

# Template:Networking rutos manual mobile

The information in this page is updated in accordance with firmware version .



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## Summary

The **Mobile** page is used to configure mobile connection settings.

This manual page provides an overview of the Mobile page in {{{name}}} 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.



## General

The **General** section is used to configure SIM card parameters that define how the device will establish a mobile connection.

## SIM card settings

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The **SIM Card Settings** section is used to configure main SIM card parameters. Refer to the figure and table below for information on the fields contained in that section.

[[File:Networking\_rutos\_manual\_mobile\_general\_sim\_card\_settings\_dualsim\_{{{dualsim}}}\_v4.png|border|class=tl-t-border]]

Field	Value	Description
Deny data roaming	off   on; default: <b>off</b>	Denies data connection on roaming conditions.
PIN	integer [0000..99999999]; default: <b>none</b>	SIM card's PIN (Personal Identification Number) is a secret numeric password used to authenticate the device to the SIM card. PIN codes are comprised of numbers only and the length can range from 4 to 8 symbols. PIN number is saved in <b>flash</b> memory therefore it does not reset when default settings are restored.

## Interface mob1s1a1 APN configuration



Field	Value	Description
Auto APN	on   <b>off</b> ; default: <b>on</b>	Auto APN scans an internal APN database and selects an APN based on the SIM card's operator and country. If the first automatically selected APN doesn't work, it attempts to use the next existing APN from the database ( APN database )  An Access Point Name (APN) is a gateway between a GSM, GPRS, 3G or 4G mobile network and another computer network. Depending on the contract, some operators may require you to use an APN just to complete the registration on a network. In other cases, APN is used to get special parameters from the operator (e.g., a <a href="#">public IP address</a> ) depending on the contract.
APN	string; default: <b>none</b>	An APN Network Identifier cannot start with any of the following strings: <ul style="list-style-type: none"><li>• rac;</li><li>• lac;</li><li>• sgsn;</li><li>• rnc;</li></ul> it cannot end in: <ul style="list-style-type: none"><li>• .gprs;</li></ul> and it cannot contain the asterisk symbol (*).
Authentication type	None   <b>PAP</b>   <b>CHAP</b> ; default: <b>None</b>	Authentication method that your carrier uses to authenticate new connections on it's network
Username	string; default: <b>empty</b>	Username provided by your carrier
Password	string; default: <b>empty</b>	Password provided by your carrier

# Connection

## Connection



Field	Value	Description
VoLTE	Auto   On   Off; default: <b>Auto</b>	Enables Voice over LTE, a digital packet technology that uses 4G LTE networks to route voice traffic and transmit data.
Preferred network type		Network connection type preference.
Band selection	Auto   Manual; default: <b>Auto</b>	Network frequency band selection method. When set to <i>Auto</i> , the device connects to the band with the best connectivity conditions, while <i>Manual</i> provides the possibility to manually select the bands which the device will be obliged to use. Selecting bands manually shows their duplex modes for 4G and 5G capable devices only.

## Low signal reconnect

The **Low signal reconnect** section is used to configure modem operator connection resetting based on signal strength .



Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables Low signal reconnect.
Reset threshold	integer [-120..-50]; default: <b>none</b>	Signal threshold in dB for the connection. When signal is under this value modem resets connection.
Reset timeout	integer [15..65535]; default: <b>600</b>	Time for the device to wait in seconds before trying to reset the connection again.

## Limits

### Data limit

The **Data Limit** section provides you with the possibility to set up a maximum used data cap for your SIM card.

To configure **Data Limit** press **Edit**

Field	Value	Description
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Enable data connection limit	off   on; default: <b>off</b>	Disables mobile data when the limit for the current period is reached
Data limit (MB)	integer; default: <b>none</b>	Disable mobile data after the limit value in MB is reached
Reset period	Day   Week   Month; default: <b>Day</b>	Interval for resetting mobile data usage limit.
Reset time	0-23 / Monday - Sunday / 0-31; default: <b>0</b>	Specify the hour (in 24-hour format) when the mobile data limit reset occurs.
Enable SMS warning on   off; default: <b>off</b>		Enables sending of warning SMS message when mobile data limit is reached.
<b>Warning threshold</b>	integer; default: <b>none</b>	Send warning SMS message after threshold in MB is reached. Warning threshold cannot be higher than data limit!
<b>Phone number</b>	integer; default: <b>none</b>	A phone number to send warning SMS message to
Clear collected data	- (interactive button)	The data collected for this interface will be cleared, but only if the interface is active

## SMS limit

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The **SMS Limit** section provides you with the possibility to set up a maximum sent SMS message cap for your SIM card.

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To configure **SMS Limit** press **Edit**



Field	Value	Description
Enable SMS Limit	off   on; default: <b>off</b>	Turns SMS limiting on or off.
SMS limit count	integer; default: <b>none</b>	Sets the SMS sending cap, i.e., how many SMS messages can be sent from this SIM card during the specified period.
Period	Day   Week   Month; default: <b>Day</b>	Period for which SMS limiting should apply. After the period expires, the SMS limit counter will be reset.
Reset time	0-23 / Monday - Sunday / 0-31; default: <b>0</b>	Starting hour of the day / day of the week / day of the month for SMS limiting period.
Clear SMS Limit	- (interactive button)	Clears the SMS limit counter for the selected period.

## Network selection

The **Network operators** section provides you with the possibility to scan for and manage mobile network operators to which the device's SIM card can connect to.

[[File:Networking\_rutos\_manual\_mobile\_network\_operators\_scan\_dualsim\_{{{dualsim}}}.png|border|class=tlr-border]]

Field	Value	Description
Current operator	string; default: <b>none</b>	Displays the name of the operator the which the device is currently connected.
Connection mode	Auto   Manual   Manual-Auto; default: <b>Auto</b>	Operator selection method. <ul style="list-style-type: none"><li>• <b>Auto</b> - selects the operator automatically.</li><li>• <b>Manual</b> - requires you to select the operator manually. (More on this selection <a href="#">below</a>.)</li></ul>

## Manual operator selection

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To select an operator manually, specify **Connection mode: *Manual*** and click '**Scan For Operators**'.

[[File:Networking\_rutos\_manual\_mobile\_network\_operators\_scan\_proccess\_step\_1\_dualsim\_{{{dualsim}}} \_v2.png|border|class=tlr-border]]

Will be prompted with a pop-up asking if you're sure. Click 'Scan' if you wish to proceed.



Wait for the scan to finish. As indicated by the onscreen message, the process can take up to 3 minutes.



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Once the scan has finished, you will see the results in the 'Available operators'.




In order to lock the SIM card to using a single operator, select operator from Operator code field and click 'Save & Apply'.

## Operators list

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This section is used to create lists of operators codes, which can then be used in [Operator settings section](#) to Whitelist or Blacklist them. Operator code consists of two parts - Mobile Country Code (MCC) and Mobile Network Code (MNC).



By clicking Edit  on a list you will be redirected to editing page in which you can enter operator codes for that list.



# Utilities

## SIM PIN management



Field	Value	Description
SIM card lock	off   on; default: <b>off</b>	Correct PIN code is required to enable or disable SIM card lock. Once SIM card lock is disabled you will not need to enter PIN code on any device to use SIM card.
Change PIN	- (interactive button)	Open modal window to change SIM PIN

## PIN/PUK lock notification

If you set an invalid PIN/PUK code or insert a locked/blocked SIM card, a side message will pop up with information that the SIM card is locked or blocked. Click 'Unlock SIM here` to open the modal window where you can enter the SIM card PIN/PUK codes.

Side message where the SIM is locked

Side message where the SIM is blocked



Field	Value	Description
PIN	4-8 positive numeric chars (positive number); default: <b>none</b>	SIM card's PIN (Personal Identification Number) is a secret numeric password shared between a user and a system that can be used to authenticate the user. PIN is saved in flash memory, it will be saved after device reset.
PUK	8 positive numeric chars (positive number); default: <b>none</b>	SIM PUK (Personal Unblocking Key) is a code consisting of 8 digits. It is used to unblock your SIM card when you entered 3 times a wrong PIN code

## APN Database

APN stands for Access Point Name and allows a device's network to connect to the internet. With the APN settings in place, your device builds a connection to a carrier's gateway. APN Database page section provides you with possibility to create/edit/delete APN records. **Note:** APN Database is additional software that can be installed from the **System → [{{{name}}}] Package Manager[Package Manager]** page.



## Adding new APN

In order to create new APN to database, insert required information and click Add button.



Field	Value	Description
Carrier name	default: <b>empty</b>	Carrier name - name of a company that sells wireless connectivity to customers for cellphone data and telephone calls. It may also be called a mobile network operator, a mobile carrier, cellular company or wireless service provider.
Mobile Country Code	default: <b>empty</b>	Mobile Country Code (MCC) - a mobile code consisting of three digits used to identify GSM networks. MCC is also used along with the International Mobile Subscriber Identity (IMSI) to identify the region from which mobile subscriber belongs.
Mobile Network Code	default: <b>empty</b>	Mobile Network Code (MNC) - a unique two- or three-digit number used to identify a home Public Land Mobile Network (PLMN) to. MNC is allocated by the national regulator.
APN	default: <b>empty</b>	APN (Access Point Name) is configurable network identifier used by a mobile device when connecting to a carrier
PDP type	IPv4/IPv6   IPv4   IPv6; default: <b>IPv4/IPv6</b>	Specifies what type of address is requested from the operator
Authentication type	none   <b>PAP</b>   <b>CHAP</b> ; default: <b>none</b>	Authentication method that your GSM carrier uses to authenticate new connections on it's network
<b>Username</b>	default: <b>empty</b>	Your username that you would use to connect to your GSM carrier's network
<b>Password</b>	default: <b>empty</b>	Your password that you would use to connect to your GSM carrier's network

[[Category:{{{name}}} Network section]]