setting	Variable Name Register Address	
Proto Conv	Map	
Redevelope	All No Data	V Select All + Add Delete
Section Y	Total 0 10/page ~ < 1 > Go to 1	Address
Maintenance	Cancel Import	
😞 Cloud MGT 🗸 🗸		
l≝ System ✓		
ver.12252M std		

Import the device and click Apply.

 If modbusRTU is used as a master, modbusTCP is required as a slave, and modbusRTU is required as a slave if modbusTCP is used as a master.
 The rest of IEC104, IEC01, DNP3.0, OPCUA, etc. are the same, the basic principle of the setting is to report the sensor data collected in the southbound direction as the data converted into a standard protocol field by the slave station to other devices, and it is still used as the southbound interface of the connected equipment in the original sense.


# 3.7 Network

# 3.7.1 WAN

# 3.7.1.1 WAN

🕁 Router	Network / WAN / WAN			al al P 🔌 🥴	🗧 🖪 🕙 admin 🕇
I Home		© CPU 1.5%	B Memory ( 59.75MB/500.22MB) 11.9%	1 Up Rate:600.1B/s	Down Rate:338.0B/s
Network	WAN Global Settings				
WAN	Dual Link Option				
LAN	Enable WAN Failover				
WIFI	Main				
VPN	Main				
NAT	* Connection Type	SIM1 - 4G/5G 🗸 🗸	Username		
IPV6	Password		APN	3gnet	
	* Connection type	AUTO $\checkmark$	PIN Code		
VLAN	* Keep Online Detection	Ping ~			
Bridge	* Detection Interval	120 S	* Main Detection IP	223.5.5.5	
Routing	* Backup Detection IP	208.67.220.220			
5GLAN Setting			> Advance		
MAC Clone					
			Save Apply		

#### **Dual Link Option**



Enable the dual-link backup function, that is, whether to enable two links, so that the route has the dual-link function, and if it is disabled, only one link, that is, the primary link, is enabled, and the backup link does not work. If you click Enable to display the Dual-Link Simultaneous Online configuration option, this option means as follows:

Enabled: When the primary link goes online, all default data is sent to the Internet network through the primary link. If the primary link goes offline, the backup link is online, and the default data is sent to the Internet network through the backup link, and the primary link tries to connect continuously, and if the primary link is connected again, it switches to the primary link again. In general, it is the function of primary link priority and backup link backup.

Note: If the load balancing and load distribution functions are enabled online at



the same time, please refer to the load balancing menu for detailed data direction description.

Note: When the dual-link backup function is enabled, if the connection type in the "Primary Link Connection Type" and "Backup Link Connection Type" is set to "Static IP" or "DHCP", you must configure the corresponding online keep-alive function. The Primary Link Connection Type and Backup Link Connection Type cannot be the same, and the same physical WAN egress cannot be selected.

#### Main/Backup

Select the Internet connection type from the drop-down menu, the WAN connection type includes 8 ways: Disable, Static IP, Auto-Provision-DHCP, PPPOE, SIM1-4G/5G, SIM2-4G/5G, SIM1-3G/UMTS/4G/LTE, SIM2-3G/UMTS/4G/LTE.

#### Method 1: Disable

	* Connection Type	Disable	
isables connection typ <b>lethod 2: Static IP</b>	pe setting for WAN	l ports	
Main			
* Connection Type	Static IP V	* WAN IP Address	10.168.1.129
* Mask	255.255.255.0 $\lor$	* Gateway	10.168.1.1
* Static DNS	+		
* Keep Online Detection	Ping ~		
* Detection Interval	120 S	* Main Detection IP	223.5.5.5
* Backup Detection IP	208 67 220 220		

This type of connection is usually used for private line access, such as business fiber. The broadband service provider will provide you with detailed parameters such as IP address, subnet mask, router and DNS, which you will need to set on your 5G router.

**WAN IP address:** The IP address that the user sets based on their own or ISP assignments

Subnet Mask: The subnet mask set by the user based on their own or ISP assignmentGateway: The gateway set by the user based on their own or ISP assignmentStatic DNS: A static DNS that users set up based on their own or ISP assignments

#### Method 3: DHCP

Four-Faith					FNR410	) User Manual
* Connection Type	DHCP	$\vee$				
* Keep Online Detection	Ping					
* Detection Interval	120	S	* Main Detection IP	223.5.5.5		
* Backup Detection IP	208.67.220.220					

Cable television (Cable) and some cell broadband use this connection. The IP address of the WAN port is obtained by DHCP

# Method 4: PPPOE

* Connection Type	PPPoE	~	Username	
Password				
* Keep Online Detection	Ping	~		
* Detection Interval	120	S	* Main Detection IP	223.5.5.5
* Backup Detection IP	208.67.220.220			

This type of connection is typically used by China Telecom and China Netcom ADSL broadband services, as well as by some other broadband service providers. The PPPoE connection type requires your ISP to provide you with a username and password, which needs to be set up on the 5G router.

**Username:** The username used to log in to the Internet. **Password:** The password used to log in to the Internet.

# Method 5: 4G/5G

* Connection Type	SIM1 - 4G/5G 🗸 🗸	Username	
Password		APN	
* Connection type	AUTO $\lor$	PIN Code	
* Keep Online Detection	Ping ~		
* Detection Interval	120 S	* Main Detection IP	223.5.5.5
* Backup Detection IP	208.67.220.220		

**Username:** The username used to log in to the Internet **Password:** The password used to log in to the Internet **APN:** The name of the access point **PIN:** The PIN code provided by the SIM card

# Method 6: 3G/UMTS/4G/LTE

°				
Four-Faith			FNR	410 User Manual
* Connection Type	SIM1 - 3G/UMTS/4G/LTE V	Username		
Password		APN		
* Dial String	*99# (UMTS/3G/3.5G)	* Connection type	AUTO $\lor$	
PIN Code				
* Keep Online Detection	Ping ~			
* Detection Interval	120 S	* Main Detection IP	223.5.5.5	
* Backup Detection IP	208.67.220.220			

Username: The username used to log in to the Internet.

Password: The password used to log in to the Internet.

Call Center Number: The calling number to the carrier.

**APN :** Access Point Name.

PIN: The PIN code provided by the SIM card

# **Connection Type**

\* Connection type AUTO  $\smallsetminus$ 

Network selection: including automatic mode, force to 3G, force to 2G, 3G priority, 2G priority and other methods, if used 5G modules, the corresponding 5G network options will be added, and they can be selected according to user needs and different module types

# **Keep Online**

* Keep Online Detection	Ping			
* Detection Interval	120	S	* Main Detection IP	223.5.5.5
* Backup Detection IP	208.67.220.220			

The online hold feature is used to detect if the Internet link is active. If this is set, the 5G router will automatically detect the Internet link, and once it detects that the link is disconnected or invalid, the system will automatically reconnect and re-establish a valid link. If the network environment is poor, or in the case of a private network, it is recommended to use the 5G route mode.

# **Keep Online Detection:**

None: Does not use the online hold feature.

Ping: Sends a ping packet to detect the link. If this is set, the Hold Online Detection Interval, Hold Detect Primary IP, and Hold Detect Secondary Server IP must also be configured correctly.

Route: If you use route mode to detect links, you must also correctly configure the



Online Hold Detection Interval, Online Hold Detection Primary Server IP, and Online Hold Detect Secondary Server IP Addresses.

TCP: If you use TCP mode to detect links, if you set this mode, you must also correctly configure the "Online Hold Detection Interval", "Online Hold Detect Primary Server IP", "Online Hold Detect Secondary Server IP" configuration items, and "Check times" configuration items.

#### **Detection Interval:**

The time interval between two online hold detections, in seconds.

#### Main Detection IP:

The IP address of the primary server that responds to the 5G router inspecting packets online. Only if the "Online Hold Mode" is set to This configuration item is valid only when Ping or Route is used.

#### **Backup Detection IP:**

The IP address of the secondary server that responds to the 5G router's online detection packet. Only if the "Online Hold Mode" is set to This configuration item is valid only when Ping or Route is used.

#### Advance

·			
	✓ Advance		
Wan Nat		STP	

#### Manually set up WAN IP/Gateway:

If enabled, you can manually set the IP address and gateway address of the WAN port. **STP** (Spanning Tree Protocol) is an abbreviation for Spanning Tree Protocol. This protocol can be applied to the loop network, and the path redundancy is realized through a certain algorithm, and the loop network is pruned into a loop-free tree network, so as to avoid the proliferation and infinite loop of packets in the loop network.

# 3.7.1.2 Global Setting

	0	CPU 1.3%	8	Memory ( 64.71MB/500.22MB)	12.9%	11	Up Rate:608.4B/s	Down Rate:195.1B/s
WAN Global Settings								
Global Settings								
* Force Net Card Mode	Auto				• MTU		Select ~	
	When a string to 10	Old an else succession of the	automatia					



# Forced Net Card Mode:

The default is automatic, which can be set to 10M and 100M;

#### Assign the WAN port as the switching port:

This configuration allows you to set the device's WAN to a LAN

# 3.7.2 LAN

Router IP			
* LAN IP	192.168.4.1	* Mask	255.255.255.0
* Gateway	0.0.0.0	* Local DNS	0.0.0.0

#### **Router IP**

#### LAN IP :

Represents the 5G router IP address that can be seen by your local area network **Subnet Mask:** 

Represents a 5G router IP address subnet mask that can be seen by your local area network.

#### Gateway:

Set the router inside the 5G router, if the default setting, the internal router is the address of the 5G router itself

#### Local DNS:

DNS servers are automatically assigned by the carrier access server, and you can choose to use these reliable DNS servers if you have your own DNS servers or other stable and reliable DNS servers. Otherwise, the default setting

# DHCP

These settings are used to configure the Dynamic Host Configuration Protocol (DHCP) server functionality of the 5G router. A 5G router can act as a DHCP server for the network. The DHCP server automatically assigns an IP address to each computer in the network. If you choose to enable the DHCP server option for your 5G router, you can set up all computers on your LAN to automatically get IP addresses and DNS, and ensure that there are no other DHCP services on your network

~	°				
Four-F	aith			F	NR410 User Manua
DHC	CP				
	* DHCP Type	DHCP Server 🗸	DHCP Server		
	* IP Start	192.168.4 100	* Maximum DHCP Users	50	
			✓ Advance		
	* Client Lease Time	1440 minutes	* WINS	0.0.0.0	
	Use DNSMasq for DHCP		Use DNSMasq for DNS		
	DHCP-Authoritative				

**DHCP type:** There are two types: DHCP server and DHCP forwarder If you set it to a DHCP forwarder, enter the DHCP server address as follows

* DHCP Type	DHCP Forwarder	~	* DHCP Server	0.0.0.0
-------------	----------------	---	---------------	---------

# **DHCP Server:**

DHCP is enabled by default at the factory. If you already have a DHCP server in your network, or if you don't want a DHCP server, click Disable. If you select a DHCP forwarder, fill in the corresponding DHCP server IP.

# **IP Start:**

Input Range 1-254 Enter a numeric value that is used as the starting value when the DHCP server assigns an IP address. Because the default IP address of this 5G router is 192.168.1.1, the starting IP address must be 192.168.1.2 or greater but smaller than 192.168.1.254. The default starting IP address is 192.168.1.100.

# **Maximum DHCP Users:**

Enter the maximum number of computers that you want the DHCP server to assign IP addresses. This number cannot exceed 253, and the number of IP addresses plus users cannot be greater than 255, and the default value is 50.

#### **Client lease time:**

Refers to the lease period for which a network user with a dynamic IP address occupies an IP address. Enter the time in minutes, and in this way, the user "leases" the dynamic IP address. When a dynamic IP address expires, it's automatically assigned to a new dynamic IP address for the user. The default setting is 1440 minutes, which represents 1 day. The range can be set from 0-99999

#### WINS :

The Windows System Internet Naming Service (WINS) manages every computer that interacts with the Internet. If you're using a WINS server, you'll enter the IP address of that server here. Otherwise, no address is filled.

#### DNSMasq :



Add your domain name to the local search realm, add extended hosting options, use DNSMasq to assign IP addresses and DNS to subnets, and use the dhcpd service to provide IP addresses and DNS to subnets if you don't choose DNSMasq.

#### **Multiple LAN IP**

Mu	tiple LAN IP				
				✓ Select All + Ade	d 🗊 Delete
	No.	IP Address	Mask	Q	peration
		Total 0 10/page <	< 1 > Go to 1		

You can use the Add button to enter the corresponding IP address and subnet mask to divide multiple network segments of LAN ports, or you can choose to delete the configuration.

Add			$\times$	0.0.0.0
q i	* IP Address			
	* Mask			
		Cancel	ОК	
	IP Address		Mask	

# **Static Allocation**

Stat	ic Allo	cation								
							Select All	+ Add		
		No.	N	IAC	Name	IP Address	Client Lease Time	Operat	tion	
				No Data						

You can add a new device, select the MAC address of the corresponding device, set the name and IPV4 address, specify the device as a fixed IP address, and set the lease time, which will be automatically renewed by default after the terminal lease time expires.

Add			×
* MAC	Please enter MAC		
* Name			
* IPv4			
* Client Lease Time		minutes	
		Cancel	OK

www.fourfaith.com



# 3.7.3 WiFi

# 3.7.3.1 WiFi

.4G				
Enable				
* Wireless Mode	Access Point V			
	Access Point Only			
* SSID	ssid	* Security Mode	Open 🗸	
* Signal	Through Walls $\checkmark$	Hide SSID (		
		> Advance		
G				
Enable				
* Wireless Mode	Access Point 🗸			
	Access Point Only			

Enabled: Turn on WiFi.

Disable: Turn off WiFi.

# Wireless Mode:

There are four modes to choose from: access point, client, trunk, and trunk bridging.

# SSID:

You can set the access point name of the wireless AP, the network name shared by all devices in the wireless network, and the SSID of all devices is the same. SSIDs are made up of numbers and letters, are case-sensitive, and must not exceed 32 characters.

Security modes: Open, WPA, WPA/WPA2-PSK, WPA2, WPA3

* Security Mode	Open ^	)
Hide SSID	Open	
	WPA	
	WPA/WPA2-PSK	
	WPA2	

Signal strength: Through Walls, Standard, Energy Saving can be selected



# 3.7.3.2 Virtual Interface

Click Add to add a Virtual Interface. After the Virtual Interface is added, click Remove to remove the Virtual Interface.

WIFI	Virtual Interface			
2.4	3			
				Select All + Add
	No. SSID	Security Mode	Hide SSID	Operation
		No Data		
		Total 0 10/page < 1	> Go to 1	

# 3.7.4 VPN

# 3.7.4.1 PPTP

PPTP Server			
PPTP Server			
Broadcast Support		Force MPPE Encryption	
DNS1		DNS2	
WINS1		WINS2	
Server IP		Client IP(s)	
	Users	Connection Status	

# **Broadcast Support:**

Enable or disable the PPTP server support broadcast function

# **Force MPPE Encryption:**

Whether you want to enforce MPPE encryption for PPTP data

# DNS1, DNS2, WINS1, WINS2:

Set up your 1st DNS, 2nd DNS, 1st WINS, 2nd WINS

# Server IP:

Enter the IP address of the 5G router as the PPTP server, which should not be the same as the LAN address.



#### **Client IP(s):**

The IP address assigned to the client in the format xxx.xxx.xxx.xxx.xxx

**Note:** The client IP cannot be the same as the IP assigned by the DHCP of the 5G router, as long as it is outside this range.

PPTP Client			
PPTP Client Options			
Server IP or DNS Name		* Remote Subnet	
Remote Subnet Mask		MPPE Encryption	mppe stateless
* MTU	1450	* MRU	1450
NAT		Fixed IP	
Username	DOMAIN\\Username	Password	
ping Detection			
	Conne	ction Status	

#### Server IP or DNS Name:

PPTP server' s IP Address or DNS Name

# **Remote Subnet:**

The network of the remote PPTP server

**Rem**ote Subnet Mask:

Subnet mask of remote PPTP server

#### **MPPE Encryption:**

Enable or disable Microsoft Point-to-Point Encryption.

#### MTU:

Maximum Transmission Unit 0-1500

#### MRU:

Maximum Receive Unit 0-1500

#### NAT:

Network Address Translation

#### **Username:**

User name to login PPTP Server.

#### Password:

Password to log into PPTP Server.

# 3.7.4.2 L2TP

Four-Faith			FNR410 User Manual
L2TP Server			
L2TP Server Options			
Force MPPE Encryption		Server IP	
Client IP(s)		Tunnel Authentication Password	
	Users	Connection Status	

# **Force MPPE Encryption:**

Enable or disable force MPPE encryption of L2TP data

# Server IP:

Input IP address of the 5G Router as PPTP server, differ from LAN address **Client IP(s)**:

L2TP Client			
L2TP Client Options			
Tunnel Name	Router	Username	DOMAIN\\Username
Password		Tunnel Authentication	
		Password	
L2TP Server		* Remote Subnet	172.16.1.0
* Remote Subnet Mask	255.255.255.0	MPPE Encryption	mppe stateless
* MTU	1450	• MRU	1450
NAT		Fixed IP	
Require CHAP		Refuse PAP	
Require Authentication	•	ping Detection	
	Coppe	otion Status	

# L2TP Server:

L2TP server' s IP Address or DNS Name

# Remote Subnet:

The network of remote PPTP server

## **Remote Subnet Mask:**

Subnet mask of remote PPTP server

# **MPPE Encryption:**

Enable or disable Microsoft Point-to-Point Encryption

#### MTU:

Maximum transmission unit 0-1500

#### MRU:



Maximum receive unit 0-1500

# NAT:

Network address translation

#### Username:

Username to login L2TP Server

# Password:

Password to login L2TP Server

#### **Require CHAP:**

Enable or disable support chap authentication protocol

#### **Refuse PAP:**

Enable or disable refuse to support the pap authentication

#### **Require Authentication:**

Enable or disable support authentication protocol

# 3.7.4.3 **OPENVPN**

PPTP	L2TP	OPENVPN	IPSEC	GRE	GRETAP	VXLAN	EOIP	FRP			
Open\	/PN Serve	r									
		Enable									
	Conn	ection Status		Show							
		* Start Type	• System	) wa	N Up						
		* Config Via	<ul> <li>Daemon</li> </ul>	) Se	rver						
		CA Cert	+ Select U	pload File							
	Publi	c Server Cert	+ Select U	pload File						10	
										h	
	Privat	e Server Key	+ Select U	pload File							
						Save	Apply				

**CA Cert:** CA certificate that is common to both the server and the client

Public Server Cert: The server-side certificate

# **Private Server Key:**

The key set on the server side



DH PEM	+ Select Upload File	
Additional Config		
TLS Auth Key	+ Select Upload File	
Certificate Revoke List		

# DH PEM:

The PEM certificate on the server side

# Additional Config:

Other additional configurations of the server

# TLS Auth Key:

Authentication key for Transport Layer Security

# **Certificate Revoke List:**

Configure a list of some revocation certificates

OpenVPN Client		
Enable		
Connection Status	Show	
* Server IP/Name	0.0.0.0	* Port
* Tunnel Device	TUN 🗸	* Tunnel Protocol
* Encryption Cipher	AES-128 CBC 🗸 🗸	* Hash Algorithm
User Pass Authentication		
ping Detection		
CA Cert	+ Select Upload File	
Public Client Cert	+ Select Upload File	

# Server IP Name:

The IP Address or Domain Name of the OPENVPN Server



#### Port:

The Listening Port of the OPENVPN Client

# **Channel Equipment:**

TUN --- route mode, TAP --- bridge mode

# **Channel Protocol:**

UDP and TCP protocols Encryption Standards: The encryption standards of the channel include: Blowfish CBC, AES-128 CBC, AES-192 CBC, AES-256 CBC, and AES-512 CBC

# Hash Algorithm:

The Hash algorithm provides a fast way to access data, including SHA1, SHA256, SHA512, and MD5

# CA Cert:

CA certificate that is common to both the server and the client

# **Public Client Cert:**

**Client** certificate

# **Private Client Key:**

The client's key

* TLS Cipher	None ~	* Use LZO Compression	Adaptive $\checkmark$	
NAT				
Bridge TAP to br0				
IP Address		Mask		
* TUN MTU Setting	1500	Tunnel UDP Fragment	Disable	
TCP MSS		nsCertType Verification		
TLS Auth Key				
Additional Config				
Policy Based Routing				
PKCS12 Key				

**Use LZO Compression:** Enables or disables the use of LZO compression for transferred data **NAT:** Enables or disables NAT traversal

Bridge TAP to br0: Enables or disables TAP binding to br0 bridge

IP Address: Set the IP Address of THE LOCAL OPENVN CLIENT

TUN MTU Settings: Sets the MTU value for the channel

TCP MSS: THE MAXIMUM FRAGMENT SIZE OF TCP DATA

TLS encryption standard: The TLS (Transport Layer Secure) encryption standard supports

AES-128 SHA and AES-256 SHA



**TLS Authentication Key:** The authentication key for the Transport Secure layer **Additional Configurations:** Other Additional Configurations of OPENVPN Servers **Policy Based Routing :** Enter some custom routing policies

PPTP	L2	TP	OPENVPN	IPSEC	GRE	GRETAP	VXLAN	EOIP	FRP				
Glo	bal Set	tings											
	E	nable NA	T-Traversal										
		• D	ebug Level	Close									
			I		Cert Manag	jement							
Tun	nel												
											✓ Select All	+ Add 💼 De	lete
		No.	Status	Na	me	Туре		Com	mon Name	Auth Mo de	Enable	Operation	
								No Data					
						Total 0 10	/page 🗸	< 1	> Go to 1				
							Save	Apply					

# 3.7.4.4 IPSEC

On the IPSEC Page, The IPSEC Connection that the current device has and their status are displayed.

# Debug Level:

There are two Debug Levels in which the connection is located: Close and Basic.

**Close:** The connection does not request a connection to the peer.

**Negotiating:** The connection has been requested to the peer and is in the process of negotiation, but the connection has not yet been established.

**Established:** The connection has been established and the channel is ready to be used. Operate:

Currently, there are four operations that can be performed on the connection: Delete, Edit, Reconnect, and Enable.

**Delete:** this operation will delete the connection, and if the ipsec channel has been established, it will also be removed;

**Edit:** Modify the configuration information of the connection, and reload the connection if you want the configuration to take effect.

**Reconnection:** This operation will remove the current channel and re-initiate the channel establishment request.



**Enabled:** When the system restarts or reconnects when the connection is enabled, the connection initiates a channel establishment request. On the contrary, no request will be made.

Add: this feature is used to add a new ipsec connection.

Delete: this feature is used to delete an ipsec connection

Tun	nel									
		No.	Status	Name	Type	Common Name	Auth Mo	<ul> <li>Select All</li> <li>Enable</li> </ul>	+ Add 🗈 Delete	2
						No Data	de			
					Total 0 10/page ~	< 1 > Go to 1				

#### Name:

The name of the IPSEC Connection;

#### Type:

The Type and function of the current IPSEC connection;

**Function:** In this column, you can select the IPSEC mode and the corresponding functions, and currently support the client and server functions in tunnel mode.

Add				×
Туре				1
Enable		* Name		
* Туре	Net-to-Net Virtual Private Net $ \smallsetminus $	* Function	Client	

**Connection Config:** This column contains the basic address information of the channel. **Local WAN interfaces:** 

The local address of the channel.

#### Local subnet:

IPSec local protection subnet and subnet mask, e.g. 192.168.1.0/24;

# Local ID:

The local identifier of the channel, which can be IP and domain name;

# Peer WAN address:

The peer's IP/domain name. If the server-side function in tunnel mode is used, this option





cannot be specified.

#### Peer subnet:

IPSec peer protection subnet and subnet mask, for example: 192.168.7.0/24;

#### Peer ID:

The peer identifier of the channel, which can be an IP address and a domain name.

Connection Config			
* Interface	WAN $\vee$		
* Local Subnet	0.0.0.0/24	* Local Id	
* Peer WAN address		* Peer subnet	0.0.0/24
* Peer ID			

# Detection

This section contains configuration information for Connection Detection (DPD).

#### **Enable DPD Detection:**

Whether to enable this function, tick to indicate that it is enabled;

#### Time Interval:

Set the time interval for connection detection (DPD);

#### Timeout:

Set the connection detection (DPD) timeout period;

#### **Operation:**

D - 4 - - 4<sup>2</sup> -

Set the action for connection detection.

Detection			
Enable DPD Detection			
* Time Interval	60	* Timeout	60
* Operation	restart ~		
ping Detection			
* Detection Interval	30 S	• IP Address	10.10.10.1
* Restart times			

#### Sign

You can select a shared key or certificate authentication based on your needs, but you can only select the shared key mode.

* Auth Mode	Pre-Shared Key	* Secret Key	

www.fourfaith.com

Sign

Copyright @ Four-Faith 2024



#### Advance

This section contains configurations such as IKE, ESP, and Aggressive Mode.

Phase 1				
	* IKE Encryption	AES (256 bit)	* IKE Integrity	MD5 V
	* IKE Grouptype	Group2(1024) ~	* IKE Lifetime	24
Phase 2				
	* ESP Encryption	AES (256 bit)	* ESP Integrity	SHA2 (512) 🗸 🗸
	* ESP Grouptype	NULL ~	* ESP Lifetime	24
IKEv2				
	Use IKEv2			
	Aggressive Mode		Perfect Forward S	ecrecy

#### To enable advanced configuration:

If it is enabled, you can configure the information of the first and second phases, otherwise, it will be automatically negotiated according to the peer.

**IKE encryption:** the encryption method of the IKE stage;

IKE Integrity: An integrity protocol for the IKE phase;

IKE Group type: DH Swap Algorithm;

**IKE Lifetime:** Set the lifecycle of the IKE, which is currently measured in hours and defaults to 0;

ESP Encryption: the encryption method of ESP;

ESP Integrity: ESP Integrity Scheme;

**ESP Lifetime:** Set the lifecycle of ESP, which is currently measured in hours and defaults to 0; **Aggressive Mode:** If the check is checked, the negotiation mode will adopt the savage mode, otherwise the main mode;

Perfect Forward Secrecy: PFS is enabled if checked, not otherwise;



# 3.7.4.5 GRE

			0	CPU 1.9%	😬 Mer	nory ( 64.92N	/IB/500.22MB)	13.0%	<b>1</b>	Up Rate: <b>861.8B</b>	/s Down Rate:624.5E	3/s
PTP	L2TP	OPENVPN	IPSEC 0	GRE GRETAF	P VXLA	N EOIP	FRP					
GRE	Tunnel											
		GRE Tunnel										
									✓ s	Select All +	- Add 💼 Delete	
	Tun	Name	Through	Peer Wan I Pe P Addr	eer subne t	Peer Tunne I IP	Local Tunn el IP	Enable			Operation	
						No Data						
				Total 0 10	0/page 🗸	< 1	> Go to	1				
		Add	I							×		
				Name								
				* Through	PPP							
				mough								
			* Peer	Wan IP Addr								
				Peer subnet	192.168.	1.0/24						
			* P	eer Tunnel IP								
			* Lo	ocal Tunnel IP								
			• Lo	ocal Netmask								
				NAT								
				* MTU	1476							
				Keenalive								
				Detection								
			pi	ing Detection								
								Cancel		OK _		

The GRE (Generic Routing Encapsulation) protocol encapsulates data packets from certain network-layer protocols (such as IP and IPX) so that they can be transmitted in another network-layer protocol (such as IP). GRE uses Tunnel technology, which is the Layer 3 tunneling protocol of Virtual Private Network (VPN).

**GRE Tunnel:** Enables or disables the GRE feature

**Channels:** Configurable channels, currently up to 12 GRE tunnels can be set up **Status:** Enabled means that the currently configured GRE tunnel is enabled, otherwise it



means that the current GRE tunnel is closed
Name: The name of the tunnel is up to 30 characters long
Through: GRE transceiver interface, currently has LAN port, and PPP dial port
Peer WAN IP Address: Enter the WAN port IP address of the peer GRE
Peer Subnet: The IP address of the peer subnet of the GRE, for example, 192.168.1.0/24
Peer Tunnel IP: The GRE tunnel IP of the peer Tunnel IP of this segment: The IP address of the local GRE tunnel
Local Netmask: the local subnet mask

#### **Keep Alive:**

Turn GRE keep-alive on/off **Number of re-pulls:** Maximum number of GRE keep-alive failures **Re-Pull Interval:** GRE keepalive packet sending interval **Failure Strategy:** Keep-alive failure strategy

# 3.7.4.6 GRETAP

	🧿 CPU 1.	1% 😬 Memory (	64.95MB/500.22MB) 13.0%	t (t)	Up Rate:861.7B/s Down Rate:606.5B/s
PPTP L2TP OP	ld		×	-	
GRETAP隧道	* Name				
No	Enable			Enable	Select All + Add Delete
	* Peer Wan IP Addr				
	ping Detection				
	* Detection Interval	30 S			
	* IP Address				
	* Restart times				
			Cancel		
		Save	Apply		

Name: The name of the GRETAP port, up to 32 characters.Enable: Specifies whether to enable the current GRETAP.PEER WAN IP Addr: THE WAN IP ADDRESS OF THE PEER GRETAP.Ping Detection: Specifies whether to enable GRETAP link detection.



**Detection Interval:** The interval between GRETAP link detections.

**IP Address:** GRETAP detects the IP address of the peer.

**Restart Times:** the number of times that GRETAP fails to detect and re-initiates GRETAP.

# 3.7.4.7 VXLAN

			C	CPU 1	.3%	😬 Memory	( 64.98MB/	(500.22MB)	13.0%	11	Up Rate:936.9B/	's Down Rate:679.3B/	S
PPTP	L2TP	OPENVPN	IPSEC	GRE	GRETAP	VXLAN	EOIP	FRP					
Vxlan													
		Enable											
	* VXLAN T	unnel Name	vxlan1				* VXI	AN remote	ip addr				
* VX	LAN Netw	ork Identifer					• VXL	AN destinatio	on port	8472			
	* \	XLAN MTU	1450										

**Enable:** Enables or disables the Vxlan feature.

VXLAN Tunnel Name: the name of the NIC of the VXLAN.

VXLAN Remote IP Address: the WAN IP address of the VXLAN peer.

**VXLAN Network Identifer:** The network ID of the VXLAN must be the same as that of the local end.

VXLAN Destination Port: The destination port of the VXLAN, default 8472.

VXLAN MTU: the MTU size of the VXLAN transmit and receive, which is 1450 by default.

# 3.7.4.8 EOIP

	CPU 2.1%	B Memory ( 64.95ME	3/500.22MB) <b>13.0</b> %	1 Up Rate	e:2.9KB/s Down Rate:1.0KB/s	
PPTP L2TP OP			×			
EOIPTunnel						
* 54				<ul> <li>Select All</li> </ul>	+ Add 📋 Delete	
Tunnel	Bridged			Enable	Operation	
		Cano	el OK			

Enable: Enables or disables the current EOIP feature.

**Remote IP Address:** The WAN IP address of the peer EOIP.

**Bridged:** Whether to enable bridging, if it is not enabled, the EOIP CIDR blocks on both sides are different, and if it is enabled, the EOIP CIDR blocks on both sides of the bridge are the same.



**IP Address:** The tunnel IP address of the EOIP. **Subnet Mask:** The tunnel subnet mask of the EOIP.

# 3.7.4.9 FRP

PTP	L2TP	OPENVPN	IPSEC	GRE GRETAP	VXLAN	EOIP FRP				
FRPC	記置									
		Enable								
	* FRP FR	P Server Add				* FRP FRP	Server Port	80		
	• FRP FRP	Remote Toker								
								✓ Select All	+ Add	Delete
	No		Name	Local IP		Local Port		Remote Port	Opera	ation
					No	Data				
				Total 0 10/pa	ige V <	1 > G	o to 1			

**Enable:** Enable or disable the FRP function.

FRP Server Address: The FRP server address of the public network.

FRP Server Port: The FRP server port of the public network.

**FRP Remote Token:** The FRP server key of the public network.

Local IP: The destination IP that FRP wants to access the mapping.

Local Port: The destination port that FRP wants to access the mapping.

**Remote Port:** The port that FRP uses to access the device through the public network.

# 3.7.5 NAT

# 3.7.5.1 Port Forward

Port Forwarding is used to set up public services on the network, such as web servers, FTP servers, or other private Internet applications (a private Internet application is any



ар	plication that	at uses Internet	acces	s to use fur	octionali	ty).			
Port	Forward								
							✓ Select All	+ Add	ش D
	No.	Name		Protocol	Acti	on	Ena ble	Opera	ation
				No Data					
		Tota	al 0 10/	page 🗸 < 1	> Go to	1			
	IZ	Add					×		
			Name						
			Nume						
			Enable						
		* F	Protocol	Select	~				
		Sou	irce Net	0.0.0/24					
		* Pc	ort From						
		* IP /	Address						
	ard		Port To						
						Cancel	ОК		
						Januer			

Name: Enter the name of the application in the fields provided by the application.

Protocol: Choose either UDP or TCP for each application, and both at the same time.

# Allowed source IP ranges:

Fill in the field with the IP address of the Internet user.

#### Source Port:

Enter the number of the external port used by the service in this field.

#### **IP Address:**

Enter the private IP address of the server that you want internet users to access.

#### **Destination Port:**

Enter the number of the internal port used by the service in this field.

#### Enable:

Select the Enable box to enable the multiport forwarding service that you define. The default configuration is Disabled (not selected).

When you're done modifying the page, click the "Save Settings" button to save your changes, www.fourfaith.com Copyright @ Four-Faith 2024 53



or click the "Cancel Changes" button to cancel the changes, the help information is located on the right, and for more information, click "More".

# Port Range Forward

ort Range Forward					
				✓ Select All	+ Add 💼 Delete
No.	Name	Protocol	Action	Ena ble	Operation
		No Data			
	Total 0	10/page ~ 1	> Go to 1		
	Add			×	
	Nam	ne			
	Enab	le			
	* Protoc	ol Select	~		
rd	* Start Po	ort			
	* End Po	ort			
	* IP Addres	SS			
_					
			Cancel	ОК	

Some applications may require forwarding of a specific port range in order to function properly, and when a request to a port range is made from the Internet, the 5G router sends this data to the specified computer. For security reasons, you may want to limit port forwarding to only those ports that are in use, and if you no longer use it, we recommend that you remove the Enable check box to temporarily disable that port forwarding.

#### Name:

Enter the name of the application in the fields provided by the application;

# Enable:

Select the Enable box to enable the multiport forwarding service that you define. The default configuration is Disabled (not selected).

# Protocol:

Choose UDP or TCP protocol for each application, and choose both protocols at the same time;



# Start Port:Enter the start port number of the port forwarding range;End Port:Enter the end port number of the port forwarding range;Destination IP address:Enter the private IP address of the server that you want Internet users to access.

When you are done modifying the page, click the Save Settings button to save your changes, or click the Apply key to make the configuration option work.

# 3.7.5.2 DMZ

	(I) CPU 1.6%	B Memory ( 65.10MB/500.22MB) 13.0%	1 Up Rate:635.8B/s Down Rate:522.6B/s
Port Forward DMZ Virtual IP Sett	ing		
DMZ			
Use DMZ			
* DMZ Host IP Address 192.16	68.4 <b>0</b>		
Dire Hostill Address			

The DMZ feature allows a network user to be exposed to the Internet and thus use a particular service. The DMZ host forwards all the ports to a computer at the same time, making port forwarding more secure because only the ports you want are open, while the DMZ host opens all the ports, exposing the computer to the Internet.

To enable the DMZ feature, select Enable, and then enter the IP address of your computer in the DMZ Host IP Address field.

# 3.7.5.3 Virtual IP Setting

	CPU 1.	5% 😬 Memory ( 65	5.10MB/500.22MB) <b>13.0%</b>	1 Up Rate:84	46.6B/s Down Rate:401.3B/s
Port Forward DMZ			×		
Virtual IP Setting	Add				
	* Virtual IP			✓ Select All	+ Add
□ No.	Enable			Enable	Operation
	* Real IP				
	* Objective IP				
	* Interface	Select ~			
			Cancel OK		

Virtual IP: The virtual IP address.



**Real IP:** the IP address to be accessed, for example, the IP address (192.168.1.100) under the route.

**Objective IP:** the subnet address and gateway of the peer end, which is not set by default (0.0.0.0/0).

Interface: the interface of virtual IP forwarding.

# 3.7.6 VLAN

			Port			Assigned To Default B
VLAN	w	1	2	3	4	dge
1					2	Yes
2						
3						No
4						No
5						No
6						No
7						No
8						No
9						No
10						No
11						No ~

The VLANs function can be divided into different VALN ports according to the user's own wishes, and the system supports VLAN1-VLAN15 which have 15 VLAN ports, but there are only 5 ports at the time, including one WAN port and 4 LAN ports, which can be divided according to their own needs, and the LAN port and WAN port cannot be divided into the same VLAN port.

# 3.7.7 Bridge

			0	CPU 1.3%	•	Memory ( 65.11MB/500.22MB)	13.0%	1 Up Rate:9	58.5B/s Down Rate:958.7B
Brid	ge								
							III Bridge Now	✓ Select All	+ Add 💼 Delete
	No.	Bridge Name		Priority		мти	Assign To Ir	nterface (!)	Operation
						No Data			
				Total 0 10/	bage	$\sim$ $<$ 1 $>$ Go to	1		



#### To create a bridge:

Create a new bridge to use. STP stands for Spanning Tree Protocol, and you can set the priority of the bridge. The lowest number, with the highest priority.

#### Assign to Bridge:

Allows you to specify any valid interface to an already established bridge. Current list of bridgings: Displays a list of current bridges

## The steps to create one are as follows:

In Create Bridge, click the Add button, and the following configuration will appear The first br0 represents the name of the bridge, STP represents whether the spanning tree protocol is enabled, Prio represents the priority of the spanning tree protocol, the lower the number represents the higher level, and the MTU represents the maximum transmission unit. The default value is 1500, if you don't need it, delete it, and then click Save or Apply, the bridge property configuration will appear as follows:

Add		×
* Bridge Name		
STP		1
* Priority	32768	
* MTU	1500	
IP Address		
Mask		
Assign To Interface		
		Select All 🔅 + Add 🗇 Delete
Interface	Priority	Operation
	No Data	
Total 0	10/page > < 1 >	Go to 1
		Cancel

Enter the IP address and subnet mask of the corresponding bridge, and click the OK button to generate the bridge.

**Note:** Bridges can only be applied after they have been generated



This assignment to bridge allows you to assign different interfaces to an already created bridge, such as the interface RA0 (i.e., the wireless interface) assigned in the BR1 bridge, as shown below

Assign To Interface			
	✓ Select All	+ Add	🗊 Delete
Interface	Priority	Opera	ation
	No Data		
	Total 0 10/page < 1 > Go to 1		
		Can	cel OK

Prio stands for priority, which is useful when there are multiple interfaces bound to the same bridge, and the lower the value, the higher the level. Click Apply to make it work.

Note: Some WAN interfaces that appear in the corresponding interfaces should not be bound, and this bridge function is basically used on the LAN port side, and should not be bound to the WAN port.

# 3.7.8 Advanced Routing

		CPU	1.4%	B Memory ( 6	65.13MB/500.2	22MB) <b>13.0%</b>	1 Up Rate:	942.9B/s Down Rate:2.6
Main Mode								
	Main Mode Gateway							
tatic Routes								
						E Current Route	✓ Select All	+ Add 🛍 Delete
No.	Route Name	Metric	Destination N NET	LA M	ask	Gateway	Interface	Operation
				No Data	1			
		Т	otal 0 10/page	~ <	1 > G	io to 1		

On the Advanced Routing page, you can set up the run mode and static routes. For most users, gateway mode is recommended.

**Operating Modes:** Choose the right mode of operation. If your 5G router shares an Internet



broadband connection, keep the default gateway settings (gateway mode is recommended for most users). If you want to use only the routing capabilities of a 5G router on your network, choose a 5G router.

Dynamic Routing			
	Interface	Disable	~

#### **Dynamic Routing**

The feature is not available in router mode. The dynamic routing feature enables 5G routers to automatically adjust to physical changes in the network layout and exchange routing tables with other 5G routers. 5G routers determine the routing of network packets based on the minimum number of hops between the source and destination.

To enable dynamic routing on the WAN side, select WAN. To enable the feature for both LAN and radio, select LAN &WLAN. To enable the feature for both WAN and LAN, select Both. To disable the dynamic routing feature for all data transfers, leave the default setting disabled.

#### **Static routes**

To set up a static route between a 5G router and another network, select a number from the Static Route drop-down list to set it up. (A static route is a predetermined path through which network information must be transmitted to a specific host or network.)

Add				×
Route Nam	е			
* Metri	c			
* Destination LAN NE	Т			0
* Mas	k			
* Gatewa	У			
* Interfac	e Select	$\sim$		
			Canaal	
			Cancel	OK



**Route Name:** A user-defined route name, which can be up to 25 characters long **Number of hops:** 

The unit of measurement for routing from source to destination addresses. Range 0-9999

#### **Destination LAN IP:**

The destination IP address is the address of the destination network or host of a static route.

#### Subnet Mask:

The subnet mask determines which part of the destination IP address is the network part and which part is the host part.

#### Gateway:

This is the IP address of the router device that allows communication between the 5G router and the destination network or host.

#### Interface:

Depending on where the destination IP address is located, you can select several ports, such as LAN and wireless or WAN (Internet). To delete a static route that has been configured, select the corresponding route table number and click Delete. To view the current one For detailed routing information of the 5G router, click the "Current Route" button.

Current Route				×
Destination LAN NE T	Gateway	Subnet Mask	Metric	Interface
0.0.0.0	10.168.1.1	0.0.0.0	0	vlan2
10.168.1.0	0.0.0.0	255.255.255.0	0	vlan2
10.168.1.1	0.0.0.0	255.255.255.255	0	vlan2
127.0.0.0	0.0.0.0	255.0.0.0	0	lo
192.168.4.0	0.0.0	255.255.255.0	0	br0
192.168.4.0	0.0.0.0	255.255.255.0	0	br0

When you're done modifying, click the Save Settings button to make the changes but they don't take effect, and click the Apply button to make the changes take effect.



Sorry, in this version we support FM650/RM500U/MT5710/NR90/NE16U only!

5G LAN is related to 5G modules, and only the corresponding 5G modules can support this function.

# 3.7.10 MAC Clone

Some ISPs may require you to register your MAC address. If you do not want to re-register your MAC address, you can clone the MAC address of the 5G router to the MAC address you registered with your ISP.

	CPU 2.3%	😑 N	lemory ( 65.20MB/500.22MB)	13.0%	Up Rate:771.2B/s	Down Rate:490
MAC Clone						
MAC Clone						
* Clone LAN(VLAN) MAC	1A:2B:3C:4D:5F:83					
* Clone WAN MAC	1A:2B:3C:4D:5F:84	Get PC MAC				
* Clone LAN(Wireless) MAC	1A:2B:3C:4D:5F:85					

Mac address cloning can clone 3 parts, one is the clone of the LAN port, one is the clone of the WAN port, and the other is the clone of the wireless MAC address, there are two points to note, first, the MAC address is 48 bits, which cannot be set to a multicast address, that is, the first byte should be an even number. Second, since the wireless and LAN ports are connected together by bridge br0, the MAC address of bridge br0 is determined by the smaller of the MAC address of the LAN and the wireless MAC address.

# 3.8 Application

# 3.8.1 Active Policy

On the Activity Policy page, you can set Schedule Reboot and Timed Tasks



# Schedule Reboot

Schedule Reboot Timed Tasks	i
Schedule Reboot	
Schedule Reboot	
* Select Method	Restart After A Few Seconds $\smallsetminus$
* Interval (in seconds)	3600

# You can set a Schedule Reboot route:

Reboot after a scheduled time of xxx seconds Reboot at a specific date, time, week, or day.

#### **Timed Tasks**

Timed Tasks			
	Enable		
			✓ Select All + Add
Cycle		Task	Operation
***	•••		ī
Cycle	••• 🛛	Task	Operation

# 3.8.2 Security

# 3.8.2.1 IP Restrictions



You can set a blacklist or whitelist to restrict the source or destination addresses of import/export, including the protocol of communication.

Restrictions	URL Restrictio	ons N	IAC Restrictions	Firewall	Web Acces	5				
P Restrictions										
	Enable									
	* Strategy	Black Lis	it							
		Discard co	mpliant data							
								✓ Select All	+ Add 💼 Dele	te
No	. D	irection	I	Protocol	So	ource Addr	ess	Target Address	Operation	
					No Data	1				
			Total	0 10/page	~ <	1 >	Go to 1			

# 3.8.2.2 URL Restrictions

You can set the URL address of the blacklist and whitelist through this column, that is, the data that meets the rules will be received, and all data that does not meet the rules will be discarded.

	CPU 1.5%	B Memory ( 65.23MB/500.22MB) 13.0%	Up Rate:753.9B/s Down Rate:484.5B/s
P Restrictions URL Re	strictions MAC Restrictions	Firewall Web Access	
URL Restrictions			
E	inable		
* Str	ategy Black List		
	Discard compliant data		
			✓ Select All + Add
No.		URL	Operation
		No Data	
	Total 0	10/page V C 1 V Go to 1	

# 3.8.2.3 MAC Restrictions



You can use this column to set the MAC address of the blacklist and whitelist, that is, to receive data that meets the rules and discard all data that does not meet the rules.

Restrictions URL Restrictio	ns MAC Restrictions	Firewall Web	Access			
MAC Restrictions						
Enable						
* Strategy	Black List					
	Discard compliant data					
					✓ Select All	+ Add 🗎 Delete
No.		MA	;			Operation
			No Data			
	Total	0 10/page v	< 1 >	Go to 1		

# 3.8.2.4 Firewall

You can enable or disable firewalls, choose to filter specific Internet data types, and block anonymous Internet request, through which the security of the network is enhanced.

#### Firewall

IP Restrictions	URL Restrictions	MAC Restrictions	Firewall	Web Access
Firewall Prote	ection			
	SPI Firewall	)		

Firewalls enhance network security and inspect packets entering the network using Condition Monitoring (SPI), which are protected by firewalls, opt-in, or disabled. You must have the SPI firewall enabled to use other firewall features: filtering proxies, blocking WAN requests, and so on.

# **Additional Filters**

Additional Filters		
	Filter Proxy	Filter Cookies
	Filter Java Applets	Filter ActiveX

#### **Filter Proxy:**

Using a WAN proxy server can reduce the security of the router, and filtering proxies will reject any-to-any WAN Proxy server access, click the checkbox to enable proxy filtering or invert the check to disable the feature.

www.fourfa	aith.com
------------	----------



#### Filter Cookies:

Cookies are pieces of data that are stored on your computer by a website and used when you interact with an Internet site. Click the checkbox to enable cookie filtering or invert the check box to disable the feature.

## **Filter Java applets:**

If you reject Java, you may not be able to open a web page programmed with Java tools, click the checkbox to enable Java applet filtering or invert the check box to disable the feature.

#### **Filter ActiveX:**

If you reject ActiveX, you may not be able to open web pages programmed with ActiveX tools, click the checkbox to enable ActiveX filtering or invert the check to disable the feature.

#### **Block WAN Requests**

<ul> <li>Block Anonymous WAN Requests (ping)</li> <li>Filter IDENT (Port 113)</li> <li>Block WAN SNMP access</li> </ul>	Block WAN Requests					
Block WAN SNMP access		<b>~</b>	Block Anonymous WAN Requests (ping)	<b>~</b>	Filter IDENT (Port 113)	
		<b>~</b>	Block WAN SNMP access			

# Block Anonymous WAN Requests (ping):

Enable this feature to prevent your network from being pinged or probed by other Internet users, making it more difficult for external users to hack into your network by checking the box next to the "Block Anonymous Internet" request, which is enabled by default and allows anonymous Internet requests by selecting Disable.

# Filter IDENT (port 113):

This feature saves port 113 from being scanned by devices outside of your local network. Select Enable to filter port 113 or disable it.

#### Block WAN SNMP access:

This feature blocks SNMP connection requests from the WAN.

#### Impede WAN Dos/Bruteforce

Impede WAN DoS/Bruteforce

	Limit SSH	Access	
--	-----------	--------	--

Limit PPTP Server Access

Limit Telnet Access Limit L2TP Server Access

#### **Restrict SSH Access:**

This feature restricts SSH access requests from the WAN to a maximum of 2 SSH connection requests per minute for the same IP.

www.fourfaith.com

Copyright @ Four-Faith 2024


#### **Restrict Telnet Access:**

This feature restricts Telnet access requests from the WAN to a maximum of 2 Telnet connection requests per minute for the same IP.

#### **Restrict PPTP Server Access:**

When a PPTP server is established on the device, this feature restricts PPTP from the WAN Access requests, up to 2 PPTP connection requests per minute for the same IP.

#### **Restrict L2TP Server Access:**

When a device establishes an L2TP server, this feature restricts L2TP from the WAN Access requests, up to 2 L2TP connection requests per minute for the same IP.

### 3.8.2.5 WEB Access

You can set the local web access protocol, port, and user logout time; and how remote web access is managed.

Restrictions URL Restricti	ons MAC Restrictions Firewall Web Access
WED	
Web GUI Management	
Protocol	
1100001	
* HTTP Port	80
* User Automatic Logout	300 S
Time	Automatically log out after closing the page for a few seconds, if 0, do not automatically log out
Remote WEB	
Remote HTTP Management	
	Support accessing management pages through HTTP from WAN port/VPN
	Attention: Before using this function, please ensure Firewall function enabled!
Pamata UTTPS Management	
Remote HTTPS Management	

## 3.8.3 QOS

Use the QOS feature to limit the traffic for uploads and downloads separately, and you can set the maximum upload and download rates for the primary and secondary links separately.

11	6							
Four-Fait	th				_		FNR410	User Manual
			¢	CPU	1.3%	Memory ( 65.25MB/500.22MB)	13.0%	
	Main							
		Enable						
		* Uplink (kbps)	0					
		* Downlink (kbps)	0					
	Backup							
		Enable						
		* Uplink (kbps)	0					
		* Downlink (kbps)	0					

#### Upload (kbps):

This field is filled in with the bandwidth you allocate to upload, which is typically 80% to 90% of the maximum bandwidth you have in actual use.

#### Download (kbps):

This field is filled in with the bandwidth you allocate to the download, which is generally the maximum bandwidth you have in actual use

### 3.9 Maintenance

### 3.9.1 Diagnosis

You can click Start Diagnosis, and the device will diagnose the current active and standby links, prompt you if there is an abnormality, or you can choose to export the current diagnostic content.

Faith			FNR410 User N
	CPU 1.3%	B Memory ( 66.11MB/500.22MB) 13.2%	Up Rate:773.4B/s Down F
Diagnosis			
* Diagnostic Content	Network	×	
	Start Diagnosis		
Diagnostic Results	Export Content		
Diagnostic Results Global Network Current Link	Export Content Main Link	Normal	
Diagnostic Results Global Network Current Link DNS Resolution	Export Content Main Link Test Address: www.baidu.com	Normal Normal	
Diagnostic Results Global Network Current Link DNS Resolution	Export Content Main Link Test Address: www.baidu.com IPv4 Resolution: 183.2.172.42 IPv6 Resolution: 240e:ff:e020:9a	Normal Normal ee:0:ff:b014:8e8b	
Diagnostic Results Global Network Current Link DNS Resolution Main Link	Export Content Main Link Test Address: www.baidu.com IPv4 Resolution: 183.2.172.42 IPv6 Resolution: 240e:ff:e020:9a	Normal Normal e:0:ff:b014:8e8b	
Diagnostic Results Global Network Current Link DNS Resolution Main Link Network Config	Export Content Main Link Test Address: www.baidu.com IPv4 Resolution: 183.2.172.42 IPv6 Resolution: 240e:ff:e020:9a DHCP	Normal Normal ee:0:ff:b014:8e8b Normal	

### 3.9.2 Network Tools

There are three modes in the network tool: ping, traceroute, and nslookup, which can be used to analyze the device.

		CPU 1.2%	•	Memory ( 66.11MB/500.22MB) 13.2%	Ţ1	Up Rate:681.8B/s Down Rate:489.0B/s
Network Tools						
* Mode	ping					
* IP or Domain						
		Run				

For reference, please refer to the following:

	CPU 6.6%	Memory ( 66.13MB/500.22MB) 13.2%
Network Tools		
* Mode	ping	
* IP or Domain	114.114.114	
	Run	
Diagnosis Completed PING 114.114.114.114 (	114.114.114.114): 56 data	bytes



## 3.9.3 Commands

You can run the command line through the command window.

#### Startup Command:

A command line that is self-executing when a 5G router boots up.

### Shutdown Command:

A 5G router that executes itself on the command line when powered off.

#### **Firewall Directives:**

Every time the firewall is started, it can run some custom iptables directives.



This window is the device terminal, which can be logged in to the device through the device's username and password, and the corresponding command operation can be performed on the device and inquiry, etc.

### 3.9.4 Log



You can choose to view Realtime Log or set up History Log

#### **Realtime Log**

Realtime Log can be viewed in real time on the local web to analyze problems, or they can be output through serial ports. Send via network.

www.fourfaith.com

	•						
Four-l	Faith					FNR410 Use	er Manual
	Realtime Log	History Log					
	System Log						
		System Log					
		* Output Mode	Web Page ~				
						<b>7</b> 22	
				Save Apply			

**In the Network mode**, UDP mode is used by default, and the corresponding remote server address and port need to be configured to receive log messages Please note that when the network mode is turned on for transmission, the traffic of the device will be occupied, and if the data card service package is small, you need to pay attention.

Realtime Log	History Log	
System Log		
	System Log	
	* Output Mode	Network
		Output logs to remote server port using UDP protocol
	* Remote Server	
	* Port	514

#### **History Log**

Log caching requires that your device has eMMC or a larger JFFS function, if it cannot be enabled, it means that the device does not have this function.





# 3.9.5 Traffic

This page is used to count the traffic that the device runs in the current month



Collect statistics on the traffic information of WAN ports, and record and display the total daily uplink and downlink traffic of the month.

## 3.9.6 Storage

The default is disabled, and you can format it first when you enable it for the first time (you don't need to do it when you are not enabled for the first time to prevent accidental deletion) Once enabled, you can see the size of the JFFS or eMMC. If you enable historical log caching or other storage needs, you need to use this function first After enabling it.

www.fourfaith.com



### 3.9.7 Remote Management

### 3.9.7.1 SSH

Once the SSHD service is enabled, remote access to your 5G router's operating system is allowed through an SSH client

	CPU 1.2%	B Memory ( 66.16MB/500.22MB) 13.2%	1 Up Rate:683.0B/s Down Rate:470.1B/s
SSH TELNET SNMP			
SSH			
Enable	)		
SSH TCP Forwarding	)		
Password Login	)		
* Port 22			
Authorized Keys			
SSH Management	)		

**SSH TCP Forwarding:** Whether TCP forwarding is supported

Password Login: Whether a password is required to log in

**Port:** Set the port of SSHD, the default system is set to 22 ports

Authorized Keys: Set as needed, and use the system login password and user name by default

3.9.7.2	Telnet
www.fourfait	th.com



The local Telnet function is enabled by default, and Telnet remote management is disabled by default.

### 3.9.7.3 SNMP

You can set parameters such as Location, Contact, Name, Read-Only Community, and Read-Write Community.

			C	CPU	1.8%	•	Memory ( 66.29MB/500	0.22MB)	13.3%		ţţ.	Up Rate:786.2B/s	Down Rate:469	9.9B/s
SSH -	TELNET	SNMP												
SNMP														
		Enable												
	-	Location	Unknown					• (	Contact	root				
		* Name	snmp					RO Com	imunity	public				
	* RW Co	ommunity	private											

**Enabled:** Enables or disables SNMP.

Location: Describes the physical location where the SNMP device is located.

**Contact:** The name of the SNMP administration.

Name: The name of the SNMP.

**Read-Only Community:** SNMP read-only string that allows SNMP clients to read device information.

**Read-Write Community:** SNMP reads and writes strings that allow SNMP clients to read and modify device information.



# 3.10 Cloud Management

	© CPU 1.7%	B Memory ( 66.32MB/500.22MB) 13.3%	1 Up Rate:902.7B	/s Down Rate:509.8B/s
Platform				1
Remote Management				
* Platform	• Private Cloud			
Remote Login Server IP		* Remote Login Server Port		
* Device Code	SN $\vee$	* Device Type Description	Router	
	FI7270443324 Copy			
* Customized Local Domian	wifi.cn			

If you have the corresponding device management platform account, you can set the management address of our cloud platform, or if you have subscribed for a private cloud platform deployment, you can set the corresponding cloud platform address and port, and the device code is the SN and unique of the device by default.

# 3.11 System

# 3.11.1 System Settings

	CPU 1.7%	8	Memory ( 66.19	MB/500.22MB)	13.2%	t1	Up Rate:916.7B/s	Down Rate:644.0B/s
System Settings								
* Router Name	Router							
Host Name								
NTP Client								
NTP Client								
Time Settings								
Time Adjustment	<ul> <li>Manually selecting date ar</li> </ul>	Set						
	2024-12-30 00:16:59	Set						
			Save	pply				

### **System Settings**

In the System Settings bar, you can set the router name and host name, and the configuration option has a default value, or you can choose to customize. **NTP client** 

www.iouriaitn.com
-------------------



The NTP client is disabled by default, and when enabled, you can set the corresponding server address, and the 5G router can perform NTP timing calibration on the basis of this NTP server.

NTP Client	
NTP Client	
* Time Zone	UTC+00:00 V
* Summer Time (DST)	None 🗸
Server IP/Name	

#### **Time Settings**

If you need to change the time of the current device, you can set it here.

Time Settings		
Time Adjustment	<ul> <li>Manually selecting date ar</li> </ul>	Set
	2024-12-30 00:18:06	Set

# 3.11.2 Login Management

This page can be used to change the login and password of the device.

	Θ	CPU 1.3%	8	Memory ( 66.33MB/500.22MB)	13.3%	11	Up Rate:867.5B/s	Down Rate:675.7B/s
Account Login								
Password Setting								
* Router Username	admin							
* Password								
* Re-enter To Confirm								
		Change Password						

## 3.11.3 Restore





Please note that if your parameters are not saved, you can configure and back up the parameters first, and then click Restore Factory Default, otherwise the device will be restored to the factory state, and the original configuration parameters will be cleared.

## 3.11.4 Backup

	(D) CPU 1.7%	Memory ( 66.21MB/500.22MB) 13.2%	1 Up Rate:901.9B/s Down Rate:632.5B/s
Backup Config			
	Backup Config		
	Back up your current configuration in case y	you need to reset the router to factory settings in the future.	
Bacayany Canta			
Recovery Coning			
	Recovery Config		
	Only backup files of the same model router	that use this firmware can be uploaded. Please do not upload	any files that were not created through this interface!

### **Backup the Config**

Select the Backup Configuration button to download the configuration parameters of the current device and use it to save or import it to other devices for configuration Resume the replication of configuration parameters.

#### **Recovery Config**

You can import the backup file of the same model router into the device by selecting the corresponding file through the Restore Configuration button, Note: Do not upload any files that are not created through this interface!

## 3.11.5 Upgrade

CPU 1.4%  Memory (66.33MB/500.22MB) 13.3%  Upgrade  Select upgrade file Upgrade Upgrade				
Upgrade * Select upgrade file Upgrade Upgrade		CPU 1.4%	B Memory ( 66.33MB/500.22MB) 13.3%	1 Up Rate:991.4B/s Down Ra
* Select upgrade file Browse Upgrade	Upgrade			
Upgrade	* Select upgrade file	Browse		
Upgrade				

New firmware can be loaded onto the 5G gateway. If there are no issues with the 5G gateway, you don't need to download an updated firmware version unless the new version includes the new features you want to use.

**Click Browse**, select the firmware file you want to upgrade, and then click the Upgrade button to start the firmware upgrade. It will take a few minutes to upgrade the firmware, please do not turn off the power or press the reset button.

Note: When you upgrade the firmware of your 5G gateway, you may lose its configuration settings, so make sure you back up your 5G gateway's settings before upgrading the firmware.

www.fourfaith.com

Copyright @ Four-Faith 2024