

# RUT901 Mobile

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The information in this page is updated in accordance with firmware version [RUT9M\\_R\\_00.07.04.5](#).

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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 RUT901 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 "Basic" button under "Mode", which is located at the top-right corner 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.

### ✓ SIM CARD SETTINGS

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The screenshot shows the SIM Card Settings interface with the following elements:

- Default SIM:** A toggle switch currently set to 'on'.
- Deny data roaming:** A toggle switch currently set to 'off'.
- VoLTE:** A dropdown menu set to 'Auto'.
- Network type:** A dropdown menu set to 'Auto'.
- PIN:** An empty text input field.
- Band selection:** A dropdown menu set to 'Auto'.

Field	Value	Description
Default SIM	off   on; default: <b>on</b>	Sets this SIM slot as the default one.
Deny data roaming	off   on; default: <b>off</b>	Denies data connection on roaming conditions.
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.
Network type	Auto   4G (LTE) only   3G only   2G only   4G + 3G   4G + 2G; default: <b>Auto</b>	Network connection type preference.
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.

## Low signal reconnect

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



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.

## Operator settings

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The **Operator Settings** section is used to configure which operators can be allowed (Whitelist) or blocked (Blacklist) for specified SIM card.

### ^ OPERATOR SETTINGS

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Enable  off on

Mode

Operator list

Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables Whitelist or Blacklist for specified operator list.
Mode	Whitelist   Blacklist; default: <b>Whitelist</b>	Mode to be applied for operator list. <ul style="list-style-type: none"><li>• Whitelist - only allow operators in list</li><li>• Blacklist - block all operators in list</li></ul>
Operator list	operator list; default: <b>none</b>	A list of operators which can be configured in <a href="#">Operators List page</a> .

## SMS limit settings

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

### ^ SMS LIMIT SETTINGS

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Enable SMS limit  off on

SMS limit count

Period

Start hour

[CLEAR SMS LIMIT](#)

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.
Start hour/day	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.

# USSD

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**Unstructured Supplementary Service Data (USSD)** is communication protocol used in communication between cellular devices and mobile network operators. It is usually used with prepaid SIM cards to enable/disable certain services or to obtain information from a network operator.

This section provides the possibility to send USSD messages to the mobile operator.

^ USSD

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USSD

Response message

No response yet

\*It can take up to a minute for a USSD response to be received.

Field	Value	Description
USSD	string; default: <b>none</b>	Enter a USSD code (up to 182 character) that you wish to send. To send the entered USSD code, click the 'Send' button below the Response box.
Response message	string; default: <b>No response yet</b>	Displays the response to the last sent USSD message. Receiving the response may take up to a minute.
Send	- (interactive button)	Click to send the message entered in the USSD field.

## SIM Switch

The **SIM Switch** section provides you with the possibility to configure SIM switching rules, i.e., set up circumstances under which the device will perform a switch from using one SIM card to another. Refer to the figure and table below for information.

Enable automatic switching  off on

Check interval

Attempts before SIM switch

On weak signal  off on

On data limit  off on

On SMS limit  off on

On roaming  off on

No network  off on

On network denied  off on

On data connection fail  off on

SAVE & APPLY

Field	Value	Description
Enable automatic switching	off   on; default: <b>off</b>	Turns automatic SIM switching on or off.
Check interval	integer [3..3600]; default: <b>10</b>	The frequency (in seconds) at which the device will check for SIM switch conditions. If such a condition exists, the router will perform a SIM switch, if not - it will check for the same conditions again after the amount of time specified in this field passes.
Attempts before SIM switch	integer [1..10]; default: <b>3</b>	How many times a condition will be checked before executing a SIM switch. For example, if the device is a state that meets at least one SIM switch condition, the device will perform a number of additional checks specified in this field and will perform a SIM switch only if the condition is met on every check.
On weak signal	off   on; default: <b>off</b>	Performs a SIM switch when the signal strength drops below a certain threshold.
On data limit	off   on; default: <b>off</b>	Performs a SIM switch when the mobile data limit for this SIM card is reached. You can set up a mobile data limit in the Network → <a href="#">WAN</a> (Basic WebUI mode) or Network → <a href="#">Interfaces</a> (Advanced WebUI mode) pages by clicking 'Edit' next to the interface you wish limit the data for.
On SMS limit	off   on; default: <b>off</b>	Performs a SIM switch when the SMS limit for this SIM card is reached. You can set up SMS limit in the Network → Mobile → <a href="#">General</a> page.
On roaming	off   on; default: <b>off</b>	Performs a SIM switch when roaming conditions are detected.
No network	off   on; default: <b>off</b>	Performs a SIM switch when a network connection is not available.
On network denied	off   on; default: <b>off</b>	Performs a SIM switch when access to a network is denied by an operator.

On data connection fail off | on; default: **off**

Performs a SIM switch when mobile data connection fails. Possible failure determination methods are:

- **LCP echo**
- **ICMP echo**

If no echo is received, the data connection is considered to be down.

When configuring SIM switching from the Secondary card, an additional field called "Switch back to primary SIM card after timeout" becomes available:

Switch back to primary SIM card after timeout  off on

Initial timeout (min)

Field	Value	Description
Switch back to primary SIM card after timeout	yes   no; default: <b>no</b>	Attempts to switch back to the primary SIM card once the specified period of time passed.
Initial timeout (min)	integer; default: <b>1</b>	Indicates a time value (in minutes) after which the device will attempt to switch back to the primary SIM card.

## Network operators

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. Operator selection is only available for the primary SIM card. In order to specify an operator for the other SIM card it must first be selected as the Primary SIM in the [SIM card settings](#) section.

### OPERATOR SCAN SETTINGS

Active SIM SIM1

Current operator N/A

Connection mode

SAVE & APPLY

Field	Value	Description
Active SIM	SIM 1   SIM 2; default: <b>SIM 1</b>	Displays which SIM card is currently active.
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> <li>• <b>Manual-Auto</b> - prompts you to enter an operator's code, but if the router can't complete the connection, it will automatically connect to the next available operator.</li> </ul>

## Manual operator selection

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

### ▼ OPERATOR SCAN SETTINGS

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Active SIM SIM1

Current operator N/A

Connection mode

Operator code

**SCAN FOR OPERATORS**

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'.

### ▼ AVAILABLE OPERATORS

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Status	Operator Name	Short Name	Numeric Name	Network Type
Available	Telia LT	Telia LT	24601	4G
Forbidden	Tele2 LT	Tele2 LT	24603	3G/4G
Forbidden	LT BITE GSM	BITE	24602	3G/4G
Available	246 08	246 08	24608	4G

**SAVE & APPLY**



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).

## ^ OPERATORS LISTS MANAGEMENT


OPERATORS LIST NAME	OPERATORS CODE	
example	24601, 24602	 

## ^ ADD LIST

NAME





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

## ^ MODIFY OPERATORS LIST: EXAMPLE

Operator code  

 BACK





















 SAVE & APPLY

# 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.

## ^ APN DATABASE

Entries per page

CARRIER NAME	MOBILE COUNTRY CODE	MOBILE NETWORK CODE	ACCESS POINT NAME	PDP TYPE	AUTHENTICATION TYPE	
AT&T PHONE TEST SIM	001	01	phone	IPv4/IPv6	None	 
TEST DEFAULT V4	001	01	default	IPv4	None	 
TEST DEFAULT V6	001	01	defaultv6	IPv6	None	 
TEST DEFAULT V4V6	001	01	defaultv4v6	IPv4/IPv6	None	 
TEST DEFAULT PAP	001	01	defaultpap	IPv4/IPv6	PAP	 
TEST DEFAULT CHAP	001	01	defaultchap	IPv4/IPv6	CHAP	 
Test Internet	001	010	VZWINTERNET	IPv4/IPv6	None	 
Cosmote Wireless Internet	202	01	internet	IPv4/IPv6	None	 
Vf Mobile Internet	202	05	internet.vodafone.gr	IPv4/IPv6	None	 
Q Internet	202	09	myq	IPv4/IPv6	None	 



## Adding new APN

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

### ADD NEW ENTRY

CARRIER NAME	MOBILE COUNTRY CODE	MOBILE NETWORK CODE	ACCESS POINT NAME	<b>ADD</b>
<input type="text" value="example"/>	<input type="text" value="000"/>	<input type="text" value="00"/>	<input type="text" value="test"/>	

### APN DATABASE ENTRY CONFIGURATION

Carrier name	<input type="text" value="example"/>
Mobile Country Code	<input type="text" value="000"/>
Mobile Network Code	<input type="text" value="00"/>
APN	<input type="text" value="test"/>
PDP type	<input type="text" value="IPv4/IPv6"/>
Authentication type	<input type="text" value="None"/>

**SAVE & APPLY**

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