

Information regarding

LCOS Software Release 3.36

for LANCOM Router and Wireless LAN Access-Points

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1. Introduction

LCOS („LANCOM Operating System“) is the operating system for all Wireless LAN Access Points and Routers. In the context of the hardware given by the products the at a time latest LCOS version is available for all LANCOM products and is available free of charge for download from LANCOM Systems.

This document describes the innovations within LCOS software release 3.36 as well as the modifications from release update 3.22.

2. LCOS modifications from 3.32.0015 -> 3.36.0018 (at present only for LANCOM 7011 VPN, LANCOM 1811 Wireless DSL and LANCOM 8011 VPN available)

Corrections/modifications:

VPN:

- Improvement of the VPN connection establishment, when at the same time many VPN connections are being initialized on one centre.
- The firmware now supports the VPN hardware acceleration of the LANCOM 1811 wireless DSL. For this purpose a 25er-VPN-Option needs to be activated on the router.
- In the VPN-statistic now also the global number of the VPN tunnels is listed.

Firewall:

- The forwarding of the GRE- and ESP-fragments in the firewall has been corrected.

Miscellaneous:

- The memory management of the router has been improved.

LCOS modifications from 3.32.0015 -> 3.34.0011

Corrections/modifications:

Firewall:

- Minimum ranges for the receive direction are now being reset, if these were not more requested for the UDP timeout. Thus the band with reservation is being reset, if no more data packages are flowing to the firewall.

Stability:

- 3 VPN connections, which are using the Aggressive-Mode, can cause the routers to reboot. Here the memory allocation has been modified.
- 3 It was possible that the router was rebooting when the router was accessed via WEBconfig. This configuration method has been improved
- 0 The stability of the firmware has been improved.

Miscellaneous:

- 0 The broadcast mode of the integrated NTP server within LANCOM has been corrected so that now the packages are sent from port 123 as port of origin.
- 0 The accessibility of the NetBIOS server which is available in the Network is being examined, so that with meshed networks NetBIOS packets do not form a loop.
- 0 The evaluation of the real time of the CRON table has been improved, so that now the instruction is not several times implemented within one minute.
- 0 The examination of the NetBIOS rights has been corrected for the LAN forwarding.

LCOS modifications von 3.22.0007 -> 3.32.0015

New Features:

- 0 DNS tables have been expanded from 64 entries to 256 entries.
- 0 The IP router trace has been revised:
 - Against the routing method the TOS field respectively the DiffServ code point is displayed in the IP router trace.
 - For TCP packages the flags (FIN, SYN, RST, PSH, ACK, URG, ECN, CWR) are being displayed.
 - ICMP packages are being displayed by type and also the embedded IP header where applicable.
 - With GRE packages, if the PPTP is being transmitted with, the Call-ID is being displayed.
 - With ESP and AH packages the SPI and sequence numbers are being displayed.
- 0 The ARCOR DSL internet assistant has been expanded by two new UR-2 connections.
- 0 Revision of the WLAN trace. The WLAN trace now also shows data over the send/received packages.
- 0 A MAC address can now be assigned manually to the WAN-Interface.
- 0 Now the device type and the firmware version are being displayed in the Boot log of the router for making it easier to allocate errors to the various Firmware versions.
- 0 The DHCP trace has been expanded, so that also WAN-sided outgoing packages are being displayed.
- 0 The Telnet menu item /Status/IP router statistics has been expanded by the statistic "QoS-statistics", which states for all physical channels if there exists a receiver-sided band with reservation and if packages are being fragmented.
- 0 Shared Key Authentication with WEP now is also available in the client mode.
- 0 Expanded Quality-of-Service functions for optimal Voice-over-IP speech quality (also over VPN-connections).
- 0 N:N IP-Address implementation for all LANCOM products with VPN-function.
- 0 VLAN-support for LANCOM Wireless products.
- 0 The routers supports the FTP-auto detect. An FTP-server thus can be addressed via any port.
- The two-party VPN-license is being expanded to a five-party VPN-license.
- A five-party VPN-license is activated automatically (software encryption) for the devices LANCOM DSL/I-1611 Office, LANCOM 1621 ADSL/ISDN, LANCOM 1811 Wireless DSL and LANCOM 1821 Wireless ADSL.

Corrections/modifications:

VPN:

- 0 The PPTP masking has been revised for ensuring e.g. the PPTP connection between 2 Microsoft ISA-Servers.
- 0 The VPN-stability during rekeying has been improved.
- 0 Dialup problems with the LANCOM VPN client and the dynamic address allocation have been solved.
- 0 VPN connections now get not more build up and released through unnecessary D-channel trigger calls.

Firewall:

- 0 If a packet is received from the WAN which is addressed to an LAN broadcast address, it is forwarded normally over the router and checked by the firewall.

WLAN:

- 0 The reply packets of the ARP-requests, which are running via DSLoL in the WLAN, are being handed over to the right interface so that the reply packets can be received. This e.g. makes an IP masking on a WLAN tunnel possible, where an access point is used as a client.
- 0 The Wireless menu item "data traffic between the individual stations" has been revised. A global forbiddance of the WLAN communication does not anymore affect the access points which share a point-to-point connection.
- 0 The noise level in the 2,4 GHz band is calibrated regularly.
- 0 A high level of broadcast inquiries in the LAN does not lead anymore to the loss of packets at WLAN stations in power-saving-mode.
- 0 If the access point is operated in the client-mode and the Authentication is being refused (e.g. through variably set radio communication standards), it was possible in earlier versions that the access point rebooting permanently.
- 0 The scan mode (active or passive) in the client mode is now selected compatible for each channel. Thus closed-network can also be used in case the 5 GHz-band should be searched.

Stability:

- 0 The firmware stability has been improved.
- 0 In case an access point is being rebooted due to an alive-test, it now always gets started with the right firmware-version.

Miscellaneous:

- 0 The generation of the MIB-file with an LANCOM 1621 has been corrected regarding the special characters.
- 0 The release of the ISDN backup line is being carried out when the DSL line is available again.
- 0 Multicasts are not anymore answered with ICMP (RFC 1812).
- 0 The sending of e-mails through the router has been revised since it was possible that emails occasionally could not been sent.
- 0 The timeout for the WAN-sided DHCP client has been raised to 1 minute.

3. Remarks

In case you want to upgrade your device to a new version, first please install the latest LANtools. Afterwards you can start the program LANconfig and load the latest LCOS-version to the device via the button „Firmware-Upload“. Before running the firmware-upload you should backup the configuration file of the router.

Please note that for you device various Upload-files can be available. Further information regarding this matter can be found in the README.PDF file in the download area of your device on our homepage.