RELEASE NOTES

LCOS LX

7.12 RU2

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1. Preface

The LCOS family of operating systems—LCOS, LCOS SX, LCOS LX, and LCOS FX—forms the trusted basis for the entire R&S®LANCOM range of products. Within the scope of the hardware specified by the products, the latest firmware version is available for all R&S®LANCOM products and is offered by Rohde & Schwarz Networks and Cybersecurity for download free of charge.

This document describes the innovations within LCOS LX software release 7.12 RU2, as well as the improvements since the previous version.

Before upgrading the firmware, please pay close attention to chapter 7 „General notes“ of this document.

Latest support notes and known issues regarding the current LCOS LX version can be found in the support area of our website.

2. The release tag in the software name

Release Candidate (RC)

A Release Candidate has been extensively tested by Rohde & Schwarz Networks and Cybersecurity and includes new LCOS features. It is suitable for testing and is not recommended for use in productive environments.

Release Version (REL)

The release version has been extensively and successfully tested in practice. It contains new features and improvements over previous operating system versions and is therefore recommended for use in productive environments.

Release Update (RU)

A release update is a further development of an initial release version in productive environments and contains minor improvements, security fixes, bug fixes and smaller features.

Security Update (SU)

Contains important security fixes for the respective operating system version and ensures that your security level remains very high on an ongoing basis in your productive environment.

3. Device-specific compatibility to LCOS LX

R&S®LANCOM products regularly receive major firmware releases throughout their lifetime which provide new features and bugfixes. LCOS LX release updates including bugfixes and general improvements are available on a regular basis for devices which do not support the latest LCOS LX version. You can find an overview of the latest supported LCOS LX version for your device under Lifecycle policies.

4. Notes on LCOS LX

Information on default settings

Devices delivered with LCOS LX automatically connect to the R&S®LANCOM Management Cloud (R&S®LMC). This functionality provides zero-touch installation for new devices. In case you do not want to use the R&S®LMC, this feature can be disabled while running the default setup wizard for the initial configuration, or at any time from within LANconfig under Management > LMC. You can manually re-enable the usage of the R&S®LMC whenever you want.

5. Known restrictions

- Local configuration changes are not transferred to the R&S®LMC.
- The scripting of the device from the R&S®LMC is currently not supported, but the use of add-ins is.

6. History LCOS LX

LCOS LX - improvements 7.12.0098 RU2

Bugfixes / improvements

- The DHCPv6 IAID (Identity Association Identifier) in DHCPv6 requests was generated randomly instead of being generated statically.
  The DHCPv6 IAID is now generated based on the interface MAC address.
- The DHCPv6 client sent DHCPv6 solicit packets at very short intervals when no DHCPv6 server responded.
  The timer for sending DHCPv6 solicit packets now increases.

LCOS LX - improvements 7.12.0097 RU1

Bugfixes / improvements

- An update to the glib program library has fixed security vulnerabilities described in the following CVEs: [1]
  - CVE-2025-6052
  - CVE-2024-34397
  - CVE-2024-52533
  - CVE-2025-4056
- An update to the libxml2 program library has fixed security vulnerabilities described in the following CVEs: [1]
  - CVE-2025-32414
  - CVE-2025-32415
- A security vulnerability in the message bus 'ubusd' described in CVE-2025-62526 has been fixed. [1]
- The value for the transmission power (EIRP) could be specified as a 3-digit number.
- The TFTP server only listened to IPv4 addresses. As a result, the system information could not be read via IPv6, and devices with IPv6 addresses could not be found in LANconfig.
- When the command 'ls /Status/Bridge/VLAN-Table/' was entered in the command line of an access point or the command 'ls' was entered in the path 'Status/Bridge/VLAN-Table/', the device suddenly restarted.
  This issue has been fixed.
- If changes were made to the 'Setup/Bridge/DHCP Snooping' table via the command line that contained a placeholder for writing to multiple columns in the command (e.g., "set NETWORK %i"), the access point would suddenly restart.
- If a bit mask with a value of 4 or higher was set for the 'WPA2-3 session key types' in the console path 'Setup/WLAN/WDS/Encryption', this caused the access point to restart unexpectedly.
- When a R&S®LANCOM LX-7200 / LX-7200E was operated in PoE mode 802.3af, the access point incorrectly displayed "Fully Operational" as the power status in the console path 'Status/Hardware/Power', even though functionality was limited. Furthermore, in the 'Status/Hardware/Power/Ports' path, port ETH2 was labeled 'DC'.
- It was not possible to change to a table entry using the console command 'cd' if the index contained the character '-' or if the index was not in the first position in the entry.
- The internal name of the packet filter rules for client isolation may be up to 31 characters long. If the configured name for the Wi-Fi network was too long, this limit was exceeded and the packet filter rule could not be written. As a result, the stored destination could not be reached by the isolated Wi-Fi clients.

1 Rohde & Schwarz Networks and Cybersecurity keeps all program libraries used in LCOS firmware up to date with the latest security patches and fixes security vulnerabilities even if they cannot be exploited in the firmware.

LCOS LX - improvements 7.12.0042 Rel

New Features

- DHCP Option 82: DHCPv4 Circuit ID and Remote ID can be inserted into DHCP requests.
- mDNS-Filter
- Cloud-based hotspot: Walled garden hosts (free hosts/networks) can be configured.
- Cloud-based hotspot: Destinations in RFC1918 networks can be selectively enabled.

Bugfixes / improvements

- When MLO was active, the ARC scan did not work on access points with Wi-Fi 7 support (R&S®LANCOM LW-700, LX-7200, LX-7300, LX-7400, and LX-7500). Furthermore, after performing the ARC scan, no more Wi-Fi was broadcast.
- If a connected USB dongle failed, communication with the USB dongle was not possible even after switching the power supply for the USB port off and on again.
- Access points with external Wi-Fi antennas interpreted the value transmitted by the WLAN controller for the standard antenna gain as 0, instead of using the standard antenna gain of the supplied rod antennas.
- In rare cases, the power LED on the access point lit up yellow instead of green when PoE negotiation was performed via LLDP. This was purely a display error. Performance was not affected.
- A configured bandwidth limitation (client Rx/Tx limit) was not applied when working with a static VLAN in the scenario.
- When using the LMC hotspot with static VLANs, if the access point received a packet that was too large and had to be fragmented, only the first fragment was transmitted and the other fragments were discarded. This resulted in severely restricted communication.
- LLDP negotiation for PoE did not function correctly with HPE Aruba switches on the R&S®LANCOM LX-7300 and LX-7500 access points. As a result, the access points received insufficient power from the switch and did not broadcast any SSID(s).
- The program libraries libpcap, apr (Apache Portable Runtime), and libxml2 have been updated to fix security vulnerabilities described in the following CVE reports:
  - libpcap: CVE-2023-7256, CVE-2024-8006
  - apr: CVE-2022-24963, CVE-2022-28331, CVE-2021-35940
  - libxml2: CVE-2024-25062
- Transmit power reduction configured in the WLAN controller was only active when the antenna gain mode was set to ‘custom’. Transmit power reduction is now active regardless of the antenna gain mode setting.

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7. General notes

Disclaimer

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Backing up the current configuration

Before upgrading your R&S®LANCOM devices to a new LCOS LX version it is essential to backup the configuration data!

Due to extensive features it is **not possible to downgrade** to a previous firmware without using the backup configuration.

Please see the LCOS LX reference manual for instructions on how to upgrade the firmware.

We strongly recommend updating productive systems in client environment only after internal tests.

Despite intense internal and external quality assurance procedures possibly not all risks can be eliminated by Rohde & Schwarz Networks and Cybersecurity.

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