RUT950 Firmware Downloads (legacy WebUI)

FW downloads

This page contains various firmware versions for RUT9XX devices.

Note: packages for Package Manager are independent from firmware and can be downloaded in the Package Downloads page.

Firmware Version		Changelog
Latest FW	**RUT9XX_R_00.06.09.5**	**2023.05.19**

FW checksums

A list of firmware checksums for RUT9XX firmwares uploaded in this page: **checksum list**

Notes

- RUT950 devices with **MeigLink** SLM750 module are only supported on firmware version RUT9XX_R_00.06.08.5 and up. You can find the module present on your device in Device (legacy WebUI) WebUI page.

Changelog

RUT9XX_R_00.06.09.5 | **2023.05.19**

- Fixes:
    - Fixed CVE-2023-32349 vulnerability

RUT9XX_R_00.06.09.4 | **2023.05.08**

- Fixes:
    - Fixed Hotspot statistics data restoring after reboot

RUT9XX_R_00.06.09.2 | **2022.06.21**

- Improvements:
    - RS232 add PL2303GC USB-Serial chip support

RUT9XX_R_00.06.09.1 | **2022.06.06**

- Fixes:
    - Add RS485 support for changes in HW23 for RUT955

[RUT9XX_R_00.06.09](#) | 2022.05.23

- Improvements:
    - Updated privoxy to version v3.0.33
    - Updated stunnel to version 5.59
    - Updated dnsmasq to version v2.85
    - Changed broadcast setting on NCM protocol
    - Increased Operator select band array size for B66 and B71 LTE bands
    - Added PDP context checking for T-Mobile operator
    - Added validation in case of duplicate IPsec configurations
    - Removed deprecated IPsec code
    - Improved firmware upgrade messages on firmware validation failure
    - Added DMZ "Use HTTPS WAN rule source zone" option
    - Updated phone number validation in the 'Call Utilities -> User Groups' page
    - Added client mode timeout support to Serial over IP

- Fixes:
    - Fixed showing RSCP, RSRQ and SINR info in the 'Status -> Network -> Mobile' page for Meiglink modems
    - Fixed CVE-2021-3712 openssl vulnerability
    - Fixed CVE-2021-34432 mosquito vulnerability
    - Fixed CVE-2020-36254 dropbear vulnerability
    - Fixed CVE-2018-1000500, CVE-2019-5747, CVE-2021-28831 busybox vulnerabilities
    - Fixed CVE-2021-38206 mac80211 vulnerability
    - Fixed mobile connection setup issue using NCM protocol
    - Fixed temperature handling on devices with MeigLink module
    - Fixed "Data only" connection handling issue
    - Fixed SMS timestamp (%ts) format issue
    - Fixed Bridge and passthrough modes in cases when leased IP is same as Network ID or broadcast IP
    - Fixed QoS port prioritization
    - Fixed Load Balancing input validation
    - Fixed Input/Output input validation
    - Fixed DHCP IP range calculation
    - Fixed adding new MODBUS alarms when one is already created
    - Fixed DDNS configuration saving without an Internet connection
    - Fixed WiFi client subtype display issue in the Events Reporting Overview page
    - Fixed SMS warning enabling validation in the Mobile Data Limit page
    - Fixed lua error when connecting to WiFi access point
    - Fixed NMEA time conversion
    - Fixed GPS HTTPS option label text
    - Enhanced SMS Utilities service security

[RUT9XX_R_00.06.08.6](#) | 2021.12.09

- New features:
    - DFOTA modem upgrade system for Quectel modems

- Improvements:
    - Expanded APN Database

- Fixes:
    - Fixed persistence of DMZ firewall rules when loading Firewall General page

- Fixed incorrect firmware downgrade error message

[RUT9XX_R_00.06.08.5](#) | 2021.10.11

- Fixes:
    - Fixed unsolicited netstate keeper for attach process
    - Added timeouts for UQMI calls when establishing connection

RUT9XX_R_00.06.08.4 | 2021.10.04

Note: Firmware version *RUT9XX_R_00.06.08.4* released on 2021.10.04 was removed due to an issue on certain MeigLink SLM750 modules with mobile data connection establishing on firstboot.

- Improvements:
    - Migrated from qmicli to uqmi tool
    - Added MEIG checking and message when downgrading firmware

- Fixes:
    - Fixed Telit modem watchdog
    - Fixed support for deny data roaming flag
    - Increased band array size for B66 and B71 LTE bands
    - Start fix_sta_ap init.d script as late as possible
    - Reintroduced German language
    - Fixed maps loading

[RUT9XX_R_00.06.08.3](#) | 2021.07.01

- Fixes:
    - Add Wireless security fixes for the FragAttacks vulnerabilities

[RUT9XX_R_00.06.08.2](#) | 2021.06.10

- Improvements:
    - Updated OpenLayers to version 6.4.3
    - Updated email text validation in I/O rules page

- Fixes:
    - Fixed hotplug naming scheme typo for MeigLink modems

RUT9XX_R_00.06.08.1 | 2021.05.19

Note: Firmware version *RUT9XX_R_00.06.08.1* released on 2021.05.19 was removed due to a "Keep settings" issue which occurred on rare occasions when upgrading the firmware on routers with certain configurations. If you have already installed this firmware and your configuration remained intact, you do not need to revert it back to a previous version.

- New features:
    - "Frequency setting method" support for MODBUS Serial Master
    - Added expansion specifiers and the option to schedule data to Data to Server service
    - Spanish WebUI language support

- Japanese WebUI language support
- "Get active profile" SMS Utilities rule

- Improvements:
    - Updated curl to version 7.74
    - Updated pcre to version 8.44 version
    - Updated sqlite3 to version 3.33
    - Updated ncurses to version 6.2
    - Updated libjson-c from version 13.1 to version 14
    - Updated mosquitto to version 1.6.10
    - Updated libpcap to version 1.10.0
    - Updated hostapd to version 2019-08-08
    - Updated tcpdump to version 4.9.3
    - Updated strongswan to version 5.8.4
    - Updated openvpn to version 2.5.2
    - Added Verizon provider support for global modules
    - Added additional command to get current operator names
    - Added VoLTE configurable by SIM card config
    - Added USB ZLP flag to avoid mobile network loss
    - Added SIM URC event handling
    - Extended new NMEA sentence PQXFI identification
    - Changed mobile interface subnet to /32
    - Added 'Bind to SIM' option to GRE Tunnel configuration
    - Added 'Single number' and 'User group' choices to the "Network → Mobile → Mobile Data Limit" page
    - Added new field called 'Base64 Encoding' to the "Services → SMS Gateway → Scheduled SMS" page
    - Added new option called 'Get active profile' to the "Services → SMS Utilities" page
    - Added new textbox called 'Services' to the "Services → SNMP" page
    - Added warning below 'Message text' when Base64 encoding is enabled
    - Added explanatory text in the "Services → SMS Gateway → Scheduled SMS" page for Message text field
    - Added 'Base64 Encoding' field live base64 encoding/decoding of 'Message text' field
    - Added TLS DHE + RSA cipher checkboxes and limited custom cipher amount in OpenVPN configuration
    - Updated SMS free space field validation
    - Added option to specify geofence name (%gn) to Events Reporting geofence rule

- Fixes:
    - Fixed mobile authentication handling
    - Added shellinabox patch to fix CVE-2018-16789
    - Added ntfs-3g patch to fix CVE-2019-9755
    - Added netifd patch to fix CVE-2021-22161
    - Added odhcp6c patch to fix CVE-2021-22161
    - Added json-c patch to fix CVE-2020-12762
    - Added glib2 patches to fix CVE-2019-12450, CVE-2019-13012, CVE-2018-16248 and CVE-2018-16249
    - Added prevention against possible unintended firsboot when JFFS2 magic number is invalid
    - Fixed mobile MTU setting
    - Changed SMS saving to modem on EC25V modules
    - Added default APN for EC25V module

- Fixed SMS managing for EC25-V modules
- Changed operator name AT command
- Fixed PPP connection mode
- Fixed Operator List connection
- Fixed connection issues when WiFi is in Failover mode
- Fixed mobile interface Static Route management
- Fixed RMS mdcollect data to receive current data, not data for period
- Fixed RMS crashing after not reading analog input value
- Fixed RMS connection uptime value
- Fixed RMS display of analog input value when measurement unit is configured
- Fixed OpenVPN auth-pam location for Authentication via file option
- Fixed unexpected ZeroTier service crash issue
- Fixed IPsec RSA key override
- Reduced configuration backup size
- Fixed Package Manager package installation on reboot
- Fixed Package Manager authorization check for offline package upload
- Fixed USB to serial service startup issues
- Fixed WiFi and SIM2-related MODBUS TCP Slave regressions
- Fixed MQTT MODBUS Gateway disconnection after network restart
- Fixed MODBUS Serial Master Alarms page loading
- Removed the "Use new register layout" option from the MODBUS TCP Slave page
- Fixed delay in I/O status check
- Removed enable option from AVL main rule
- Fixed hostname textbox validation in the "Network → LAN → Static Leases" section
- Fixed SNMP Service Settings hints for Location, Contact and Name
- Deleted unused subtype options from the "Services → Events Log → Events Reporting" page
- Fixed sending Events Log Reporting email with attached file
- Fixed Auto-APN hint text positioning
- Fixed dropdown location in the SMS Utilities edit page
- Fixed the "System → Administration → Backup" page layout

RUT9XX_R_00.06.07.7 | 2021.04.12

- New features:
  - Added Operator Station Synchronization option to NTP page

- Improvements:
  - Updates iptables to version 1.6.2
  - Updated openssl to version 1.1.1k

RUT9XX_R_00.06.07.5 | 2021.01.28

- Fixes:
  - Added dnsmasq patch CVE-2020-25681, CVE-2020-25682, CVE-2020-25683, CVE-2020-25684, CVE-2020-25685, CVE-2020-25686, CVE-2020-25687
  - Fixed SSH reachable over SIM IP in early boot
  - Added manual network band selection support for EC25-AF modem

RUT9XX_R_00.06.07.4 | 2020.12.21

- Fixes:

- Added hostapd patch to fix CVE-2019-16275, CVE-2019-11555, CVE-2019-13377 vulnerabilities
- Added openvpn patch to fix CVE-2020-11810
- Added strongswan patch to fix CVE-2018-10811
- Updated openssl to version 1.1.1i
- Updated uci to version 2019-09-01
- Updated license information to the System → Licenses → General info page

RUT9XX_R_00.06.07.3 | 2020.11.25

- Fixes:
  - Removed "remote-cert-tls server" option from default OpenVPN config

RUT9XX_R_00.06.07.2 | 2020.11.19

- Fixes:
  - Randomized the global rate limiter to mitigate "SAD DNS" attack

RUT9XX_R_00.06.07.1 | 2020.11.12

- Fixes:
  - Removed downgrade with 'Keep settings' permission with some firmwares
  - Fixed mdcollect to receive current data not period
  - Fixed single I/O trigger handling
  - Fixed multiple I/O triggers handling

RUT9XX_R_00.06.07 | 2020.09.30

- New features:
  - Port Mirroring
  - During this release a new package was released - WireGuard

- Improvements:
  - dnsmasq updated to version 2.80
  - uhttpd updated to 2020-02-12 version
  - Added logging to Events Log on Modbus write actions
  - Added "Persistent connection" and "Timeout" options to Modbus TCP Slave
  - Added ASCII, HEX data types to Modbus TCP/Serial Master
  - Added more precise error messages to Modbus TCP Test
  - Added QoS option for Modbus Data Sender/MQTT protocol
  - Added new parameter called "all" to Modbus Data Sender to select all records into one packet
  - Increased Modbus Data Sender maximum name length
  - Added the option to send SMS to multiple numbers to Modbus Alarm Configuration
  - Added ICCID parameter to SNMP MIB module
  - Added 4 pin Input/Output parameters to SNMP MIB module
  - Added RSCP, EC/IO options to SNMP
  - Added support for multiple iroutes per OpenVPN client
  - Added validation to "Keep Alive" field in OpenVPN configuration
  - Added uploaded package signature verification to Package manager
  - Huawei MS2131 USB dongle back-end support
  - Added "Ignore incoming calls" option to Call Utilities
  - Added possibility to create new profiles from current configuration

- Added additional AT commands for troubleshooting: AT+CGPADDR AT+QGMR AT+QCFG="NWSCANMODEEX" AT+QCFG="BAND" AT+QNWINFO AT+QENG="servingcell" AT+QENG="neighbourcell"
- Added "RMS On/Off" input rule to Input/Output configuration
- Added logging to Events Log when action is 'None'
- Added MD5 & SHA256 checksum calculation for Configuration Backup files
- Removed deprecated crt_rms service
- Changed tooltip messages for Ping/Wget Reboot
- Ping Reboot service rewritten from C to Shell
- Improved IPsec and DMVPN pre-shared key validation
- Fixed IPsec identifier validation
- Added hints in "Multiple Access Points" page and a redirect to main wireless page after saving
- Removed misleading hints from wireless MAC filter page
- Unified I/O pin names throughout the interface
- Improved validation for newly created port-based VLAN
- Changed "Memory expansion" name to "Storage memory expansion"
- Added loading icon when downloading Troubleshoot file
- Added default text when no group is created in User Group selection
- Unified VPN error messages
- Removed "Back to overview" button from GRE Tunnel and SSTP pages
- Added missing "Mode" option in "Mobile configuration" page when PPP is selected
- Removed non-functional "Back To Overview" buttons
- Removed the possibility to create custom reset button configurations
- Added security fixes related to file upload and HTTP headers
- Added existing SMS rule updating to new group name when changing group name
- Unified and expanded username and password validations

- Fixes:
  - Fixed starting NTP client after WAN cable is plugged in
  - Fixed SIM Switch event sending after switch execution
  - Fixed SIM Switch PIN code setting after switch execution
  - Fixed sending logs via email
  - Fixed active SIM changing issues related to Modbus TCP Slave
  - Fixed first-trigger alarm frequency for Modbus Serial Master
  - Fixed period when Modbus Data Sender fails to send packet
  - Disabled WiFi STA when authentication fails in STA+AP mode due to bad key
  - Fixed WiFi STA/AP bad test logic
  - Fixed WiFi STA operation while multiple WiFi APs are present
  - Fixed WiFi SSID string handling
  - Added WiFi SSID field validations
  - Fixed GPS time synchronization in some time zones below the equator for RUT955
  - Removed "Aggressive mode" choice from IPSec IKEv2
  - Reworked multiple subnet configuration parsing to match documentation recommendations
  - Fixed sent email logging on SMS to Email Forwarding
  - Included default profile together with other profiles in the list in SMS Utilities
  - Made DNS pushed from OpenVPN server live on OpenVPN client
  - Fixed compatibility with firmware after update to dnsmasq 2.81
  - Changed notification message that is shown when branched firmware is uploaded
  - Fixed Analog Input value display over RMS I/O monitoring

- Fixed layout and validations in I/O Rules page
- Unified Output option names in I/O pages
- Fixed SIM2 default MTU value
- Fixed change password error message after factory setting restore
- Fixed non-existing page error on password change after factory setting restore
- Fixed Lua error in Network → Mobile → SIM Management page
- Fixed Lua error in MQTT Publisher page
- Fixed profile apply/update/delete confirmation messages
- Fixed error message display for SIM2 in mobile configuration page
- Removed duplicate MTU field from Setup Wizard's Mobile page
- Fixed incorrect MTU validation in LAN page
- Fixed Hotspot statistics URL error, when URL contains special symbols (such as '%')
- Fixed Hotspot statistics database clearing, when multiple users have the same MAC address
- Fixed phone number field validations
- Fixed Package Manager menu update right after new package upload
- Fixed XSS vulnerability in System → Administration → Root CA page
- Added band selection for 3G modem
- Fixed "Success URL" validation in Hotspot configuration page
- Fixed remote network netmask validation in OpenVPN page
- Fixed element positioning in Setup Wizard, NTP and DHCP pages

RUT9XX_R_00.06.06.1 | 2020.03.12

- Fix:
    - Fixed ppp buffer overflow vulnerability (CVE-2020-8597)
    - Fixed saving Ping Reboot configuration

RUT9XX_R_00.06.06 | 2020.03.09

- New features:
    - UDP broadcast relay functionality
    - Redundancy protection, alarm frequency for Modbus TCP Master
    - Telenor MQTT package
    - MQTT publisher TLS support
    - VRRP multi-section configuration
    - Mobile Data Limit info in Clear Data Limit section
    - HTTPS control in Access Control window and corresponding SMS rule
    - Added source version value to Package Manager

- Improvements:
    - Complete rewrite of Modbus TCP Slave: fixed bugs, added new features
    - Modbus TCP Master test button now works without needing to save configuration first
    - Added ucitrack entry, improved init script for MQTT-Modbus gateway
    - Ability to install packages stored in backup file from Package Manager
    - Longer profile change loading animation that ends when profile is fully loaded
    - Profile name validation and name input hint
    - Updated Status → Services page design
    - Updated IPsec Pre-Shared key tooltip
    - Improved operator control with auto APN functionality
    - Refactored VRRP overview and status pages
    - Added 4 pin I/O SNMP trap rules

- Fixes:
    - Fixed GPSD session handling functionality
    - Rewritten communication logic for RMS connections with non-blocking socket
    - Fixed signal strength logs when Events Reporting is enabled
    - Fixed Events Reporting 'Send Test Email' button to not send empty emails
    - Fixed 'Change profile' SMS Rule
    - Fixed 'Monitoring status' SMS rule
    - Fixed 'Send status' message to other multiple phones
    - Unified password validation and password hints
    - Removed "Site Survey" page
    - Changed 'free' memory indication to 'used' memory in the Status → System window
    - Fixed mobile service 3G + 4G configuration
    - Fixed OpenVPN server status values in the Overview page
    - Fixed OpenVPN config from file
    - Fix mobile protocol value in the WAN window
    - Fixed restore to default LAN after disabling VLAN
    - Fixed RAM usage display
    - Removed 4 pin power block picture from devices which do not have it

[RUT9XX_R_00.06.05.3](#) | 2019.11.26

- Fixes:
    - Fixed RMS not displaying correct data from device when mobile is enabled and there is more than one day of data collected

[RUT9XX_R_00.06.05.1](#) | 2019.11.15

- New features:
    - Modbus TCP custom register block
    - tls-crypt Additional HMAC authentication option
    - Ability to upload custom OpenVPN configuration file
    - Ability to upload OpenVPN TLS-clients configuration
    - OpenVPN Password authentication
    - Azure IoThub MQTT subscriber support
    - Call utilities add support for answer/hangup with timer
    - SMS Utilities Auto-APN toggling rule
    - Full Unicode SMS support
    - Multiple Access Points
    - Network frequency band select support for global version

- Improvements:
    - Added tables' position priority in Overview settings
    - Added hint in the Hotspot statistics page
    - OpenVPN PKCS12 support added
    - Added supported AES ciphers to OpenVPN
    - Updated APN database
    - Add advertisement interval option to VRRP
    - Faster private key generation on first boot

- Fixes:
    - Restored Passthrough and Bridge mode DHCP leasetime configuration
    - Network frequency band selection fix

- Network frequency Bands SIM1/SIM2 tab disappearing fix
- Automatic APN save fix
- Mobile Service mode validation fix
- Mobile username/password' read & write fix
- Mobile widget sent/received bytes for PPP mode fix
- Mobile Data Limit firewall rule init fix
- Operator control fixes
- SMS Utilities message deletion fix
- SMS Utilities vpnstatus command fix
- SMS Utilities setting of APN with Auto APN enabled fix
- OpenVPN enable/disable fix
- OpenVPN Additional HMAC authentication option selection fix
- OpenVPN TLS/Password & Password authentication fixes
- VPN incorrect error message fix
- Unified VPN name validation methods
- Events Reporting service start fix
- Events reporting event subtype changes
- Network type logging on modem service restart fix
- Added button to delete all access points, fixed long configuration apply times
- Increased Hotspot Landing page file upload limits
- SNMP option in Events Reporting without package installed fix
- SNMP MIB syntax fixes
- Samba CVE-2019-3824 and CVE-2019-3880 fixes
- QoS speed fields validation fix
- Latest HTTP/HTTPS connections not showing in Access Status fix
- Added error messages in Package Manager
- Package Manager: added service restart after keep settings and backup installation
- Package Manager: decreased package script reload after keep settings firmware and backup upload
- Package Manager: services start on boot if enabled fix
- Changed packages names in Package Manager
- Merged all Package Manager tabs into one
- Premature session end when time is updated fix
- Expanded Input/Output status view and updated information
- Incorrect VLAN ID range fix
- Fixed VRRP default config to follow RFC 2338
- Hostname and router name after backup upload fix
- Unified password field validations
- USB modem widget crashing WebUI fix
- CVE-2019-12272: possible shell injection in WebUI fixed
- WebUI doesn't load if modem is unresponsive fix
- Input/Output button styles changed to reflect global design
- Fixed design issue in SIM idle protection
- Restore Point applying after backup fix

[RUT9XX_R_00.06.04.5](#) | 2019.08.26

- Fixes:
  - RutFOTA Memory managament fix and speed improvements
  - Firmware upgrade from server fix
  - Mobile page fix for 3G modules

[RUT9XX_R_00.06.04.3](#) | 2019.08.14

- Fix:
    - Removed APB type 'mms' from database
    - Network Frequency Bands SIM1/SIM2 tab disappearing fix
    - Service mode validation fix
    - Automatic APN save fix
    - Mobile Username/Password read & write fix
    - LTE B20 band showing up twice fix
    - SIM2 tab APN write fix
    - SIM2 tab Authentication method does not show up fix
    - Enable automatic APN selection by default

[RUT9XX_R_00.06.04.1](#) | 2019.07.31

- Fixes:
    - Mobile Bridge and Passthrough mode keep settings fix

[RUT9XX_R_00.06.04](#) | 2019.07.24

- New features:
    - [Package manager](#) functionality added
    - [Modbus Serial Master](#) functionality added
    - [SMS Limit](#) functionality added
    - [ZeroTier One VPN](#) support implemented
    - [Azure IoT Hub](#) support implemented
    - Added buildable Cumulocity library and example application to the SDK
    - Add an insecure bridge option for MQTT
    - Added Jio APN

- Improvements
    - All VPN services styles were unified
    - Added Slovenia to operator country list

- Fixes:
    - SMS Gateway: Removed new line add after configuration save
    - Fixed Montenegro operators
    - SMS Utilities Mobile/WiFi on & off commands fixed
    - SMS Utilities UCI API rule fixes
    - Modbus Mobile/WiFi on & off commands fixed
    - DDNS service restart fix
    - Data limit validation fixes
    - Hotspot Logging disable fix
    - Some grammar mistake fixes
    - Disappearing 'Load Balancing/WAN Failover' option fix
    - Fixed spammy WiFi logging
    - On action 'reboot' allow a minimum of 5 minutes interval fix for Wget reboot
    - Load Balancing re-ordering and deletion fix, added validation for policy name
    - Operator control, determine APN from SIM IMSI number
    - WAN state and IP print fixes
    - DDNS name existence check fix
    - Ping Reboot packet size 0 fix

- Added validation to prevent very large-files from being uploaded and taking up all the space in RAM
- Hotspot external landing page de-selection fix
- Input/Output Periodic Control fixes
- Port forwarding with prefix /31 fix

[RUT9XX_R_00.06.03.2](#) | 2019.06.10

- New features:
    - Added port logging
    - Added upload backup from lower firmware version support
    - Added 4-pin I/O support for new RUT9 models
    - Introduced auto APN selection feature
    - Added SNMP GET requests for LAN1/LAN2/LAN3/WAN (or LAN4) status
    - Hotspot TOS HTML support added
    - GPL Teltonika 'twStreamApp' API for ThingWorx added
    - Added UDP support for serial connections

- Improvements:
    - Updated uci to version 2018-08-11
    - Updated ubus to version 2018-10-06
    - Updated ubox to version 2019-04-07
    - Updated libubox to version 2019-02-27
    - Updated openssl to version 1.0.2r
    - Updated busybox to version 1.30.1
    - Updated dropbear to version 2019.78
    - Added reply after mobileon and mobileoff SMS Utilities commands
    - Added access control disable confirmation
    - Added data limit information in Hotspot landing page
    - Modbus: added busy status return code while actions are executed
    - GPS: added support for Input/Output
    - Expanded VRRP configuration to support virtual MAC
    - Added -U parameter to gsmctl for ussd commands

- Fixes:
    - Mobile page fix
    - Increased RMS HTTP Proxy resource limit
    - Fixed LED indication setting
    - Fixed input validation issues
    - Mobile traffic graph fixes
    - SIM Idle Protection test fix
    - Services: Remove GRE and Hotspot from Status → Services window
    - GPS speed calculation fix
    - Mobile: set 1st context to IPv4
    - RS232/RS485 service reload fixes
    - Bootloader URL update
    - Email to SMS validation and larger SMS send fix
    - Fixed LED signal issue when reporting invalid signal
    - Main WAN routes overwritten when USB Modem is used fix
    - Added explanation text to operator control
    - Remove WEP encryption method
    - Cloud4wi profile fixes

- IPSec 'Allow WebUI access' with 'Redirect to HTTPS' fix
- SMS Utilities User group validation fix
- GPS Map was made compatible with Edge browser
- GPS Tab order fix
- Wireless regulatory domain and channel change fix
- GRE and GPS start/stop fix
- Minor NHRP bug fixes
- XHR authentication fixes
- DMVPN lua bug fix
- SMS Forwarding clarified WebUI options
- Hotspot local users data limit fix
- Setup Wizard Mobile 'Dialing number' disappears after save fix
- Setup Wizard: Validation fix
- Wireless SSID validation fix
- Bidirect mode connection problems fix
- GPS & SNMP Trap link fixes
- Validation for GRE Tunnel interface name added
- Force band validation fix
- VRRP status window fix
- PPTP server configuration when upgrading from old firmwares with keep-settings enabled fix
- Added GPS geofencing coordinate validation
- Added error return codes for fault conditions, changed writing register numbers for Modbus
- Fixed GPS time synchronization
- Output - Periodic Control form not visible on Chromium fix
- SIM Switch on mobile data limit fix
- Load Balancing validation for port numbers fixed, modified warning message
- Overview Bytes sent/received count fix
- Fixed sending data to AVL server
- OpenVPN configuration name fix
- DMVPN configuration count validation fix
- IPSec LAN access fix
- After editing WAN interface, redirect back to WAN page fix
- Wireless STA scanning when all AP are down fix
- SMS Gateway auto reply page fixes
- NTP time zone options fix
- Wake on LAN validation to prevent shell command execution via 'name' field
- GPS Input/Output SMS send fix
- RMS HTTPS proxy fix
- Fixed RMS WAN State and WAN IP
- MQTT bridge with SSL/TLS connection fix
- Use DNS servers advertised by peer not saving fix
- Wget reboot logging fixes
- Periodic Control do not show timeout if it is disabled fix
- QoS speed limitation fix
- Added additional band support for some models

[RUT9XX_R_00.06.02.2](#) | 2019.04.23

- Fixes:

- GPS related fixes
- SDK compilation fixes

[RUT9XX_R_00.06.02](#) | 2019.04.05

- New features:
    - Added [Modbus master](#) feature
    - Added [Modbus data sender](#) feature
    - Added NMEA forwarding, Geofencing, NTP calculation, AVL forwarding, HTTPS forwarding, other satellite support to GPS functionality
    - Added DMVPN service
    - Impelemented NHRP protocol

- Improvements:
    - Updated xl2tpd to version 1.3.13
    - Added "use as default gateway" option to SSTP
    - Added XT25F128B flash support
    - Shared-keys option added to Strongswan
    - Auto option selection added to Strongswan
    - Added GRE Tunnel source selection from interfaces and ability to write in the local IP
    - Added ability to create VLAN 0

- Fixes:
    - Fixed Event Log reporting over FTP
    - Multiple OpenVPN fixes
    - IPSec start order fix
    - IPSec configuration loss fix
    - IPSec sha512 and sha384 support fix
    - IPSec IKEv2 restart loop fix
    - L2TP stability issue fixes
    - L2TP service restart after config change fix
    - USB to serial multiple minor bug fix
    - Samba multiple bug fix
    - Wireless Station availability when two or more Access Points are created fix
    - Input/Output analog calculator fix
    - Wget Reboot disable fix
    - SMS Utilities, 'more' command SMS text customisation fix
    - SMS Utilities GPS ON/OFF fix
    - SMS Utilities 'uci show' command fix
    - Multiple SMS Utilities remote configuration fixes
    - Use WAN as LAN fix
    - Wake on LAN use WAN as LAN fix
    - Authorization on LTE network fix
    - Restore Point file download fix
    - LED issue when rebooting router with reset button fix
    - LED issue when there is no connection fix
    - SSTP interface up after being disabled fix
    - MQTT Publisher WAN IP retrieval fix
    - Static leases, MAC address list fix
    - Static Routes, PPTP interface creation fix
    - SMS Utilities User groups synonymous numbers '00XXX' & '+XXX' fix
    - Hotspot Restricted Internet Access fix

- Hotspot session in use by user deletion fix+
- Hotspot Walled Garden fix
- Hotspot Statistics window contains non-hostpots fix
- Hotspot authentication mode validation fix
- VLAN, LAN Network configuration backup fix
- VRRP fix
- Call utilities, mobile data ON/OFF without config write fix
- MQTT multiple bug fixes
- Output Scheduler fix
- Profiles: output scheduler update fix
- Maximum length SMS message send fix
- DDNS sleep after check interval and force interval fix

[RUT9XX_R_00.06.00.4](#) | 2019.03.12

- Fixes:
    - Samba fix

[RUT9XX_R_00.06.00.3](#) | 2019.03.08

- Fixes:
    - Special case 3G to 4G fix

[RUT9XX_R_00.06.00.2](#) | 2019.03.07

- New features:
    - Added Wake on LAN feature
    - Added SMS Utilities Wake on LAN rule
    - Added Global module connection support

- Improvements:
    - Changed RMS communication protocol to MQTT from OpenVPN
    - Added informational text to Proxy based content blocker page
    - Improved wording in Load Restore Point section
    - Updated curl to version 7.64.0
    - Updated OpenSSL to version 1.0.2q

- Fixes:
    - UPNP not starting, reappearing leases fixes
    - Removed NOTRACK from firewall rules
    - RS232/RS485: allow DNS NTRIP address
    - DDNS Process kill fix
    - Multiwan fix
    - Added rule validation to Load Balancing
    - rpcd broken pipe fix
    - Daily mobile traffic deletion fix
    - Fixed mobile traffic logging graph issues
    - CLI Connect button fix
    - Data only SIM support fix
    - Limit guard Widget fix
    - Sodog related fixes
    - Hotspot Advertisement address error message fix
    - SSTP fix

- SIM switch related fixes

[RUT9XX_R_00.05.04](#) | 2019.01.14

- Improvements:
    - Added IP allocation for users in L2TP server
    - SMS utilities add 'more' functionality
    - Added modem band display in Mobile page

- Fixes:
    - Remote access information fix
    - Fixed static route application for PPTP, L2TP servers
    - Fixed PPTP passwords file override
    - L2TP IP-range change fix
    - Fixed firewall rules that apply for hotspot firewall zone
    - SMS Utilities web access control rule fix
    - Wireless status and mobile uptime fixes
    - Fixed active connections on Fallback WAN
    - Fixed routing table display
    - Setup Wizard LAN DHCP fields not hidden when DHCP is unchecked fix
    - Fixed GRE Tunnel connection
    - Fixed static routes table view with VPN interfaces
    - Enabled NTP to run server and client simultaneously

[RUT9XX_R_00.05.03.4](#) | 2018.12.20

- Fixes:
    - SSH security fix
    - Mobile page fix

[RUT9XX_R_00.05.03.3](#) | 2018.12.11

- New features:
    - Added SSTP VPN protocol
    - Added force network bands support for RUT9xx H*****, U***** and T***** product codes
    - Added STunnel feature to VPN services

- Improvements:
    - Added every WAN interface selection to QoS
    - Updated VRRP to latest version
    - Added MAC address range support for WiFi MAC filter

- Fixes:
    - Enabled "Enter" key on login form
    - Mobile WAN IP display in overview
    - SMS status WAN IP with multiwan fix
    - Fixed WAN failover metrics and priorities
    - Some additional WAN failover fixes
    - Update Teltonika contact address in Licenses page
    - Fixed lua dispatcher error after reboot
    - Overview OpenVPN widget fix
    - Associated wireless stations display fix
    - PPTP default gateway set and delete fix

- GRE Tunnel delete after button press fix
- L2TP network restart after L2TP connection loss fix
- Wireless connection loop fix
- Modem related updates
- Disabled DHCP request in bridge mode
- Keep data limit count after firmware upgrade with keep settings fix
- WiFi STA+AP fix
- GPS related fix
- SNMP signal value type and memory leak fixes
- Modbus serial read gateway timeout fix
- Modbus set APN and memory leak fix
- Serial over IP ASCII full character support fix
- SMS Utilities check for incoming SMS fix
- Events Reporting firmware upgrade fix
- Mobile WAN IP fix
- L2TP network restart after client delete with default gateway set fix
- Hotspot user validation fix
- Added OpenVPN service restart when TLS Password is changed
- Redirect to different LAN IP after configuration backup, restore and firmware upgrade fix
- NTP time synchronisation after WebUI configuration fix
- Setup wizard wireless channel select fix
- Data collection counter fixes
- Fixed inactive SNMP Input/Output traps
- SNMP Hotspot and serial values fix
- Log to flash limited to 1MB

RUT9XX_R_00.05.02.6 | 2018.11.05

- Fixes:
    - Overview mobile WAN IP display fix

RUT9XX_R_00.05.02.5 | 2018.10.26

- Fixes:
    - Removed ability to use username and password without APN
    - Updated to latest modem version
    - Changed dhcp usage on mobile interface

RUT9XX_R_00.05.02.3 | 2018.10.22

- New features:
    - Added event log entry when clearing mobile data limit

- Fixes:
    - Data limit calculation fixes
    - SIM switch: data limit check fixes

RUT9XX_R_00.05.02.2 | 2018.10.12

- Fixes:
    - Troubleshoot: sensitive information (usernames and passwords) removal from router configuration

- DDNS IP source changing fix
- Overview VRRP widget status fix
- OpenVPN name validation with special symbols check fix
- SMS Forwarding number check with 00 code with listed numbers fix
- Overview SMS counter widget fixes
- Firewall and UPnP page display fixes
- Periodic SIM Switch check fix
- Operator selection fix
- SNMP MIB values and file format fix
- OpenVPN configuration section name compatibility fix
- Call Utilities: 4G-only mode warning fix
- Mobile traffic data usage delete fix
- Disabled passthrough and bridge selection when multiwan is enabled
- Log to flash limited to 1MB

[RUT9XX_R_00.05.02](#) | 2018.10.01

- New features:
    - Added Relayd function
    - Added ability to create multiple geofencing zones
    - Added support for NTFS disks
    - Enabled diffie-hellman-group14-sha1 key exchange algorithm

- Improvements
    - Changed default VLAN to vid 0, added ability to tag WAN port
    - Added ebgp-multihop option to BGP
    - Added Modbus parameters for GPS information
    - Added custom IPsec option field
    - Disabled Hotspot users ability to reach LAN devices and WebUI
    - WAN Failover: add option to execute command
    - Made Wired (Main) + Mobile (Failover) as default configuration
    - Enabled connection to RMS by default
    - Some RMS page updates
    - Added default LAN IPv6 address

- Fix:
    - OpenVPN server authentication change fix
    - Events reporting rule enable fix
    - PPTP use as default gateway option fix
    - Language translation fixes
    - RS232/RS485 synchronization bug fix when using NTRIP with GPS coordinates
    - Operator list fixes
    - USB to Serial firewall rules fix
    - SMS Utilities rule not enabled exit fix
    - MQTT remote address datatype fix
    - GSMD: remove old info from help
    - Some Hotspot functionality fixes
    - Input/Output User groups fix
    - DHCP server lease time fix
    - Dynamic routes fixes
    - Static Routes fix
    - Mobile Passthrough mode fix

- Events Log Report configuration validation fixes
- WiFi updates and security fixes
- Overview WAN wiki link fix
- Overview Hotspot widget fix
- SIM Idle Protection Test WAN IP fix
- Samba network share discovery fix
- SIM card switch on data limit fix
- Mobile data bytes reset on 4GB fix
- Hotspot start after reboot fix

[RUT9XX_R_00.05.01.8](#) | 2018.09.10

- Fixes:
    - Config restore fix
    - RS-232 serial over IP fix
    - CLI fix for RMS

[RUT9XX_R_00.05.01.5](#) | 2018.08.02

- New features:
    - Added PDU forwarding function
    - Added new logic for operator whitelist/blacklist
    - Updated mobile operator database
    - Added Firmware update information
    - Added information text in Emailt to SMS page
    - Added wiki link to an IP type next to WAN IP
    - Added Graphs/Signal strength: UMTS network type signal
    - Added Operators list: periodic network scan if fail to connect to operator on first time
    - Added SLIP protocol with slattach software into the router
    - Added automatic IP refresh in WAN page
    - Added VLAN LAN IP start and end automatic update

- Fixes:
    - DDNS Force update
    - Configuration Wizard: LAN page redirect fix
    - Overview: WAN IP fix
    - Fixed Troubleshoot: TCP dump
    - Access Control: Add Redirect to HTTPS information
    - Service Status: QoS status
    - Hotspot: Parameter validation
    - Overview: OpenVPN widget
    - PPTP: Fix interface metric on multiwan with PPTP
    - Nerwork -> WAN Mode translate
    - DHCP range display in VLAN page
    - Change 'Backup WAN' to 'WAN Failover'
    - Linux: CVE-2017-18017
    - OpenVPN: remote IP address validation to not include route LAN subnet
    - GRE: updated keep alive to work with cisco routers
    - WebUI: NTP Time servers page fix
    - Call Utilities: reboot action partial message
    - WebUI: sim_switch: add ICMP host field validation
    - Hotspot: data limit fix

- Security: CLI: updated shellinabox to 2.20, changed CLI WebUI page
- WebUI: DDNS: Force IP renew
- WebUI: SMS counter widget
- WebUI: Hotspot: security
- PPP: add default route
- WebUI: Hotspot: Protocol and HTTPS redirect option
- WebUI: Mobile Traffic Usage Logging
- WebUI: Administration added hostname length limit (32 symbols)
- OpenVPN: Add RMS service fix
- libgsm: Prevent crash on failed libusb init
- uHTTPd: Disable stderr option
- SMS Utilities: Prevent crash when reading config
- Mobile: Service mode selection fix
- WebUI: Prevent redirection to HTTPS by default
- WebUI: Add hint when accessing CLI without certificate
- SMS Utilities: Prevent stopping application on empty reports config
- CLI: Use correct service port

[RUT9XX_R_00.05.00.5](#) | 2018.05.30

- New features:
    - Added forced password change
    - New firmware versioning system

- Fixes:
    - Fixed SMS PDU decoding sender number
    - Fixed RMS connection status display in Overview window
    - SIM Switching fix
    - Updated Hotspot login page parameters (MAC parameter)

[RUT9XX_R_00.04.233](#) | 2018.04.26

- Fixes:
    - Minor Hotspot fixes (CVE-2018-17532)
    - Minor SIM Switch fixes
    - Minor opkg fix and package update

[RUT9XX_R_00.04.199](#) | 2018.04.18

- Improvements:
    - Upgraded SIM Switch speed
    - Upgraded OpenVPN with the possibility to upload CRL files
    - Added IP aliases description and advanced features
    - Added additional DPD option to IPsec configuration

- Fixes:
    - Disabled saving password with the Enter key on WebUI
    - Firewall User Script fix
    - OpenVPN TLS clients fix
    - Some IPsec functionality fixes
    - Fixed all VPN shutdown on delete
    - Mobile Passthrough mode bad netmask fix
    - Call Utilities write to config fix

- Minor Input/Output fixes
- Fixed RMS connection retry time
- Signal Strength display fix for HSDPA+HSUPA network type

[RUT9XX_R_00.04.172](#) | 2018.04.10

- New features:
    - Added RMS connection page to Setup Wizard
    - Added link to Teltonika wiki in the router's WebUI
    - Updated Overview conifugration with Remote Monitoring widget and wiki icon

- Improvements:
    - Upgraded to faster SIM switching logic

- Fixes:
    - Fixed OpenVPN TLS/Password client route pushing
    - Fixed GPS bug that caused 100 % CPU usage when using I/O
    - Fixed password saving with the "Enter" key
    - Removed RS485 echo
    - Fixed Event Log bug that caused Call events not showing up in the log
    - Fixed SMS-Utilities openvpn status rule

[RUT9XX_R_00.04.161](#) | 2018.03.26

- Improvements:
    - Improved SSH security

- Fixes:
    - Fixed deleting SMS messages function in SMS Utilities
    - QoS bug fix that caused it to work even if it was disabled
    - LTE only mobile data connection fix
    - Minor Kernel fix
    - Minor functionality fixes for when there is no SIM card inserted

[RUT9XX_R_00.04.153](#) | 2018.03.16

- Fixes:
    - IPsec fix for use with multiple WANs
    - Fixed a bug that caused different WAN IPs to be displayed in the Overview and WAN windows
    - SMS Forwarding to HTTP fix
    - SMS Utilities functionality fixes

[RUT9XX_R_00.04.147](#) | 2018.03.08

- New features:
    - Added L2TP tunnel watchdog.

- Fixes:
    - PPP connection type fix
    - SMS Utilites vpnon/vpnoff rule fixes
    - Added GRE-Tunnel fix that prevents problems when switching profiles
    - OpenVPN status display fix
    - SMS Forwarding to Email fix

[RUT9XX_R_00.04.125](#) | 2018.02.27

- Improvements:
    - Added ICCID print, for dynamic parameters
    - Added reload function for GRE Tunnel if SIM Switch ocured
    - Added SIM card option for GRE tunnel

- Fixes:
    - SMS Utilities forward to HTTP fix
    - Network Shares USB drive safe removal fix
    - Some changes to config hierarchy
    - Wget Reboot fix
    - Input/Output SIM Switch rule fix

[RUT9XX_R_00.04.112](#) | 2018.02.20

- Fixes:
    - Small fix for HTTPS access when DMZ is enabled
    - Updates to Firmware Upgrade verification
    - L2TP unused UCI option removed
    - Minor fixes to VPN use with Multiwan
    - Format style fixes for VPN pages

[RUT9XX_R_00.04.103](#) | 2018.02.14

- Fixes:
    - SMS Counter database fix
    - IP renewal by APN fix
    - Firmware verification bug fix
    - Call Utilities rule enable fix
    - Wget Reboot modem restart fix

[RUT9XX_R_00.04.94](#) | 2018.02.12

- New features:
    - Added Printer Server functionality that allows control of a printer that connects to the router via USB cable

- Improvements:
    - Improved RS232/RS485 Over IP function so that the server can communicate with multiple clients at the same time
    - Added automatic Firewall rules that allow remote access to the router's WebUI when DMZ is enabled

- Fixes:
    - Some minor Samba fixes in the WebUI
    - OpenVPN username and password validation fix
    - Fixed VPN service restart when in use with Multiwan
    - Site Blocking file parsing fix
    - Some updates to the router's config file system
    - Firmware check fix

[RUT9XX_R_00.04.75](#) | **2018.01.30**

- Fixes:
    - APN bug fix
    - Added modem Firmware update package
    - Some minor OpenVPN username and password requirement fixes

[RUT9XX_R_00.04.64](#) | **2018.01.23**

- Improvements:
    - SMS Utilities rule configuration pages supplemented with information about SMS text format
    - Disable NAT function moved from VPN to Firewall page

- Fixes:
    - Minor fix to Hotspot functionality
    - Minor fixes to Firewall confg
    - Fixed Mobile Data Limit byte count storage
    - RS232/RS485 Modbus functionality fixes

[RUT9XX_R_00.04.57](#) | **2018.01.17**

- Improvements:
    - Added special character support for OpenVPN tunnel names
    - Added binero.se to DDNS service list

- Fixes:
    - Fixed Write to config function for SMS Utilities mobileoff rule

[RUT9XX_R_00.04.48](#) | **2018.01.12**

- New features:
    - Added RS232 over IP serial data as email feature

- Fixes:
    - Fixed MQTT bug where you couldn't remove TLS/SSL option once selected
    - Fixed GPS hostname data type check
    - Fixed DHCP lease time validation in LAN and Setup Wizard
    - Updated IPsec stop function
    - Site blocking White List fix
    - Modem GPS related bug fix

[RUT9XX_R_00.04.38](#) | **2018.01.08**

- Fixes:
    - Changed Mobile Data Limit representation in the Overview window
    - Fixed GPS Fix status display bug

[RUT9XX_R_00.04.32](#) | **2018.01.04**

- New features:
    - Added Wget Reboot function
    - Added RS232/485 initiation string option for Modem mode

- Fixes:
    - Samba user creation fix. Added a user limit of 2999 users
    - Some minor grammatical and data type fixes in the router's WebUI
    - Added a function that restarts services when using the SMS Utilities uci rule
    - Input/Output Scheduler backup fix
    - Some fixes to the style of the Administration page
    - Network Operators White List fix
    - Mobile connection stability fix

[RUT9XX_R_00.04.12](#) | 2017.12.22

- New features:
    - Added IPsec support for multiple clients

- Improvements:
    - Updated troubleshoot package with IPsec status
    - Added WebUI notice for SIM Switch on Data limit
    - IPsec instances limit set to 5
    - Dynamic list limit set to 100

- Fixes:
    - Wi-Fi security fix
    - Firmware update fix due to 04 FW version
    - SIM Switch back to primary SIM after Data or SMS limit fix
    - Fixed bug that didn't allow hostnames to be used as Ping Reboot

[RUT9XX_R_00.03.985](#) | 2017.12.14

- New features:
    - Added left and right firewall options to IPsec configuration

- Fixes:
    - Fixed some minor grammatical errors
    - SIM PIN bug fix
    - Some minor fixes to SMS and Call Utilities
    - Fixed loading gif spinner bug that caused it to spin endlessly
    - SMS Gateway form validation fixes
    - Post/Get configuration fix
    - Fixed empty value insertion for IPsec local LAN
    - Fixed iptables rule that didn't allow Limit Guard to account traffic
    - Some minor PPTP Server and Client fixes
    - Fixed mobile disconnection bug

[RUT9XX_R_00.03.965](#) | 2017.12.07

- New Features:
    - Added NAT Helper control page to the Firewall section

- Improvements:
    - Added IPsec Multiwan support for transport mode

- Fixes:
    - Changed data type for storing Data limit network stats
    - Added some default Firewall rules needed for SIM Switch

- SIM Switch on Data limit now uses limit_guard for counting data
- Some stylistic changes to router's WebUI
- Fixed Call Utilities calling from User Group bug
- Fixed OpenVPN Static key bug

[RUT9XX_R_00.03.946](#) | 2017.12.01

- New features:
    - Added OpenVPN Client key decryption password field

- Improvements:
    - Updated Dynamic DNS service

- Fixes:
    - OpenVPN Server configuration save fix
    - Multiple PPTP clients in LAN fix
    - Fixed Realtime Traffic graphs with PPP type connection
    - Fixed PPP connection type data usage collecting

[RUT9XX_R_00.03.923](#) | 2017.11.24

- Fixes:
    - Wi-Fi Station with WPA-Enterprise fix
    - Fixed Wi-Fi Access Point SSID mismatch when adding new Access Points
    - Fixed no data connection bug when Operator is added to the White List
    - Added fix that makes sure password fields glow red after entering incorrect data
    - Fixed SMS Utilities bug that caused Router Name not being displayed in status messages
    - SMS Counter fix
    - Some security fixes
    - Some modem functionality fixes that prevent not switching to LTE
    - SIM Switch logic fixes

[RUT9XX_R_00.03.906](#) | 2017.11.20

- New features:
    - Added WPA-Enterprise support
    - Added Hotspot Landing page URL parameters config
    - Added Host list file feature that allows uploading a list of hosts to Site Blocking and Proxy Based Content Blocker
    - Added RS232/RS485 Serial type: Modem option
    - Added SNMPv3 support
    - Added Huawei USB modem support added

- Fixes:
    - Added reboot patch for Event Log messages
    - Use IPv4 Only fix that caused not using default context ID
    - Fixed reboot with button issue
    - Added Multiwan checking for L2TP fix
    - Added default static route selection for L2TP
    - Some kernel logging fixes
    - Updated iptables 1.4.21 release to 2
    - Updated busybox package to 1.24.2

- Fixed OpenVPN NAT configuration
- Web Filter model fix
- SMS Counter fix
- Fixed Bridge mode bug that prevented devices from getting an IP address when APN was entered
- Fixed connection to hidden Wi-Fi Access Point

[RUT9XX_R_00.03.850](#) | 2017.11.03

- New features:
  - Added NETMAP functionality

- Fixes:
  - Some Limit Guard fixes
  - Some GPS functionality fixes
  - Mobile sent/received data added to TR-069
  - Fixed start up of SD card

[RUT9XX_R_00.03.832](#) | 2017.10.25

- Improvements:
  - Added network and cell information

- Fixes:
  - RS232/RS485 fix for flow controll settings and console mode
  - Internet Explorer WebUI bug fix
  - Fixed new FOTA version notice
  - Added network and cell information