

# Configuration manual - OpenWRT

The AG-1621 is also sold in an OpenWRT version. With this system, we have a web interface available, and all in all, it is a ready-to-use gateway.

## OpenWRT Startup Guide

### Opening inbuilt website

To access the built-in website, connect the gateway by WAN to the local network and enter the IP address in the address window of the browser. Please note that it may take some time from powering on to booting up the system.

IP: **http://192.168.10.60**

user name: **root**

password: **root**



After logging in, you are automatically taken to the application page.

## Applications

- Status >
- System >
- Services >
- Network >
- VPN >
- Log out

## Applications

You can open the web-interface of the below applications by clicking on the icon. If this is the first time you are using the ChirpStack Gateway OS, please do not forget to configure your shield first. You can do this under the ChirpStack > Concentrator menu item.



## Cellular modem

### Modem

The Gateway in its basic configuration is equipped with an LTE modem that also supports GPRS and SMS functions. Different modems were used depending on the model variant. [Here](#) is a table of models.

### SIM card

The Gateway supports two nano SIM cards, both 1.8V and 3V. The card connector is tray type. When installing the SIM card, pay attention to the correct insertion of the card. The used SIM card tray is designed so that the card sticks to the tray. This makes it easy to insert the SIM regardless of the position of the Gateway.

## Using Cellular Network

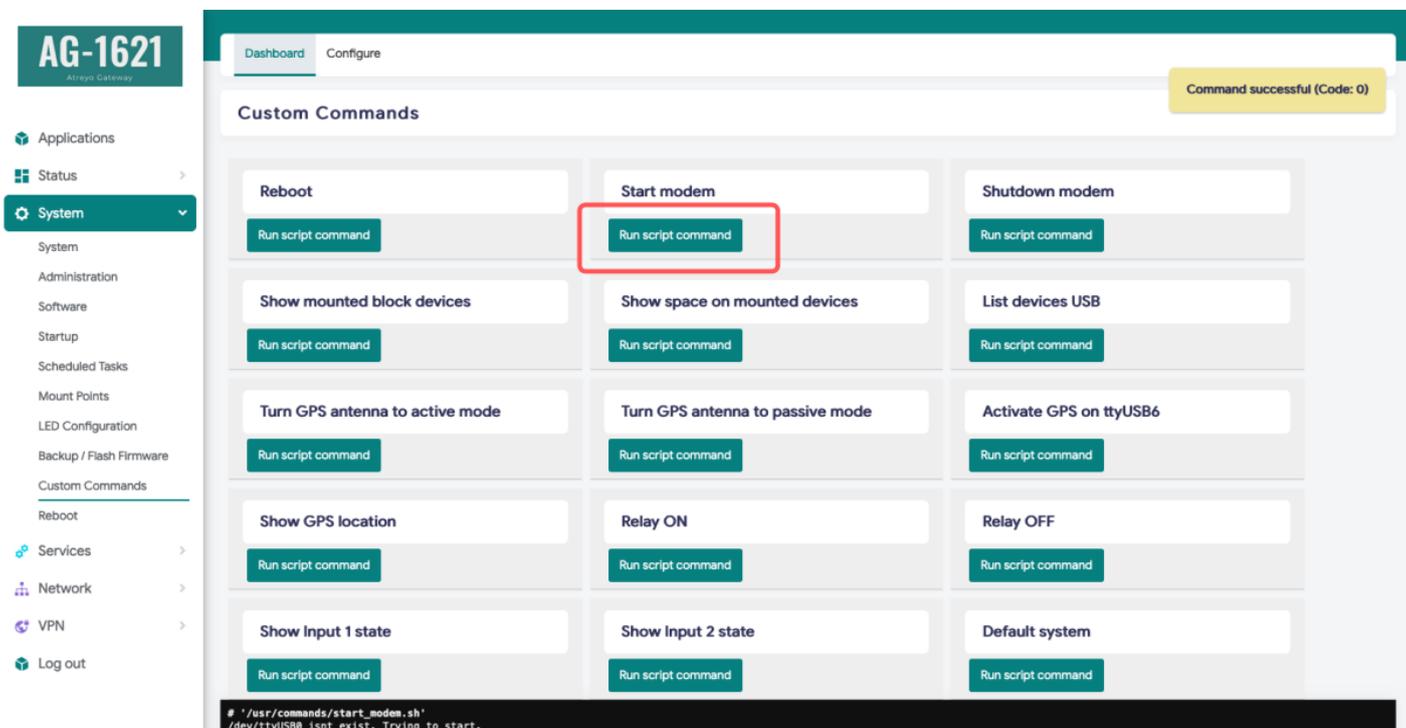
To activate the LTE modem, go to **Network > Interfaces** and select the **lte** tab there.

The screenshot shows the 'Interfaces' configuration page for the AG-1621 device. The page is divided into several sections: 'lan', 'lan6', 'wan', 'wwan', and 'wwan2'. Each interface has a status indicator (green for active, red for error), a protocol, and various statistics. The 'wan' interface is currently in an error state, indicated by a red status bar and the message 'Error: Network device is not present'. The 'Edit' button for the 'wan' interface is highlighted with a red box. At the bottom of the page, there are buttons for 'Save & Apply', 'Save', and 'Reset'.

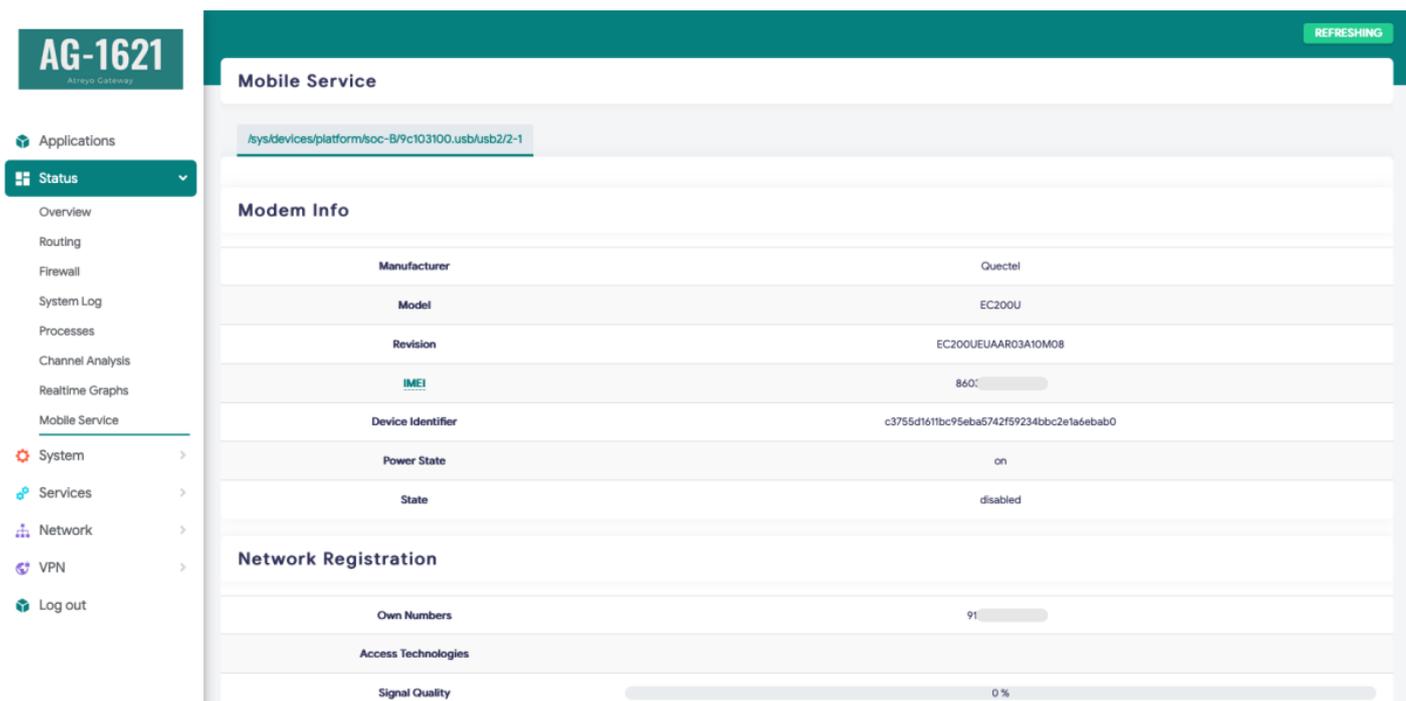
Mostly the network operator requires you to enter the APN, sometimes it also requires a username and password. Enter the required data and save.

The screenshot shows the 'wan' interface configuration page. The 'General Settings' tab is selected. The 'Status' section shows the device as '3g-wan' with an error message 'Error: Network device is not present'. The 'Protocol' is set to 'UMTS/GPRS/EV-DO'. The 'Bring up on boot' checkbox is checked. The 'Modem device' is set to '/dev/ttyUSB0' and the 'Service Type' is 'UMTS/GPRS'. The 'APN' field is highlighted with a red box and contains the value 'JIONET'. Other fields include 'PIN', 'PAP/CHAP username', 'PAP/CHAP password', and 'Dial number'.

Then go to **System > Custom Commands** and click on **Start modem**.



The modem will start up and connect to the Internet. To check if it is working properly and what the signal is, go to **Status > Mobile Service**.

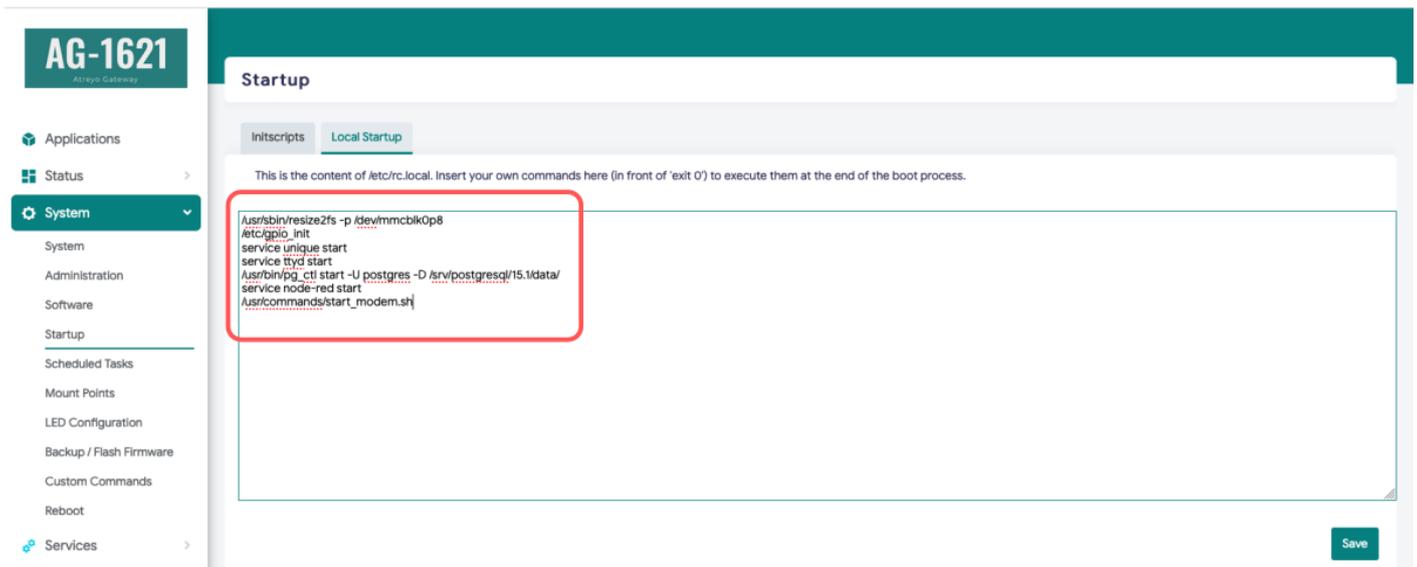


## Cellular modem ON on start

To make the gateway automatically connect to the Internet after startup, you need to add a modem startup in the System > Startup section under Local Startup, add a line

```
/usr/commands/start_modem.sh.
```

Then save the changes. After each reboot, the gateway will automatically start the modem.



The screenshot shows the AG-1621 Gateway web interface. The left sidebar contains a navigation menu with items: Applications, Status, System (selected), Administration, Software, Startup, Scheduled Tasks, Mount Points, LED Configuration, Backup / Flash Firmware, Custom Commands, Reboot, and Services. The main content area is titled 'Startup' and has two tabs: 'Initscripts' and 'Local Startup'. Below the tabs, there is a text area for editing the content of /etc/rc.local. The text area contains the following commands: /usr/bin/resize2fs -p /dev/mmcblk0p8, /etc/gpio\_init, service unique start, service ttyd start, /usr/bin/pg\_ctl start -U postgres -D /srv/postgresql/15.1/data/, service node-red start, and /usr/bin/start\_modem.sh. A red box highlights the text area. A 'Save' button is located in the bottom right corner of the text area.

Generally, the Gateway supports all versions of Quectel MiniPCI express modems. However, you can use a third-party modem, as long as the signal outputs are compatible with those of the Quectel company. For use your won LTE module select model without LTE module installed. You also need to pay attention to the power supply to the LTE module should be 3.3V.

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