



R2100 series

Industrial Grade 4G Wireless Router

User Manual



- Industrial Grade 4G LTE Cat4 Modem Performance
- 12VDC Power Input and Wide Power Input Range 6V~40V
- Automatic System Recovery From System Failures
- Industrial Grade Interfaces with full ESD protection
- Support VPN Client Functions
- Ruggedized Metal Casing and DIN-Rail Mountable

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Product Description

The R2100 4G router is a new generation 4G wireless VPN router launched by Shenzhen Yinghua IoT Technology Co., Ltd. for industrial level application. The device provides fast Internet access by virtue of the explosive growth of 4G cellular data network and a variety of high-speed networked broadband access services. With its security, stability and intelligence performance, thousands of devices can be easily networked, providing high-speed data transmission and communication for the true meaning of Internet of Things.

The R2100 also provides an Ethernet WAN/LAN multiplexing RJ45 network port, an Ethernet LAN RJ45 network port, a set of industrial Phoenix terminal blocks (serial function and power supply function), a drawer type SIM/UIM card slot, which can have the serial port, Ethernet port, and Wi-Fi connected at the same time for enabling pass-through transmission.

The R2100 supports remote management via a cloud platform. The cloud platform has a simple graphical interface that can be quick to use. It can let you know the current status of the device anytime and anywhere. Such application is widely used in the M2M industry and 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 care, remote sensing surveys, military, area exploration, agriculture, forestry, water affairs, coal mines, petrochemicals and other industrial fields.

Features

Ruggedized Industrial Design

R2100 is a performance industrial grade 4G wireless router based on a 32bit MIPS network processor with high speed cat4 4G LTE, 2 Ethernet port (1 WAN 1 LAN) and full speed 2.4GHz Wi-Fi that comply with IEEE 802.11n standard. The R2100 is a product protected from a ruggedized metal casing to give an excellent isolation protection from interference in the surrounding environment. It is suitable to utilize in industrial control field applications. Besides it takes standard 12VDC power input, it has more capability and can have wider power input range from 9~36VDC as well as reverse-voltage protection.

Robustness and Stability

R2100 has dual auto recovery mechanism from system failure. The hardware and software watchdog in the system ensure high system stability of the device in a long operation application.

The device has a well-designed failsafe mechanism to take care of the WAN/Cellular connection, improving uplink time and preventing lost in communication. All the Ethernet ports have built-in 1.5KV magnetic isolation protection and the SIM holder has built in 15KV ESD protection, the power Input has reverse-voltage and surge protection as well as lightning protection (optional) in the antenna connectors.

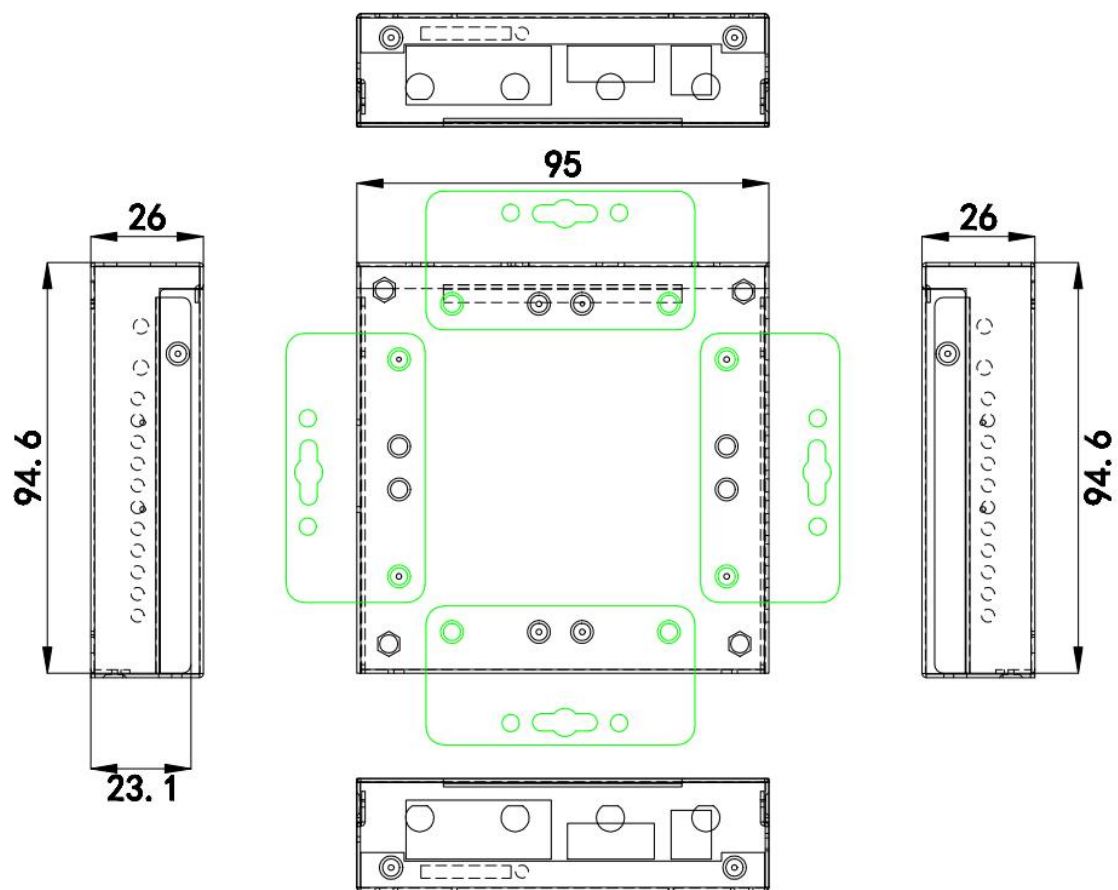
Easy to Use

R2100 provides standard RS232/RS485, Ethernet, and Wi-Fi interfaces, which can make connections to a serial device, wired network device, and wireless devices via Wi-Fi. The wired WAN port supports standard PPPoE dialup protocol which can be directly connected to an ADSL modem or equipment. Furthermore, the R2100 is a smart data terminal device that can enter the data transmission mode after power on. It also supports a powerful and comprehensive cloud management platform that make multi-device management easier and very convenient (optional feature). The R2100 is easy to use, flexible, and support multiple working modes. It has convenient system configuration and system maintenance by local web access, remote access and cloud platform management.

Product Views



Product Size and Dimension

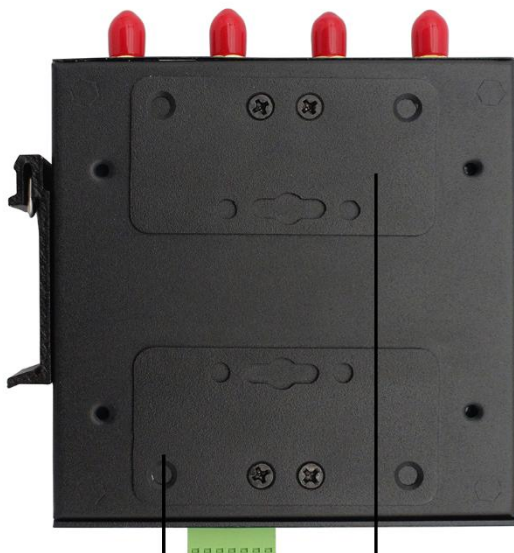


Interfaces and Indicators

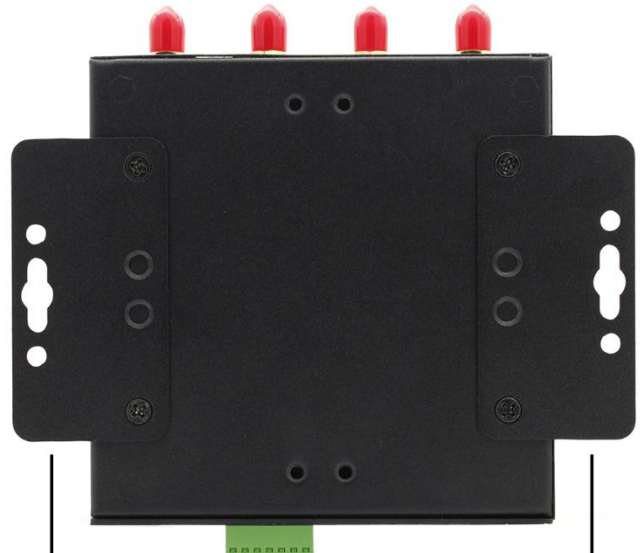


1. 12V DC Power Input (Wide Voltage Input Range 6-36V)
2. Industrial Phoenix terminal (2.0mm Pitch)
3. RJ45 (LAN interface)
4. RJ45 (WAN interface)
5. Reset button (Press for 1 second to restart, long press for 5 seconds to restore factory settings)
6. WPS button
7. LED indicators
8. SIM card Slot (Drawer Type)
9. 4G antenna (Main)
10. 4G antenna (Auxiliary)
11. WIFI antenna

Mounting Options



Mounting Plate (When Not In Use)



Mounting Plate (When Using)

LED Description

LED type	State	Description
PWR	Long bright	Normal power input
	No Light	Abnormal power input
SYS	Blinking Light	System startup
	Long bright	System exception
	No Light	System exception
WIFI	Long bright	WIFI On
	No Light	WIFI Off
	Blinking Light	Data In/Out
WAN	Long bright	Cable Connected
	No Light	Cable Not Connected
	Blinking Light	Data In/Out
LAN	Long bright	Cable Connected
	No Light	Cable Not Connected
	Blinking Light	Data In/Out
VPN	Long bright	VPN Connection Connected
	No Light	VPN Connection Disconnected
NET	Long bright	Internet Connected
	No Light	Internet Network Disconnected
SIM	Long bright	SIM Card Detected
	No Light	SIM Card Not Detected/Not Found
Signal	1 Bar	Signal Fair
	2 Bar	Signal Good
	3 Bar	Signal Excellent

Phoenix Terminal Block Pin Definition

Pin	Definition	Description
RXD/B-	Serial Port	RS232 or RS485 (Depend on Model)
TXD/A+	Serial Port	RS232 or RS485 (Depend on Model)
GND	Data Ground	RS232 has common ground, RS485 does not need to be connected
DO	GPIO	Output Only
DI	GPIO	Input Only
GND	Power Ground	Power Ground
VCC+	Power Supply	DC 6~36V Input

Quick Start

Mounting Accessories

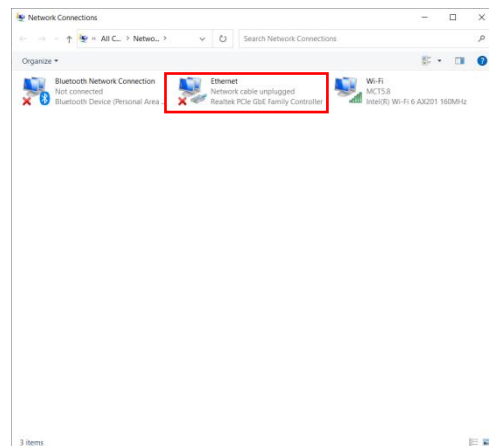
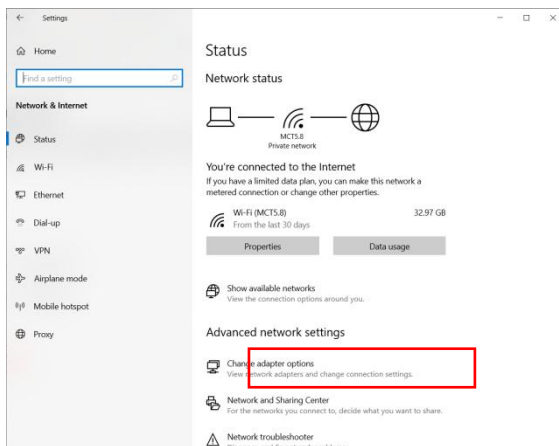
Put the WIFI antenna, 4G antenna, and SIM card into the designated position according to the interface, connect to the 6-36V DC power supply, observe the indicator light, after the sys light flashes, the router starts normally.



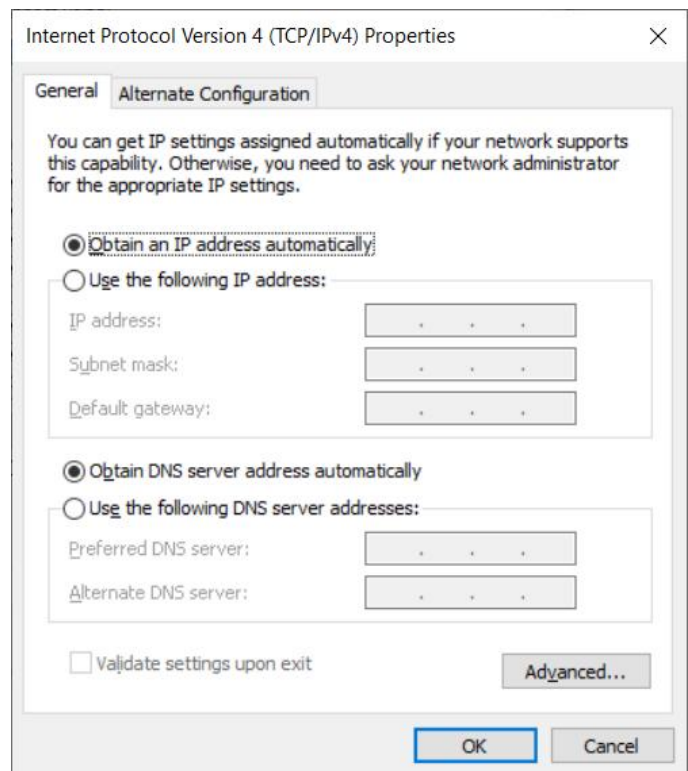
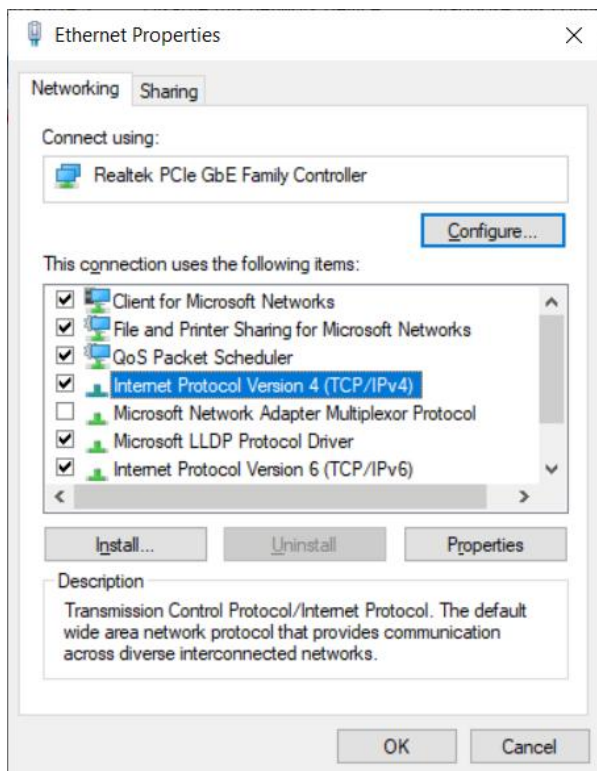
Note: Please do not remove or insert the SIM card with power on, otherwise the SIM card may be damaged.

Connect to the Internet

Correctly set your computer network configuration, now take win10 operating system as an example, use it to open "Settings\Network & Internet\Change Adapter Options" in Control Panel. Double-click the "Ethernet" connection icon.



In the pop-up dialog box, click "Properties", select "Internet Protocol Version 4 (TCP/IPv4)", and then click the "Properties" button; select "Obtain an IP address automatically". After clicking OK to save, the computer will automatically obtain the IP address assigned by the router.



Login to the router

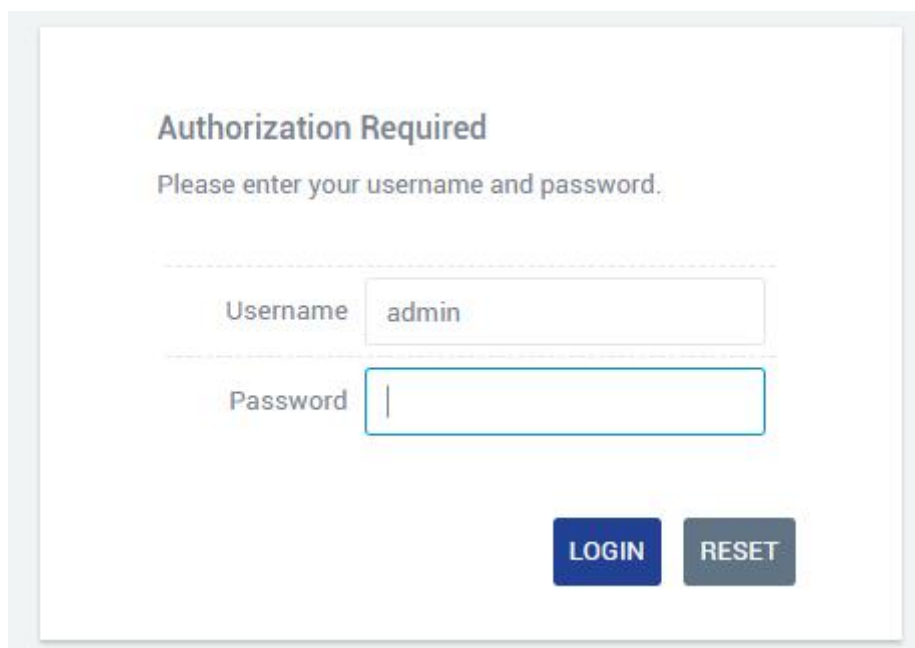
WebUI Login

Open a web browser, key in `http://192.168.99.1` in the address bar and press Enter;

Default Username: admin

Default Password: admin

It is recommended to use Google Chrome or Mozilla Firefox browser.

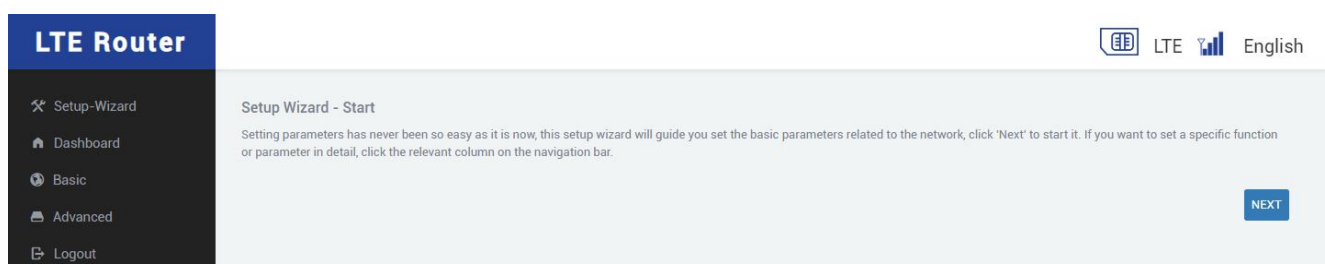


The image shows a web browser window displaying the 'Authorization Required' login page. The page has a light gray background. At the top, the text 'Authorization Required' is in bold, followed by 'Please enter your username and password.' Below this, there are two input fields: 'Username' with the value 'admin' and 'Password' which is empty. At the bottom right, there are two buttons: 'LOGIN' in blue and 'RESET' in gray.

Note: For the first time, after the login page will see the setup wizard page. You can configure the router directly according to the setup wizard.

Setup Wizard

For the first time, after the login page will see the setup wizard page. You can configure the router directly according to the setup wizard.



The image shows the 'LTE Router' web interface. On the left is a dark blue sidebar with a white 'LTE Router' header and a list of menu items: 'Setup-Wizard', 'Dashboard', 'Basic', 'Advanced', and 'Logout'. The main area is light gray and titled 'Setup Wizard - Start'. It contains a paragraph of text: 'Setting parameters has never been so easy as it is now, this setup wizard will guide you set the basic parameters related to the network, click 'Next' to start it. If you want to set a specific function or parameter in detail, click the relevant column on the navigation bar.' At the bottom right of the main area is a blue 'NEXT' button. In the top right corner of the interface, there are icons for LTE, signal strength, and language (English).

Click Next to enter Quick Configuration - Mobile Network APN Settings, this page can set the APN.

The screenshot shows the 'LTE Router' interface with a sidebar menu containing 'Setup-Wizard', 'Dashboard', 'Basic', 'Advanced', and 'Logout'. The main content area is titled 'Setup Wizard - Internet Access'. It features a text input field labeled '4G LTE APN' and a blue 'NEXT' button in the bottom right corner.

Click Next to enter the Quick Configuration - Wired WAN Configuration interface.

The screenshot shows the 'LTE Router' interface with a sidebar menu containing 'Setup-Wizard', 'Dashboard', 'Basic', 'Advanced', and 'Logout'. The main content area is titled 'Setup Wizard - WAN Setting'. It features a dropdown menu labeled 'Protocols' with 'DHCP' selected and a blue 'NEXT' button in the bottom right corner.

Configure WAN - description of the connection method:

WAN Setting	Description	How to Set
DHCP	When connected. Automatically obtain the IP address and subnet mask assigned by the server	No configuration
PPPoE	The router is connected to the optical fiber/Cable, and the account and password provided by the operator are used to dial up the Internet	Setup access username and password
STATIC	Manually assign IP address and subnet mask	Setup IP address, Subnet Mask, Gateway, and DNS.

Click Next to enter the Quick Configuration - Local Address Configuration interface, where you can modify the local IP address and subnet mask.

LTE Router

LTE

English

Setup-Wizard

Dashboard

Basic

Advanced

Logout

Setup Wizard - LAN Setting

IPv4 IP Address192.168.99.1

IPv4 Subnet Mask255.255.255.0

NEXT

Click Next to enter the quick configuration-WI-FI configuration interface.

LTE Router

LTE

English

Setup-Wizard

Dashboard

Basic

Advanced

Logout

Setup Wizard - Wi-Fi

SSIDLTE-2G-2605F0

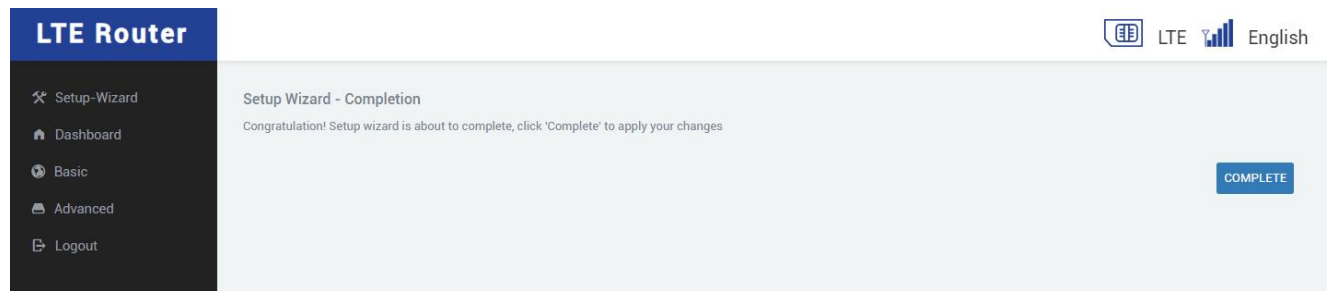
EncryptionWPA-PSK/WPA2-PSK Mixed Mode

Key*****

NEXT

WIFI Setting	Description	How to Set
WIFI Name	WIFI SSID Name	You can fill in any name you like
Encryption	WIFI Encryption Method	Click the drop-down box, there are 4 encryption methods for you to choose, of which None means no encryption, any client can directly connect to the WIFI
Password	Other than None option, a password is required for WIFI encryption methods	You can fill in a password of 8~64 digits

Click Next to enter the Quick Configuration-Complete interface

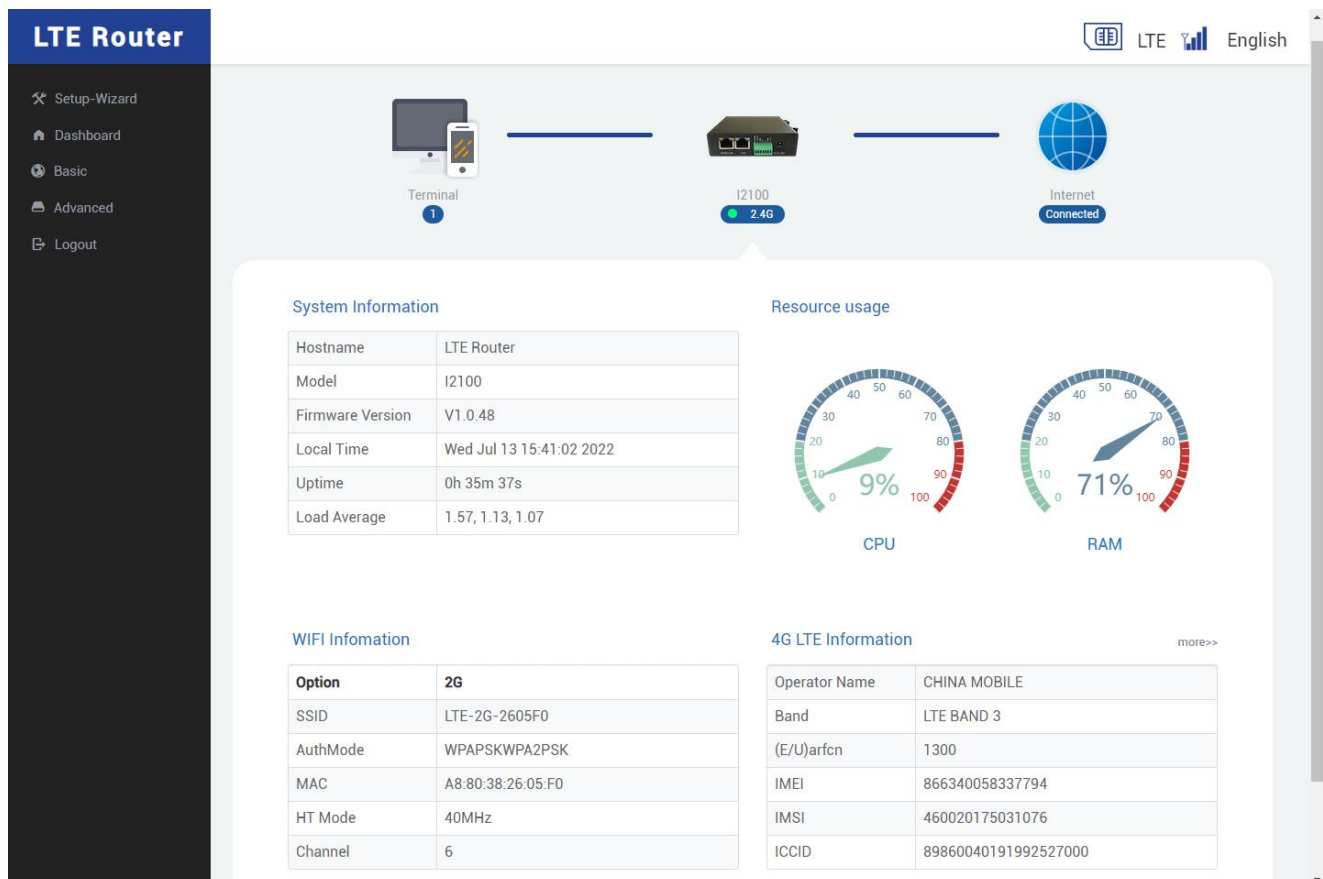


Click Finish and Configure to complete and apply.

Function introduction

Device Status – Dashboard

Through the status page (Dashboard), you can see the router's version number, 4G information, Wi-Fi information, network connection and other basic information.



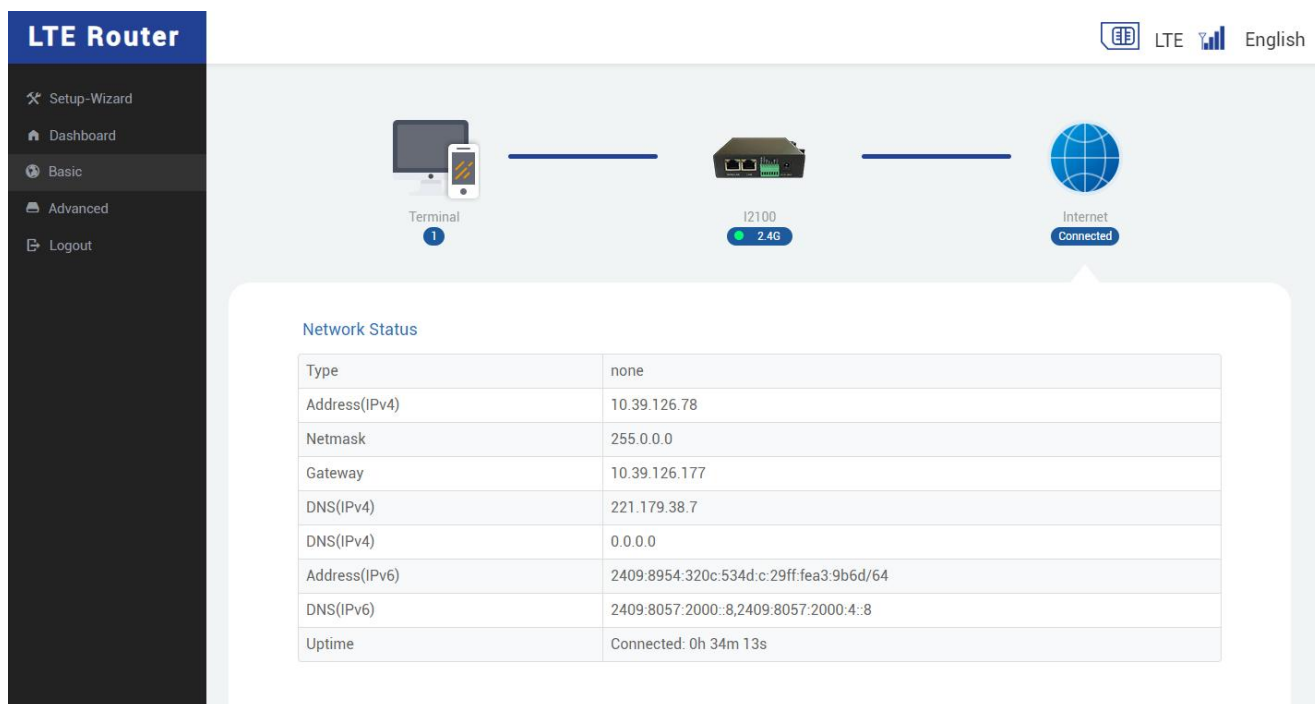
Device Status – User Connection

By clicking the computer icon on the upper left, you can enter the user management page, where you can view the user's connection status and manage the user's Internet access.



Device Status – Internet Connection

By clicking the globe icon on the upper right, you can enter the page to view the dial-up, relay, and network connections.



Common Settings - Cellular Network

Cellular network contains information about mobile network and settings of mobile network.

Cellular – Cellular Information

LTE Router

- Setup-Wizard
- Dashboard
- Basic
 - Cellular**
 - Wired
 - Wi-Fi
 - DHCP Server
- Advanced
- Logout

LTE
English

Cellular Information Cellular Setting Band Lock Network Selection

Cellular Information

We get the Cellular information on this page

Cellular Information for SIM			
Manufacturer	Quectel	Band	LTE BAND 41
Model	EC200T	Mode	LTE
Software Version	EC200TCNDAR02A15M16	MCC/MNC	460/00
IMEI	866340058337794	Cell ID	DE57D43
SIM	READY	PhycellID	315
IMSI	460020175031076	(E)arfcn	40936
ICCID	89860040191992527000	(L/T)AC	2871
Operator	CHINA MOBILE	(S)rxlev	45
RSRP	-82	RSRQ	-9
SINR	22	RSSI	-

Cellular – Cellular Setting

LTE Router

- Setup-Wizard
- Dashboard
- Basic
 - Cellular**
 - Wired
 - Wi-Fi
 - DHCP Server
- Advanced
- Logout

LTE
English

Cellular Information Cellular Setting Band Lock Network Selection

Cellular Setting

Set the params for the Cellular Internet.

General Settings	SIM Settings
Dial Type	General
SIM Select	Auto
MTU	1500
Check Alive Host	

Note: It is differently from Cable network and WIFI repeater network.

Configure mobile network - basic settings parameter description:

Cellular Setting	Description	How to Set
Dial Type	You can choose different dial-up methods to access the Internet	Click the drop-down box to select

MTU	The maximum transmission unit is used to notify the other party of the maximum size of the data service unit that can be accepted.	
Check Alive Host	Fill in the destination address of the Ping packet to keep the cellular network online	Fill in the IP that can be pinged

Cellular – SIM Setting

Configure APN settings for the SIM card and the Cellular Network.

Cellular Setting	Description	How to Set
APN	Set APN (Access Point Name) of the gateway operator.	Fill in APN of the SIM card's service name.
PIN	Fill in SIM pin if any. Leave blank for no SIM pin.	Fill in SIM Pin if required
Authentication Type	Authentication method for the APN Configuration. None, PAP, CHAP. Default is None.	Click the drop-down box to select

Cellular – Band Lock

In this section, you can lock the cellular network module frequency band. After locking the frequency band, restart the router is required. The router will automatically dial and connect to the network of the selected frequency band.

The screenshot shows the 'LTE Router' web interface. On the left is a dark sidebar with a menu: Setup-Wizard, Dashboard, Basic, Cellular (highlighted), Wired, Wi-Fi, DHCP Server, Advanced, and Logout. The top right corner shows 'LTE', a signal strength icon, and 'English'. The main content area has a breadcrumb trail: Cellular Information > Cellular Setting > Band Lock (underlined) > Network Selection. Below the breadcrumb is the title 'Lock The Band'. The form contains: a 'Lock' dropdown menu set to 'ALL BANDS'; a 'Lock Cell Switch' checkbox which is unchecked; a 'Current Lock (E)arfcn' text input field containing '38400'; and a 'Current Lock PCI' text input field containing '362'. A blue 'SUBMIT' button is at the bottom right.

Cellular – Network Selection

In this section, you can select the dialing method, such as Auto, GSM, WCDMA, LTE, etc.

The screenshot shows the 'LTE Router' web interface with the 'Network Selection' tab selected in the breadcrumb trail. The sidebar and top navigation are identical to the previous screenshot. The main content area is titled 'Config The Selection of NetWork'. It features a 'Network Selection' dropdown menu currently set to 'Automatic'. A blue 'SUBMIT' button is located at the bottom right.

Common Settings - Wired Network

The wired network can set the WAN port and LAN port of the router.

LAN

WAN

Configure wired WAN network - basic settings parameter description:

WAN Setting	Description	How to Set
Protocols	You can choose different dial-up methods to access the Internet	Click the drop-down box to select
MTU	The maximum transmission unit is used to notify the other party of the maximum size of the data service unit that can be accepted.	Leave Blank by Default

Check Alive Host	Fill in the destination address of the Ping packet to keep the cellular network online	Fill in the IP that can be pinged
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Configure wired WAN network - description of the connection methods (Protocols):

WAN Protocol Option	Description	How to Set
DHCP	When connected. Automatically obtain the IP address and subnet mask assigned by the server	No configuration
PPPoE	The router is connected to the optical fiber/Cable, and the account and password provided by the operator are used to dial up the Internet	Setup access username and password
STATIC	Manually assign IP address and subnet mask	Setup IP address, Subnet Mask, Gateway, and DNS.

Common Settings – Wireless

Wireless network can set WIFI name, encryption, channel and other common parameters. Also, WIFI can be setup as a WIFI relay for the router.

2.4GHz WIFI Setting

LTE Router

Setup-Wizard

Dashboard

Basic

Cellular

Wired

Wi-Fi

DHCP Server

Advanced

Logout

2.4G

Repeater

Wi-Fi Setting

Configure the params of 2.4G wireless

SSIDLTE-2G-2605F0

Hide ESSIDDisable

AuthModeWPA-PSK/WPA2-PSK Mixed Mode

Key*****

HT Mode20/40 MHZ

Country Region0: Ch1~11

ChannelAuto (Channel 0)

SUBMIT

Configure Wireless network (WIFI) - basic settings parameter description:

WIFI Setting	Description	How to Set
SSID	WIFI Name, WIFI SSID	You can fill in any name you like
Hide Name	Make SSID invisible to users	Click the drop-down box to select Disable or Enable. Disable by Default
AuthMode	WIFI Encryption Method	Click the drop-down box, there are 4 encryption methods for you to choose, of which None means no encryption, any client can directly connect to the WIFI
Key	Other than None encryption, a password is required to connect to this WIFI	You can fill in a password of 8~64 digits
HT Mode	The amount of data that can be transferred at a fixed time	Click the drop-down box to select
Country Region	Compliant with a country's Wi-Fi regulations	Click the drop-down box to select

Channel	Data signal transmission channel from 1 to 13	Click the drop-down box to select
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Repeater Setting

Wireless Setting has the Repeater setting option to setup the device to work as WIFI relay that extend WIFI Radio and WIFI coverage.

The screenshot displays the 'LTE Router' web interface. On the left is a dark sidebar with a menu: Setup-Wizard, Dashboard, Basic, Cellular, Wired, Wi-Fi, DHCP Server, Advanced, and Logout. The top right shows 'LTE' and 'English'. The main area is titled '2.4G Repeater' and 'WIFI WISP Repeater'. Below the title, it says 'We Can configure the wifi wisp for the router'. The 'Repeater Status' is 'Disconnected'. There are radio buttons for 'Enable' and 'Disable', with 'Disable' selected. Below are input fields for 'SSID', 'BSSID', 'Channel' (set to 0), 'Encryption Mode' (set to 'Disable'), and 'Check Alive Host'. At the bottom right are 'WIFI-SCAN' and 'SAVE & APPLY' buttons.

Common Settings – DHCP Server

In the DHCP server configuration, you can do the IP address and MAC address binding. You can also set the DHCP allocation method. Since the settings on this page may affect the Internet access, it is recommended that to get someone with computer network knowledge to do the setup.

DHCP Leases

LTE Router

Setup-Wizard

Dashboard

Basic

Cellular

Wired

Wi-Fi

DHCP Server

Advanced

Logout

LTE

English

DHCP Leases Static Leases DHCP Server

DHCP Leases

You can get the active dhcp leases both ipv4 and ipv6

Active DHCP Leases

Hostname	IPv4-Address	MAC-Address	Leasetime remaining
There are no active leases.			

Active DHCPv6 Leases

Hostname	IPv6-Address	DUID	Leasetime remaining
There are no active leases.			

Static Leases

LTE Router

Setup-Wizard

Dashboard

Basic

Cellular

Wired

Wi-Fi

DHCP Server

Advanced

Logout

LTE

English

DHCP Leases Static Leases DHCP Server

DHCP Static Leases Setting

You can add or del the dhcp static leases in this page

Static Leases

Static leases are used to assign fixed IP addresses and symbolic hostnames to DHCP clients. They are also required for non-dynamic interface configurations where only hosts with a corresponding lease are served.
Use the Add Button to add a new lease entry. The MAC-Address identifies the host, the IPv4-Address specifies to the fixed address to use and the Hostname is assigned as symbolic name to the requesting host.

Hostname	MAC-Address	IPv4-Address	IPv6-Suffix (hex)
This section contains no values yet			

ADD

SAVE & APPLY

DHCP Server – General Setup

LTE Router

Setup-Wizard

Dashboard

Basic

Cellular

Wired

Wi-Fi

DHCP Server

Advanced

Logout

DHCP Leases

Static Leases

DHCP Server

DHCP Server Setting

You can set the dhcp server on this device

DHCP Server

General Setup

Advanced Settings

IPv6 Settings

Ignore interface ☐

Disable DHCP for this interface.

Start 100

Lowest leased address as offset from the network address.

Limit 150

Maximum number of leased addresses.

Leasetime 12h

Expiry time of leased addresses, minimum is 2 minutes (2x).

SAVE & APPLY

DHCP Server Setting	Description	How to Set
Ignore Interface	Enable or Disable DHCP for this Interface	Enable or Disable the Tick box option
Start	Lowest leased address as offset from the network address	Set according to the specific application
Limit	Maximum number of leased addresses	Set according to the specific application
Leasetime	Expiry time of leased addresses, minimum is 2 minutes	Set according to the specific application

DHCP Server – Advanced Settings

27

LTE Router

Setup-Wizard

Dashboard

Basic

Cellular

Wired

Wi-Fi

DHCP Server

Advanced

Logout

DHCP Leases

Static Leases

DHCP Server

DHCP Server Setting

You can set the dhcp server on this device

DHCP Server

General Setup

Advanced Settings

IPv6 Settings

Dynamic DHCP ☒

ⓘ

Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐

ⓘ

Force DHCP on this network even if another server is detected.

IPv4-Netmask

ⓘ

Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options

ⓘ

Define additional DHCP options, for example "6, 192.168.2.1, 192.168.2.2" which advertises different DNS servers to clients.

SAVE & APPLY

Advanced Setting	Description	How to Set
Dynamic DHCP	Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.	Enable or Disable the Tick box option
Force	Force DHCP on this network event if another server is detected.	Enable or Disable the Tick box option
IPv4 Netmask	Override the netmask sent to clients. Normally it is calculated from the subnet that is served.	Set according to the specific application
DHCP Options	Define additional DHCP options, For example "6, 192.168.2.1, 192.168.2.2" which advertises different DNS servers to clients	Set according to the specific application

DHCP Server – IPv6 Settings

28

LTE Router

Setup-Wizard

Dashboard

Basic

Cellular

Wired

Wi-Fi

DHCP Server

Advanced

Logout

DHCP Leases

Static Leases

DHCP Server

DHCP Server Setting

You can set the dhcp server on this device

DHCP Server

General Setup

Advanced Settings

IPv6 Settings

Router Advertisement-Service

server mode

DHCPv6-Service

server mode

NDP-Proxy

disabled

DHCPv6-Mode

stateless + stateful

Default is stateless + stateful

Always announce default router

☐

Announce as default router even if no public prefix is available.

Announced DNS servers

Announced DNS domains

SAVE & APPLY

IPv6 Setting	Description	How to Set
Router Advertisement Service	Default Server Mode	Click the drop-down box to select
DHCPv6 Service	Default Server Mode	Click the drop-down box to select
NDP-Proxy	Default Disabled	Click the drop-down box to select
DHCPv6 Mode	Default is Stateless + Stateful	Click the drop-down box to select
Always Announce Default Router	Announce as default router even if no public prefix is available	Enable or Disable the Tick box option
Announced DNS Servers		If any
Announced DNS Domains		If any

Advanced Settings

In the advanced settings, you can perform various advanced configurations to the router, such as firewall, port mapping, language setting, time zone, TR069, firmware upgrade, etc.

Advanced Settings – DTU

DTU Management

The screenshot shows the 'LTE Router' interface with a sidebar menu on the left. The 'DTU' option is selected under the 'Advanced' category. The main content area is titled 'DTU Management' and features a 'Servers List' table. The table has columns for Name, Server IP, Server Port, Status, and Actions. One server is listed with Name 'U2', Server IP '10.10.10.100', Server Port '15000', and Status '0'. The Actions column contains buttons for 'CONNECT', 'STOP', 'EDIT', and 'REMOVE'. An 'ADD' button is located below the table. The top right of the interface shows 'LTE', a signal strength icon, and 'English'.

Name	Server IP	Server Port	Status	Actions
U2	10.10.10.100	15000	0	CONNECT STOP EDIT REMOVE

Serial Port

The screenshot shows the 'LTE Router' interface with the 'Serial Port' option selected under the 'DTU' category. The main content area is titled 'DTU Serial Port Management' and includes a subtitle: 'This is the page of setting the dtu serial port.' Below this is a 'Serial Port Setting' form with the following fields: 'Baud rate' (set to 9600), 'Time Interval(ms)' (set to 100), 'Data bits' (set to 8), 'Parity' (set to None), and 'Stop bits' (set to 1). A note below the 'Time Interval' field reads: 'Configuring a serial port to accept data timeout.' A 'SAVE & APPLY' button is located at the bottom right of the form. The top right of the interface shows 'LTE', a signal strength icon, and 'English'.

Advanced Settings – Firewall

You can set the firewall rules of the router. Since the settings on this page may affect the Internet access, it is recommended that to get someone with computer network knowledge to do the setup.

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Traffic Rules

Domain Filter

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Custom Rules

Firewall - Zone Settings

The firewall creates zones over your network interfaces to control network traffic flow.

General Settings

Enable SYN-flood protection ☒

Drop invalid packets ☐

Input

accept

Output

accept

Forward

reject

Zones

Zone → Forwardings

Input

Output

Forward

Masquerading

MSS clamping

lan: lan:  ⇒ wan

accept

accept

accept

☐

☐

EDIT

DELETE

wan: wan:  wan6:  wwan:  wisp:  ⇒ REJECT

reject

accept

reject

☒

☒

EDIT

DELETE

ADD

SAVE & APPLY

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DMZ Setting

Configure The DMZ

Enable ☐

DMZ Host IP Address

SAVE & APPLY

Port Forwarding

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Firewall - Port Forwards

Port forwarding allows remote computers on the Internet to connect to a specific computer or service within the private LAN.

Port Forwards

Name	Match	Forward to	Enable	Sort
This section contains no values yet				

New port forward:

Name	Protocol	External zone	External port	Internal zone	Internal IP address	Internal port
New po	TCP+UDP	wan		lan		

ADD

SAVE & APPLY

Traffic Rules

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Firewall - Traffic Rules

Traffic rules define policies for packets traveling between different zones, for example to reject traffic between certain hosts or to open WAN ports on the router.

Traffic Rules

Name	Match	Action	Enable	Sort
Allow-DHCP-Renew	IPv4-UDP From any host in wan To any router IP at port 68 on this device	Accept input	☒	^v EDITDELETE
Allow-Ping	IPv4-ICMP with type echo-request From any host in wan To any router IP on this device	Accept input	☒	EDITDELETE
Allow-IGMP	IPv4-IGMP From any host in wan To any router IP on this device	Accept input	☒	^v EDITDELETE
Allow-DHCPv6	IPv6-UDP From IP range fe80::/10 in wan with source port 547 To IP range fe80::/10 at port 546 on this device	Accept input	☒	EDITDELETE
Allow-MLD	IPv6-ICMP with types 130/0, 131/0, 132/0, 143/0 From IP range fe80::/10 in wan To any router IP on this device	Accept input	☒	^v EDITDELETE

Domain Filter

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Domain Filter Setting

Configure the Domain Filter

Enable ☐

The Filter Type

BlackList

Blocked Domain List

www.baidu.com

SAVE & APPLY

Domain Filter Setting	Description	How to Set
Enable	Disable or Enable the Domain Filter Function	Enable or Disable the Tick box option
The Filter Type	Blacklist: No access to the Domain in the List Whitelist: Only can access to the Domain in the List	Pick the option in the dropdown lost
Blocked Domain List	Fill in the address you need to prohibit or only access	Set according to the specific application

VPN Passthrough

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Custom Rules

VPN PASS THROUGH

Configure The VPN Passthrough

PPTP ☒

Allow PPTP transparent transmission in VPN connection

L2TP ☒

Allow L2TP transparent transmission in VPN connection

IPSEC ☒

Allow IPSEC transparent transmission in VPN connection

SAVE & APPLY

Custom Rules

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Domain Filter

VPN PASS THROUGH

Custom Rules

Firewall - Custom Rules

Custom rules allow you to execute arbitrary iptables commands which are not otherwise covered by the firewall framework. The commands are executed after each firewall restart, right after the default ruleset has been loaded.

```
# This file is interpreted as shell script.
# Put your custom iptables rules here, they will
# be executed with each firewall (re-)start.

# Internal uci firewall chains are flushed and recreated on reload, so
# put custom rules into the root chains e.g. INPUT or FORWARD or into the
# special user chains, e.g. input_wan_rule or postrouting_lan_rule.
iptables -I zone_wan_forward 2 -p udp -s 0.0.0.0/0 -d 0.0.0.0/0 --dport 500 -j zone_lan_dest_ACCEPT ###vpn_pass_ipsec
iptables -I zone_wan_forward 3 -p esp -s 0.0.0.0/0 -d 0.0.0.0/0 -j zone_lan_dest_ACCEPT ###vpn_pass_ipsec
```

SUBMIT RESET

Advanced Settings – System

You can configure the router's time zone, import and export configuration, firmware upgrade, change system language, etc.

Configuration

After modification, click Apply to configure the application.

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Configuration

Backup/Restore

Router Password

Router Model

Scheduled Reboot

System

Configure the timezone of your device.

System Properties

Local Time

Wed Jul 13 16:04:02 2022

SYNC WITH BROWSER

Timezone

Asia/Shanghai

Time Synchronization

Enable NTP Client

☒

NTP Server Candidates

0.time.windows.com

SAVE & APPLY

Configuration Setting	Description	How to Set
-----------------------	-------------	------------

Time Zone	Time zones can be modified. Such as: Asia/Shanghai (Asia/Shanghai)	Pull down menu and select
Sync With Browser	Synchronize the time of the browser with the selected time zone	Click on Save and Apply to configure the application

Upgrade (Backup/Restore)

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- Logout

LTE
English

Configuration Backup/Restore Router Password Router Model Scheduled Reboot

Backup/Restore

Backup the system configs and restore it and update the firmware

Backup / Restore

Click "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with squashfs images).

Download backup: **GENERATE ARCHIVE**

Reset to defaults: **PERFORM RESET**

To restore configuration files, you can upload a previously generated backup archive here.

Restore backup: **UPLOAD ARCHIVE...**

Flash new firmware image

Upload a sysupgrade-compatible image here to replace the running firmware. Check "Keep settings" to retain the current configuration (please upload the file provided by the manufacturer).

Keep settings: ☒

Image: **FLASH IMAGE...**

Setting	Description	How to Set
Download Backup	Download a tarball of the current configuration	Auto download the backup after clicking GENERATE ARCHIVE
Reset to Defaults	Reset to Factory Configuration	Restore Factory Configuration after clicking PERFORM RESET
Restore Backup	Upload a tarball of the saved configuration and to configure the router parameters to be the same as the saved configuration.	Select a saved configuration file and click UPLOAD ARCHIVE
Keep Settings	This option makes the firmware upgrade will not reset the router parameters, but will keep it instead	Tick or untick

Image (Flash Image)	Upgrade the router firmware	Select the firmware upgrade provided by the manufacturer
---------------------	-----------------------------	--

Router Password

The screenshot shows the 'LTE Router' web interface. On the left is a dark sidebar menu with the following items: Setup-Wizard, Dashboard, Basic, Advanced, System (highlighted), IOCTL, Remote Manager, VPN, Static Routes, Diagnostics, SQM QoS, and Logout. The main area has a top navigation bar with tabs: Configuration, Backup/Restore, Router Password (active), Router Model, and Scheduled Reboot. Below the tabs, the title 'Router Password' is followed by the subtitle 'Changes the administrator password for accessing the device'. The form contains two input fields: 'Password' and 'Confirmation', each with a green checkmark icon to its right. A blue 'SAVE & APPLY' button is located at the bottom right of the form area.

The router password setting description:

Setting	Description	How to Set
Password	After the modification is completed, the password of the current login account is changed to this password	Fill in the same password in both fields and then apply to make the password change.
Confirmation	Repeat the new password to ensure password you enter correctly	Fill in the same password in both fields and then apply to make the password change.

Schedule Reboot

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ConfigurationBackup/RestoreRouter PasswordRouter ModelScheduled Reboot

Scheduled Reboot

Scheduled reboot Setting

Enable ☐

Week DayWednesday

Hour5

Minute0

REBOOT

SAVE & APPLY

Setting	Description	How to Set
Enable	Check and apply to complete the configuration	Tick or untick
Week Day	Choose the day of the week or restart every day	Pull down menu and select
Hour	Restart at what time	Set according to the specific application
Minute	Restart at what minute of the day	Set according to the specific application

Advanced Settings – IO Controller (IOCTL)

You can set the IO controller of the router

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Overview

IO Controller Overview

You can get the all status of IO in the device

Controller	Description	Status	Actions
1	DO		ENABLE EDIT
2	DI		ENABLE EDIT

Advanced Settings – Remote Manager

TR069 and cloud platform configuration can be set.

TR069

LTE Router

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TR069 Remote Network Manager

TR069 Setting

Configuration the TR069

Enable ☒

ACS URL

ACS Username

ACS Password

ACS Periodic Enable ☒

ACS Periodic Interval

CPE Username

CPE Password

SAVE & APPLY

Remote Network Manager (Cloud Platform)

LTE Router

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TR069 Remote Network Manager

Remote Manager

Enable ☒

Server

Port

The range is 1000 to 65535

Report Interval(Mins)

The range is 1 to 600

Reconnect Interval(secs)

The range is 1 to 600

SAVE & APPLY

Advanced Settings – VPN

You can setup the PPTP and L2TP client for a VPN connection.

The screenshot shows the 'LTE Router' interface with a sidebar menu on the left containing options like Setup-Wizard, Dashboard, Basic, Advanced, DTU, Firewall, System, IOCTL, Remote Manager, VPN, Static Routes, Diagnostics, SQM QoS, and Logout. The main content area is titled 'VPN Management' and includes a sub-header 'Overview of the vpns both pptp and l2tp client'. Below this is a 'VPN List' table with columns: Name, Protocol, Server IP, Username, Status, and Actions. An 'ADD' button is located below the table. The top right of the interface shows 'LTE' status, signal strength bars, and 'English' language selection.

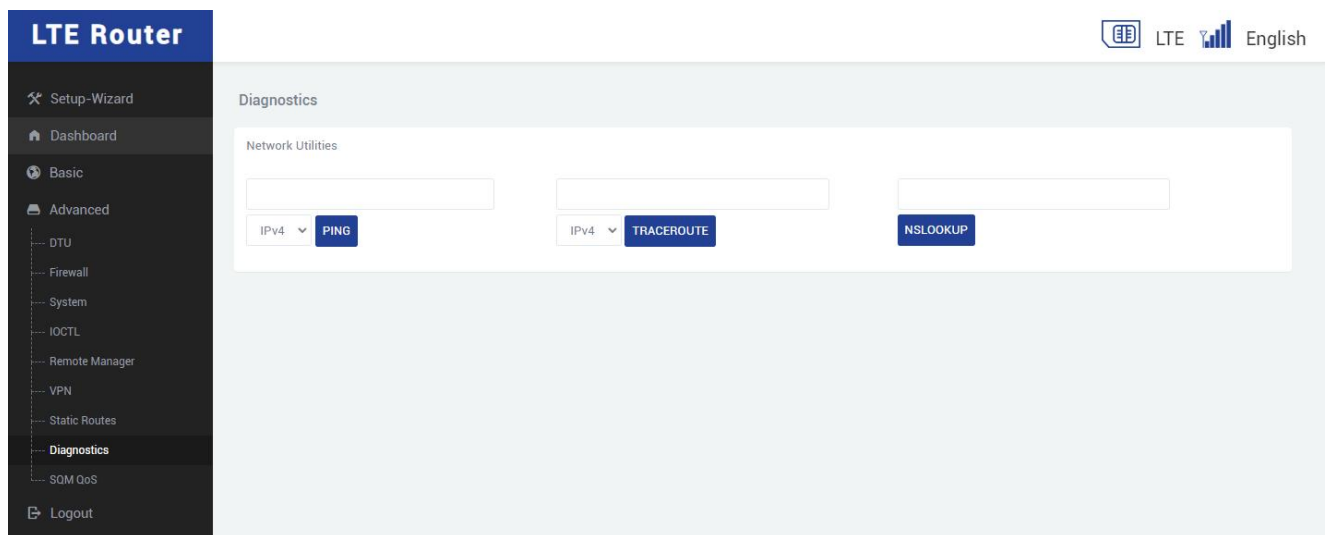
Advanced Settings – Static Route

Set up static routing rules in the router. Since the settings on this page may affect the Internet access, it is recommended that to get someone with computer network knowledge to do the setup.

The screenshot shows the 'LTE Router' interface with the sidebar menu on the left. The main content area is titled 'Routes' with a sub-header 'Routes specify over which interface and gateway a certain host or network can be reached.' It contains two sections: 'Static IPv4 Routes' and 'Static IPv6 Routes'. Each section has a table with columns: Interface, Target (with sub-headers 'Host-IP or Network' and 'if target is a network' for IPv4, and 'IPv6-Address or Network (CIDR)' for IPv6), IPv4-Gateway (or IPv6-Gateway), Metric, and MTU. Both sections currently show 'This section contains no values yet' and have an 'ADD' button. A 'SAVE & APPLY' button is at the bottom right. The top right of the interface shows 'LTE' status, signal strength bars, and 'English' language selection.

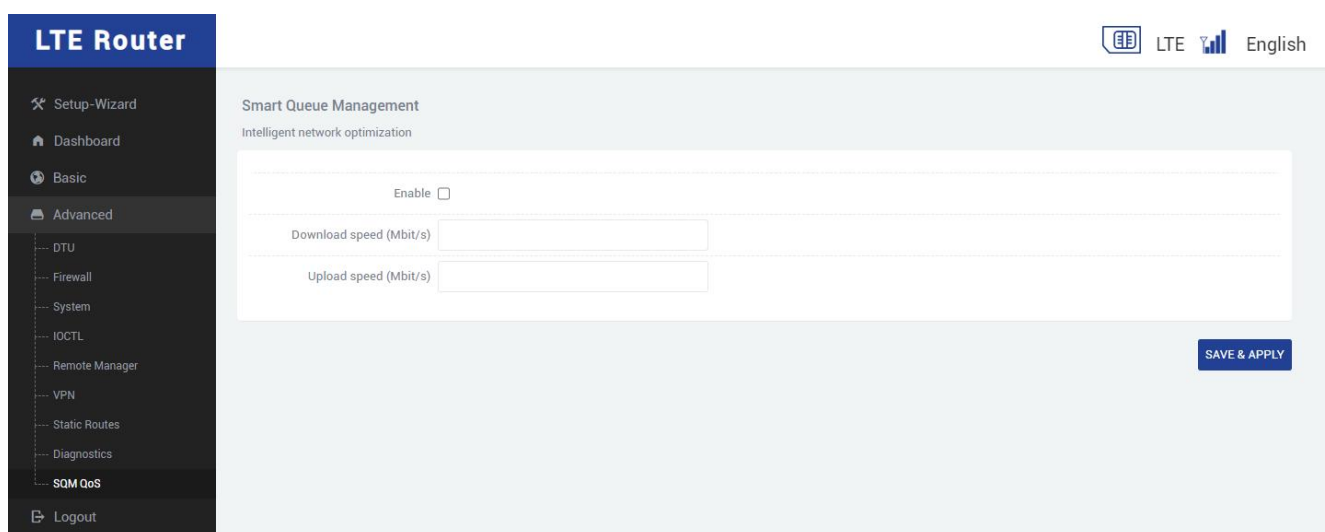
Advanced Settings – Network Diagnostics

You can use the functions to check the network status of the router



Advanced Settings – SQM-QoS

Setting QoS can optimize the network quality of the router. Since the settings on this page may affect the Internet access, it is recommended that to get someone with computer network knowledge to do the setup.



Typical Application

Typical Application – APN/VPDN Dedicated Network Card

When the user's card uses a private network card with APN function, the router can be modified according to the following configuration, so that the router can connect to the private network normally.

1. Find the Cellular Network in the basic settings, click "Cellular Setting" tab, fill in the APN or VPDN parameters provided by the operator in the corresponding position, and click "Submit".

The screenshot shows the LTE Router web interface. On the left is a dark sidebar with a menu: Setup-Wizard, Dashboard, Basic, Cellular (highlighted), Wired, Wi-Fi, DHCP Server, Advanced, and Logout. The main content area has tabs: Cellular Information, Cellular Setting (active), Band Lock, and Network Selection. Below the tabs is the 'Cellular Setting' section with the instruction 'Set the params for the Cellular Internet.' There are two sub-tabs: General Settings and SIM Settings. The SIM Settings tab is active, showing fields for APN (3GNET@VPDN.GD), PIN, Authentication Type (PAP), PAP/CHAP username (3GNET), and PAP/CHAP password (masked with dots). A green status icon is next to the password field. A 'SAVE & APPLY' button is at the bottom right. The top right of the interface shows 'LTE', a signal strength indicator, and 'English'.

Note: The link detection address must be filled with a server address that can be pinged, otherwise the router cannot judge whether the network dialing is normal or not, which will cause the network to be unstable.

2. Check the network by ping to a server address via the network diagnosis page to determine whether the connection is normal and working.

The screenshot shows the LTE Router web interface with the 'Diagnostics' page selected. The sidebar menu is the same as in the previous screenshot, with 'Diagnostics' highlighted. The main content area has a 'Diagnostics' section with 'Network Utilities'. It contains three input fields: the first has '114.114.114.114', the second is empty, and the third is empty. Below the first field are buttons for 'IPv4' (selected) and 'PING'. Below the second field are buttons for 'IPv4' (selected) and 'TRACEROUTE'. Below the third field is a button for 'NSLOOKUP'. Below these buttons is a section titled 'Collecting data...' which displays the results of a ping test: 'PING 114.114.114.114 (114.114.114.114): 56 data bytes', followed by five lines of ping statistics (64 bytes from 114.114.114.114: seq=0 ttl=91 time=84.450 ms, etc.). At the bottom, it shows '--- 114.114.114.114 ping statistics ---', '5 packets transmitted, 5 packets received, 0% packet loss', and 'round-trip min/avg/max = 48.607/60.128/84.450 ms'. The top right of the interface shows 'LTE', a signal strength indicator, and 'English'.

Typical Application – WIFI Relay / Repeater

The wireless repeater function is to use the router's WIFI as the wireless client terminal to connect to another existing WIFI hotspot. This solution can use the network of the other router or hotspot to reduce the use of cellular traffic. The specific configuration is as follows:

1. Open the configuration page of "Common Settings" --> "Wireless". Click "Relay Settings", click "Connect" to search for surrounding networks.

LTE Router

2.4G Repeater

WIFI WISP Repeater

We Can configure the wifi wisp for the router

Repeater Status: Disconnected

Locked BSSID: ☐ Enable ☒ Disable

SSID:

BSSID:

Channel:

Encryption Mode:

Check Alive Host:

WIFI-SCAN **SAVE & APPLY**

2. Select the hotspot you want to connect to, and click "Connect". The router will automatically fill in the parameters of the hotspot into the column field according. If the hotspot has a password, you need to manually fill in the password and click "Apply".

LTE Router

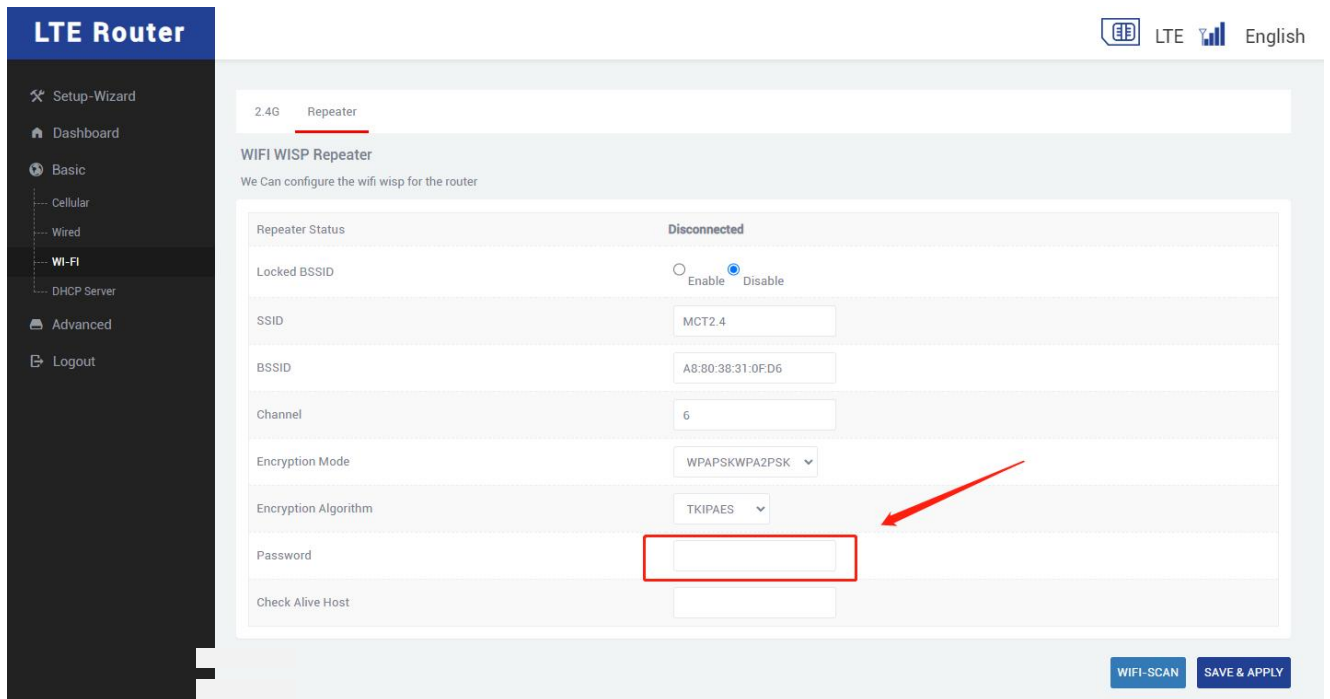
2.4G Repeater

WIFI WISP Repeater

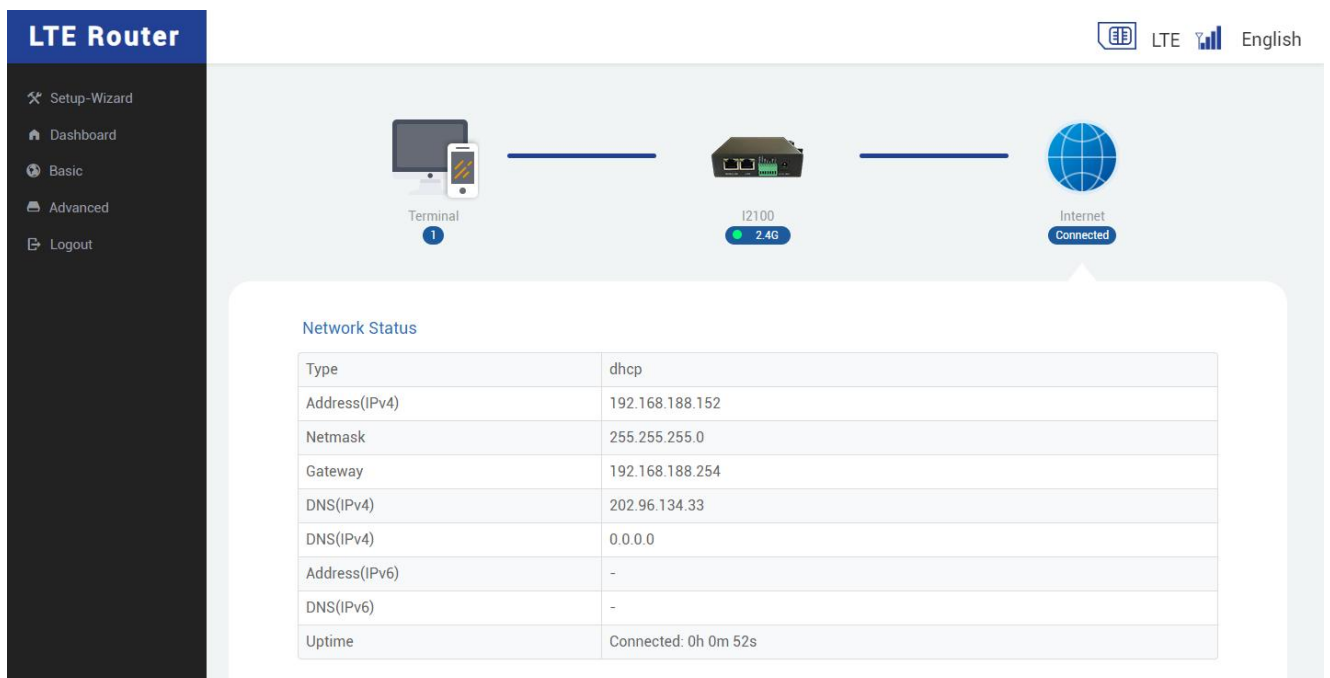
We Can configure the wifi wisp for the router

无线名称	信道	BSSID	加密方式	信号强度	动作
	1		WPAPSKWPA2PSK/TKIPAES	31	Choose This
	1		WPAPSKWPA2PSK/TKIPAES	42	Choose This
	1		WPAPSKWPA2PSK/TKIPAES	76	Choose This
	1		WPAPSKWPA2PSK/TKIPAES	34	Choose This
	1		WPA2PSK/AES	29	Choose This
	1		WPAPSKWPA2PSK/TKIPAES	78	Choose This
	2		WPAPSKWPA2PSK/AES	50	Choose This
	5		WPAPSKWPA2PSK/AES	99	Choose This
	5		WPAPSKWPA2PSK/AES	99	Choose This
	6		WPAPSKWPA2PSK/TKIPAES	39	Choose This
	6		WPA2PSK/AES	70	Choose This
	6		WPAPSKWPA2PSK/TKIPAES	100	Choose This
	6		WPA2PSK/AES	68	Choose This
	6		WPA2PSK/AES	65	Choose This

WIFI-SCAN **SAVE & APPLY**



- Click the icon  on the status page. When the router has obtained the IP address from the uplink (WIFI hotspot or Router), the relay of the router is connected normally.



- Perform packet ping to the gateway address of the uplink network via the network diagnostics page to determine whether or not the connection is normal

LTE Router

LTE

English

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- 📁 Advanced
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- 🚪 Logout

Diagnostics

Network Utilities

IPv4
PING

IPv4
TRACEROUTE

NSLOOKUP

Collecting data...

```

PING 192.168.188.254 (192.168.188.254): 56 data bytes
64 bytes from 192.168.188.254: seq=0 ttl=64 time=13.242 ms
64 bytes from 192.168.188.254: seq=1 ttl=64 time=10.473 ms
64 bytes from 192.168.188.254: seq=2 ttl=64 time=3.246 ms
64 bytes from 192.168.188.254: seq=3 ttl=64 time=2.301 ms
64 bytes from 192.168.188.254: seq=4 ttl=64 time=8.257 ms

--- 192.168.188.254 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 2.301/7.503/13.242 ms
          
```

Typical Application – Port Mapping

"Port Forwarding" can be found in the firewall page. You can map the port that needs to be translated and forwarded to the corresponding intranet IP, and click "Apply" to apply the configuration.

LTE Router

LTE

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- 🕒 Basic
- 📁 Advanced
 - DTU
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Firewall - Port Forwards

Port forwarding allows remote computers on the Internet to connect to a specific computer or service within the private LAN.

Port Forwards

Name	Match	Forward to	Enable	Sort
This section contains no values yet				

New port forward:

Name	Protocol	External zone	External port	Internal zone	Internal IP address	Internal port
Forward	TCP+UDP	wan	1000	lan	192.168.99.254 (00:E0:4C:72:DC:FC)	1000

ADD

SAVE & APPLY

Typical Application – Serial Passthrough

1. First setup the TCP server, note down the address and port number of the server.
2. Configure the DTU server settings located in the DTU menu of the router. Set the server address and port number to the IP address and port number of the TCP server, and then click Connect, the status is 1 means the connection is successful.

LTE Router

Setup-Wizard Dashboard Basic Advanced

DTU

DTU Servers Setting

This is the page of setting the dtu servers

Servers setting

Enabled ☒

Protocol NONE

Connect type TCP

Server IP 192.168.99.100

Server Port 15000

Heartbeat Interval(Second) 60

Hex Device ID ☐

Device ID U2

SAVE & APPLY

LTE Router

Setup-Wizard Dashboard Basic Advanced

DTU

DTU Management

Servers List

Name	Server IP	Server Port	Status	Actions
U2	192.168.99.100	15000	1	CONNECT STOP EDIT REMOVE

ADD

3. According to the baud rate of the serial port to set the baud rate information. Connect the RS485 connection to the RS485 serial port.

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DTU

Serial Port

DTU Serial Port Management

This is the page of setting the dtu serial port.

Serial Port Setting

Baud rate

9600

Time Interval(ms)

100

Configuring a serial port to accept data timeout

Data bits

8

Parity

None

Stop bits

1

SAVE & APPLY

4. After that, you can send data to each other between the server and the serial port.