

# RobustOS Firmware Release Notes

## NOTES

- This release notes mainly describe all-new features, fixes, and other changes implemented in the RobustOS LTS (Long Term Support) version. Firmware upgrade information about all LTS versions will accumulate in this release note so that you can check the history here.
  - This release note applies to all routers using **RobustOS 5.x** version.
  - The firmware name prefix corresponds to the supported product models:
    - ❖ m120x : M1200, M1201
    - ❖ r1500 : R1500
    - ❖ r151x : R1510, R1510Lite, R1511, R1511P, R1511PL
    - ❖ r1520 : R1520
    - ❖ r201x : R2010, R2011
    - ❖ r3000 : R3000, R3000Lite, R3000Q
    - ❖ r3000lg : R3000LG
    - ❖ r2110 : R2110
    - ❖ r5020 : R5020
    - ❖ r3010 : R3010
  - Firmware from V3.x.x upgrade to **RobustOS5.x** requirements:
    - ❖ R5020 must upgrade the intermediate version firmware (V3.1.8 or later) before upgrading the RobustOS 5.0 firmware.
    - ❖ R3000LG must upgrade the intermediate version firmware (V3.1.9 or later) before upgrading the RobustOS 5.0 firmware.
    - ❖ R3010 must upgrade the intermediate version firmware (V3.1.3 or later) before upgrading the RobustOS 5.0 firmware.
    - ❖ Other devices can directly upgrade to the RobustOS 5.0
- Note:**
- ❖ Please be aware that if you downgrade the firmware from V5.x.x to V3.x.x, the router will reset the user management feature parameter to default, and you also need to clean the browser cache.
  - ❖ Please check the compatible module information of the firmware version before upgrading.
  - ❖ Starting from RobustOS V5.1, firmware updates no longer support R2000 series.

---

## VERSION V5.1.0

Release Date: January 13, 2023

Previous Version: V5.0

## NEW FEATURES

1. Added feature of disabling the network port.
2. Added support for OpenVPN-Client backup mode.
3. Added support to view the network status through the CLI "status active\_link" command.
4. Added support for user role management.
5. Added option to configure the default rules of the INPUT chain on the WAN and LAN sides.
6. Added support for SFTP feature.
7. Added support for importing custom files.
8. Added support for importing custom APN list feature.
9. Added support for GRE interface configuration MTU feature.
10. Added support for GPS to add message station prefix feature.
11. Added feature of switching links immediately after the physical connection of the device WAN is disconnected.
12. Added support for deep recovery.
13. Added support to view all configurations of the current device through CLI "show all" command.
14. Added 'link\_connect' and 'link\_disconnect' script whitelist.
15. Added support for DI Counter timing reset feature.
16. Quectel module supports DFOTA feature.
17. R151x/R201x/R1520 supports WPA3 in Wi-Fi AP mode.
18. R1520 added support for serial port redirection.
19. R3000 LG added support for LoRa packet filtering feature.
20. R3000 Series/R3000 LG/R3010 added support network port specified negotiation mode.

## ENHANCEMENTS

1. Optimized Wi-Fi initial SSID and password.
2. Optimized the display of expandable status pages.
3. Optimized 5G status display.
4. Optimized display of cellular module status page.
5. Optimized OpenVPN and IPsec long text box certificate editing mechanism.
6. Optimized operating mode of ML620EU module.
7. Optimized USB connection stability.
8. Optimized SMS sending function.
9. Optimized the number of serial socket connections, and increase the maximum number of connections to 8.

10. Optimized the Event function.
11. Optimized the DI Counter function and add DI Counter timestamp.
12. Optimized R3000 LG LoRa page information display.
13. Optimized module support list of Verizon Auto APN.
14. Optimized Socket policy creation of Serial Port service. When the creation fails, keep trying to create it until succeed.

## BUGS FIXED

1. Fixed security loopholes and enhance system security.
2. Fixed issue where GRE and IPsec could cause the device to reboot under certain circumstances.
3. Fixed issue of 2.4 GHz channel selection.
4. Fixed issue of OpenVPN connection failure and static routing not taking effect.
5. Fixed issue of starting App after the IP Passthrough feature is enabled when device restarted.
6. Fixed issue that the NTP time server could not be manually synchronized.
7. Fixed issue that status of WAN traffic of a single SIM card device does not display.
8. Fixed issue that "\" or double quotation marks cannot be included in SMS content.

## KNOWN BUGS & LIMITATIONS

1. When IP Passthrough feature is enabled, when the IP address of cellular module changes, the device connected to LAN port of router/gateway needs to disconnect the Ethernet port to obtain latest IP address assigned by cellular module

## COMPATIBLE MODULES

EC25, EG25-G, EC200S, EC200T, EC200N, EC200A, ME3630, ML620, EP06, BG95, BG96, UC20, RM500Q, RM500U, RM520N, CUIoT-5GMZ-6M

## OTHERS

N/A

---

## VERSION V5.0.0

Release Date: August 10, 2022

Previous Version: N/A

## NEW FEATURES

1. Firewall IPset feature
2. GRE VPN TAP feature
3. SmartRoamingV2

## ENHANCEMENTS

1. Added support for the EC200A module
2. WireGuard support import and export configuration feature
3. Added support for selecting "Wireless mode" for R3000 WiFi devices: 11b, 11g, 11n, 11b/g/n
4. Added support for the single and double quotes for SMS testing
5. Added MTU parameter configuration and status display of WWAN interface
6. Added firewall interface rules label to prevent accidental deletion of firewall rules of other applications
7. Added APP deletion prompt
8. Added support for NTP time synchronization from LAN
9. Added NMEA sentences forwarding to server
10. Added firewall status display NAT table-related rules
11. Added Modem status to the home page
12. Added support for disabling WiFi group key update for R3000, R2000, and 151X series devices
13. Added support for millisecond level settings in the PING detection
14. Modified the "WWAN ->Data Allowance" parameter range to 0 - 2147483646
15. Modified "Link Manager-> Backup\_Link" default parameter to None
16. Optimized the operation method of restoring default configurations and restoring factory configurations
17. Optimized the running status of the language APP
18. Optimized MAC address allocation rules: WIFI MAC address is generated based on LAN0 MAC
19. Added year information to Syslog
20. Removed the E2C Broker in the firmware and integrated it into the northbound APP
21. Updated the WiFi driver of R3000 series devices
22. Updated Copyright's Year Information
23. Updated R3000 series device kernel version to 5.10.50
24. Updated dnsmasq to version 2.86
25. Updated gmp to version 6.2.1
26. Updated sqlite to version 3.37.2

27. Updated contrack-tools to version 1.4.6
28. Updated libnetfilter\_contrack to version 1.0.8
29. Updated libnetfilter\_queue to version 1.0.5
30. Updated klish to version 1.7.1
31. Updated iptables to version 1.8.7
32. Updated lzo to version 2.10
33. Updated msmtplib to version 1.8.19
34. Updated ntp to version 4.2.8p15
35. Updated openssh to version 8.8p1
36. Updated libpcap to version 1.10.1
37. Updated ipset to version 7.15
38. Updated libxml2 to version 2.9.11
39. Updated rp-pppoe to version 3.15
40. Updated zlib to version 1.2.11
41. Updated wireguard-tools to version 1.0.20210914
42. Updated mosquito to version 2.0.14
43. Updated nopoll to version 0.4.1.b265
44. Updated openhrp to version 0.14.1
45. Updated libpg-error to version 1.43
46. Updated libcrypt to version 1.8.8
47. Updated mutt to version 2.1.5
48. Updated paho.mqtt.c to version 1.3.9
49. Updated wireless-regdb to version master-2021-08-28
50. Updated openldap to version 2.4.59
51. Updated sscep to version 0.9.1
52. Updated ncurses to version 6.1
53. Updated mtd-utils to version 2.1.1
54. Updated can-utils to version 2021.08.0
55. Updated wpa\_supplicant to version 2.9
56. Updated net-snmp to version 5.9.1
57. Updated c-ares to version 1\_18\_1
58. Updated hostapd to version 2.9
59. Updated libiconv to version 1.16
60. Updated pam\_tacplus to version 1.6.1
61. Updated arptables to version 0.0.4
62. Updated dosfstools to version 4.2
63. Updated dropbear to version 2020.81
64. Updated e2fsprogs to version 1.46.5
65. Updated expat to version 2.4.2
66. Updated openvpn to version 2.5.5

## **BUGS FIXED**

1. Fixed CVE-2022-33329 command injections vulnerabilities of WEB Server
2. Fixed CVE-2022-33328 command injections vulnerabilities of WEB Server
3. Fixed CVE-2022-33327 command injections vulnerabilities of WEB Server
4. Fixed CVE-2022-33326 command injections vulnerabilities of WEB Server
5. Fixed CVE-2022-33325 command injections vulnerabilities of WEB Server
6. Fixed CVE-2022-33314 command injections vulnerabilities of WEB Server
7. Fixed CVE-2022-33313 command injections vulnerabilities of WEB Server
8. Fixed CVE-2022-33312 command injections vulnerabilities of WEB Server
9. Fixed CVE-2022-32585 command execution vulnerability of WEB Server
10. Fixed CVE-2022-28127 data removal vulnerability of WEB Server
11. Fixed plain text password storage
12. Fix the problem of low probability startup failure of R3000LG

## **KNOWN BUGS & LIMITATIONS**

N/A

## **COMPATIBLE MODULES**

EC25, EG25-G, EC200S, EC200T, E2000A, EC200N, ME3630, EP06, BG95, BG96, RM500Q, RM500U

## **OTHERS**

N/A