

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,R5020Lite
 - ❖ 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 V5.2.2

Release Date: January 31, 2024

Previous Version: V5.2.1

NEW FEATURES

N/A

ENHANCEMENTS

1. Added support for IPsec VPN GCM functionality.
2. Added support for WLAN traffic statistics function.
3. Added support for WLAN traffic statistics events.
4. Added support for daily traffic statistics on WAN and WLAN interfaces.
5. Optimized the R2110/R5020/R5020lite partition to solve the problem of firmware exceeding 10M.
6. Optimized the Link Manager PING detection backup server address to 1.2.4.8.
7. Optimized certificate management. When the device saves the configuration, it will check whether there are any changes to the certificate and update it only if there are any changes.
8. Optimized the software restart mechanism. The device needs to be restarted when saving the configuration, and needs to wait until the configuration is saved before restarting.
9. R2110/5020/R5020lite added support for specifying a 1000M Ethernet port rate.
10. R1520/R201x series/R151x series added support for specified network port speed.
11. R151X series added support for SLM770A.
12. The EC25J module added support for DFOTA functionality.

BUGS FIXED

1. Fixed an issue where the imported OVPN file containing auth-user-pass would cause the device to fail to save configuration and restart when OpenVPN uses Auto mode.
2. Fixed the problem of SNMP failure to read RSRP.
3. Fixed the issue that the R2110/R5020 could not mount an SD card with partitions.
4. Fixed the issue where no event was generated when the traffic limit set in link manager exceeded the threshold.
5. Fixed the issue that the IP address of the cellular module (EC200A) could not be obtained from the downstream device after IP Passthrough was enabled.
6. Fixed the problem that event information could not be obtained when executing the status event command in CLI mode.
7. Fixed the problem of low probability of Uboot being modified after restarting R201x/ R2110/ R5020/R5020 lite

8. Fixed the issue that IP address assignment was incorrect when modifying WiFi configuration after Captive Portal was enabled.

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, SLM750, ML620DE, SLM770A, RM500Q, RM500U, RM520N, CUIoT-5GMZ-6M

OTHERS

R5020Lite only supports upgrade from V5.0.0.2 and V5.0.0.5 to V5.2.0

VERSION V5.2.1

Release Date: November 6, 2023

Previous Version: V5.2.0

NEW FEATURES

N/A

ENHANCEMENTS

N/A

BUGS FIXED

1. Fixed the abnormal use problem of R2110/R5020/R5020lite WireGuard feature.
2. Fixed the problem of QoS speed limit failure.
3. Fixed the problem of abnormal usage of ACC feature.
4. Fixed the issue of incomplete system log sending.
5. Fixed the problem of DynDNS connection error.

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

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OTHERS

R5020Lite only supports upgrade from V5.0.0.2 and V5.0.0.5 to V5.2.0

VERSION V5.2.0

Release Date: September 28, 2023

Previous Version: V5.1.6

NEW FEATURES

1. Added WiFi STA status information on the home page (only for devices that support WiFi).
2. Added support for SpeedTest tool.
3. Added support for SLM750, ML620DE, and SLM770A modules.
4. Added support for R5020Lite.
5. Added support for PPPoE Bridge feature.

ENHANCEMENTS

1. Updated the R2110/R5020/R5020Lite kernel version to 5.4.179.
2. Updated R2110/R5020/R5020Lite WiFi driver.
3. R2110/R5020 series/R151X series/R1520/R201X series supports WPA3 in Wi-Fi AP mode.
4. R2110/R5020 series/R151X series/R1520/R201X series support running WiFi AP and WiFi Client modes at the same time.
5. R2110/R5020/R5020Lite supports WiFi EAP-TLS authentication method.
6. Optimized the speed of L2TP VPN.
7. Added support for customizing the reporting interval of GPS data.
8. Added support for deleting CR and LF characters of GPS data.
9. Added support for custom WEB tags.
10. Added support for limiting the number of SMS sent by the SIM card.
11. Added support for displaying ENDC status in cellular status.
12. Added support for disabling DNS resolution feature.
13. Added the Contrack Flush feature to be enabled by default.
14. Added firewall support for WebFilter feature.
15. Added OpenVPN support for SHA384 authentication algorithm and TLS Crypt.
16. Added DI Counter to support reservation clearing feature.
17. Added support for configuring RSRP threshold in event feature.
18. Added support for Ethernet port UP/Down events.
19. Added support for daily traffic statistics events.
20. Optimized the log format to comply with RFC5424 specification.
21. Optimized the login security feature.
22. Optimized the TCP Server feature of the serial port.
23. Optimized OpenVPN's backup server address configuration to support being empty.

24. Updated the auto mode name in the WPA Version of WIFI to WPA/WPA2.
25. Updated the upload file size limit for R151x/R1520/R201x to 30MB.
26. Updated the name of DO status.
27. Updated the CA certificate list.

BUGS FIXED

6. Fixed displaying wrong 5G network type when registering EN-DC network.
7. Fixed the problem that when WAN PPPoE+L2TP VPN is used at the same time, the WAN link and L2TP VPN keep restarting.
8. Fixed the problem of incomplete firewall domain name resolution.
9. Fixed the conflict between IPSecVPN interest flow and LAN.
10. Fixed the problem of low probability of restart failure using the reboot command.

KNOWN BUGS & LIMITATIONS

2. 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

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OTHERS

R5020Lite only supports upgrade from V5.0.0.2 and V5.0.0.5 to V5.2.0

VERSION V5.1.0

Release Date: January 13, 2023

Previous Version: V5.0

NEW FEATURES

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

ENHANCEMENTS

28. Optimized Wi-Fi initial SSID and password.
29. Optimized the display of expandable status pages.
30. Optimized 5G status display.
31. Optimized display of cellular module status page.
32. Optimized OpenVPN and IPsec long text box certificate editing mechanism.
33. Optimized operating mode of ML620EU module.
34. Optimized USB connection stability.
35. Optimized SMS sending feature.
36. Optimized the number of serial socket connections, and increase the maximum number of connections to 8.

37. Optimized the Event feature.
38. Optimized the DI Counter feature and add DI Counter timestamp.
39. Optimized R3000 LG LoRa page information display.
40. Optimized module support list of Verizon Auto APN.
41. Optimized Socket policy creation of Serial Port service. When the creation fails, keep trying to create it until succeed.

BUGS FIXED

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

KNOWN BUGS & LIMITATIONS

3. 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

Starting from V5.1.0, subsequent firmware no longer supports the R2000 series.

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 mosquitto to version 2.0.14
43. Updated nopoll to version 0.4.1.b265
44. Updated opennhrp to version 0.14.1
45. Updated libpg-error to version 1.43
46. Updated libgcrypt 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