RUTX09 Firmware Downloads

Main Page > RUTX Routers > RUTX09 > **RUTX09 Firmware Downloads**

This page contains firmware files for RUTX09 devices. Look to the table below or the changelog to find download links.

To upgrade firmware using WebUI, follow the instructions in RUTX09 Firmware.

RUTX09					
File	**Type**	**Release date**	**Size**	**MD5**	**Changelog**
RUTX_R_00.07.06.10_WEBUI.bin	Latest FW	2024.04.04	24.6 MB	6ade4748118720d9f8c72524498acf69	Link
RUTX_R_00.07.06.10_WEBUI.bin	Mass production FW	2024.04.04	24.6 MB	6ade4748118720d9f8c72524498acf69	Link
RUTX_R_GPL_00.07.06.10.tar.gz	SDK	2024.04.04	80.1 MB	a6653437efdbba12151579615a86b2f3	

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

FW checksums

Checksums for firmware files can be found **here**.

Changelog

Global RUTOS changelog can be found here: **LINK**

* This is universal changelog of RUTOS. Changes made to features that are not present in some devices, do not affect them.

RUTX_R_00.07.06.10 | 2024.04.04

- Global changelog for **R_00.07.06.10** - LINK

RUTX_R_00.07.06.8 | 2024.03.25

- Firmware **R_00.07.06.8** was removed due to an issue with inefficient memory allocation for LED control.

[RUTX_R_00.07.06.6](#) | 2024.03.04

- Global changelog for **R_00.07.06.6** - [LINK](#)

[RUTX_R_00.07.06.5](#) | 2024.02.21

- Global changelog for **R_00.07.06.5** - [LINK](#)

[RUTX_R_00.07.06.3](#) | 2024.01.17

- Global changelog for **R_00.07.06.3** - [LINK](#)

[RUTX_R_00.07.06.1](#) | 2024.01.04

- **Fix**
  - **Services**
    - Fixed issue with NTPclient zombie processes

[RUTX_R_00.07.06](#) | 2023.12.20

- **New**
  - **Network**
    - Enabled IPv6 by default for mobile interfaces
    - Added operator blacklisting and whitelisting based on mobile country code
    - Added SIM card not inserted event in Events Log
  - **Services**
    - Added OPC UA Server
    - Added the ability to set port for TACACS+ in PAM service
    - Added switch to enable using root certificate authority for MQTT alarms in Modbus Client services
    - Added new alarm action "Ubus event" in Modbus Client services
    - Added new input "Modbus alarms" in Data to Server service
    - Added wget ping subtype support in Events Reporting service
    - Added new I/O SNMP OID that returns numeric I/O state
    - Added new Post/Get service action "mobile_sim_pin" for changing used SIM PIN code on the device
    - Added TLS support for OverIP serial functionality
  - **WebUI**
    - Added Tailscale VPN support
    - Renewed user interface design
    - Added network interface name change functionality
    - Added last resort configuration option for multiwan policy rules
    - Mobile: Added indication when new modem firmware is available
    - Mobile: Added mobile connection establishment display in mobile status page
    - Mobile: Added defaEG06ult value for "Reset threshold" field in Low Signal Reconnect feature
  - **System**

- Added ability to enable/disable SSH access for specific users in System Users
- API support

- **Improvements**
  - **Network**
    - Disabled operator scan when SIM card is not inserted
    - Updated carrier aggregation value to be shown as active/inactive
    - Changed default MTU to 1500 for Mobile interfaces
  - **Services**
    - Expanded GRE VPN keep alive functionality to disable routes from unreachable tunnel
    - Added PKCS#12 certificate container authentication method in IPsec VPN
    - Added TLV message_payload support for SNMP service
    - Added Purple.ai configuration profile
    - Replaced option "No leading zeros" with "Remove all zeros" in Over IP serial functionality
    - Added possibility to assign mobile interface in SQM service
    - Added reboot on storage device disappearance and re-appearance
    - Added additional anonymous phone number validation in Mobile Utilities service
    - Added "N/A" signal strength response in DNP3 service if SIM card is not inserted
  - **WebUI**
    - Improved Events Log page loading by adding asynchronous pagination
    - Removed requirement for Diffie-Hellman parameters in OpenVPN service
    - Added improvements for creating OpenVPN IPv6 configurations
    - Added auto redirect after changing router's IP address or port
    - Added "Interface" dropdown for interfaces selection in Wake on LAN service
    - Increased Data to Server service MQTT topic length limit to 65535 characters
    - Added OSPF external routes section to Status page
    - Moved device menu entry "Reboot" to header menu
    - Added indication in Overview, Status -> Mobile and WAN pages when mobile data limit is reached
    - Updated Operator state field to show if modem is in limited service
    - Combined Mobile Usage day, week, month and total pages into one
    - Updated Realtime data -> Mobile signal page design to show all available modems and their bands data in one graph
    - Added message when SIM card requires PIN/PUK code in Status -> Mobile page
  - **System**
    - Added Mosquitto CVE patch 2023-28366
    - Added Mosquitto CVE patch 2023-3592
    - Updated hostapd version to 2023-09-08
    - Updated cURL version to 8.4.0
    - Updated kernel version to 5.10.199
    - Updated Mac80211 version to 6.1.24
    - Added RMS data display to generated troubleshoot
    - Added downloaded Package Manager packages list to generated troubleshoot
    - Added process activity load list to generated troubleshoot
    - Changed default OPKG feed to use Teltonika's URL

- **Fix**
  - **Network**
    - Fixed DMVPN firewall rule creation issues
    - Fixed RUTX VLAN keep settings issue when WAN port configuration are

- overwritten with 1st vlan
- Fixed Failover missing active rules when using multiple source and destination IP addresses
- Fixed mobile service crash due to buffer overflow while reading partially overwritten SMS
- Fixed an issue with Manual APN connection making attempts too rapidly
- Fixed deny data roaming functionality when transitioning between roaming and home operator network
- Fixed network disconnection on mobile network detach and DHCP lease loss situations
- Fixed VoLTE configuration after modem reboot
- Fixed Mobile interface bridge and passthrough mode connectivity loss
- Fixed an issue where rarely PIN code would get removed after SIM switch
- Fixed mobile operator list being not updated after changes in WebUI
- Fixed issue where mobile interface was unreachable after device reboot or interface restart while using Failover service

- **Services**
  - Fixed SSH module enable in PAM service
  - Added minimum free space check when saving logs to flash in Logging service
  - Fixed "Set multiple coils" function sending too many bytes in Modbus Client services
  - Fixed multiple Events Reporting messages being sent when Firewall configuration is changed
  - Fixed VRRP instances advertising wrong virtual IPs
  - Added Hotspot information in SNMP MIB file
  - Fixed registered Hotspot Local Users showing random username
  - Fixed selection of MAC Auth for LAN interfaces in Hotspot service
  - Fixed inconsistent Hotspot login behaviour when using MAC Auth with Password
  - Fixed instance shutdown after last local user deletion
  - Fixed RMS Hotspot data display for devices without WiFi support
  - Fixed Call Utilities failure when caller id is hidden during a call
  - Fixed AVL with poor mobile connections
  - Fixed default profile SMS Utilities I/O status rule configuration in Profiles functionality
  - Fixed serial timeout not working in Over IP serial functionality
  - Removed "Echo" option in Modbus TCP over Serial functionality
  - Fixed CRC verification failing when CRC is correct in Modbus TCP over Serial functionality
  - Fixed crash when getting unexpected messages from RTU in Modbus TCP over Serial functionality

- **WebUI**
  - Fixed side menu style issues when Japanese language is used
  - Fixed displaying of vendor names in Topology page
  - Fixed language packs being selectable when still in Package Manager queue
  - Added ability to configure IPv6 BGP peer
  - Fixed realtime graphs responsive design issues
  - Fixed Network Shares users deletion
  - Fixed not all LAN interfaces shown in dropdown in Hotspot service page
  - Fixed modem updater legacy firmware flashing

- **System**
  - Patched FRR CVE-2023-38406

- Patched FRR CVE-2023-38407
- Patched FRR CVE-2023-41358
- Patched FRR CVE-2023-41360
- Patched FRR CVE-2023-41909
- Patched FRR CVE-2023-47234
- Patched FRR CVE-2023-47235
- Patched OpenSSL CVE-2023-3446
- Patched OpenSSL CVE-2023-3817
- Patched LibXML2 CVE-2023-39615
- Patched LibXML2 CVE-2023-45322
- Patched FFMPEG CVE-2021-28429
- Patched FFMPEG CVE-2022-48434
- Patched dnsmasq CVE-2023-28450
- Fixed running out of space when SSHFS is mounted in /tmp while generating troubleshoot
- Fixed WebUI access after upgrading from legacy RutOS version

[RUTX_R_00.07.05.4](#) | 2023.11.09

- **Improvements**
  - **WebUI**
    - Improved asynchronous pagination in events log pages
    - Optimized Overview page load
    - Added resource loading cancellation after switching to different page

[RUTX_R_00.07.05.3](#) | 2023.10.30

- **New**
  - **System**
    - Added support for GD5F2GM7 and GD5F2GQ5 GigaDevice NAND flashes

- **Fix**
  - **Network**
    - Improved device stability when using IPv6 for modem connections

[RUTX_R_00.07.05](#) | 2023.10.19

- **New**
  - **Network**
    - Added "shared.m2m.ch" APN for Swisscom IoT operator to APN database
    - Added "gamma" APN to auto-APN database
    - Added "soracom.io" APN for Soracom operator to APN database
    - Added "simbase" APN to auto-APN database
    - Added "pnd" APN for Pond IoT to auto-APN database
    - Added "spitfire1" APN for Spitfire operator to APN database
    - New argument in "gsmctl" CLI command for Carrier aggregation
    - Numeric mode support for modem AT commands
    - Enabled dynamic MTU configuration on mobile interfaces by default
  - **Services**
    - DLMS Client package
    - 7zip package
    - TincVPN package

- Added router uptime and mobile connection uptime data parameters to SNMP
- Custom MQTT publisher/subscriber topics definition support
- Alternative configuration file upload support for MQTT Broker service
- Device Provisioning Service support for Azure IoT Hub service
- Added DPO configuration support in GPS
- Added more mobile usage parameters to SNMP
- SIM Idle Protection package
- AVL collection based on minimum accuracy for GPS service
  - **WebUI**
    - Firewall status page
    - Page search feature
    - Network Topology page
    - "Allow insecure connection" option for MQTT TLS protocol in Data to Server service
    - Package Restore feature Enable/Disable option
    - Hotspot client connection/disconnection trap option for SNMP service
    - Added Events log trap option for SNMP service
    - Confirm dialog when cancelling a verified package in Package Manager
    - "Bridge ALPN" option for Bridge configuration in MQTT Broker service
    - New subtypes of events that specify a specific port on "Events Reporting" and "SNMP Trap rules" pages
    - Specific firmware packages repository link in Package Manager page
    - Ability to enter decryption passphrase for encrypted private keys
    - "Reconnect" button in RMS page
    - New event "Device startup completed" in Events Reporting service
    - Port status and configuration page
    - IP6 table configuration option for DHCPv6 protocol in Network -> WAN page
    - "Write to config" option for SIM Switch action in I/O Juggler service
    - Configurable GPS NMEA prefix
    - Modem Debug page
    - APN database management page added to package manager
    - Added "Message forwarding" option in SMS Rules page when rule type is "Execute custom script"
    - Ability to unblock SIM card and insert SIM PIN in Overview page
    - New SMS rules "Reset mobile connection" and "Reload config"
    - "SMS limit clear due" display in Overview page
    - Added modem temperature to System -> Status page
  - **System**
    - Mechanism to rebrand WebUI using GPL
    - Possiblity to create web applications with closed-source GPL

- **Improvements**
  - **Network**
    - Moved FRR VTYSH package to package manager
    - Made newly created Firewall Traffic, NAT rules and Port Forwards disabled by default
    - Improved Interfaces to enable IPv6 DHCP server when mobile v6 or v4v6 PDP type is set
    - Improved IPSec performance throughput
    - Improved auto APN selection
    - SMS sending event is now logged into events log

- Improved roaming control
- Removed unused APN usernames and passwords from auto-APN database
- Added connection to the operator when no mobile interfaces are active
- Improved VoLTE management functions
- Improved cases where Low Signal Reconnect sometimes executed prematurely
- Improved wrong SIM PIN remove logic

- **Services**
  - New reworked Data to Server
  - UPNP moved to package manager
  - Added IPv6 support for Modbus TCP Server/Client services
  - Refactored Azure IoT Hub service
  - Improved resiliency to timeouts in Modbus Client service
  - Added PDU data type to Modbus read requests
  - Added new formatters for MQTT alarms in Modbus Client service
  - Added main section to make test functions independent in Modbus Client service
  - Improved WAN IP register reading time in Modbus service
  - Sped up default profile and profile template generation for Profiles functionality
  - Optimized profile change time for Profiles functionality
  - Added IPv6 support for Stunnel VPN
  - Added MAC blocking for client connections after set amount of failed login attempts in Hotspot service
  - Improved TCPdump by allowing to capture packets from any interface
  - Added OSPF support for DMVPN
  - Updated Hotspot password hashing to sha512
  - A single SMS message with multiple PDUs is sent instead of multiple SMS messages in Email to SMS service
  - Allowed connection to SMPP server using IPv6 address
  - Extended IP unblock action functionality in SMS Utilities
  - Increased allowed Email to SMS service message size to 61440 bytes
  - Added parameter "%gs" that sends GPS data in formatted info message
  - Updated AVL to prefer checking network status through Failover if configured
  - Added I/O pin name to trap notification message

- **WebUI**
  - Reorganized menu
  - Updated header design
  - Split Interfaces configuration in Advanced mode into two pages: WAN and LAN, identically as in Basic WebUI mode
  - Moved Interfaces IPv6 configuration into seperate tab
  - Added client/server status information in OpenVPN instance overview page
  - Added more IPv6 information to interface status in Interfaces page
  - Removed "Custom delegated IPv6-prefix" field from DHCPv6 configuration in Interfaces page
  - Disabled DHCPv6 interface editing while in basic mode
  - Refactored custom DHCP options into seperate modal
  - Added automatic start and end IP allocation for DHCP server configuration in Interfaces
  - Added client/server status information in L2TP VPN page
  - Added "MTU" field to L2TP client configuration page
  - Added CHAP, PAP and MSCHAP-v2 authentication fields to L2TP instance configuration
  - Added more detailed IPsec VPN status information

- Encryption AES-256-CBC added as default in OpenVPN
- Added "Authentication algorithm" support to OpenVPN configuration with static key mode
- Added GRE (DMVPN) VPN tunnel source support to any instead of specific interface
- Improved Hotspot landing page theme package removal
- Added upload and download theme functionality to Hotspot Landing page
- Improved ZeroTier VPN bridge configuration
- Added ability to adjust order of rules in Firewall page
- Added IPv6 RAW table to be displayed in Status -> Firewall
- Improved file upload component's visual appearance
- Change "Allow anonymous" option default value to 0 in MQTT Broker
- Added option to specify "Client ID" in MQTT Publisher
- Added functionality to select specific interface in Web Filter service
- Allowed to select FTP server subfolder in Traffic Logging service
- Renamed various service master/slave naming convention in config files, package names and webUI to client/server
- Added "Create static" button in Status -> Network -> LAN which bind DHCP lease for device
- Updated Status -> Network -> Mobile page layout
- Added bandwidth, provider in Status -> Network -> Mobile page
- Added colors for signal strength values in Status -> Network -> Mobile page
- Added frequency, pcid, mcc, mnc and LAC values in Status->Network->Mobile page
- Refactored network type selection in Network -> Mobile -> General page
- Serving cell information is not returned anymore when SIM card is not inserted
- Changed default "Check interval" option value in Network -> Mobile -> SIM Switch page
- Added button in a Scanned operators table which allows to add an operator to the operator list
- Added search bar in Mobile Utilities -> SMS Utilities page
- Added SMS sent and limit count to Network -> Mobile -> General page
- Added GPS longitude and latitude data in TR069
- Updated Mobile Signal graphs to show EC/IO and RSCP values when network type is 3G
- Updated "Change SIM" action type to display configured SIM target in I/O Juggler -> Actions overview page
- **System**
  - Updated kernel version to 5.10.188
  - Updated UCI version to 2021-10-22
  - Updated SSHFS version to 3.7.1
  - Updated FRR suite to 8.4.2
  - Updated cURL version to 8.2.0
  - Updated TCPdump version to 4.99.4
  - Updated C-ares version to 1.19.1
  - Updated iproute2 version to 5.19.0
  - Updated libubox package version to 2021-08-19
  - Added CVE patch CVE-2023-2650
  - Added additional firmware information in CLI prompt banner
  - Connection mode LED now blinks on data transfer
  - Changed "routername" to "devicename" in system config file

- Made all clients get disconnected out once dropbear service is disabled
- Improved firmware downgrade restrictions for certain regions
- Device name is now displayed in browser tab when in WebUI login page
- Added NF conntrack information in generated troubleshoot archive

- **Fix**
  - **Network**
    - Fixed UDP Broadcast Relay service crashing on start without physical network device
    - Fixed wrong or empty WAN state info
    - Fixed connection tracking for main interface in Failover
    - Fixed SMS limit period migration
    - Fixed SMS limit size breaking various functionality
    - Fixed custom IPv6 DNS option not overriding default DNS from operator
    - Fixed an issue with blacklist and whitelist connection
    - Fixed multipart SMS handling
    - Fixed wrong SIM state display when SIM is fully blocked
    - Fixed incorrect virginmobile APN MNC
    - Fixed mobile operator scanning fault when no mobile interfaces are active
    - Fixed mobile interfaces generating multiple events on mobile connection
    - Fixed PDU SMS parsing when operator provides user data header in single part SMS
    - Added scheduled data limit clear for inactive mobile interfaces
  - **Services**
    - Fixed reconnecting to inactive connections for Modbus Server service
    - Fixed Modbus Client response after reboot write request
    - Fixed Modbus Server to show error when trying to get operator name without SIM
    - Updated Modbus Client to handle large numbers of schedule rules, when frequency is set to schedule (Daini
    - Fixed "Input" rule displaying incorrect and missing ports in Network -> Firewall -> Traffic Rules
    - Fixed WireGuard VPN endpoint resolving problem
    - Peer cache is no longer deleted when ZeroTier service is restarted
    - Fixed RMS data collection about the list of devices connected to WiFi
    - Fixed showing incorrect Internet state in RMS
    - Fixed WiFi client info display in RMS
    - Implemented error handling when device is blocked or unrecognized by RMS
    - Fixed L2TP client sometimes not adding routes on successful connection
    - Fixed NTP time sync with browser functionality in some edge cases
    - Fixed reinstalled packages" verification when device name is changed
    - Fixed an issue where signal query would return invalid value instead of error in case of no signal in MQTT Publisher service
    - Fixed OpenVPN firewall rule creation for both IPv4 and IPv6
    - Fixed OpenVPN server crash loop after changing authentification from TLS to Static Key
    - Fixed IPsec VPN connection problem with small lifetime values
    - Fixed IPsec "Default Route" not working when Flow Offloading is enabled
    - Fixed an issue where system directory could be used as a mount point in SSHFS service
    - Fixed IP block feature to unblock an OpenVPN IP address on successful authentification

- Fixed package installation process bug when packages have different architecture names
- Added "bearer token" authentication functionality in Dynamic DNS
- Fixed MQTT Broker "local_port" option keep settings migration
- Remove public keys when key-based authentication is disabled in Access Control
- Fixed "Parity" field "Mark" and "Space" options being ignored in DNP3 Serial services
- Corrected SNMP MIB file syntax according to standards
- Fixed returned port count in SNMP
- Fixed disabled CLI remote access taking up a session slot
- Fixed user deletion in Network Shares service
- Fixed router reboot inconsistencies after Storage Memory Expansion
- Fixed received SMS messages parsing with trailing whitespaces
- Fixed VPN status rule message text in SMS Utilities
- Fixed UDP payload size in GPS AVL
  - **WebUI**
    - Fixed empty events cards in Overview page when no content is available
    - Fixed modal form inputs not clearing upon closing after nested modal is saved
    - Fixed select menu closing when selecting custom option
    - Fixed multi select expanding table row when adding new values
    - Fixed global section caching after deleting a section in a table
    - Fixed unpredictable search logic in tables
    - Fixed interfaces reordering by metrics in Failover page
    - Removed ability to select ports on ICMP and ESP protocol in Failover page
    - Fixed wrong status when interface is disabled in Failover page
    - Fixed firewall zone and rule creation/deletion on VPN configuration creation/deletion
    - Fixed STP enabling issue in Interfaces
    - Fixed EIGRP status info in Dynamic Routes
    - Fixed issue with custom DHCP options where you could not have multiple values per rule
    - Fixed Routing/NAT Offloading section display in Network -> Firewall -> General Settings when device is not supported
    - Fixed SSH/HTTP/HTTPS/ICMP setting in Network -> Firewall -> Attack Prevention page
    - Fixed failing Firewall rules with united protocol formats
    - Fixed zone select component not closing options menu when selecting an option in Firewall pages
    - Fixed memory leak when cancelling file uploads on Chromium-based browser
    - Fixed group settings saving by removing deprecated ":section" routes in Administration -> User Settings -> System Users
    - Fixed allowing IDs above 247 in Modbus Client service
    - Fixed selecting SIM in Modbus Client service Alarms
    - Fixed Modbus Alarm telephone number limit
    - Fixed to show available options for test requests on error in Modbus Client service
    - Fixed Modbus Alarm I/O pin display values
    - Fixed issue when creating instance named "gre" does not show in GRE VPN
    - Remote endpoint field now allows underscore character in IPsec VPN
    - Fixed ZeroTier wrong service status display in Status -> Services
    - Fixed problems with L2TP/PPTP VPN firewall rules automatic creation
    - Fixed problem related to the enable/disable toggle in OpenVPN instance overview

page
- Added fixes for key-direction missing problem when uploading OpenVPN config file
- Fixed login page read-only inputs after custom user logout
- Fixed issue when double clicking firmware upgrade cancel button returned error
- Fixed Package Manager prompt message to appear when package requires network restart
- Fixed showing in queue packages when they contained special symbols in the Package Manager page
- Fixed various visual Side Widget bugs
- Fixed Data to Server DNP3 filter from flash display
- Fixed incorrect source data displayed in Realtime Data -> Connections table
- Fixed memory expansion confirmation prompt title
- Fixed incorrect configuration saving in Hotspot 2.0 service
- Disabled password hashing for new user creation in Hotspot service
- Fixed Hotspot landing page themes saving bug
- Fixed test email sending to more than one recipient in Events Reporting page
- Fixed VLAN OID values in SNMP service
- Output proper error message in case of hardware not being supported in Firmware Upgrade
- Fixed being able to open side widget when user does not have read access
- Fixed profile creation when current configuration is not present
- Fixed wrong protocol data display in "Access control" page
- Fixed LAN interfaces not showing up before WAN interfaces in Status -> Realtime Data -> Traffic
- Fixed incorrect Bluetooth details modal size
- Updated to display "MAC address" on device details page
- Fixed disabling DLNA service when USB drive is removed
- Fixed error when user has no write permissions in Speed Test page
- Fixed "Clear Collect Data" button logic to not clear overall mobile usage info
- Fixed "Used data" showing large negative numbers for disabled mobile interfaces with Data Limit enabled
- Fixed carrier aggregation information when no connection is made or SIM card is not inserted
- Changed representation of mobile cell ID from hexadecimal to integer type
- Fixed Mobile Utilities "SMS forwarding to HTTP" URL generation
- Fixed an issue where sometimes bands were not represented correctly on certain modems
- Fixed provider information and IMSI value representation when SIM and modem cannot provide this information
- Fixed mobile pages throwing 404 error when modem disconnects
- Fixed WebUI showing mobile connection when no SIM card is inserted
- Fixed GPS AVL I/O trigger option filtering
- **System**
  - Patched CVE-2023-0386 vulnerability
  - Patched CVE-2023-0464 vulnerability
  - Patched CVE-2023-0465 vulnerability
  - Patched CVE-2023-2602 vulnerability
  - Patched CVE-2023-3772 vulnerability
  - Patched CVE-2023-3773 vulnerability
  - Patched CVE-2023-4128 vulnerability

- Patched CVE-2023-33476 vulnerability
- Patched CVE-2023-28484 vulnerability
- Patched CVE-2023-29469 vulnerability
- Patched CVE-2023-31490 vulnerability
- Patched CVE-2023-36369 vulnerability
- Patched CVE-2023-40283 vulnerability
- Patched CVE-2023-48174 vulnerability
- Delayed Custom Scripts execution on boot, after storage devices are mounted
- Fixed Custom Scripts permissions after save
- Changed certificate expiry calculation mechanism to fix Y2K38 bug
- Fixed downloading of certificates that have a space in their name in Administration -> Certificates -> Certificates Manager
- Fixed Events Log database rotation to prevent log partition space exhaustion
- Fixed duplication and sorting of all events IDs in Events Log
- Fixed FOTA crash when current hours is with leading 0
- Fixed crontab job removal after disabling FOTA
- Changed Mosquitto build options to not include cJSON library
- Fixed device name resetting to default upon refresh in Administration
- Fixed backup upload validation with memory expansion

[RUTX_R_00.07.04.5](#) | 2023.07.24

- **Improvements**
  - **Network**
    - Improved MBN reselection algorithm when switching SIM
    - Improved SIM card change detection algorithm
    - Improved connection establishment speeds after sim switch
    - Added metric field support in BGP Route-maps page
  - **WebUI**
    - Updated SIM slot labeling in modem card Overview page

- **Fix**
  - **Network**
    - Fixed an issue with MBN selection when device is started for the first time
    - Fixed an issue where MBN activation would not be successful
    - Fixed service provider parsing when operator does not provide all fields for Quectel modems
    - Fixed a condition where mobile connection would not get established after a SIM switch
    - Fixed an issue with SIM switch causing connection problems

[RUTX_R_00.07.04.4](#) | 2023.06.26

- **Improvements**
  - **Services**
    - Improved UPNP lease file validation
    - Improved DLNA 'Database directory' field validation to not allow ', ` and spaces
  - **System**
    - Device name is now displayed in browser tab when in login page

- **Fix**
  - **Network**

- Fixed a connection issue with bridge/passthrough mode when reconnecting ethernet cable
- Fixed long mobile operator list parsing for whitelist/blacklist functionality
- Patched CVE-2023-32233 vulnerability
- Fixed default networks in WAN firewall zone and possibility to add a network that is not yet created
  - **Services**
    - Fixed connection establishment for RMS MQTT service
    - Implemented partial restart when connection with RMS server fails
    - Fixed device name resetting to default upon WebUI page refresh
    - Fixed being able to set device name without passing validations
    - Fixed WireGuard port change in firewall traffic rule when modifying instance port

RUTX_R_00.07.04.3 | 2023.05.11

- **Improvement**
  - **System**
    - Removed SSH RSA key generation
    - Added SSH ECDSA key generation

- **Fix**
  - **Network**
    - Fixed an issue with mobile when Call Utilities configuration is invalid
    - Fixed an issue where sometimes PIN/PUK code was deleted when performing a SIM switch
  - **Services**
    - Fixed incorrect mobile data usage provided to RMS service
  - **System**
    - Fixed an issue on bootloader web recovery hanging with certain firmware sizes

RUTX_R_00.07.04.2 | 2023.04.18

- **New**
  - nftables support

- **Improvement**
  - **Network**
    - Added PDP profile registry and LTE SMS format functions & management for the Verizon network
    - Improved SIM detection algorithm
    - Improved Multi-APN connection establishment time
  - **WebUI**
    - Improved Overview page performance
  - **System**
    - Changed hostname to router name
    - Updated OpenSSL to version 1.1.1t
    - Updated CA certificates to version 20211016
    - Updated libiwinfo to version 2022-08-19

- **Fix**
  - **Network**
    - Fixed IPv4, IPv6 mobile connection restarts
    - Fixed operator scanning when mobile interface is disabled

- Fixed data limit and tracking when software flow offloading is enabled
- Added network reload call before bringing the mobile interface up
- Fixed a segmentation fault issue which would occur occasionally when switching between SIM cards
- Fixed Port-based VLAN ID calculation issue
- Fixed Ethernet interfaces showing incorrect transferred data values
- Fixed EEE disable issue that caused reduction in data transfer speed
- Fixed PDP context authentication when using special characters
  - **Services**
    - Fixed event text for configurable inputs/outputs on I/O Juggler
    - Fixed I/O PIN3 value not changing via MODBUS TCP
    - Added I/O status request error handling in various WebUI pages when the I/O service is booting up
    - Fixed wrong timezone returned issue in Operator Station Synchronization & Timezone Synchronization
    - Fixed MODBUS TCP Slave memory leak issue when requesting mobile parameters
    - Fixed OpenVPN enabling/disabling when using Password or TLS/Password authentication modes
    - Fixed OpenVPN keep alive setting migration issue
    - Fixed PPTP server name setting migration issue
    - Fixed missing WebUI issue caused by Email Relay installation
    - Fixed NTP's Operator Station Synchronization memory leak issue
    - Fixed test email validation
  - **System**
    - Fixed libcares vulnerability CVE-2022-4904
    - Fixed frr vulnerability CVE-2022-37035
    - Removed ability for non root users to edit scripts that get executed as root

[RUTX_R_00.07.04.1](#) | 2023.03.24

- **Fix**
  - **Network**
    - Fixed Data Limit issue

RUTX_R_00.07.04 | 2023.03.07

Note: Firmware version **RUTX_R_00.07.04** was removed from downloads list due to issues with Mobile Data Limit functionality not working correctly when Software offloading is enabled.

- **Improvements**
  - **WebUI**
    - Improved data persistence between page refreshes
    - Improved page navigation behavior
    - Improved redirect logic to open configuration edit modals
    - Updated the 'Status -> Mobile' page
    - Updated interface card in the Overview page
    - Separated Sent and Received data bars on the chart in the Mobile Usage page
  - **Network**
    - Made Software Flow Offloading Enabled by default
    - Added an info message displayed when a faulty SIM card is inserted
    - Added ResIOT operator's APNs to the APN database
    - Improved mobile connection re-establishment after reboot

- Improved mobile connection recovery in cases where it was lost unexpectedly
- Improved 'Deny data roaming' operation when switching between operators
- **Services**
  - Added MQTT support to I/O Juggler
  - Added support for new NMEA sentences: GARMC, GAGGA, GAGSA, GAVTG, GBGSV, GBGSA, GQGSV, GQGSA
  - Added an error message when trying to send an SMS from the 'Send Messages' page with no SIM card inserted
  - Changed the behavior of setting the 'Write to config' flag in the 'mobileoff' SMS rule
  - Added argument support for the 'Execute custom script' SMS rule
  - Added a frequency option 'schedule' Modbus Master
  - Added pagination to Events Reporting overview
  - Added limit to Events Reporting rule list
  - Added email logging for Events reporting
  - 'Sync with browser' button in the NTP page now also synchronizes the time zone
  - Added a limit of 30 for NTP instances
  - Made Networks selections in the 'Traffic Logging' page to display interface choices dynamically
  - Added "make before break" option to IPsec configuration
  - Added MODBUS TCP connection handling layer to MQTT-MODBUS Gateway
  - Improved MODBUS Master connection handling to reduce connection count
  - Updated modbus request error messages
  - Added OpenVPN server ip block support
  - Added MQTT support for MODBUS Master alarms
  - Added the possibility to get the device's Ethernet port data via SNMP
  - Improved error messages in the Serial Utilities page
- **System**
  - Updated bash to version 5.1.16
  - Added detailed FW update failure error message to Events Log
  - Improved firmware upload/validation error messages
  - Updated Turkish language support
  - Added protocol column to IP block page
  - Added "vpns.log" file to the Troubleshoot package
  - Added Wireguard tunnel information to the Troubleshoot package
  - Updated default admin group access rights
  - Updated DFOTA notification to show "More info" only when the update is forced

- **Fix**
  - **WebUI**
    - Fixed MAC address showing on mobile interfaces
    - Fixed mobile cell ID displaying in hexadecimal
    - Fixed mobile data limit card creation in the Overview page
    - Fixed modem widget disappearing from the Overview page
    - Fixed Services page not displaying data after Thingworx package is installed
    - Added DNP3 to the 'Status > Services' page
  - **Network**
    - Fixed interface priority change issue
    - Fixed a Custom Firewall Rule editing issue
    - Fixed DMZ configuration saving while it is disabled
    - Fixed Port Scan script execution failure

- Fixed Firewall zone duplication issue
- Fixed call function when VoLTE is disabled
- Fixed VoLTE control when IMS is not enabled
- Fixed mobile IPv6 IP checking when the device didn't get a correct IP address
- Fixed APN authentication when using empty credentials
- Fixed manual APN selection from list

- **Services**
  - Fixed the listing of slow USB devices such as HDDs
  - Fixed disappearing GPS NMEA and HTTPS fields
  - Fixed unused NTRIP option deletion on NMEA source change
  - Fixed I/O Scheduler overlapping instances issue
  - Fixed Input/Output image pin colors
  - Fixed issue that causes ADC subscribers to receive notifications for when ACL is active
  - Fixed DNP3 serial master not working when Stop bits are set to 2
  - Fixed DNP3 requests not deleting along with instance
  - Fixed DNP3 memory leak occurring after spamming the test request button
  - Fixed Serial Over IP related Firewall rule setting
  - Added limitations on message size and quantity of email messages in Email to SMS
  - Fixed SMTP HELLO value parsing issue
  - Fixed SMS message window reset button
  - Fixed not being able to save empty 'Message text' field in Auto Reply
  - Fixed multi-part SMS concatenation
  - Fixed multi-part SMS processing
  - Fixed SMS error message on 'Mobile Data Reset' action
  - Fixed Data To Server JSON format %n, %N and %s flag issues
  - Fixed Events Reporting email data clean
  - Fixed Events Reporting missing config selections
  - Fixed GRE Tunnel's 'Tunnel source' field validation when the source is custom
  - Fixed IPsec instance deletion after removing DMVPN package
  - Fixed IPSec migration via Backup file when DMVPN is configured
  - Fixed IPsec naming issue when the includes an equals sign
  - Fixed L2TP client to use correct interface on failover events
  - Fixed L2TP over IPsec connection dropping issue when connecting from a Windows client
  - Fixed MODBUS database size limiting issue
  - Fixed MODBUS MQTT Gateway client ID input
  - Fixed MODBUS TCP Slave RSSI value
  - Fixed MODBUS test button returning errors when several non-connected devices are configured
  - Fixed NTP Etc/GMT+1 and Etc/GMT-1 time zones
  - Fixed OpenVPN password validation when no CA certificate is uploaded or 'custom' template is selected
  - Fixed OpenVPN Static Key configuration saving by making Static key upload required
  - Fixed OpenVPN TLS client creation issue while LAN is down
  - Fixed Package Manager displaying non-existent packages
  - Fixed Package Manager errors showing up after successful installations
  - Fixed Periodic Reboot entry duplication after a power cycle
  - Fixed PPTP 'Client to client' option not being applied after save
  - Fixed receiving excessive device state emails after a reboot is initialized over RMS

- Fixed WebUI unavailability after unsuccessful package install
  - **System**
    - Fixed vulnerabilities CVE-2022-3524, CVE-2022-3566, CVE-2022-3567, CVE-2022-39188, CVE-2022-45934, CVE-2022-47929
    - Fixed bash vulnerability CVE-2022-3715
    - Fixed CGI-IO file download vulnerability CVE-2022-38333
    - Fixed libxml2 vulnerability CVE-2022-40304
    - Fixed libcurl vulnerabilities CVE-2022-43551 and CVE-2022-43552
    - Improved file upload logic
    - Fixed GPL firmware compilation with selected Tinc package
    - Fixed OpenVPN Static Key migration via keep settings issue
    - Fixed NTP time zone name setting migration when the name contains whitespaces
    - Fixed language setting issue
    - Fixed integer validation on industrial services
    - Fixed LED indications when PDP type is IPv6
    - Fixed issues with PDP type and SMS limit period migration via keep settings
    - Fixed mobile network type LED indications when device is in Bridge or Passthrough modes
    - Fixed LAN port LEDs staying on after being disabled

RUTX_R_00.07.03.4 | 2023.02.09

- **Fix**
  - **Network**
    - Fixed CVE-2023-32349 vulnerability
    - Changed generic modem restart method
    - Fixed mobile page VoLTE switching issues
  - **Services**
    - Sanitized tcpdump storage location

RUTX_R_00.07.03.3 | 2023.01.25

- **Fix**
  - **Network**
    - Updated init sequence

RUTX_R_00.07.03.2 | 2023.01.13

- **New**
  - **System**
    - Japanese language

- **Improvements**
  - **Network**
    - Optimized mobile netifd script installation

- **Fix**
  - **Network**
    - Shortened modem hang monitor timeout
    - Fixed VLAN option setting when changing VLAN ID

[RUTX_R_00.07.03.1](#) | 2023.01.03

- **Improvements**
  - **System**
    - Remove front-end certificate validation
  - **Network**
    - Optimized mobile netifd script installation

- **Fix**
  - **Network**
    - Fixed modem communication validation
    - Fixed connection establishment in IPv6 only mode
  - **Services**
    - Fixed libxml2 vulnerability CVE-2022-40303
    - Fixed an IPsec Phase one & two setting migration issue
    - Returned missing udp_client_count option to Over IP mode
    - Fixed operator index in DNP3 outstation; added GPS resubscribe; fixed segfault when GPS is enabled
  - **System**
    - Fixed JSON key parsing; keys can now be any printable character sequence
    - Fixed memory leak in 'session' module
  - **WebUI**
    - Fixed file pretty name parsing

[RUTX_R_00.07.03](#) | 2022.12.16

- **New**
  - **Network**
    - Firewall DMZ page
    - Fixed CVE-2023-32349 vulnerability
  - **Services**
    - Java package
    - SFTP server support
    - OPC UA client
    - NTRIP
    - Hotspot registered users management page
  - **System**
    - Portuguese language
    - Spanish language
    - Turkish language
    - Email Relay package
  - **WebUI**
    - New Web menu design

- **Improvements**
  - **Network**
    - Updated modem handling, attachment, tracking and connection establishment processes
    - Added the possibility to select multiple ports in all firewall port fields
    - Added 'Match' traffic by type option to firewall traffic rules
    - Added DNS servers and routing table fields to the Wireguard page
    - Improved generating network topology

- Moved Relayd, UDP Relay & Static Leases to the Interfaces menu section
- Update Firewall Traffic Rules page with DSCP and MARK options
- Added keepalive, holdtime and connect timers to BGP configuration
- Added 'Use gateway metric' to network protocols web interface
- Added more DHCPv6 client events to system log
- Moved IP Filter rules from Modbus TCP Gateway and Over IP services to Firewall page
- Added option to select subnet parameters in mobile Passthrough/Bridge modes
- Added WhereverSIM operator APN and fr.lebara.mobi APN to APN database
- Added mobile connection state for IPv6
- Added switch back to default SIM after SIM Switch service disable
- Added wget tracking method to WAN Failover
- Added interface checks to remove inaccurate Failover events from the Event Log
- **Services**
  - Added OpenVPN IPv6 Web support
  - Added format button for each USB device in USB Tools General page
  - Reduced waiting time during storage device setup for Memory Expansion
  - Optimized Storage Memory Expansion package size
  - Replaced ntfs-3g with kernel-mode driver
  - Added USB to Serial support for Modbus, MQTT Modbus Gateway, NTRIP, DNP3
  - Added CSP headers to Hotspot Landing Page
  - Added hotspot user script validation
  - Improved logging of disconnecting client devices
  - Added the possibility to switch profiles on GPS geofencing events
  - Added satellite count and accuracy columns to GPS Map page
  - Added execute custom script SMS Utilities rule
  - Added receiver and transceiver mode support to SMPP
  - Added timezone synchronization with GSM operator option to NTP Client
  - Updated Zerotier web interface
  - Added IPsec Flush connection option on tunnel initialization
  - Added MODBUS slave regfile validation
  - Added delay, number of timeouts, always reconnect options to MODBUS Master service
  - Added DMVPN Phase 2 and Phase 3 support
  - Added synchronization counting to NTP client
  - Expanded the data that is sent to the Cumulocity cloud with device log, mobile data usage nd GPS data
  - Added 'Unregister' button to RMS page
  - Added new data monitoring options to SNMP: configuration state of wireless, smart queues & VLANs
  - Updated Zerotier package to version 1.10.1
  - Added automatic package removal upon failed installation in Package Manager
  - Added option to describe custom routing table and MTU auto counting to Wireguard VPN
  - Added IP blocking to MQTT Bridge for failed login attempts to prevent bruteforce attacks
  - Updated sqm-scripts to version 1.5.1
  - Improved MODBUS Master service: added multiple datatypes, added multiple register reading for alarms
  - Added monthly reboot option to periodic reboot function
  - Added support for multiple custom option selection to SSTP configuration

- Added PKCS12 certificate chain support to OpenVPN
- Improved MQTT to support multiple port listening, multiple bridge connections, notification settings and added support for custom configuration file
- Added QoS selection to MQTT Modbus Gateway
- Improved RAM usage during upload and installation of packages via Package Manager
- Updated curl to version 7.86.0
- Added brute-force prevention measures to Post/Get
- Added automatic private and public key generation to Wireguard VPN
- Added multiple Remote source IP support to IPsec
- Added the possibility to configure multiple IPsec phase 1 and phase 2 proposals
- Added functionality to rotate log file when log is saved to Flash memory
- Improved performance while fetching packages on repeat visits to the Package Manager page
- **System**
  - Added a 'test mail' button to the Administration -> Recipients page
  - Added option to clear blocked IPs in the Access Control page after reboot
  - Updated Web Request-Response core logic
  - Added certificate validation to all services that support certificate upload
  - Updated URL protocol validations
  - Removed profile update requests during Save & apply
  - Optimized profile switching logic
- **WebUI**
  - Added an indication to the Interfaces page that displays when data limit is enabled
  - Added bootloader version to the Device section in the System page
  - Added configuration page shortcuts to Overview page widgets
  - Added tooltip in Overview that show free, used and total RAM/Flash values on mouse cursor hover
  - Updated network interfaces protocols web interface
  - Updated 404 page to include navigation menu

- **Fix**
  - **Network**
    - Fixed jumbo frames MTU issue
    - Added the 'Any' choice to source & destination IP address field in NAT rule edit
    - Fixed NHRP web interface issues
    - Fixed WAN interface configuration interfering with LAN
    - Fixed mdcollect memory leak issue
    - Fixed data limit not resetting properly
    - Fixed incorrect mobile data usage calculations for multiple day periods
    - Fixed an Auto APN 'Keep settings' issue
    - Fixed data counting after mobile data limit has been reached
    - Fixed mobile band not setting correctly on first try
    - Fixed incorrect data limit conditions causing unwanted SIM switches
    - Fixed Passthrough DHCP lease time setting
    - Fixed mobile bridge mode issue when no DNS servers are supplied
    - Added new Operator Lists instance name validations
    - Fixed SIM Switch issue on newly created mobile interfaces
    - Fixed switch back to primary SIM rule disable when the default SIM is changed
    - Fixed incorrect SIM Switch behavior on low signal value
    - Fixed Wired WAN connectivity issue when Failover interfaces are disabled

- Fixed Failover fallback issue
  - **Services**
    - Fixed Printer service starting issue
    - Fixed Printer service boot issues
    - Fixed DLNA service reload issues on USB drive insert/remove
    - Fixed relay state switching
    - Fixed Save & Apply issue with ADC/ACL type condition on I/O Juggler
    - Added I/O restart on configuration profile change
    - Fixed I/O voltage range display for power socket pins
    - Fixed SMNP OID for I/O state
    - Fixed I/O Juggler SMS text message Save & Apply issue
    - Fixed Hotspot connected user list maximum upload/download value limits
    - Fixed incorrect connected Hotspot user information in RMS JSON
    - Fixed Delay field in GPS HTTPS/HTTP Server Settings section
    - Fixed AVL packet timestamp display
    - Fixed issue that prevented GPS map display after clearing cache
    - Removed unnecessary field from the Port Mirroring page
    - Fixed Events Reporting 'Changing to SIM1/SIM2' options
    - Fixed UCI SMS Rule return message to display new changes
    - Fixed DNP3 issues when asking for modem temperature
    - Fixed base64 encoding of SMS messages when forwarding to HTTP
    - Fixed SMS sending issues when using multiple APN
    - Added Gateway modem option to IP Block and WoL in SMS Rule edit
    - Fixed unblocking IP addresses with an SMS message
    - Fixed Mobile Utilities page not load properly on some occasions
    - Fixed dbus vulnerability CVE-2020-35512
    - Fixed dnsmasq vulnerability CVE-2022-0934
    - Fixed ext4 vulnerability CVE-2021-3428
    - Fixed kernel vulnerabilities CVE-2021-3669, CVE-2021-4203, CVE-2022-1353, CVE-2022-3435, CVE-2022-20008, CVE-2022-30594
    - Fixed libxm12 vulnerability CVE-2022-29824
    - Fixed Linux vulnerabilities CVE-2021-4148, CVE-2022-0480, CVE-2022-1055, CVE-2022-0886, CVE-2022-2663, CVE-2022-36879 for v5.4
    - Fixed MQTT DoS vulnerability CVE-2021-41039
    - Fixed privoxy vulnerability CVE-2021-44542
    - Fixed python3 vulnerability CVE-2022-42919
    - Fixed strongswan vulnerabilities CVE-2021-41991, CVE-2021-45079
    - Fixed uboot vulnerabilities CVE-2022-30552, CVE-2022-30790
    - Fixed switching between RMS connection types while the device is unregistered
    - Fixed reload issues in website blocking feature
    - Fixed IPsec PSK secret required field validation
    - Fixed bandwidth limiting after QoS is enabled for the first time
    - Fixed Dropbear issues when logging in over IPv6
    - Fixed Modbus status in Status -> Services page
    - Fixed Azure IoT Hub application issues when sending large volumes of data
    - Fixed Azure IoT Hub MQTT password validation
    - Fixed DMVPN configuration migration issue
    - Fixed DMVPN duplicate select options, added suffix to mobile interfaces to use IPv4
    - Fixed DMVPN IPsec connection issue
    - Fixed DMVPN mobile interface 'Keep settings' migration issue

- Fixed Dynamic DNS long hostname text display issue
- Fixed Events Reporting memory leak issue
- Fixed Events Reporting not triggering after flipping an I/O slider
- Fixed FOTA cron job not starting after factory reset
- Fixed IPsec local firewall option parsing
- Fixed IPsec tunnel creation issue when compatibility mode is used and the tunnel name contains an underscore
- Fixed L2TP, PPTP, SSTP state display in the Status -> Services page
- Fixed NTP pool hostname validation
- Fixed OpenVPN certificate remove with Static key and TLS authentication methods
- Fixed OpenVPN configuration saving issue when using HMAC key authentication
- Fixed OpenVPN custom dev name transformation to correct format
- Fixed OpenVPN device name setting logic when uploading config from file
- Fixed OpenVPN instance status display
- Fixed OpenVPN TAP (bridged) configuration detection
- Fixed Qos configuration saving issue occurring after instance deletion
- Fixed RMS JSON incorrect WAN state and IP information
- Fixed RMS step access issue in the Setup Wizard page
- Fixed SNMP issues after reboot while using a Hotspot
- Fixed SNMP generating MIB files for devices in accordance with to their hardware
- Fixed SNMP traps not working after SNMP is installed from server
- Fixed SSTP client route creation issue
- Fixed UPNP secure mode not turning off issue
- Fixed Wireguard route to endpoint issue
- Fixed manual package installation for queued packages
- Fixed NAT Rules dependency from IPsec web instance
- Returned usleep utility
- Updated Australian and South African NordVPN server IP addresses
- **System**
  - Fixed LED operation while device is in bootloader state
  - Fixed certificate signing issues
  - Fixed Telnet, CLI access blocking after max invalid tries
  - Fixed FW upgrade with 'Keep settings' while low free space is available
  - Fixed backup file duplication issue
  - Fixed network device handling in system
- **WebUI**
  - Fixed Hotspot interface display
  - Fixed side widget accessibility during first login
  - Fixed file upload issues
  - Fixed drag and drop issue in the Traffic Rules page
  - Fixed protocol display in the overview of the Interfaces page
  - Fixed blocked IP settings migration during a FW upgrade with the 'Keep settings'
  - Fixed login errors after browser tab restoration
  - Fixed redirect to newly set IP address after Interface configuration
  - Fixed firmware upgrade verify spinner not closing
  - Fixed an issue with file upload via drag and drop

[RUTX_R_00.07.02.7](#) | 2022.09.12

- **Improvements:**

- Improved manual-auto connection mode
- **Fixes**
    - Fixed AT command for SMS storage usage
    - Fixed CVE-2022-1012 memory leak vulnerability
    - Fixed CVE-2022-37434 kernel vulnerability
    - Fixed GPS constellation settings
    - Fixed interface option reset after VLAN ID change
    - Removed memory leak on port events

RUTX_R_00.07.02.6 | 2022.08.24

- **Improvements:**
    - Added 'home.vodafone.de' APN
    - Improved stability of device information storage

- **Fixes:**
    - Added SMSC type omitting when empty SMSC number parsed in SMS PDU mode
    - Fixed Serial-symlink dmesg messages
    - Fixed VoLTE management
    - Fixed OpenVPN tls-auth and tls-crypt option names

RUTX_R_00.07.02.5 | 2022.08.12

- Improvements:
    - Updated curl to version 7.83.1
    - Updated firmware validation error messages
    - Added multiple source IP address support to the Port Forwards page
    - Increased custom APN Username & Password field maximum length to 64 symbols
    - Added auto switch to modem's SMS storage when SIM card storage doesn't exist
    - Improved mobile connection status handling
    - Optimized CORE distribution for packet handling

- Fixes:
    - Lixed EEE link advertisment
    - Fixed CVE-2022-32205, CVE-2022-32206, CVE-2022-32207, CVE-2022-32208 curl vulnerabilities
    - Fixed CVE-2022-30065 busybox vulnerability
    - Fixed file upload path traversal
    - Removed Data to Server limit to proccess less than 10 instances
    - Fixed Data to Server 'out of memory' crashes when database is full or has a large amount of data
    - Fixed OpenVPN dev setting logic
    - Fixed OpenVPN updating from legacy issue that caused IPv6 not to work
    - Fixed MAC and leasetime setting for Bridge & Passthrough modes

RUTX_R_00.07.02.4 | 2022.07.20

- Improvements:
    - Added default password change warning message before firmware downgrade
    - Extended time period for device to make connection to operator
    - Reduced the number of modem reboots when changing mobile settings
    - Reduced excessive log output when no SIM card is inserted

- Added modem restart prevention on modem init
- Added disable RPLMN option in the SIM section of the SIM card config

- Fixes:
  - Fixed CVE-2022-2068 vulnerability
  - Disabled autoconnect on stop-network call
  - Fixed possible I2C bus lock-up issue when upgrading firmware from 02.xx versions

[RUTX_R_00.07.02.2](#) | 2022.06.27

- Improvements:
  - Updated FSTools package to version 2022-05-03
  - Added security headers to web requests
  - Added ping to DNS IPv6 support
  - Added modem reset to default state after device FW upgrade
  - Modem init now checks NVRAM sensitive commands before setting
  - GSM output was made consistent

- Fixes:
  - Fixed CVE-2019-12900 libbz2 vulnerability
  - Fixed CVE-2022-23303 hostapd vulnerability
  - Fixed CVE-2022-29581 Linux kernel vulnerability
  - Fixed CVE-2022-29458 ncurses vulnerability
  - Fixed CVE-2022-1292 c_rehash script command injection vulnerability
  - Fixed behavior of some gsmctl commands
  - Fixed band locking issue

[RUTX_R_00.07.02.1](#) | 2022.06.06

- Improvements:
  - Improved GSM related messages in Troubleshoot logs

- Fixes:
  - Fixed IGMP Proxy menu item not appearing after package installation
  - Fixed default mobile network configuration generation
  - Fixed MODBUS write requests and Mobile Utils option setting

[RUTX_R_00.07.02](#) | 2022.05.23

- **New features**
  - Overview side widget
  - IGMP Proxy
  - Privileged Access Management (PAM)
  - AWS Greengrass support
  - HTTPS certificate and key upload feature
  - SSH public keys edit box
  - License page
  - DNP3 data for Data to Server

- **Improvements**
  - Updated busybox to version: 1.34.1
  - Updated curl to version 7.79.1
  - Added iptables filter package for string filtering
  - Added CHAP authentication for L2TP VPN

- Added IPv6 support for L2TPv3 VPN
- Added EAP-MSCHAPV2 authentication method for IPsec VPN
- Added IPv6 support to Auto Reboot
- Added 'Save to flash' and 'Test configuration' button to DNP3 configuration page
- Updated SNMP version 5.9.1
- Added OpenSSL authentication options to SNMPv3
- Added support for OSPF redistribution options and OSPF neighbors
- Added password field to BGP Peers page
- Extended BGP "AS" field validation to accept integers up to 4294967295
- Added "DHE+RSA" to OpenVPN cipher selections
- Increased OpenVPN max password length from 128 bytes to 512 bytes
- Made HMAC key direction initial value dependent on the role of the instance (client or server)
- Made HMAC key and HMAC authentication key upload fields required
- Added DES to IPsec encryption algorithms selections
- Added special character support for CHAP secrets
- Added validation requirements for PPTP user list username field
- Added option to manually enter Public key in Wireguard configuration
- Made generating Wireguard keys possible only while in auto mode
- Added Events Log database to troubleshoot archive
- Added RFC1918 filter field
- Added the possibility to unblock multiple blocked devices at once
- Added 'Port' column to blocked login attempts table
- Added Speedtest server refresh
- Updated Speedtest server list
- Added asterisk option to Site Blocking
- Added MD5 and SHA256 checksums to package validation page
- Changed certificate requirements to only require client key file if client certificate is used
- Added pagination and data retention between table pages
- Added pagination functionality to tables when there are more than 10 records
- Improved table sorting by saving user provided sort settings in the browser
- Improved drag and drop functionality
- Added the possibility to drag and drop files onto upload components
- Moved 'Root CA' from the 'Access Control' page to the 'Certificates' page
- Added 'Strict-Transport-Security' response header for HTTPS
- Added 'breadcrumbs' to modal windows
- Improved initial WebUI loading after login
- Added mobile bytes sent and bytes received SNMP OIDs
- Added mobile LED turn off feature ('System -> Administration' page)
- Added 'iot.1nce.net', 'internet', 'VZWINTERNET' and Truphone APNs to APN database
- Updated mobile usage data point calculation logic
- Added the possibility to manually enter operator number
- Improved obtain mobile cell ID process
- Added modem restart if SIM card is removed during APN database fetching process
- Added unauthorized call logging
- Added space character support in SMS commands
- Disabled SMS modem storage configuration form when SIM is not inserted
- Changed SMS '%wi' parameter value to return IP address of any currently used WAN interface (not only wired)
- Added external modem SMS limit Overview card and widget

- Made in-use APNs visible next to mobile interface configurations (before clicking the 'Edit' button)
  - Added duplicate value check for list configuration options
  - Changed mobile card instance design
  - Fixed 'Mobile Data usage reset' SMS rule
  - Fixed the default state parameter of SMS list POST/GET command
  - Added AVL "Static Navigation" flag
  - Added GSV parsing for NMEA collecting
  - Added newline and GPS location actions to I/O Juggler
  - Added error code 5 for reserved SAMBA user names
  - Added Mobile data and SMS limit features for external modem
  - Added I/O SNMP trap
  - Added ISO 8601 time format to I/O Juggler's '%ts' parameter
  - Added device name parameter '%pc' to I/O Juggler
  - Added PPPoE VLAN priority support
  - Made VRRP ping section dependent on main instance
  - Added 'WAN to LAN' switch

- **Fixes**
  - Fixed CVE-2021-20322, CVE-2021-4197, CVE-2022-1011, CVE-2022-0847 kernel vulnerabilities
  - Fixed CVE-2022-28391 busybox vulnerability
  - Fixed CVE-2018-16789 shellinabox vulnerability
  - Fixed CVE-2021-44543, CVE-2021-44542 privoxy vulnerabilities
  - Fixed CVE-2021-43618 GNU Multiple Precision Arithmetic Library vulnerability
  - Fixed zlib backport security issue
  - Fixed Wireguard firewall zone assignment
  - Fixed queued packages disappearing from list after FW upgrade with keep settings
  - Fixed error message display for multiple input validation rules
  - Fixed incorrect DHCP validation range for start and limit fields
  - Removed 'Bring up on boot' option from network interface configuration pages
  - Fixed coma-separated DHCP options disappearing after save
  - Fixed exclude and listen interfaces
  - Fixed 'Use broadcast flag' option saving
  - Fixed firewall zone assignment when creating new interfaces
  - Fixed OpenVPN 'Netmask' and 'IP address' field validations
  - Fixed OpenVPN TAP configuration saving issue
  - Fixed OpenVPN switching to TUN mode when uploading a configuration from file
  - Fixed dynamic BGP route state display
  - Fixed BGP peer enable in edit page
  - Fixed issue when no L2TP client instance could be bound to IPsec
  - Fixed firewall rule and zone behavior related to config section creation
  - Added default value for L2TPv3 netmask, which is now written to config after save
  - Fixed passthrough option saving to IPsec file
  - Fixed DMVPN issue where instance configuration could not be saved
  - Fixed Wireguard peer could not be saved issue
  - Fixed NTP client time synchronization after factory reset
  - Fixed device time display with selected time zone
  - Fixed MODBUS TCP indexation missing bracket issue
  - Fixed initial MODBUS TCP request count validation
  - Fixed PIN 3/4 direction switching over MODBUS TCP

- Fixed MODBUS data to MQTT socket closing issue when connection fails
- Fixed MODBUS alarm configuration deletion
- Fixed DNP3 master not working after FW upgrade with 'keep settings'
- Fixed DNP outstation not returning error messages
- Added missing SNMP objects: mobile IP, data sent/received today
- Fixed MQTT Publisher 'Remote address' field validation
- Fixed long interface name support for Azure IoT Hub
- Increased maximum Azure IoT Hub 'Connection String' length to 4096 characters
- Fixed missing sent/received data issue
- Fixed URL input field length validation
- Fixed admin login issue after upload of backup from a device with older firmware versions
- Fixed MAC address formatting in Events reporting messages
- Fixed Events reporting DHCP lease message spam, when no new lease is added
- Fixed logging crashing after downloading Troubleshoot file
- Made Wake on LAN visible only on devices with Ethernet ports
- Fixed Traffic log file transfer to FTP server
- Fixed Web Filter service reloading after a host list file is uploaded
- Fixed access denied messages when sending JSON-RPC requests from root user
- Fixed error message display about duplicated intervals in Profile scheduler
- Fixed FW upgrade with 'keep settings' migration issue for Access Control's 'Fail count' and 'Device port' fields
- Corrected OSPF Routing card values, value positions and names
- Fixed global secret instances not being removed when there are no IPsec instances
- Fixed uploaded file remove icon not staying in position on hover
- Fixed Overview card collapse issue that made it unresponsive after too many clicks
- Removed WAN6 interface from the Overview page
- Fixed mobile IPv6 display in Events Reporting status messages
- Fixed Bridge mode when DNS2 is not available
- Fixed PAP/CHAP username and password fields not saving in interface edit window
- Fixed sending email without secure connection for providers that support such an option
- Fixed 'N/A' parameter showing up in SMS Utilities monitoring status message
- Fixed Call Utilities Events Log message for reboot rule
- Fixed SMS command validation for no-authorization option
- Fixed MODBUS SMS alarms 'Enable' option saving
- Fixed running RMS with no SIM card inserted issue
- Fixed firmware available on server version checking issue
- Fixed CVE-2020-15078 openvpn vulnerability
- Fixed storage calculation for packages
- SMS Utilities: enhanced service security
- Fixed firmware deletion after leaving the page
- Fixed setup wizard redirect after LAN IP change
- Fixed various validation bugs, typos, option hints & alignments
- Fixed multiple IPv6 configuration field validations
- Fixed unnecessary SIM switch issue when Multi-APN is configured
- Fixed MODBUS TCP slave modem not starting after switching SIM cards
- Added multiwan support for Wireguard default route
- Fixed restoring GPS HTTPS options after FW upgrade with 'keep settings'
- Fixed missing NMEA sentences
- Fixed NMEA cache sentence calculation
- Fixed 'outside/inside range' condition for AVL I/O Analog input trigger

- Fixed I/O Juggler external modem recognition
- Fixed flash driver reformatting after memory shrink
- Fixed DLNA package installation issue
- Changed Media Directories field to be required
- Fixed SAMBA fields value display
- Fixed relay output value display in I/O Juggler condition page
- Fixed I/O Juggler's WiFi rule not enabling or disabling WiFi interfaces
- Fixed I/O Juggler's double delete issue on I/O Juggler action and condition instances
- Fixed I/O Juggler's incorrect I/O status messages

[RUTX_R_00.07.01.4](#) | 2022.02.25

- **Improvements**
  - Increased Port Forwards rule max name length
  - Added a new '%it' parameter for UTC time in ISO 8601 format to I/O Juggler

- **Fixes**
  - Added missing bracket to the end of MODBUS messages
  - Fixed preserving the contents of /etc/luci-uploads/ after FW upgrade with the 'Keep all settings' option
  - Fixed IPv4-Gateway column showing empty values in the Status -> Routes page
  - Fixed firewall extra option validation
  - Changed the logic of uploading files to the modem
  - Fixed usage of custom headers in I/O Juggler HTTP action
  - Fixed 'verify' option parsing for I/O Juggler
  - Fixed OpenVPN server configuration with password authentication
  - Fixed NTP interval length validation
  - Fixed network interface enable after Drag & Drop
  - Updated NTP client interval to 24h
  - Fixed connection to whitelist carriers
  - Fixed Passthrough mode when DHCP is disabled
  - Fixed 'Deny data roaming' feature
  - Fixed mobile blocking dependency on region
  - Disabled Ping To DNS functionality when Bridge/Passthrough mode is enabled

[RUTX_R_00.07.01.2](#) | 2022.01.04

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

- **Improvements**
  - Removed L2TP section title prefixes

- **Fixes**
  - Fixed IPSec crashing issue using mobile
  - Fixed FW flashing when chip is in unknown state
  - Fixed CPU usage percentage display in the Overview page
  - Fixed FOTA timeout issue when server does not respond
  - Fixed installation of backup packages
  - Fixed mobile data limit display after profile change
  - Fixed Bridge mode without multi-APN

- Fixed multi mobile interface checking
- Fixed error handling when the modem is not responding
- Prolonged autoconnect setting timeout

RUTX_R_00.07.01 | 2021.11.18

Note: Firmware version RUTX_R_00.07.01 released on 2021.11.18 was removed due to an issue with IPsec tunnel while using mobile connection.

- **New features**
  - Load Balancing Rules
  - RUTX series support without STM32
  - Tinc VPN
  - German language support
  - Manual-Auto operator select

- **Improvements**
  - Updated base to OpenWrt version 21.02
  - Improved WebUI functionality when multiple browser tabs are open
  - Updated kernel to version 5.4.141
  - Updated mtd-utils to version 2.1.2
  - Updated busybox to version 1.33.1
  - Updated ubus to version 2021-06-3
  - Updated ubox to version 2020-10-25
  - Updated rpcd to version 2021-03-11
  - Updated opkg to version 2021-06-13
  - Updated fstools to version 2021-01-04
  - Updated wwan to version 2019-04-29
  - Updated ethtool to version 5.10
  - Updated uhttpd to version 2021-03-21
  - Updated ppp to version 2020-10-03
  - Updated odhcpd to version 2021-07-18
  - Updated hostapd to version 2020-06-08
  - Updated dropbear to version 2020.81
  - Updated dnsmasq to version 2.85
  - Updated netifd to version 2021-07-26
  - Updated firewall3 to version 2021-03-23
  - Updated libjson-c to version 0.15
  - Updated libevent2 to version 2.1.12
  - Updated mac80211 to version 5.10.42-1
  - Updated wireless-regdb to version 2021.04.21
  - Updated binutils to version 2.35.1
  - Updated gdb to version 10.1
  - Updated strace to version 5.10
  - Updated trace-cmd to version 2.9.1
  - Updated valgrind to version 3.16.1
  - Updated ath10k-ct-firmware to version 2020-11-08
  - Updated procd to version 2021-02-23
  - Updated iw to version 5.9.8
  - Updated iproute2 to version 5.11.0

- Updated iptables to version 1.8.7
- Updated nettle to version 3.6
- Updated libpcap to version 1.9.1 rel3
- Updated elfutils to version 0.180
- Updated cryptodev-linux to version 1.11
- Updated linux-firmware to version 20201118
- Updated util-linux to version 2.36.1
- Updated openwrt-keyring to version 2021-02-20
- Updated mtd to version rel26
- Updated fwtool to version 2019-11-12
- Updated ca-certificates to version 20210119
- Updated wireguard-tools to version 1.0.20210223
- Updated iwinfo to version 2021-04-30
- Updated ipset to version 7.6
- Updated gre to version rel12
- Updated wolfssl to version 4.7.0
- Updated ustream-ssl to version 2020-12-10
- Updated uclient to version 2021-05-14
- Updated readline to version 8.1
- Updated mbedtls to version 2.16.11
- Updated libusb to version 1.0.24
- Updated libunwind to version 1.5.0
- Updated libubox to version 2021-05-16
- Updated libnl-tiny to version 2020-08-05
- Updated libnftnl to version 1.1.8
- Updated libiconf-full to version 1.16
- Updated libbsd to version 0.10.0
- Updated gmp to version 6.2.1
- Updated ulogd to version rel6
- Updated sqm-scripts to version 1.5.0
- Updated ntpclient to version rel14
- Updated nmap to version 7.80
- Updated curl to version 7.77.0
- Updated zerotier to version 1.6.5
- Updated xtables-addons to version 3.13
- Updated xl2tpd to version 1.3.16
- Updated stunnel to version 5.59
- Updated strongswan to version 1.0.13
- Updated sstp-client to version 1.0.13
- Updated pptpd to version rel5
- Updated openvpn to version 2.5.3 rel2
- Updated ntpd to version rel3
- Updated net-snmp to version rel2
- Updated mosquitto to version 2.0.11
- Updated miniupnpd to version 2.2.1 rel 3
- Updated etherwake to version rel5
- Updated libzip to version 1.7.3
- Updated libgpg-error to version 1.39
- Updated glib2 to version 2.66.4
- Updated libnetfilter-conntrack to version 1.0.8
- Updated libnetfilter-log to version rel3

- Updated lzo to version rel4
- Updated nghttp2 to version 1.43.0
- Updated openvpn-easy-rsa to version 3.0.8 rel3
- Updated iperf to version rel2
- Updated iperf3 to version 3.10.1
- Updated e2fsprogs to version 1.45.6
- Updated fuse to version 2.9.9
- Updated udprelay to version 2020-02-26
- Updated qmicli to version 1.28.2
- Updated pcre to version 8.45
- Updated libsmpp34 to version 1.14.1
- Updated libiwinfo to version 2.1
- Added netifd library for additional information related to network interfaces
- Updated openssl to version 1.1.1l
- Updated privoxy to version 3.0.32
- Added ACL reload method for sessions
- Added 'Advertisement interval' field to the VRRP configuration window
- Added a PPTP-to-WAN Zone Forwarding rule when default route is enabled on PPTP client
- Added email user group validation for sendind test emails with Events reporting
- Added an event logging feature for Ping Reboot events
- Improved file/section deletion logic: now files are also deleted after deleting a related config section
- Improved package deletion logic
- Added the possibility to configure multiple reboot times in one Reboot Scheduler configuration instance
- Updated 'External system log server' field validation to accept IPv6 addresses
- Added redirect to Overview page after login
- Added WebUI session timeout after user inactivity
- Added placeholder text to dropdown menus
- Improved multi-select design and functionality
- Added Unix timestamp, local ISO time, UTC time to Modbus
- Added info message when selected file cannot be uploaded
- Improved IPsec throughtput
- Added IPSec "Compatibility mode" configuration support
- Made SNMP 'Community name' option editable
- Added the option to delete configurations to the SMS Utilities 'UCI' rule
- Added 'hour', 'week day', 'month day' slelection options to SMS Limit configuration
- Added Lithuanian and Verizon APNs
- Added modem selection for the 'Send SMS' option in Auto Reboot settings
- Added the possibility to get total data usage value without specifying time interval via ubus
- Added return SIM count command
- Added new configuration options to the Failover feature
- Changed Failover page availability from Advanced only both advanced and basic
- Made Failover Interfaces table rows draggable when in 'Load Balancing' mode
- Changed Failover page 'Ratio' fields to a smaller size
- Added an indication to the GPS map when GPS service is disabled
- Added external modem support for the 'Mobile Usage' graph
- Added I/O support to SNMP
- Removed ubus list method due to security reasons

- Added MODBUS "%I, %T, %S, %r, %n" support to MODBUS Data Sender
- Removed search engine site crawling
- Improved IPSec "Local/Remote source" validation
- Added Firewall "all" and "custom" protocol options
- Added Backup file size limit of 2 MB
- Improved basic/advanced mode changing
- Improved Wireguard "IP Addresses" field validation
- Added language download support from language selection section
- Added PPTP "Client to client" configuration support
- Made DDNS "username", "password", "host" fields optional
- Added SSTP "Default route" configuration support
- Added SMS Limit hour, week day and month day support
- Added Passthrough "Leasetime" and "Unit" configuration support
- Added Call Utilities "Active Timeout" configuration support
- Added support for PL2303GC serial to USB chip
- Added GPS AVL "Don't Contain Connection" and "Retry on Fail" configuration support

- **Fixes**
  - Made RMS 'Connect' button disabled when a connection attempt is already in progress
  - Added validation for TLS Clients 'Private network' option
  - Fixed the validation range for MTU fields
  - Fixed removing firmware image file after leaving the fimware upgrade page
  - Fixed network selection list for Traffic Logging - added all available LAN networks
  - Fixed DHCP Options validation
  - Fixed configuration profile date display
  - Fixed blank page after invalid URL in login page
  - Fixed TR-069 related firewall rule loading
  - Fixed remote subnet netmask validation issues for the GRE Tunnel configuration
  - Fixed WebUI section toggle
  - Fixed package installation modal layout
  - Fixed current page values showing up in login page username field
  - Fixed the possibility to create section with a name that is already in use in the same config file
  - Fixed OpenVPN username and password deletion when deleting configuration instance
  - Fixed session closing issue for the user whose password was just changed
  - Updated MODBUS credential validation
  - Updated MQTT credential validation
  - Fixed DNS 'Rebind protection' setting when switch is disabled
  - Updated libgcrypt to version 1.9.3 to fix CVE-2021-33560
  - Fixed CVE-2021-33624, CVE-2021-29648 vulnerabilities
  - Fixed DHCP 'Lease time' and 'Unit' option saving over the Setup Wizard LAN page
  - Fixed Reboot Scheduler not removing crontab file after disabling the rule
  - Fixed OpenVPN 'Extra options' field validation to allow a space character
  - Added table drag and drop functionality to the Firewall's Traffic Rules page
  - Fixed DNP3 Outstation crash caused by non-void function returning no value
  - Fixed RMS 'Copy' button functionality
  - Fixed gsmd deamon crashing after modem restart
  - Fixed gsm memory leak
  - Fixed WCDMA band names for MEIG modules
  - Fixed SMS Gateway loading screen issue when sending an SMS message
  - Fixed mobile data database error after upgrading firmware with the 'Keep settings'

option
- Fixed rpcd memory leak issue
- Fixed network information gathering
- Fixed 3G LED not being active in 3G mode
- Fixed data limit accuracy issue
- Fixed SIM Switch back to default SIM crash loop when SIM1 is disabled
- Removed unused SIM Switch struct objects
- Fixed incorrect loading after saving Failover configuration
- Fixed NTP GPS Synchronization swith to enable GPS service
- Fixed I/O Juggler hour condition interval issue
- Patched CVE-2021-40528 vulnerability
- Patched CVE-2021-40490 vulnerability
- Patched CVE-2020-16120 vulnerability
- Fixed VLAN section creation
- Returned Interfaces "Port priority" option
- Fixed missing Content-Type header to initial WebUI response
- Fixed RIP information parsing in status page
- Fixed OpenVPN IPv6 netmask validation
- Fixed SNMP Trap Settings Host/IP field validation
- Fixed Cumulocity authentication reset
- Fixed Events Reporting rule saving

[RUTX_R_00.07.00](#) | 2021.07.16

- **New features**
  - New WebUI based on Vue.js 2.6.12
  - RutOS updated to OpenWrt 19.07.7 base
  - DNP3 Master and DNP3 Oustation
  - 'Restore to user's defaults' SMS Utilities rule

- **Improvements**
  - Updated firewall to release 3
  - Updated kernel to version 4.14.221
  - Updated uhttpd to version 2020-10-01
  - Updated xtables-addons to release 9
  - Updated mwan to version 2.8.14
  - Updated pcre to version 8.44
  - Updated curl to version 7.74
  - Updated sqlite to version 3.33
  - Updated ncurses to version 6.2
  - Updated OpenSSL to version 1.1.1k
  - Added full MODBUS register address expansion specifier for Data to Server
  - Added full MODBUS register address legend
  - Added Client ID option for the MQTT protocol in Data to Server
  - Improved Data to Server sleeping accuracy
  - Improved Data to Server username validation; now space is allowed
  - Added firmware version OID to the SNMP service
  - Added IP address family option field to the SNMP page
  - Added SNMPv6 section to the SNMP Communities page
  - Renamed the 'System -> Users' page to 'System -> System Users'
  - Moved password changing option to the 'System -> System Users' page
  - Switched to ar8216 driver

- Added IPsec XAUTH support
- Improved OpenVPN updown, init scripts to write info about instance in JSON
- Added AES-256-GCM encryption support to OpenVPN
- Added extra configuration parameters to DMVPN
- Added PSK conversion to DMVPN and single PSK types
- Improved Package Manager package installation, deletion and dependencies
- Improved Package Manager download process over FOTA
- Added new Input/Output values manageable over RMS
- Added IPv6 traffic logging
- Made 'Network -> Failover' and 'Network -> Interfaces' page data draggable on multiple browsers
- Added Input/Output Post/Get URL parameter t_time changing delay and time to seconds or miliseconds
- Added message storage management by config value
- Improved QMI error handling and status tracking
- Turned on modem in preinit for correct power-on sequence
- Added Post/Get feature to turn mobile data on/off
- Added the possibility to use 2gonly/3gonly/4gonly arguments for cellular service command alongside current 2g/3g/lte arguments
- Added "Phone number" and "Message" fields for "Send SMS" option
- Added "Host to ping from SIM1" and "Host to ping from SIM2" fields
- Added support for multiple USB to Serial adapters
- Added option to switch back to primary SIM card after timeout
- Improved I2C communication
- Added peer groups to BGP access list dropdown
- Added TCP MD5 authentication support for BGP

- **Fixes**
  - Added glib2 patch to fix CVE-2019-13012 vulnerability
  - Added ntfs-3g patch to fix CVE-2019-9755 vulnerability
  - Added WolfSSL patch to fix CVE-2021-3336 vulnerability
  - Added Busybox patch to fix CVE-2018-1000500 vulnerability
  - Added netifd, odhcp6c IPv6 routing loop on point-to-point links patches to fix CVE-2021-22161 vulnerability
  - Fixed Android clients IPsec MTU/MSS size
  - Fixed wrong IPsec DPD value saving
  - Changed IPsec PSK maximum length to 128 symbols
  - Fixed SSTP remaining up after package removal
  - Fixed DMVPN crypto_proposal write to config
  - Fixed I/O Juggler's SMS sending to correct group
  - Fixed I/O Scheduler's relay state issue
  - Added I/O direction check while changing IOs via I/O Post/Get
  - Fixed float endianness mismatch on some devices MODBUS TCP Master, MODBUS Serial Master
  - Fixed UPnP issue that caused config changes to apply only after service restart
  - Fixed WebUI files caching when upgrading firmware
  - Fixed WebUI date display format
  - Fixed MODBUS returning incomplete MAC address data
  - Fixed GPS time synchronization for DST regions
  - Fixed depleting IPv6 RA timeout when the ISP doesn't send RA updates
  - Added "Transaction timed out" error handling

- Fixed PPPOE connection loss when wrong session PADT packet arrives
- Added gcont object tracking and info update if this service is restarted
- Fixed default SMS storage
- Fixed SMS warning sending after Mobile Data Limit change
- Fixed DHCP relaying over mobile networks
- Changed PIN code maximum length to 8 symbols
- Fixed 'I/O status' message to include correct Input/Output name based on info in ubus ioman objects
- Fixed 'Over IP' serial type's UDP issue in client mode
- Fixed DLNA connections count total in statistics page
- Fixed wrong VRRP IP address writing to file
- Fixed DLNA connections count total in statistics page
- Fixed JSON-RPC issue that caused incorrect state returns

[RUTX_R_00.02.06.1](#) | 2021.02.10

- **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
  - Fixed modem status after failed network scan
  - Fixed mbncfg function and PIN check logic
  - Fixed PPTP server interface naming
  - Fixed correct client PPTP interface name selection for route creation
  - Fixed adding helper to firewall's wan zone when enabling PPTP configuration
  - Added package size checking when manually installing a package
  - Fixed 'New Firmware Available' message display after firmware upgrade

[RUTX_R_00.02.06](#) | 2020.12.31

- **New features**
  - External Quectel modem support
  - Operator Whitelist/Blacklist

- **Improvements**
  - Updated base to OpenWrt 19.07.4
  - Added Phone Groups as possible SMS recipients to SMS Post/Get
  - Added PSK support for MQTT Broker/Publisher
  - Changed Output Scheduler structure
  - Removed limitation of one configuration per Input
  - Added multiple modem support for TR-069
  - Fixed parsing user uploaded custom OpenVPN configuration files containing carriage returns
  - Added iptables conntrack flush on WAN Failover if IPsec is enabled
  - Optimized package responsible for sending/receiving GRE Tunnel keepalive packets
  - Added extra error checking to Package Manager when downloading packages
  - Added data usage info for both SIM cards to RMS
  - Added logging to syslog when Ping/Wget Reboot "Action" is set to 'None'
  - Improved display of configuration tables when a lot of information is shown
  - Renamed MODBUS strings to uppercase
  - Added redirect to configuration page after a new configuration is created with the 'Add' button

- Added option to create a Configuration Profile from current configuration
- Added data validation to Profiles Scheduler fields
- Replaced the Firewall 'Helpers' page with conntrack helper configuration for each firewall zone
- Increased dynamic list maximum amount of values to 50
- Added the possibility to save email accounts without entering email username and password
- Unified device access password validations
- Expanded DDNS validation for domain input to accept emails
- Added SMS Utilities rule to reset mobile data usage for specified interface
- Improved SMS Utilities VPN status rule to support custom configurations
- Added SMS storage limit check after inserting a SIM card
- Changed modem name from primary to internal if device has only one built-in modem
- Improved SIM count check during init
- Moved all USB related services to the 'Services -> USB Tools' page
- Added 'General' page to 'Services -> USB Tools'; the page contains a list of all USB devices and the option to safely unmount the devices
- Added 'passive-interface' and 'default-information' options to the OSPF configuration page
- Added NHRP dynamic route status page
- Split VLAN configuration page into two separate ones: 'Port Based' and 'Interface Based'

- **Fixes**
  - Fixed IPsec Passthrough subnet/ip value parsing to make it dynamic for leftsubnet
  - Fixed occasions when error messages overlap buttons
  - Fixed I/O state saving after revert back to original state
  - Fixed IPsec connection after reboot
  - Fixed bridged interface configuration for L2TPv3
  - Removed trailing newlines in returned SNMP strings
  - Fixed Events Reporting waiting to send email before rebooting
  - Fixed MQTT MODBUS Gateway not working when topics have special characters
  - Swapped pin3 and pin4 values in MQTT Publisher
  - Added an 'IP4Table' option to advanced interface configuration
  - Fixed an issue where User Scripts were being deleted after device reboot
  - Fixed various WebUI validation bugs, typos, option hints & alignments
  - Fixed a bug that caused an internal sever error after logging in with a username that contained special characters
  - Fixed crashes that occur after configuration files are not correctly generated
  - Fixed a Firewall Port Forwarding bug which caused an internal sever error when no 'Protocol' was selected
  - Fixed changing WebUI mode bug while current page is accessed with POST method
  - Fixed password allowed lengths and tooltips
  - Fixed mountpoint display
  - Removed non-supported SMS Utilities rules
  - Fixed SMS sending to Phone Group on I/O event
  - Changed device name in 'Status' message to configured name instead of the default one
  - Added modem reinit after SIM card initialization failure
  - Fixed SMS Limit checking when messages exceed the set SMS limit
  - Moved 2-8 PDP contexts to 9-16 the 2-8 are necessary for SIM card MIB APNs
  - Changed mobile interface subnet to /32
  - Fixed modem SIM card checking

- Fixed multi SMS handling on SMS Limit
- Fixed Call Utilities multiple SMS sending per received call
- Fixed SMS storage limit check on device reboot
- Changed SNMP mSignal, mTemperature and numSatellities datatypes to correspond to devices' MIB files
- Fixed erroneous data usage display of external modem after it's been disconnected

RUTX_R_00.02.05.2 | 2020.11.19

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

RUTX_R_00.02.05.1 | 2020.09.30

- **New features**
  - DLNA media server
  - iptables NETMAP extension
  - "Flush connections on" option for WAN Failover
  - New firmware notifications
  - Updated header logo from 'Teltonika' to 'Teltonika | Networks'
  - USSD command support
  - Time sync via network operator's station
  - SQM QoS
  - USB Tools
  - USB to Serial adapter support
  - Auto format USB storage devices to NTFS
  - Storage Memory Expansion

- **Improvements**
  - Improved WebUI page loading speed
  - Added Basic/Advanced mode selection in Setup Wizard
  - Added a dropdown with a search function for time zone selection
  - Added "copy to clipboard" button in Cloud Solutions next to MAC and Serial
  - Added option to send all Modbus records in one packet
  - Disabled IPV6 services on LAN by default
  - Added password hashing in Post/Get pages
  - Added a warning message about rebooting the device while certificate files are being generated
  - Added status option to uploaded custom OpenVPN configuration file
  - No longer showing "Enable OpenVPN config from file" option if "Enable external Services" is selected
  - Added some missing placeholder values
  - Added warning message about unsaved changes when leaving Auto Reboot, Periodic Reboot, Wireless pages
  - Added port selection to SSTP configuration
  - Changed Periodic Reboot service name to Reboot Scheduler
  - Added table row highlights on hover
  - Changed section name from 'Email users' to 'Email accounts' in the Recipients page
  - Added network interface automatic assignment to firewall zones when interface protocol is switched
  - Adjusted Azure validations
  - Adjusted Local/Remote subnet field validations

- Adjusted Hotspot field validations
- Unified VPN overview section option names and titles
- Removed mandatory requirements for inter-zone forwarding source & destination options in Firewall zone configuration
- Added placeholder values for drop down options in Routing pages
- Increased maximum package upload size
- Removed mobile interfaces from Hotspot configuration
- Added "Passthrough subnets" option to IPsec configuration page
- Added package size checking when installing packages via Package Manager
- Optimized switching between Basic and Advanced WebUI modes
- Added missing services to Events Reporting page when selected Event is "Config change"
- Improved general web design, ordering and positioning
- Added word wrap in the Unsaved Changes page
- Centered 'Apply' button in the Profiles page
- Hid network interfaces with DHCPv6 protocol in Overview page while in Basic WebUI mode
- Changed tcpdump "Select storage" option value from 'Internal storage' to 'RAM memory' in the System → Administration → Troubleshoot page
- Added more descriptive error messages when connection to FOTA server fails
- Updated "Local address" hint in l2tpv3 page
- Updated phone number placeholders to +37000000000
- Updated SMS rule descriptions related to phone numbers and email accounts
- Made SMS/Mobile data limit options always visible in Overview Setup page
- Added indications for which antenna connector is connected to which modem
- Adjusted Modem FW file validations
- Added network selection option in Traffic logging page
- Reworked Q-in-Q configuration page
- Added loading spinner and a "No GPS signal" message to GPS Map page
- Removed incorrect GPS analog input option from GPS HTTPS settings

- **Fixes**
  - Fixed DDNS freeze issues
  - Fixed Firewall Traffic Rules Source and Destination address field validations
  - Started using more stable, builtin ar82xx switch driver
  - Symlinking tty devices in one place
  - Fixed period when sending packet curl timeouts in Modbus Data Sender
  - Fixed "active SIM" register value retrieval after regression in Modbus TCP Slave
  - Fixed Hotspot 'Trial access' function
  - Fixed OpenVPN TLS Cipher display and added a limit to number of ciphers
  - Fixed various WebUI validation bugs, typos & option hints
  - Fixed DHCP lease range validation and value saving in Interfaces page
  - Fixed error messages when creating interfaces with incorrect names
  - Fixed various section toggling bugs
  - Fixed username validation in SNMP page
  - Fixed certificate file importing bugs & common name display in Certificates Manager page
  - Fixed interface option related to IPv4 and IPv6 in Routing pages
  - Fixed OpenVPN multi-line command that adds client specific parameters
  - Fixed DHCP lease range validation in Basic mode
  - Fixed incorrect sorting in dynamic tables

- Fixed routing table writing and deleting
- Fixed incorrectly displayed type when no protocol is selected
- Removed Wireguard interfaces from the Interfaces page
- Fixed SNMP user access mode display in SNMPV3 Users Overview page
- Fixed SNMP memory leak on chilli module
- Fixed MD5 and SHA256 checksum calculations
- Fixed DHCP-options field validation to allow separating parameters with commas
- Fixed Package Manager side menu entry updates right after package upload
- Fixed Wireguard port selection
- Fixed VPN zone status display
- Fixed lua errors when Start/End time option is empty
- Fixed incorrectly displayed OpenVPN protocol
- Fixed Lua errors in Profile Scheduler and Firewall Zones
- Removed *log* folder from Troubleshoot file directories
- Fixed endless spinner when applying profiles
- Fixed nil value in the Traffic Logging page
- Fixed "Units" option dependency on "Enable DHCP" option in the Setup Wizard's LAN page
- Fixed redirecting to login page after factory setting restore (reset)
- Removed Unsaved Changes notification when downloading Troubleshoot/tcpdump files from the System → Administration → Troubleshoot page
- Vulnerability fixes for Package Manager and Certificates Manager pages
- Fixed Firewall zone placeholder (removed "-- Please select --" and left "Unspecified")
- Fixed update from server option in the Firmware page
- Added missing error messages when password is invalid in default password change page
- Fixed "Lease time" option in the Setup Wizard's LAN page
- Fixed error 500 when accessing Advanced pages while in Basic mode
- Increased allowed character lengths for MQTT Broker and Data to Server
- Fixed XSS vulnerabilities in package manager and package file upload pages
- Fixed incorrect OpenVPN configuration saving
- Fixed NHRP lua error
- Removed "Wireguard" from Status → Services display if it is not installed
- Fixed crashing issue when getting "SIM slot in use" satus value
- Fixed sending status SMS to other number
- Fixed "Change mobile settings" rule service setting
- Fixed SMS Forwarding To HTTP "URL" option validation
- Fixed Mobile Signal graph data display
- Changed message type from 'error' to 'info' from Auto Reply page
- Fixed manual operator selection validation
- Fixed mobile interface authentication settings reset after selecting auto APN mode
- Fixed libgsm password and serial authorization
- Added workaround for mobile to switch LAN port throughput problem for ath79 target
- Fixed Hotspot login page signup fields and notifications
- Removed unnecessary default Hostname and URL values from GPS pages
- Fixed AVL I/O incorrect option display in input rule configuration
- Fixed "Enabled" option design in GPS Geofencing page
- Fixed MAC address validation in Mobile Utilities page for Wake on LAN SMS rule
- Removed Hotspot 2.0 page

[RUTX_R_00.02.04.3](#) | 2020.07.31

- **New features**
    - Backup archive MD5 & SHA256 checksum calculation to help user identify altered backup archives
    - Package signature check to verify that a package comes from Teltonika

- **Improvements**
    - Updated APN database
    - **Fixes**
    - Fixed CVE-2019-17367
    - Fixed hiding of configuration pages that users of a specific group don't have read access to
    - Fixed firmware upload script

[RUTX_R_00.02.04.1](#) | 2020.07.02

- **New features**
    - Added 'Mobile Passthrough mode'
    - Added mobile signal real-time graph
    - Added USB Tools page with "USB to Serial" and "Printer Server" sections
    - Added mobile data usage charts
    - Added profile change action to "I/O Juggler"
    - Relay control to Call Utilities
    - 'Certificates' page for generating and managing TLS certificates
    - 'Drag & Drop' support for Overview page tables
    - 'Speed Test' feature
    - AVL I/O support
    - Added JSON formatting option to Data to Server
    - Added timeout and keep-connection options to Modbus TCP Slave
    - During this release a new package was released - [WireGuard](#)

- **Improvements**
    - Improved mobile interface creation
    - Improved L2TPv3 functionality with VLAN
    - Improved 'Profile Scheduler' with minute accuracy
    - Reordered VPN configuration options
    - Standardized section header styles
    - Unified spelling of dropdown values
    - Added information about 'Package Manager' packages before updating firmware
    - Updated services management to Status → Services page
    - Improved performance of firmware upgrades from server
    - Improved security features related to file uploading and HTTP headers
    - Changed RAM/flash memory units from MiB to MB
    - Updated warning message and lease deletion message for static leasing
    - Moved 'Country code' option to general tab
    - General web responsiveness improvements

- **Fixes**
    - Removed incorrect SMS character counter from SMS Utilities page
    - Fixed symlinking tty devices in one place
    - Fixed validations and option saving in OSPF page

- Fixed various element positioning bugs on smaller screens
- Fixed switching to advanced mode notification when accessing non existing pages
- Fixed validations in Traffic Logging page
- Fixed showing failover section only for interfaces with failover rules
- Fixed static leases redirect after saving
- Fixed empty dropdown values in 'I/O juggler' and 'Network Shares'
- Fixed interface IP address validation in DDNS page
- Fixed various spelling mistakes
- Fixed broken address option in the 'Troubleshoot' page
- Fixed dropdown select element double clicking issue
- Fixed basic/advanced mode switching with Microsoft Edge browser
- Fixed firmware upgrading bug when LAN interface with a changed name exists
- Fixed redirecting to the 'Interfaces' page when mode is changed from basic to advanced and user is in the 'LAN' or 'WAN' pages
- Fixed validation of custom header in 'Data To Server' page
- Fixed "Type" option error in Failover page
- Updated username and password validations
- Fixed profile change action in 'I/O Juggler'
- Fixed bidirectional GPIO change feature

RUTX_R_00.02.03.4 | 2020.06.15

- **Fixes**
  - Fixed modem option set in basic mode for mobile interfaces
  - Fixed libgsm connection state function
  - Fixed config generation script

RUTX_R_00.02.03.1 | 2020.05.15

- **New features**
  - Responsive WebUI design
  - New Access Control window for managing IP access
  - Attack Prevention page under Firewall settings
  - New IPv6 options in WAN, LAN and VPN pages
  - Progressive Web Application support and extra page caching when device is configured with a valid SSL certificate
  - OpenVPN configuration file upload functionality
  - Unsaved Changes page
  - Bridge mode display in Overview page
  - Input inversion buttons
  - Dynamic switch port display in side widget
  - Input/Output manipulator
  - Full unicode SMS support
  - IO control and status over SMS
  - MQTT Publisher: added support to send I/O values
  - Ability to install packages stored in backup file
  - IP unblock SMS rule
  - New Modbus TCP Slave register fields
  - New Modbus Alarm redundancy options
  - NTPD version 4.2.8p14

- **Improvements**

- Added HMAC configurations for OpenVPN
- Added AES ciphers support for OpenVPN
- Added MTU and gateway metric to mobile interfaces
- Added DHCP lease range display in the Network → LAN page
- Added warning messages when deleting interfaces/configurations
- Added available FW on server status messages in FW upgrade page
- Added mobile PIN code saving note
- Changed UPnP redirect delete button style
- Changed functionality of reset button in the Firewall → Custom Rules page. Now fully resets to default
- Added hints on all value fields about field validation
- Added pin information for iostatus SMS rule
- Removed modem traps if no modem is present
- Optimized section toggling logic, removing all toggling associated flags required prior optimization
- Standardized section edit page headers in WebUI Services
- Improved the look of error pages and messages
- Updated Wiki links to wiki.teltonika-networks.com
- Disabled 'Clear data limit' button for inactive interfaces
- Reordered menu, moved 'Default configuration' to the Backup page, moved 'Diagnostics' to the Troubleshoot page
- Added credentials input fields to Data to Server
- Changed hint of 'Allow guest" in the Network Shares page
- Updated Periodic Reboot service status in the Services page
- Improved hint for incoming calls option
- Changed OpenVPN LZO option to a dropdown with an extra 'none' option
- Added suggestion to create a profile if there are no profiles created in the Profiles → Scheduler page
- Filtered out unnecessary interfaces ending with _4 _6 in firewall page
- Moved SIM switch to separate page and added check interval and retry count options
- Changed side widget button color to blue to make it more visible
- Added 'Dynamic List' option limit (20 elements)
- Added info message to Events Reporting & Mobile Utilities rules, if selected recipient or sender is a group or no groups are created yet
- Improved stm32 recv message handling
- Modbus TCP test now allows reading more than 125 coils/inputs
- Reworked NTP page, separating general options from NTP specific ones
- Fixed grammar errors in Mobile page
- Resolved using SHA512 bug for versions 02.01 or lower with additional (-b) parameter

- **Fixes**
  - Added name validation in the Firewall → Port Forward page, fixed custom protocol value selection and display
  - Added validation for GRE 'Remote subnet IP' option
  - Added missing Mobile Data limit input validation
  - Fixed Schedulers' cells to be of equal width
  - Fixed uploading backup from lower firmware version
  - Fixed SSTP certificate upload function
  - Fixed IPsec 'Aggressive' setting value saving in config file
  - Fixed LAN settings static lease name validation
  - Fixed issue that sometimes caused failures when redirecting to Mobile interface edit

page
- Fixed descriptions in Access Control → Security page
- Fixed HTTP login while HTTPS session is still active
- Fixed real time CPU load in the Overview page
- Fixed advanced static routing display for all routes
- Fixed file upload error messages in backup page
- Fixed 'Select' option for Firefox browser
- Fixed RAM usage display in side widget
- Fixed access to non existing pages
- Fixed saving empty message field in Events Reporting rules
- Fixed I/O socket pinout
- Fixed showing correct APN settings when upgrading with the 'Keep all settings' option
- Fixed Events Reporting send test email page display when email contains 2 new lines in a row
- Fixed phrasing and grammatical mistakes in SMS messages tooltip
- Fixed LAN Overview section display
- Fixed early login page load after reboot or backup upload
- Fixed Package Manager notification display
- Fixed SMS rule display for different devices
- Fixed PPTP and L2TP client configuration creation with same name
- Fixed static route removal if corresponding interface is removed
- Fixed Realtime Graphs → Traffic tab display
- Fixed OpenVPN username and password writing to file
- Fixed time zone sync between Setup Wizard & NTP pages
- Fixed DHCP lease range validation
- No longer write anything into Events Log when forcing reboot to prevent device hang-up
- Fixed restore settings when upgrading from Yocto base firmware on TRB1 targets
- Fixed launching stm32 autoflash script at early boot to avoid possible keep settings loss
- Removed certain Events Reporting options on devices that don't have the corresponding functionality
- Fixed recovery from lost connection for MQTT publisher, Modbus MQTT gateway

[RUTX_R_00.02.01.1](#) | 2020.01.15

- New features:
    - Email to SMS
    - Static IP lease
    - SMS OTP and MAC auth in Hotspot
    - Hotspot logs
    - TOS in HotSpot
    - Custom URL parameters while using external landing page in Hotspot
    - Expiration time for Hotspot
    - Wireless status page
    - USB mount settings
    - Site blocking list from file
    - Events Reporting via Email
    - STunnel
    - Multi-User support
    - Mobile page
    - Operators control
    - Bluetooth passive device scanning

- Hotspot 2.0
- Modbus MQTT gateway
- Package manager
- RUT FOTA
- TR-069

- Improvements:
    - Deleted OpenVPN forward rule on instance deletion
    - Improved "SMS Forwarding to Email" field validations
    - Rename IPsec fields from right/left to remote/local
    - Bluetooth style improvements
    - Applied same style on all scheduler templates
    - Renamed "Setup Wizard" steps
    - Renamed "IPv4 and IPv6 routes" headings
    - Renamed "User groups" to "Users & Recipients"
    - Added "Clear data limit" on a specific date
    - Enable/Disable all SMS-Utilities rules at once

- Fixes:
    - Fixed WAN mobile interfaces reload
    - Fixed parsing interface IP address in WAN
    - Fixed OSPF "Hello Interval" field hint
    - Fixed field validation on "Port Forward" create form
    - Fixed display build date
    - Removed "Bring up on boot" option
    - Fixed Mobile page with additional USB modem
    - Fixed creating SNAT rule without port
    - Fixed SDK archive name

[RUTX_R_00.02.00.2](#) | 2019.10.11

- Fixes:
    - WiFi fix

[RUTX_R_00.02.00.1](#) | 2019.09.27

- New features:
    - Auto APN
    - MQTT
    - Web Filter
    - Dynamic Routes
    - GRE over IPsec
    - Wireless Hotspot
    - VRRP
    - HTTP POST/GET
    - Network Shares
    - VLAN multiple tags functionality
    - SMS HTTP POST/GET
    - SMS Forwarding
    - Auto Reply
    - SMS storage
    - Switch back to primary SIM

- Email groups
- Default VPN firewall zones
- Support for XT25F128B spi-nor memory
- Support for Bluetooth

- Improvements:
  - Updated Kernel to version 4.14.131
  - Updated Strongswan to version 5.8.0
  - Updated curl to version 7.60.0.4 (fixes CVE-2018-14618, CVE-2018-16839, CVE-2018-16840, CVE-2018-16842, CVE-2019-3823, CVE-2019-3822, CVE-2018-16890)
  - Updated mosquitto to version 1.5.8
  - Updated dnsmasq to version 2.80
  - Updated iptables to version 1.6.2
  - Updated openssl to version 1.0.2s
  - Updated zlib to version 1.2.11
  - Updated hostapd to the 2018-05-21 version (fixes CVE-2019-9494, CVE-2019-9495, CVE-2019-9496, CVE-2019-9497, CVE-2019-9498, CVE-2019-9499, CVE-2019-11555)
  - Updated fstools to the 2019-03-28 version
  - Updated procd to the 2018-03-28 version
  - Updated rpcd to the 2018-11-28 version
  - Updated ubox to the 2018-02-14 version
  - Updated ubus to the 2018-10-06 version
  - Updated uci to the 2019-05-17 version
  - Updated Firewall to the 2018-08-13 version
  - Updated netifd to the 2019-01-31 version
  - Updated uhttpd to the 2018-11-28 version
  - Switched to mac80211 WiFi driver
  - Updated IPsec page
  - Updated DMVPN page
  - Updated Overview configuration page

- Fixes:
  - Fixed operator name parsing
  - Fixed serial reading
  - Fixed SIM card PIN code setting
  - Fixed I/O event handling
  - Fixed backup save after device restart
  - GPS init script fixes
  - IPsec page rework
  - Failover/Load Balancing mobile interface fixes
  - L2TP/PPTP/SSTP configuration fixes
  - TX power save setting fixes
  - Refactored profiles functionality
  - Added write to config option in Call Utilities
  - Wireless config migration fix
  - Firmware checksum fix

[RUTX_R_00.01.06](#) | 2019.07.24

- New features:
  - Added Wake on LAN feature
  - Added SSTP VPN support

- Added mobile bridge feature
- Added Status → Network page
- Added SIM Switch feature
- Added SMS Limit feature
- Added save and restore SIM PIN code from flash
- Added feature to monitor switch port events
- Added Events Reporting send to RMS functionality
- Added FOTA support for RUTX08, RUTX10, RUTX11
- Added Modbus TCP master function

- Improvements
  - Added microcontroller version information
  - Updated Wireless page design and WiFi widget in overview page
  - Updated Overview widget style
  - Updated stm32 firmware
  - Updated LED logic
  - Changed check for new FW logic
  - WebUI style updates

- Fixes:
  - Fixed multiwan function. Changed firewall traffic control to routing rules control
  - NTP time zone display fix
  - LED functionality fix
  - Changed time function used for rollback timestamps
  - Login form updated and other fixes
  - Fixed firmware update checksum mismatch
  - lua error on map when GPS is disabled fix
  - Firmware update percentage and check box fix
  - LAN interface creation with short names fix
  - WAN state and IP print fixes
  - OpenVPN new port save in firewall rule fix
  - RUT FOTA bug fixes

RUTX_R_00.01.04.5 | 2019.06.14

- Improvements:
  - Revert settings logic updated

- Fix:
  - Firmware update checksum mismatch fix
  - DHCP dnsmasq fix
  - Wireless improvements and bug fixes
  - Increased RMS HTTP Proxy resource limit

RUTX_R_00.01.04.1 | 2019.05.17

- New features:
  - Add initial wireless support
  - Added SNMP support
  - Added Advanced Routing functionality
  - Added L2TP VPN
  - Added PPTP VPN

- Improvements:
    - Added signal strength logging and reporting to Events Log
    - Added authentic firmware check
    - OpenSSL updated to version 1.0.2r

- Fixes:
    - Wireless improvements and bug fixes
    - Fixed IPSec Phase 1 and Phase 2 keys lifetime not saving bug
    - Input Output improvements and bug fixes
    - Fixed router values sent from SMS utilities
    - WebUI style fixes
    - Fixed RMS proxy multiform submits

[RUTX_R_00.01.03](#) | 2019.04.25

- New features:
    - Adapted WebUI for RUTX08
    - Added DMVPN support
    - Added HTTP support
    - Added SMS message input field validation and counter
    - Added UPnP support
    - Added GRE Tunnel support
    - Implemented dynamic routing with BGP, OSPF, RIP, EIGRP and NHRP protocols
    - Added manual network band lock support
    - Added Events Log
    - Added Events Reporting

- Improvements
    - Updated OpenVPN client count to 20
    - WebUI style updates

- Fixes:
    - Profile scheduler fixes
    - Mobile service crash fix
    - Ping Reboot IP field validation fix
    - LED functionality related fixes

[RUTX_R_00.01.02](#) | 2019.03.19

- New features:
    - Added configuration profiles
    - Updated WebUI style
    - Added Reboot button

- Improvements:
    - curl updated to version 7.64.0
    - openssl updated to version 1.0.2q
    - dropbear updated to version 2018.76
    - busybox updated to version 1.28.3
    - ustream-ssl updated to latest version
    - OpenVPN updated to version 2.4.6

- OpenVPN-Easy-RSA updated to version 3.0.4
    - ubus updated to version 2018-10-06
    - uhttpd updated to version 2018-11-28
    - NTP updated to version 4.2.8p12

- Fixes:
    - Root CA validation and page style fixes
    - Hardware compatibility check fix
    - DDNS force IP renew fix
    - Site Blocking enable column fix
    - Don't show rules in Load Balancing mode when in failover page fix

[RUTX_R_00.01.01](#) | 2019.02.05

- New features:
    - Initial firmware release