RAy3-80 - Firmware Release Notes

Firmware for units operating in 80 GHz band, not installable on units operating in 10-24 GHz bands.

Release 1.1.10.0

2025-02-10

Warning

For security reasons, DSS-encrypted keys are no longer supported for SSH access to the CLI. Supported encryption types are RSA, ECDSA, and ED25519. After upgrading to the new firmware, it will no longer be possible to connect to the unit using a DSS-encrypted key. Therefore, it is necessary to replace such keys before upgrading the firmware.

- New features:
  - Updated display of historical data – new graphs, smoother navigation through historical values
  - For security reasons, DSS-encrypted keys are no longer supported for SSH access to the CLI
  - Security libraries updated
  - Company logo updated
- Fixed bugs:
  - Slow GUI loading – fixed
  - In some cases, a long outage on one side of the link prevented the connection from being re-established – fixed
  - Saving a new SNMP community string value failed if SNMP was simultaneously activated – fixed
  - The LSP settings on the Alarms > Config screen did not update after loading a configuration from a backup file – fixed
  - Generating a configuration file for backup purposes took a relatively long time when called via the GUI – fixed
  - Certain configuration changes on the Peer side caused LSP to be unintentionally activated – fixed
  - IGMP snooping on the internal Ethernet switch has been disabled, as it caused the switch to block IGMP and MLD frames.
  - The Tx power value in graphs was displayed with an incorrect decimal point (showing 10 times lower power) – fixed
  - The command cli_cnf_set USB_WIFI=off or cli_cnf_set USB_WIFI_AUT=off caused an unintended reboot of the unit – fixed
  - When connecting via the service USB interface and updating configuration parameters in the USB accessories > WiFi adapter section, access through this interface stopped working – fixed
  - The command cli_cnf_backup_get resulted in an error – fixed
  - The ETH2 port sometimes failed to return to the "link up" state after LSP functions were disabled – fixed

Release 1.1.8.0

2024-10-11

- New features:
  - The LSP function has been extended to include the ability to shut down Ethernet port(Link down / SFP off).
- Fixed bugs:
  - ACM fixed to be able to reach modulations up to 256QAM

Release 1.1.7.0

2024-06-28

- New features:
  - The LSP function has been extended to include the ability to disconnect the backup port to prevent the creation of a loop.
  - Implementation of static configuration of the SyncE synchronization source
  - Set of supported Forward Security ciphers was extended.
  - The Factory settings function has been expanded to include the option to delete only historical data (errors, alarms, graphs).
  - For new HW versions (available from July 2024) higher modulations up to 256QAM are now available on 250 MHz - 1250 MHz channels.
- Fixed bugs:
  - Fixed a delay when logging into the web configuration interface
  - Fixed auto-negotiation when connecting two RAy3 units directly
  - Fixed several broken links in the Help, they were referring to the Login screen
  - Fixed occasional incorrect setting of ETH port

Release 1.1.5.0

2024-02-09

- New features:
  - Factory settings
    - Factory settings now does not delete SW keys
    - Added Total purge option, which deletes all user data in the unit including all logs and SW keys
  - The Tools > Maintenance > Backup screen has been simplified and made clearer
  - The LSP function has been extended by the possibility of interconnecting ETH ports when it is activated. This function is subject to further modifications - please read additional information in the user manual chapter *5.4.2.3. Link State Propagation (LSP)*[1].
- Fixed bugs:
  - If the unit is overwhelmed by requests for new connections to management, these are rejected to avoid CPU congestion of the unit
  - Fixed listing of ATU tables for various FIDs
  - Occasional TX power decrease after the change of modulation (even with ATPC off) – fixed
  - Fixed the formatting of the listing on the header bar when the LSP function is enabled
  - Fixed LSP behavior after bandwidth change
  - Behavior of SNMP traps “Air capacity changed” and “LSP activated” is not correct – fixed
  - The SNMP trap "LSP activated" has been expanded to include the current state of the LSP
  - Setting IP tables during reconfiguration has been fixed
  - Fixed an incorrect configuration rollback function in some situations that led to the need to perform factory settings
- Known issues:
  - Universal 10G SFP+ modules can not be set by the unit for speeds 2.5 and 5 Gbps

Release 1.1.4.0

2023-11-24

[1] https://www.racom.eu/eng/products/m/ray3/conf.html#conf-link-rad-lsp-f

- New features:
  - Spectrum analyzer
  - Replacement of the parameter “ACM min TX modulation” by the new functionality ‘Link State Propagation’ (LSP). LSP disables user data transmission when the link speed drops below the preset threshold.
  - Remote unit management is now accessible also via Local unit management IP using port forwarding. It is useful in situations when internal switch configuration does not enable access to the Remote unit IP (e.g. when two ETH ports are completely separated in order to serve different customers).
- Fixed bugs:
  - Known issues related to “ACM min TX modulation” parameter (including modulation freezing at the minimum value)
  - SNMP alarms
  - FlowControl on SFP port
  - Correct indication of inserted SFP module
  - Other minor issues and improvements
- Known issues:
  - Universal 10G SFP+ modules can not be set by the unit for speeds 2.5 and 5 Gbps
  - Occasional TX power decrease after the change of modulation (even with ATPC off)
  - Behavior of SNMP traps “Air capacity changed” and “LSP activated” is not correct

Release 1.1.3.0

2023-10-18

- Fixed bugs:
  - STP/RSTP packets can be blocked in certain situations - fixed
  - Unintentional “TX power” change after link disconnection (FW 1.1.2.0 affected) - fixed
- Known issues:
  - Some SNMP alarms are incorrect
  - Spectrum analyzer not available
  - Universal 10G SFP+ modules can not be set by the unit for speeds 2.5 and 5 Gbps
  - The modulation sometimes freezes at the minimum value
  - “ACM min TX modulation” parameter sometimes does not limit modulation level and the modulation goes below the given limit.
    Workaround: Do not use “ACM min TX modulation” parameter - keep default lowest modulation level “2PSK_BW/4_S”.
  - When the “ACM min TX modulation” parameter is used and the modulation goes below the given limit (see above), the modulation sometimes does not return to higher level.
    Workaround: Change “ACM min TX modulation” to the lowest level (“Apply” changes) and then back to the original value (“Apply” changes).
    Note: Changes to modulation settings are hitless.

Release 1.1.2.0

2023-09-04

- New features:
  - Complete Ethernet switch configuration (identical Switch menu functions like other RAy3)
  - TX mute (possibility to suppress radio transmission)
  - Fast ATPC reaction (better adaptation to sudden weather changes)
  - Default WiFi channels are 5 and 9 (different for L and U unit)
- Fixed bugs:

  - Default MTU is 10240 Bytes
  - Configuration backup is working
  - Freezing after pressing virtual button “Restore switch settings (Local)” (by a mouse) is eliminated
  - WiFi under active “Air link loss” and units disconnection is activated
  - Sending of LLDP packets is possible
  - RAyTools ver.3 displays correct RSS values during antenna alignment
  - Link Authorization Guard function is correct
- Known issues:
  - Spectrum analyzer not available
  - Universal 10G SFP+ modules can not be set by the unit for speeds 2.5 and 5 Gbps
  - The modulation sometimes freezes at the minimum value
  - STP/RSTP packets can be blocked in certain situations
    Workaround: Add entry into ATU table enabling Bridge Group address. Use menu ('Switch settings / Advanced / ATU')
    MAC = 01-80-C2-00-00-00
    Entry state = “static management”
    Port association = “Eth1”, “Eth2”, “Air”
  - “ACM min TX modulation” parameter sometimes does not limit modulation level and the modulation goes below the given limit.
    Workaround: Do not use “ACM min TX modulation” parameter - keep default lowest modulation level “2PSK_BW/4_S”.
  - When the “ACM min TX modulation” parameter is used and the modulation goes below the given limit (see above), the modulation sometimes does not return to higher level.
    Workaround: Change “ACM min TX modulation” to the lowest level (“Apply” changes) and then back to the original value (“Apply” changes).
    Note: Changes to modulation settings are hitless.

Release 1.1.1.0

2023-05-22

First official FW release

- Available features:
  - Basic functionality (user interface identical with RAy3 for other bands)
  - All modulations, channels and speeds (up to 10 Gb/s)
  - Final bit rates and modulation names
  - Most of CLI commands
  - Complete SNMP (same MIB table like RAy3 for other bands)
  - API for new RAyTools ver.3
- Fixed bugs:
  - All issues found during Alpha and Beta testing of RAy3-80 HW and FW (conducted in labs and on several real links from November 2022 to May 2023).
  - Tuning of all FW parameters (ACMB, ATPC, etc.)
- Known issues (to be fixed/added in future FWs between August and December 2023):
  - Ethernet switch operates in default configuration only
  - Default MTU is 1522 Bytes (for longer MTU workaround please contact *support@racom.eu*[2])
  - Switch menu contains basic reporting only (RMON counters, SFP info)
  - Spectrum analyzer not available
  - Configuration backup not working
  - Universal 10G SFP+ modules can not be set by the unit for speeds 2.5 and 5 Gbps

[2] mailto:support@racom.eu

- Pressing virtual button “Restore switch settings (Local)” (by a mouse) leads to the frozen unit
- WiFi set to an “Air link loss” is not activated when the connection between units is lost (as it should)
- Allowance of sending LLDP packets works only for the local unit
- New RAyTools ver.3 shows “0 dBm” during antenna alignment (instead of measured Local “RSS” value)