

# **USER MANUAL**

**S9922M-LTE Series Mobile Router**

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## GENERAL CONFIGURATION

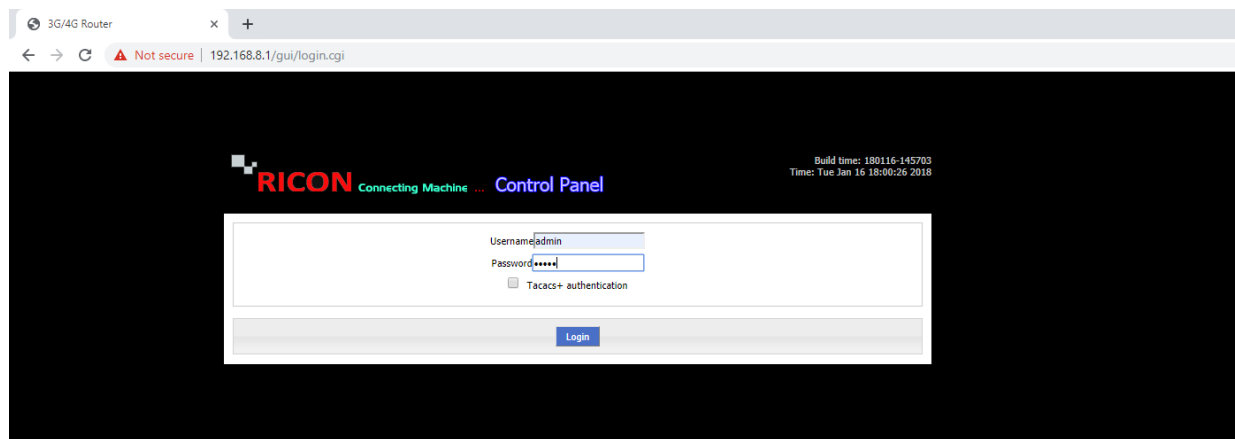
Use Ethernet port directly connected to S9922L Router and computer, or transferred by a switch.

This method will temporarily interrupt the communication between the computer under configuration and LAN, and the specific parameter configuration is shown as below:

IP address: 192.168.1.\* (\*indicates any integral between 2 to 254)

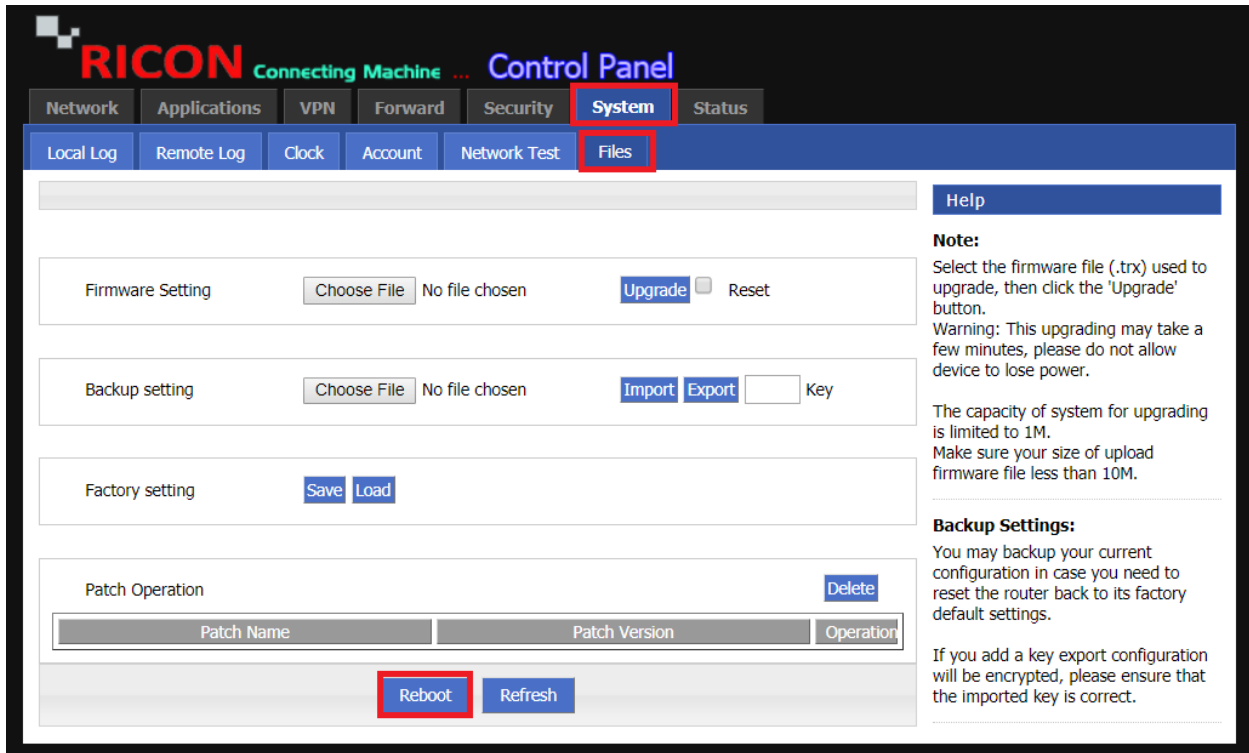
Subnet mask: 255.255.255.0

Default gateway: 192.168.1.1



Follow the steps below to reboot the device and single click the **Reboot** icon.

**System > Files > Reboot**



**RICON** Connecting Machine ... **Control Panel**

Network Applications VPN Forward Security **System** Status

Local Log Remote Log Clock Account Network Test **Files**

Firmware Setting Choose File No file chosen Upgrade Reset

Backup setting Choose File No file chosen Import Export Key

Factory setting Save Load

Patch Operation Delete

| Patch Name | Patch Version | Operation      |
|------------|---------------|----------------|
|            |               | Reboot Refresh |

**Help**

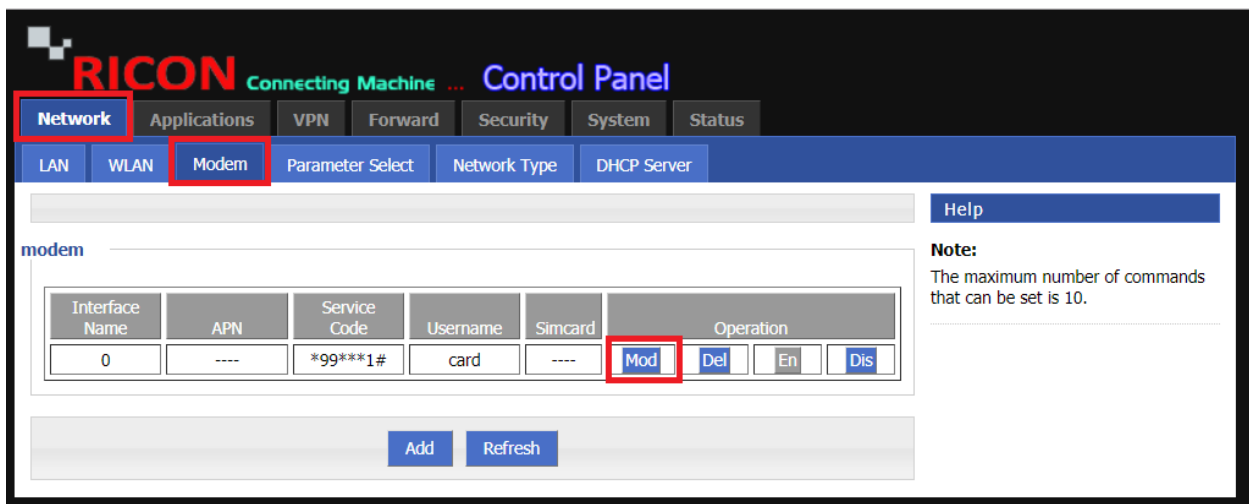
**Note:**  
Select the firmware file (.trx) used to upgrade, then click the 'Upgrade' button.  
Warning: This upgrading may take a few minutes, please do not allow device to lose power.  
The capacity of system for upgrading is limited to 1M.  
Make sure your size of upload firmware file less than 10M.

**Backup Settings:**  
You may backup your current configuration in case you need to reset the router back to its factory default settings.  
If you add a key export configuration will be encrypted, please ensure that the imported key is correct.

## 1. WAN SETTINGS

S9922M-LTE Router core function is connecting to a desired network (corporate or internet) by cellular connection. Usually 3G/LTE network bandwidth is (Depending on the operators' infrastructure) between 1~300Mbps

**Network > Modem > Mod**



**RICON** Connecting Machine ... **Control Panel**

**Network** Applications VPN Forward Security System Status

LAN WLAN **Modem** Parameter Select Network Type DHCP Server

modem

| Interface Name | APN  | Service Code | Username | Simcard | Operation      |
|----------------|------|--------------|----------|---------|----------------|
| 0              | ---- | *99***1#     | card     | ----    | Mod Del En Dis |

Add Refresh

**Help**

**Note:**  
The maximum number of commands that can be set is 10.

## S9922M-LTE SERIES MOBILE ROUTER



Single click “**Mod**” to access modem parameter settings section.

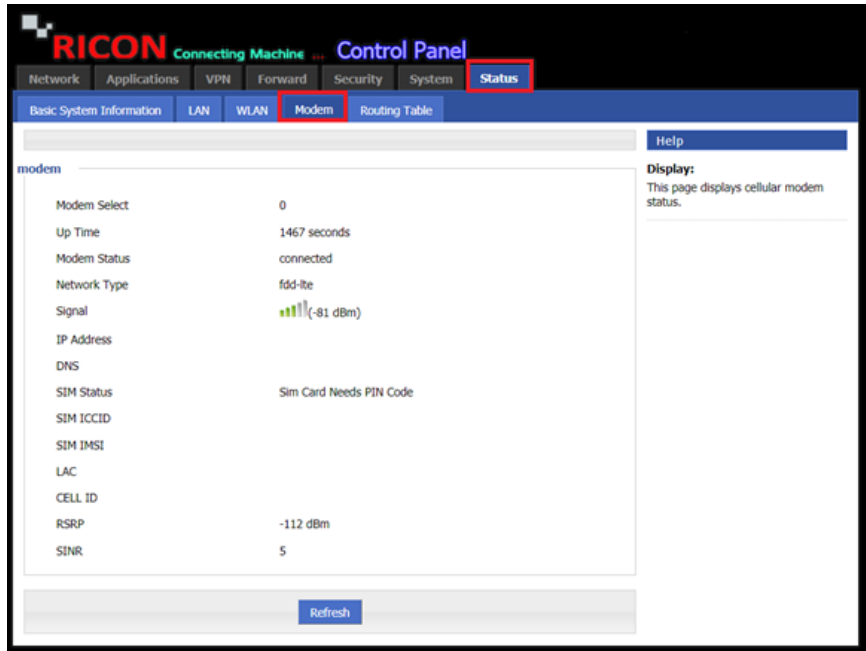
Single click “**save**” icon to finish.

The screenshot displays the web interface of the Ricon S9922M-LTE Series Mobile Router. The top navigation bar includes tabs for Network, Applications, VPN, Forward, Security, System, and Status. The 'Network' tab is active, and the 'Modem' sub-tab is selected. Below the navigation bar, there are buttons for 'Auto-Dialup' (Enable/Disable), 'Basic Settings', and 'Advanced Settings'. The 'Basic Settings' section contains fields for Interface Name (0), APN (internetstatik), Service Code, Username, Password, PIN, Network Type (auto), and Connection mode (pppd). Each field has a maximum length restriction. At the bottom, there are 'Save' and 'Return' buttons.

| Field           | Value          | Max length |
|-----------------|----------------|------------|
| Interface Name  | 0              | 12         |
| APN             | internetstatik | 64         |
| Service Code    |                | 64         |
| Username        |                | 64         |
| Password        |                | 64         |
| PIN             |                | 64         |
| Network Type    | auto           |            |
| Connection mode | pppd           |            |

Click to see the IP received LTE connection.

**Status > Modem**



## 2. Wi-Fi SETTINGS

Follow the steps below to make Wi-Fi connection.

SSID is your Wi-Fi connection name.

WPA Shared Key is your Wi-Fi connection password.

Single click **Save** icon to finish.

**Network > WLAN**

Build time: 180116-145703  
Time: Tue Jan 16 19:00:06 2018



**RICON** Connecting Machine ... **Control Panel**

**Network**
Applications
VPN
Forward
Security
System
Status

LAN
**WLAN**
Modem
Parameter Select
Network Type
DHCP Server

WLAN Status

☒ Enable
☐ Disable

**Basic Settings**

SSID  \* Max length is 32

Wireless Mode ap ▾

Network Mode n ▾

Channel 1 ▾

Bandwidth 20mhz ▾

AP Isolate ☐ Enable ☒ Disable

Broadcast Status ☒ Enable ☐ Disable

**Encryption Settings**

Security Mode wpa2 ▾

Algorithms aes ▾

WPA Shared Key  \* Length is between 8 to 63

WPA Renewal Interval  \* 120-86400 s

**Help**

**Note:**  
WPA Shared Key length can be between 8-63 characters.

In ap mode ssid cannot contain these characters ! ? " |

in station mode ssid cannot contain these characters & # \ % +

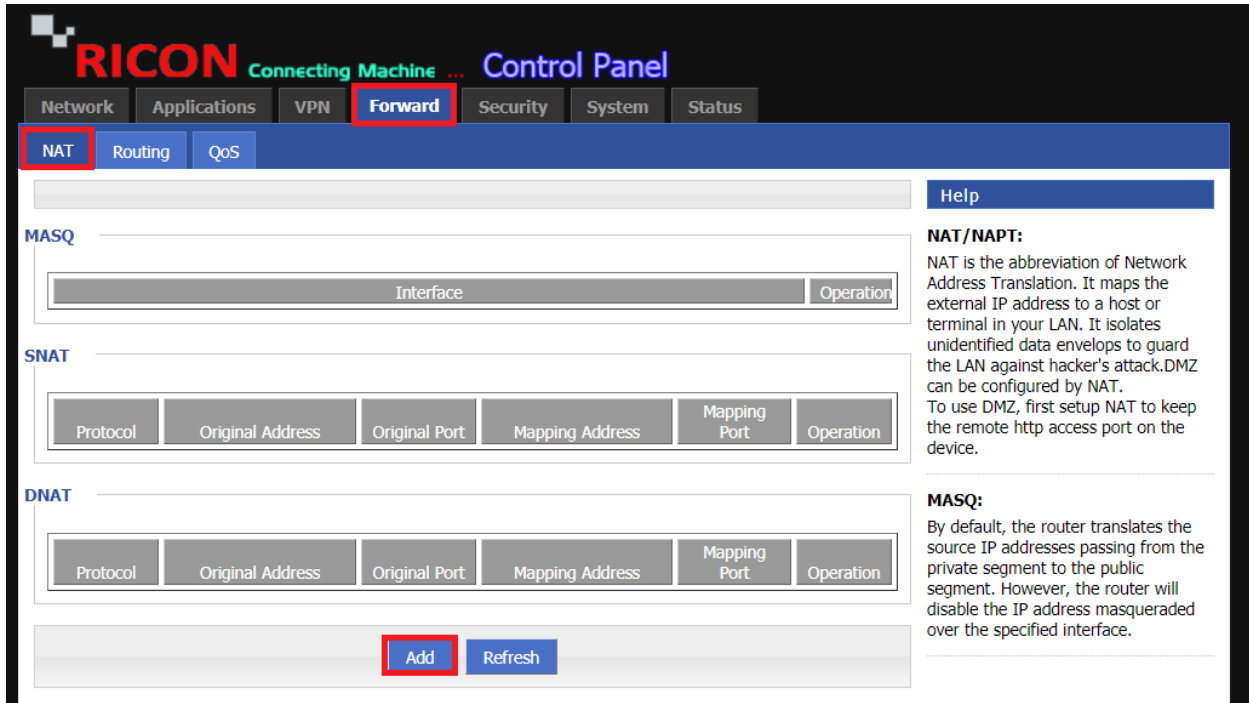
when set Bandwidth 40mhz only 5 - 11 channel is available.

when set Network Mode g and set Security Mode disable, Network Mode while change to n

### 3. NAT SETTINGS

To connect to the interter via the S9922M-LTE, proceed as follows.

**Forward > NAT > Add**



**RICON** Connecting Machine ... Control Panel

Network Applications VPN **Forward** Security System Status

**NAT** Routing QoS

**MASQ**

| Interface | Operation |
|-----------|-----------|
| modem     | Save      |

**SNAT**

| Protocol | Original Address | Original Port | Mapping Address | Mapping Port | Operation |
|----------|------------------|---------------|-----------------|--------------|-----------|
|----------|------------------|---------------|-----------------|--------------|-----------|

**DNAT**

| Protocol | Original Address | Original Port | Mapping Address | Mapping Port | Operation |
|----------|------------------|---------------|-----------------|--------------|-----------|
|----------|------------------|---------------|-----------------|--------------|-----------|

**Add** Refresh

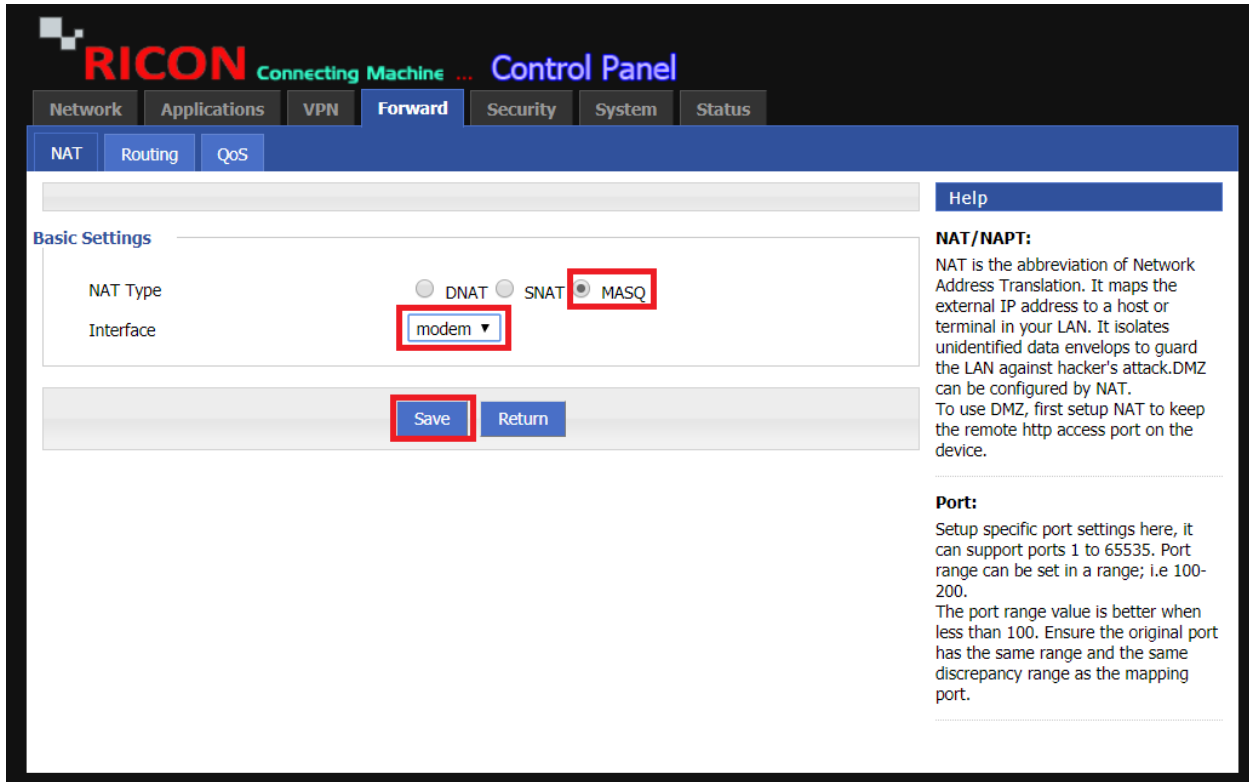
**Help**

**NAT/NAPT:**  
NAT is the abbreviation of Network Address Translation. It maps the external IP address to a host or terminal in your LAN. It isolates unidentified data envelopes to guard the LAN against hacker's attack. DMZ can be configured by NAT. To use DMZ, first setup NAT to keep the remote http access port on the device.

**MASQ:**  
By default, the router translates the source IP addresses passing from the private segment to the public segment. However, the router will disable the IP address masqueraded over the specified interface.

NAT type must be **MASQ**.

Interface must be **modem** and single click **Save** icon.



**RICON** Connecting Machine ... **Control Panel**

Network Applications VPN **Forward** Security System Status

NAT Routing QoS

**Basic Settings**

NAT Type ☐ DNAT ☐ SNAT ☒ MASQ

Interface modem ▼

Save Return

**Help**

**NAT/NAPT:**  
NAT is the abbreviation of Network Address Translation. It maps the external IP address to a host or terminal in your LAN. It isolates unidentified data envelopes to guard the LAN against hacker's attack. DMZ can be configured by NAT. To use DMZ, first setup NAT to keep the remote http access port on the device.

**Port:**  
Setup specific port settings here, it can support ports 1 to 65535. Port range can be set in a range; i.e. 100-200. The port range value is better when less than 100. Ensure the original port has the same range and the same discrepancy range as the mapping port.

#### 4. LAN SETTINGS

LAN settings are used to manage local area network units which are connected to a S9922M-LTE Router, make them reach to the desired network or internet regarding the network topology. Follow the steps below to change the existing LAN IP block or add another IP block. Enter the IP block you have specified and click Save.

##### Network > LAN


**RICON** Connecting Machine ... **Control Panel**

Build time: 180116-145703  
 Time: Tue Jan 16 19:44:05 2018

**Network**
Applications
VPN
Forward
Security
System
Status

**LAN**
WLAN
Modem
Parameter Select
Network Type
DHCP Server

|                  |                                             |                      |
|------------------|---------------------------------------------|----------------------|
| Host Name        | <input type="text" value="router"/>         | * Max length is 32   |
| IP1              | <input type="text" value="192.168.8.1/24"/> | * eg. 192.168.8.1/24 |
| IP2              | <input type="text"/>                        |                      |
| IP3              | <input type="text"/>                        |                      |
| IP4              | <input type="text"/>                        |                      |
| Loopback Address | <input type="text"/>                        | eg. 10.1.1.1/24      |

**Help**

**Note:**  
 Fields marked with \* are required.  
 Hostname must start with an alphabet letter; special characters ie: '@', '.', '/', '-', '\_', ':', ';', numerical are supported.

IP addresses specified for IP1, IP2, IP3, and IP4 cannot be identical.

Save
Refresh

DHCP is on in the default configuration. You can follow the steps below to configure the DHCP settings.

#### Network > DHCP Server


**RICON** Connecting Machine ... **Control Panel**

Build time: 180116-145703  
 Time: Tue Jan 16 19:50:26 2018

Network
Applications
VPN
Forward
Security
System
Status

LAN
WLAN
Modem
Parameter Select
Network Type
DHCP Server

DHCP Server

**Basic Settings**

Domain Name  Max length is 32  
 IP Pool   
 Gateway Type   
 DNS Type   
 Lease Time  \* 120-86400 s

**DHCP Relay**

Relay Server  \* eg. 192.168.8.254  
 Relay Server Backup  eg. 192.168.8.254  
 Option 60  Max length is 64  
 Relay Interface

IP  \* eg. 192.168.8.1  
 MAC  \* eg. 00:1A:4D:34:B1:8E

| IP | MAC | Operation |
|----|-----|-----------|
|    |     |           |
|    |     |           |
|    |     |           |

Help

**Note:**  
The 'default' option in 'DNS Type' and 'Gateway Type' means the router will resolve this value automatically.

Ensure DNS is available when 'DNS Type' is set.

The maximum number of IP and MAC address that can be set is 10.