# **RUT240 Network**

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The information in this page is updated in accordance with firmware version **RUT2 R 00.07.06.10**.

**Note**: <u>click here</u> for the old style WebUI (FW version RUT2XX\_R\_00.01.14.7 and earlier) user manual page.

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# **Summary**

The **Network** page contains information related to the device's networking. This chapter is an overview of the Network page in RUT240 devices.

If you're having trouble finding this page or some of the parameters described here on your device's WebUI, you should **turn on "Advanced WebUI" mode**. You can do that by clicking the "Advanced" button, located at the top of the WebUI.



## **Mobile**

The **Mobile** tab displays information about the mobile connection. The figure below is an example of the Mobile tab:  $\blacksquare$ 

field name	description
SIM card state	The current SIM card state. Possible values are: • Inserted - SIM card is inserted and ready to be used • Not inserted - SIM card is not inserted • Unknown - unable to obtain SIM card state value. Possible communication issue between the the device and the modem
Provider	Network operator's name
IMSI	The IMSI (international mobile subscriber identity) is a unique 15 decimal digit (or less) number used to identify the user of a cellular network
ICCID	SIM card's ICCID - a unique serial number used to identify the SIM chip
Operator	Network operator's name

Shows whether the network has currently indicated the registration of the mobile device. Possible values are:

· Unregistered - not registered to a network and the device is not currently searching for a new operator to register to

Registered (home) - registered, home network

• Searching - not registered to a network, but the device is currently searching for a new operator to register to • Network denied - registration to network denied by operator

· Unknown - operator state is currently unknown

• Registered (roaming) - registered to network, roaming conditions Data connection state Indicates whether the device has a mobile data connection or not. Mobile connection state Show intermediate stages of mobile connection establishing process.

Mobile network type. Possible values are:

4G: 4G (LTE)

• 3G: 3G (WCDMA), 3G (HSDPA), 3G (HSUPA), 3G (HSPA), 3G (HSPA+), 3G (DC-HSPA+), 3G (HSDPA+HSUPA), UMTS Network type

• 2G: 2G (GSM), 2G (GPRS), 2G (EDGE)  $\bullet$   $\,N/A$  - not possible to determine at the moment

LTE Advanced Carrier Aggregation, CA, is one of the key techniques used to enable the very high data rates of 4G to be achieved. By combining more than one carrier together, either in the same or different bands it is possible to increase the bandwidth available

and in this way increase the capacity of the link.

Connected band Currently used mobile frequency band.

Signal strength Received signal strength indicator (RSSI) measured in dBm. Values closer to 0 indicate a better signal strength

Amount of data received through the mobile interface Bytes received Bytes sent Amount of data sent through the mobile interface Cell ID The ID of the cell that the modem is currently connected to

The Location Area Code, abbreviated as LAC is the unique number given to each location area within the network. The served area LAC

of a cellular radio access network is usually divided into location areas, consisting of one or several radio cells.

Physical cell ID Physical Cell ID is an identification of a cell at physical layer.

In GSM cellular networks, an absolute radio-frequency channel number (ARFCN) is a code that specifies a pair of physical radio EARFCN carriers used for transmission and reception in a land mobile radio system, one for the uplink signal and one for the downlink signal.

The Mobile Country Code, abbreviated as MCC, is the code uniquely identifying the home country of a (Glossary: Mobile network

operator (MNO|mobile network operator (MNO).

Mobile Network Code (MNC) is a unique two- or three-digit number used to identify a home Public Land Mobile Network (PLMN) to. Mobile network code

MNC is allocated by the national regulator.

If mobile data limit is set and reached, near *Connection* column warning mark will appear. E.g.:



#### **Bands**

Operator state

Carrier Aggregation

Mobile country code

#### bands information

#### Name

#### Connected band

Overall signal quality for different network types is defined by different measurements. Short explanations and recommendations are provided below. Click **here** for more in-depth information or click on one of the links below:

#### • 4G

- RSRP reference signal received power, measured in dBm. Values closer to 0 indicate better signal strength
- RSRQ reference signal received quality, measured in dB. Values closer to 0 indicate a better rate of information transfer
- SINR signal-to-interference-plus-noise ratio, measured in dB. Higher values indicate a better rate of information transfer

#### • 3G

- EC/IO downlink carrier-to-interference ratio. Values range from -20 to 0 (closer to 0 indicates better signal quality/cleanliness)
- RSCP received signal code power. Values range from -124 to 0 (closer to 0 indicates better signal stength)

- RSSI - received signal strength indicator, measured in dBm. Values closer to 0 indicate better signal strength

### Other signal level measurements

### LAN

This tab displays information about the device's local network(s). The figure below is an example of the **Network** window:



lan information

Name LAN interface name

IP address of the LAN interface

Netmask of the LAN interface. In a sense, a netmask specifies the size of a network. In other words, it indicates which part of the IP

address denotes the network, and which denotes the device

dhcp leases

Hostname Hostname of a LAN client
IP Address IP address of a LAN client
MAC Address MAC address of a LAN client

Leasetime Remaining Remaining lease time for a DHCP client. Active DHCP lease holders will try to renew their DHCP leases after a half of the lease time

passes.

Static Lease This action will reserve currently assigned IP address for the device in Network -> Interfaces -> Static leases.

### **Firewall**

This tab displays information about the device's firewall. Info is shown of IPv4 and IPv6 traffic. The figure below is an example of the **Firewall** page tables:









Field name Description

Reset counters Resets all traffic and packet fields

Name of the chain

Traffic Size of traffic that was matched to the chain
Packets Count of packets that were matched to the chain

Policy Policy for traffic entering the zone.
Rules Count of rules the chain has

References Count of times the chain was referenced in other chains

For more information about specific firewall chain, **INFO** button can be pressed. Window like this should pop up:



Field name Description

Traffic Size of traffic that was matched to the rule
Packets Count of packets that were matched to the rule

Target Name of the rule (if highlighted you can click it to open modal to it)

Protocol Filters by Internet protocol
In Filters by inbound interface
Out Filters by outbound interface
Source Filters by source address
Destination Filters by destination address
Options Additional iptables options
Comment Filters by comment

# **Topology**

The Topology tab allows scanning of WAN, LAN or both interfaces via arp scan to check active connected devices. After scan it shows how many active devices were found and on which interface.



### All active devices

This section displays the results of the scan.



field name description Hostname (Vendor) Hostname of scanned device IP Address IP address of scanned device MAC Address

MAC address of scanned device

Туре The type of connection

The interface the scanned device is connected Interface