### Release 2.2.2.0

2017-08-16

Note: FW Version 2.0.4.0 must be installed before upgrading to recent versions from 1.x

- · New features
  - New function 'Radio loopback' (accessible via CLI only) provides indicative measurement of XPD (cross polar discrimination). XPD is the ratio between desired signals on preferred
    polarization and signals on opposite polarization.
  - Informative LLDP frames containing basic information about management IP parameters now also available over the USB interface
  - Sending of informative LLDP frames can now be suppressed
  - · Additional items now available over the SNMP interface (ACM, ATCP, speed guard, active Frequency table name)
  - Unit management libraries (e.g. ssl) have been updated to more recent versions
  - The https protocol 3DES cipher has been disabled it is no longer treated as secure
  - New item 'Radio approval version' indicates changes in FW related to the radio
- · Antenna alignment application
  - Help screen added
  - Application can be launched directly from unit management login screen
- Fixed bugs:
  - · Incorrect behaviour when different versions of the Frequency table were selected on both sides of the link
  - o Incorrect behaviour when different versions of the FW were present (temporarily) on both sides of the link

### Release 2.1.28.0

2017-02-16

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- · New features:
  - WiFi drivers (realtek Edimax) were updated, new drivers (ralink Tenda) were added.
  - · WiFi management access is enabled by default now. The default status is without password. No password operation is monitored by system warning "WiFi management".
  - New web page for precise antenna alignment was added. The web page is optimised for smartphone display resolution. The signal strength/quality information is available in visual and audible form.
- Fixed bugs:
  - The 55 MHz channel in the 18 GHz band was fixed.

# Release 2.1.26.0

2016-10-21

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- New features:
  - Automated access to WiFi/[USB service port] based unit management when air connection broken
  - Manual control of the WiFi management system is monitored by a new system alarm (alarm severity = Warning). The alarm is accessible via SNMP protocol. SNMP trap can be generated. New MIB record was added.
  - Ability to Configuration an Ethernet network connected via service USB port provides more options

### Release 2.1.25.0

2016-09-16

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- Fixed bugs:
  - RAy2-18: Spectrum analyzer and ACM (On/Off switching) malfunction fixed.
  - Web: RMON counter label "Out filtered" corrected to "In accepted".

### Release 2.1.24.0

2016-08-30

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x.

- New features:
  - Security update to remove DDOS amplification via NTP threat.
  - USB accessories Status information added.
- Fixed bugs:
  - RAy2-18 support

# Release 2.1.22.0

2016-06-15

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- New features:
  - RAy2-18 supported.
  - New narrow channels with stronger FEC added to both 10 and 11 GHz frequency bands.
  - New version of openssl.
- Fixed bugs:
  - Manual frequency input validation fixed.

## Release 2.1.14.0

2015-12-09

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from version 2.0.4.0 has to be installed first when upgrading from 2.0.4.0 has to be installed first when upgrading from 2.0.4.0 has to be installed first when upgrading from 2.0.4.0 has to be installed first

New features:

- FCC operation support: EIRP calculation. New channel frequencies definition within the 24 GHz band.
- Web page title gives a detailed information about microwave link being just configured.
- o Safety updates: dropbear and openssl new versions.

### Release 2.1.13.0

2015-09-14

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- New features:
  - Menu parameter "Switch settings/Advanced/ATU settings/Reserved multicast to CPU" default value changed to "disabled" to ensure STP protocol frames to be transferred transparently.
  - Menu parameter "Link settings/Service access/Services/Service channel" default value changed to "direct" to ease the coexistence of multiple units at the same location.
  - The link parameters have been adjusted to make the link more robust in difficult transmitting environments.

#### Release 2.1.12.0

2015-09-14

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- New features:
  - New https certification authority applied. The security certificate is signed with stronger SHA256withRSA algorithm.
  - Https key exchange process security enhanced.
  - · AIR link status indicated by one SNMP Trap only.
  - o maxNetBitrate value is limitted according to the Feature keys installed.
- Fixed bugs:
  - Ethernet port link status fixed.
  - · Racom Ethernet interface MIB fixed
  - o RF Power Fail and Net Bitrate alarms fixed.
  - Spectrum analyzer longer activation intervals fixed

#### Release 2 1 7 0

2015-06-22

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- New features:
  - · New units contain only "admin" user. This user is listed in cli super group, thus is authorized to configure other user accounts.
  - · HTTP access can be switched off, to force HTTPS access only
  - o 50 MHz bandwidth added. New frequency tables listed.
  - Status LED visualization state added to the status screen.
- Fixed bugs:
  - Production script fixed (see FW 2.1.5.0).
  - RAy2-17 version 4.0 and 5.0. radio board compatibility fixed.
  - Displaying error for some texts in user interface fixed.
- Known issues
  - HTTPS configuration not working in IE 11 browser. (HTTP configuration for IE 11 works.) While using other browsers, both HTTP and HTTPS configuration are fully functional.

### Release 2.1.5.0

2015-04-29

Note: There is no possibility to downgrade the FW to version 1.x. FW version 2.0.4.0 has to be installed first when upgrading from version 1.x

- New features:
  - ATPC now with configurable RSS threshold.
  - Alarm system redesigned. Alarms are weighted by severity. Alarm status overview screen added. Alarms can be user acknowledged. Specific alarm types can be disabled. New
    alarm types added: "Eth link down" is triggered separately for each user port, Air link "Net bitrate" drop below pre-set threshold.
  - Initial "Internal backup" configuration is automatically created.
  - Factory settings is automatically triggered when U/L station type is changed (valid only for RAy2-17 and RAy2-24).
  - Management traffic can now also be double-tagged.
  - The SNMP traps now triggered at both alarm onset and end.
  - The SNMP traps can now be sent to 3 different IP addresses.
  - SFP module diagnostic information extended.
  - Ethernet ports can now be user-labeled via management interface.
  - STU, VTU and ATU rules can now be user-labeled.
  - CLI command set now extended by switch related commands.
  - Web interface includes CLI console allowing directly executed CLI commands.
     User defined scripts (batch files) can be uploaded and executed from the CLI console.
  - Local unit management now accessible via USB service port with USB/Ethernet or USB/WiFi adapter.
  - The RSTP protocol newly implemented. New configuration and status screens added. The respective RSTP protocol switch configuration defaults applied. Resetting to default values insures proper RSTP protocol operation (or see Help for individual settings).
  - New version of openssl library (1.0.2) implemented per CVE-2015-0204.
  - o STU, VTU and ATU tables are listed faster. Column based sort now available
  - o Built-in help includes CLI command descriptions, which can be hidden (for brevity).
- Fixed bugs:
  - Better support for "Service access direct".
  - BER value display fixed.
  - o Graph plot display exceptions corrected.
  - Minor MIB and SNMP traps numbering issues resolved.
- Known issues:
  - Failing script used in production which may cause problems with management IP address and gateway setting
  - Compatibility issues with RAy2-17 radio boards version 4.0 and 5.0 leading to incorrect radio board initialization.

### Release 2.0.4.0

Note: There is no possibility to downgrade the FW to version 1.x

- New features:
  - Help texts for menu Switch Advanced.
- Fixed bugs:
  - RSS measurement fixed.
  - Internal graphs behavior fixed in case of corrupted database.
  - Channel frequencies fixed in RAy2-17 and RAy2-24.

# Release 1.3.3.0

# 2014-09-24

- New features:
  - Large set of internal switch functions released: new group of menu "Switch settings Advanced". All of them are currently marked as Beta.
  - Automatic egress rate limit control.
  - Service channel mode selectable.
- Fixed bugs:
  - Many minor fixes of the initial release.

# Release 1.2.2.0

2014-05-30

Initial release