MPX-1g
Release Notes

Version 1.14.2
08.08.2025

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Version 1.14.2

08.08.2025

Fixed Issues

- RDS encoder: Synchronisation to external pilot tone is faulty

Known Issues

- Output signal distorted after disconnecting XLR Input

Version 1.14.1 - retracted

01.08.2025 – update: 08.08.2025

Fixed Issues

- GPI / Scheduler: Actions are not executed with certain rights configurations

Known Issues

- RDS encoder: Synchronisation to external pilot tone is faulty

Version 1.14

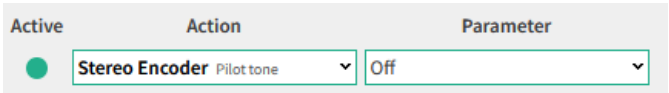
01.08.2025

New Functionality

- Optional SAT tuner: added a second C/N alarm

1.14-rc26

- GPI: Stereo encoder pilot tone can now be switched off/on

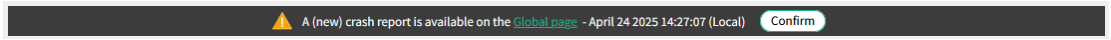


- GPI / Scheduler: All available actions can now be used as GPI actions or scheduler actions

1.14-rc23

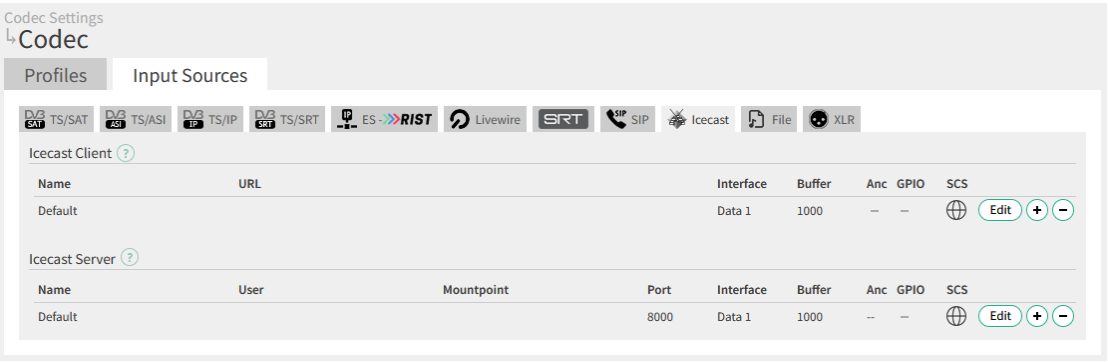
- Added new crash report functionality

  In case the device does crash (performing an unintended reboot) it was until now very difficult to find the root cause for the crash/reboot. In such a case a crash report will now be generated which should be sent to us via the 2wcom Support Center. It will allow us to inspect the reason for the crash/reboot, enabling us to develop a fix for the crash.

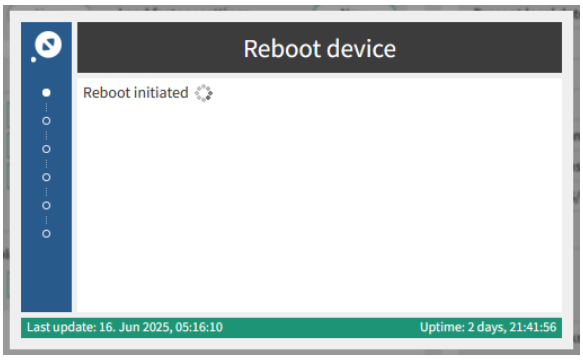


The crash report can be downloaded via System Settings / Global:

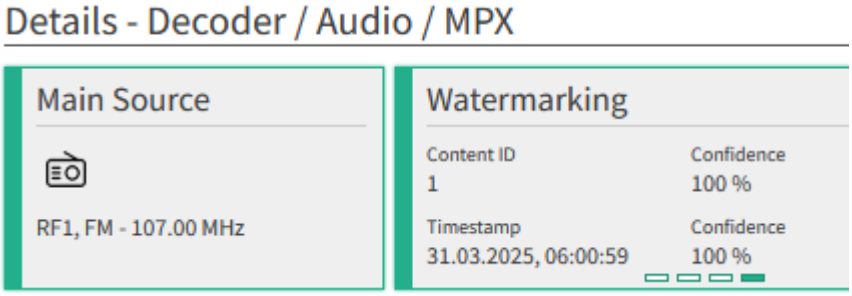
- Added Icecast server as new input source type, allowing to get audio from an Icecast source client connecting to that server instance



- Added PTP QoS DSCP settings
- Completely revised dialog that informs about the current status during reboot, firmware update, etc. This dialog is displayed on all browsers that have a connection to the web interface. Regardless of which browser has performed a reboot, for example.



- Added Watermarking decoder (optional) for radio input sources

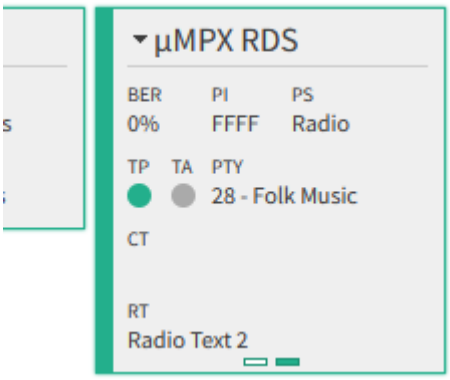


1.14-rc18

- Added new buttons to the Overview page to reset the counters of all decoders or encoders
- Extended log now tracks NTP reference server changes

1.14-rc16

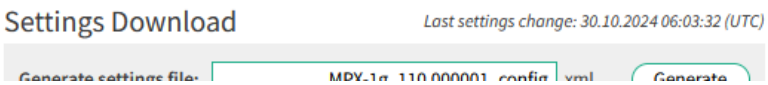
- Alarms for optional FM/DAB tuner and SAT tuner added
- µMPX RDS decoding if RDS signal is available



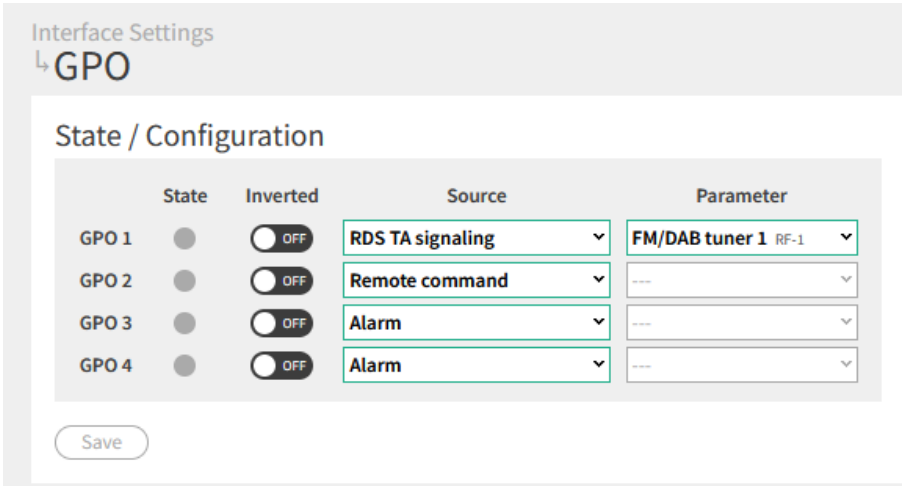
- RDS databridge is now also available for µMPX codec

1.14-rc14

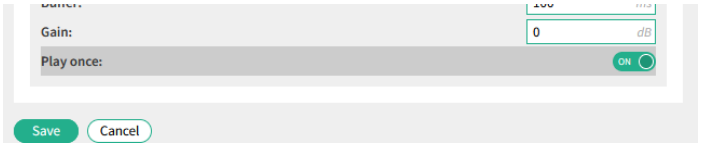
- GPO: Add “Remote command” to GPO switch source select.
- Scheduler: Enables the execution of various actions at defined times. Currently activating/deactivating a decoder source (optional)
- Last settings change: The time can be read out as a UNIX timestamp or date.
  This is also displayed on the Global page:



- GPO: Add “RDS TA Signaling” to GPO switch source. Enables the signaling of TA via relay (optional).

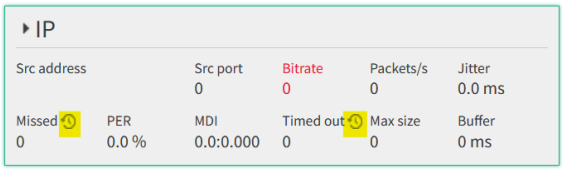


- Input source “File” can be played only once if desired.

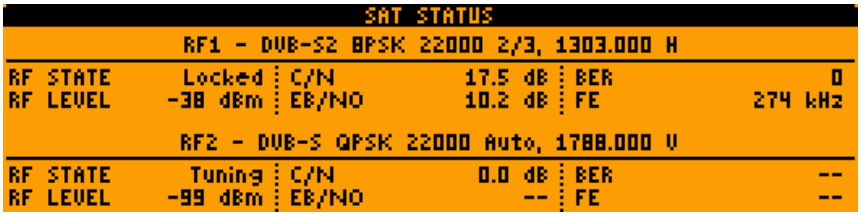


- Started to add the possibility to get a counter history on the Overview page via a small icon next to the label. It’s more or less a shortcut to the extended log, showing you only the entries for the counter of this

input source. Currently it's added to the "Missed" and "Timed out" counter, others should follow.



- If the optional SAT tuner is installed, the LCD screen will now show additionally a status page with reception information:

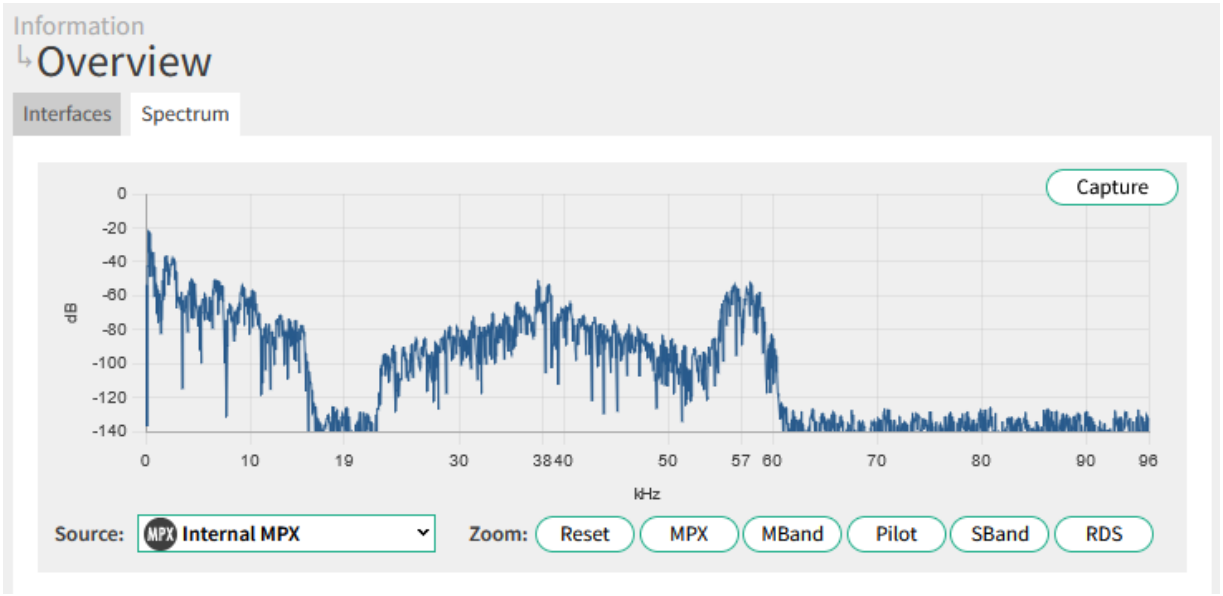


1.14-rc6

- uMPX can now be embedded into MPEG Transport Streams using PES mode
- Added support for WAV files with BW64/RF64 file format

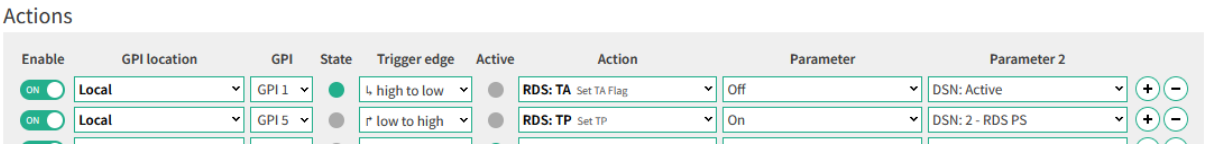
1.14-rc3

- Spectrum view: The spectrum of the sources used (including the internally generated MPX signal) can be displayed using an FFT. The display switches dynamically between MPX (192 kHz) and audio (48 kHz) content. The display can be saved as an image if required. The cursor can be used to zoom or select predefined areas.



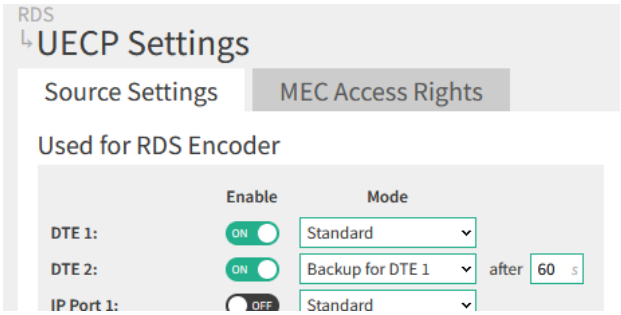
- Added parity configuration for DTE outputs

- GPI Actions: A special data set can now also be defined for the RDS actions TA, TP, EON TA, MS and TA Toggle. The default is the active data set.



1.14-rc2

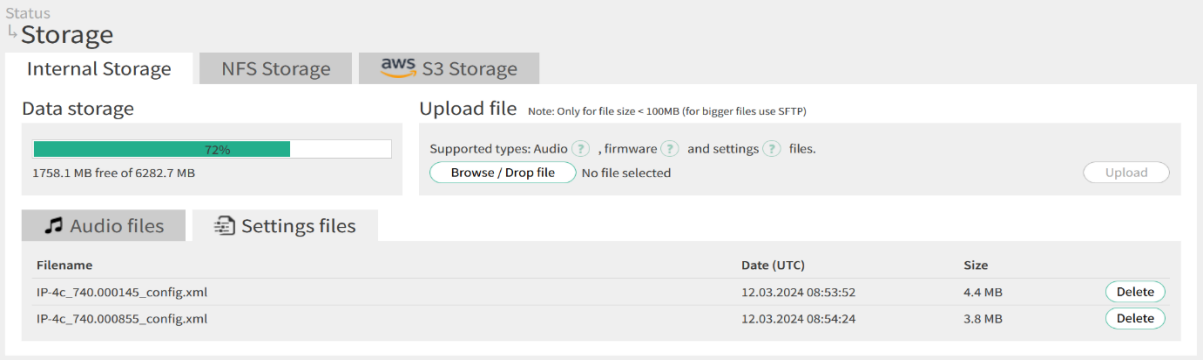
- UECP source backup: Each UECP source can run in standard mode or serve as a backup for another UECP source. Multiple backups for one source are also possible. For each backup, a time can be defined from which this backup becomes active.



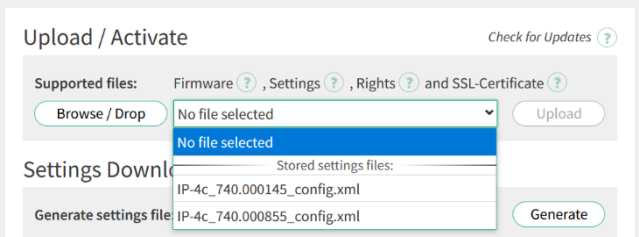
- Added ping and traceroute possibility to web interface (Network Settings / TCP/IP / Tools)

- Added event log entries when loading a settings file or loading factory settings
- When generating a settings file on the Global page you can now not just only download the file, but also save it to the internal storage. You can also directly change the name of the settings file.

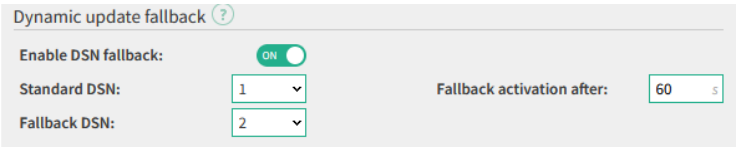
- Settings files can also be uploaded via the Storage page



- Once there are settings files on the internal storage the user can select one of the stored files instead of uploading one and load it via the new consolidated Upload/Activate section, thereby having a sort of preset functionality, allowing to quickly switch between different configurations.



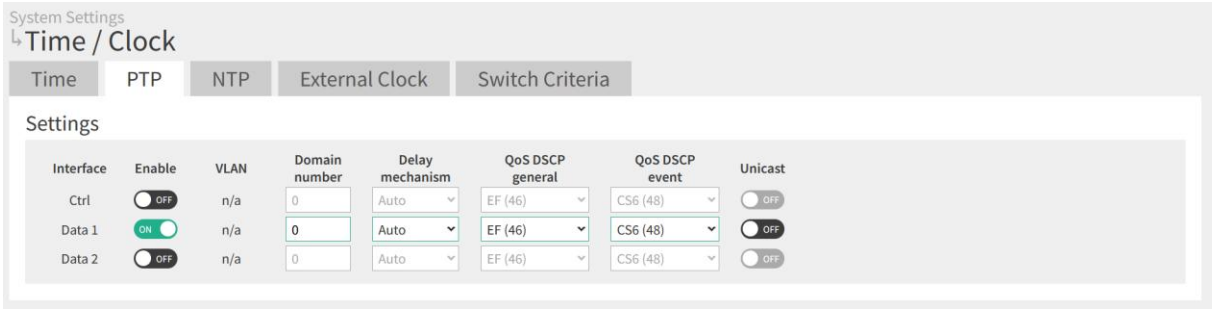
- Added ping possibility to web interface (Network Settings / TCP/IP / Tools)
- Added an event log entry when setting a GPO by GPI tunnelling
- RDS Databridge (optional): If no RDS update is received for a period of time, the databridge can switch the RDS encoder to a "Fallback DSN".



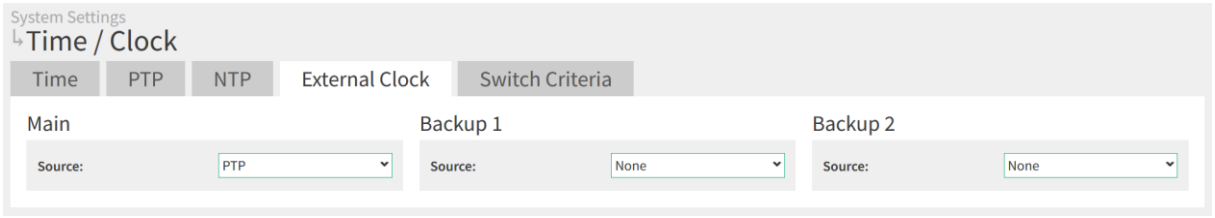
- RDS TA timeout: The TA flag is automatically reset after this time

Improved / Changed Functionality

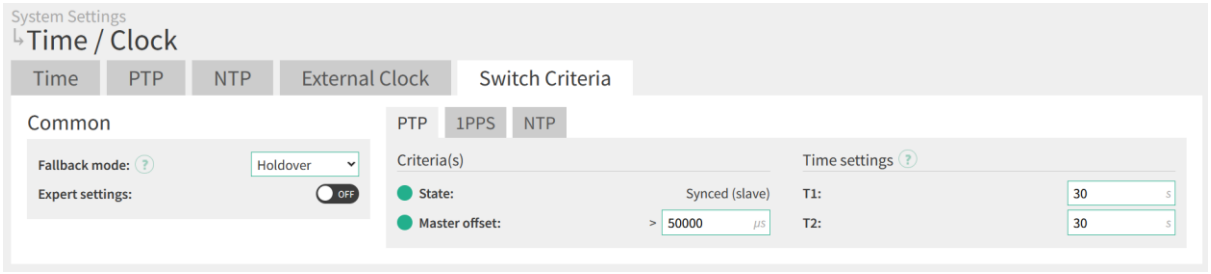
- The PTP functionality did get a complete revision, as it was not working reliably. In the course of these changes we did also revise the way to configure everything related to time and clock handling including NTP and external clock.
  Before this revision several menu options were involved in the configuration. The selection of interfaces, on which PTP should be enabled was done via the “Network Settings / Services” menu. The PTP configuration itself (e. g. domain number and delay mechanism) was done via the “AoIP Settings / External Clock” menu (but only allowing to use the same configuration for all interfaces enabled for PTP). NTP configuration was done via “Network Settings / NTP”, time configuration (time zone) via “System Settings / Time”. Pretty much scattered all over the place.
  All these configuration options are now consolidated into a single place – the menu “System Settings / Time/Clock”:



You still have to configure via the “External Clock” tab (which corresponds to the former “AoIP Settings / External Clock” menu), if and which external clock source (PTP, NTP, 1PPS) should be used for the audio clock synchronization (including optional AES67 outputs).



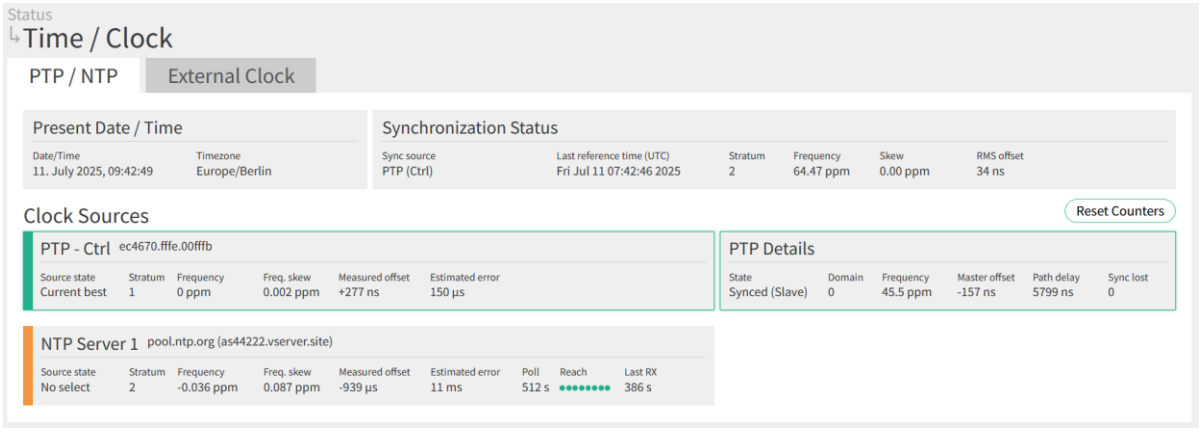
If a backup for the external clock is configured (e. g. NTP), the switch criteria are now configured via the “Switch Criteria” tab of the “Time / Clock” menu.



There’s also a new “Fallback mode” which allows you to control the behaviour if all configured external clock sources do fail. In “Holdover” mode (the new default) the device will keep the last external clock (no longer regulated) and will not switch to the internal clock, which would always result in a glitch.

- Together with the revision of the time and clock configuration we did also revise the available status information for time / NTP / PTP / external clock. Before the revision the NTP status could be found via the “Status / NTP” menu, whereas the external clock status could be found on the Overview page in a separate tab. PTP status information was only provided via this “External Clock” tab on the Overview page.
  The complete status information for all this is now also consolidated into a single place – the menu

"Status / Time/Clock":



1.14-rc24

- Diagnostic report: Extended by further debug information.

1.14-rc19

- In case of limited screen width, the new hamburger menu is now more prominent. Additionally, the collapsed menu can be pinned to stay on the screen even in case of limited screen width.
- The PER (packet error/loss rate) for RTP inputs was formerly measured in an interval of 1/10 of the T1 time of the packet loss switch criteria time (where the default is 60s resulting in a default measurement interval of 6s). The measurement does now adapt to the type of incoming stream and its number of packets per second to allow for a resolution of the PER of 0.1% (meaning 1 of 1000 packets). To be able to measure that at least 1000 packets need to be the measurement interval which might result in the PER not updating very frequently.

1.14-rc18

- The menu of the web interface does now collapse to a hamburger menu in case screen width is limited
- Show Dual Streaming block on Overview even if FEC is enabled

1.14-rc14

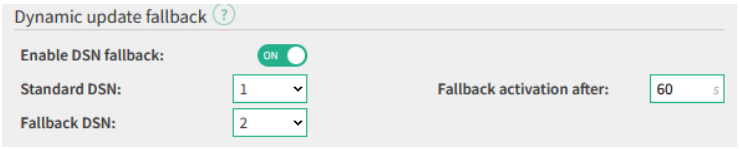
- Decoder Main / Backup switching improved
- Ext. log can now be deleted via a button.

1.14-rc10

- µMPX status values improved and supplemented by FEC values.

1.14-rc3

- New version of the xHE-AAC encoder (04.05.04) with default loudness -24 LUFS
- Updated Fraunhofer libraries to latest versions
- RDS Databridge (optional): If no RDS update is received for a period of time, the Databridge can switch the RDS encoder to a "Fallback DSN".

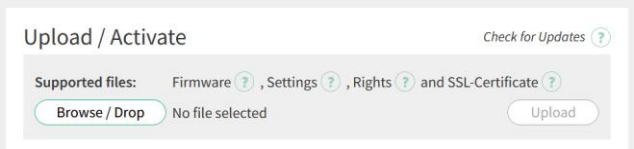


- Audio input: If the audio input is used by the audio decoder as a source, the signal runtime is equal to the direct selection of the audio input.

- Input LED: The color is now determined by the activation of RDS Encoder, Stereo Encoder or Pilottone and the status of the decoder chain.
- Output LED: Green as soon as a signal is generated.

1.14-rc2

- The different upload sections on the Global web page (Firmware, Settings, Rights, SSL Certificate) were consolidated to just one section allowing to upload every of the four kinds of files



- The manager user can be granted limited access to the Global web page, allowing just to switch between different configurations
- Reduced sensitivity of the jog wheel for better user experience when doing configurations via the LCD menu
- Allow lower SAT transponder frequencies for C band transponders
- Changed Load Factory Settings via LCD menu to new method without reboot

Fixed Issues

- MPX Limiter: Overshot values are not displayed (always 0.0)
- The individual gain may not get applied after reboot for TS/Demux inputs (CSM-1256)
- TS/IP input stream may not continue decoding after stream interruption (CSM-1077)

1.14-rc25

- Headphone and interface levels are not correct

1.14-rc24

- TS/Demux source: Gain may not get applied after reboot.
- µMPX: Disturbed decoding / silence output. Caused by different µMPX buffer values.
  Ext. log shows cyclically: “Realigned µMPX buffer after startup”

1.14-rc23

- Loading factory settings might not stop/clear all input sources internally which could result in old settings still being used
- Icecast client may stop receiving data (after redirect to illegal URL) and does not recover automatically
- General Icecast client compatibility enhancements
- Changing the input source gain of a file input source was not applied to all instances
- Overview: Displays incorrect analog XLR input level (right)

1.14-rc22

- µMPX: Reception problem with stream with larger FEC settings (e.g. 64/8)

1.14-rc21

- GPI actions without parameter 2 setting do not work

1.14-rc20

- FM tuner (optional): RF level and SNR can be displayed incorrectly as 0 dB(µV)
- µMPX: After a restart no µMPX level in the backup stream (partially prevents backup switching)
- Auto Config Mode: Possible incorrect setting after a device restart

- Switch criteria: “AES EBU No signal” does not work

1.14-rc19

- Prevent duplicate VLAN IDs on same interface
- RTCP sender report may get broken after some time (breaking automatic codec detection and transport of the global delay information in case of synchronous playout / SFN)
- Enhanced compatibility to some WAV files
- Decoder stops working with ancillary data decoding enabled after ancillary data is sent (if DTE output is configured; since 1.14-rc18)
- PTP for unicast configuration improved
- Enhanced compatibility of the Icecast client in case of FLAC Icecast server content

1.14-rc18

- Buffer level alarm not working when uMPX is being decoded
- Alarm for “AES/EBU no signal” not working
- uMPX: Streams with very small data packets (less than 200bytes) not working
- RTP input source: when the input stream changes (e. g. due to an encoder restart), RTP reception might not resume, showing an input bitrate of 0, even if the new stream is received by the device
- Bunch of internal improvements and optimizations
- Security enhancements
- FLAC codec did not work in combination with SRT
- SRT in caller mode doesn’t always connect reliable with the SRT listener
- Not currently active TS/Demux backup sources may show wrong ancillary data on Overview page in case a private PID is used as ancillary source
- When changing the ancillary data configuration the ancillary output doesn't work afterwards or the device may even crash
- xHE-AAC encoder: added parameters to control live loudness and DRC
- UDP ancillary input improved (might not work after reboot when DHCP is enabled)
- When changing a TS/Demux source and switching to the Overview page the device could crash with certain transponders
- Check minimum SRT passphrase length
- “Jumping” level meters after decoder backup switching on Overview page
- Live Listening: switching the input source while listening may not work reliable
- Loading settings might not activate all input source settings

1.14-rc16

- MPX decoder: fluctuation of the pilot frequency (greater than +-2Hz)
- Combination of “auto config mode” and switching on/off by the scheduler can lead to incorrect settings
- TS/SRT decoding not possible

1.14-rc15

- GPI: Double processing of GPI actions
- GPI: Configured actions are not displayed
- Fixed possible application crash when loading settings or loading factory settings
- Fixed possible crash on startup
- µMPX ancillary data decoding may drop some bytes

- Automatic codec detection for TS/Demux input sources may not signal correct AAC type

1.14-rc14

- Fixed a problem on the Codec page, sometimes not allowing to switch between the “General” and the “Switch Criteria” tabs in the input source configuration dialogs
- Second stream in DualStreaming setup may show missed packets, although they weren’t missed
- In case of audio errors, the corresponding event log entry may show the wrong reason for the error
- General playout stability improvements
- Optional SAT tuner: Switch criteria C/N does not work
- Icecast client: https Icecast streams with credentials may have problems with authentication
- (Limited) support for Internet Explorer 11 was broken

1.14-rc10

- Cyclic audio errors when processing PCM streams (Ravanna)
- Fixed audio errors due to FPGA underruns (reported in event log) after a switch between main <-> backup sources has been done
- Enhanced compatibility to µMPX with FEC from StereoTool and Omnia9
- Fixed audio errors in PCM 192 kHz mode in case of missed packets
- ProMPEG FEC decoder let main input stream fail, if one FEC port offset is set to 0
- Fix µMPX Dualstreaming
- Fix µMPX decoding from TS in case of PES encapsulation (instead of MPE)

1.14-rc9

- Cyclic audio/MPX interference during processing.
- PES mode for uMPX: fixed several issues in certain configurations for both encoder and decoder side.
- Encoder profiles: fixes an issue where uMPX bitrate would always default to 320kbps when opening the dialog again.
- Dual Streaming: UDP dual streaming for uMPX is possible once again
- uMPX Decoder (SFN/SPN): fixed a stuck issue/crash with uMPX running in SFN or SPN mode
- uMPX Decoder: fixed a crash that could occur when changing sources for a decoder with a present and active backup
- uMPX Decoder: increased internal buffer sizes to be able to handle large uMPX FEC bursts (tested 120/120)
- uMPX Decoder (SPN via Stereo Tool with NTP): fixed an issue that lead to accuracy not updating every 6h12m for a short duration, this however had no negative impact on general operation
- uMPX Encoder (SFN/SPN): fixed a crash when changing sources on an active encoder
- PCM Decoder (SFN/SPN): fixed filling silence in for portions where there is no data, instead of skipping over it, which lead to SFN/SPN accuracy jumping all over the place
- Storage: Incorrect display of file names with special characters (e.g. öäü)
- RDS: Deletion of a created AF List not possible

1.14-rc7

- System crash when creating a diagnostic report
- Transmission of µMPX via TS and PES mode faulty.

1.14-rc6

- Fixed some problems with the optional Live Listening feature
- PTP might not work correctly in certain environments

- PTP might not be active after loading a settings file with a corresponding configuration
- Changing the SNMPv3 authentication protocol (MD5 <-> SHA1) did not work
- After IP address change the SRT decoder (in Listener mode) did not receive any SRT streams

1.14-rc5

- Interference from the stereo encoder and distorted audio during live listening (since 1.14-rc4).
- Switching from decoder to analog XLR not possible.
- When doing “Load factory settings”, the user account passwords were not reset to default
- When loading a settings file, the user account passwords were not taken from the loaded settings file
- The optional low symbol rate SAT tuner did only work with symbol rates down to 100 kSym/s. This limit is now reduced to 64 kSym/s
- The metronome icon on the Overview page (which should signal external clock usage and its state) was not shown appropriately
- Playback and management of files larger than 2 GB not possible.

1.14-rc4

- Buffer management: Fixed a buffer management issue that was introduced in 1.01-rc2, causing buffers to be played out with a static clock, slowly decreasing or increasing the level until it needs to reset.

1.14-rc3

- Fixed audio buffer drift in case of enabled external clock (PTP/1PPS) and enabled sample rate converter
- Web interface: session timeout did no longer work
- SRT input stream will be only restarted if parameters were changed
- Standby input sources were no longer activated when needed - Fixed
- UDP ancillary output status did not always work
- When switching from PTP to internal clock, the audio outputs had a short distortion
- Web interface: on the Login page the user name field now has the focus on page load to allow immediate typing without the need for the additional click into the field
- Web interface: for elementary stream and TS/IP input sources not applicable configuration options are getting hidden in case of UDP protocol selection
- RDS Databridge (optional): the EON TA functionality does now respect the EON PI configuration and will not react on EON Ta from a service with a different PI then the configured one
- SNMP: Reading of virtual values not possible (new SNMP MIB required)

1.14-rc2

- UECP IP ports not functional after a restart
- GPI Forwarding may have some issues when an input source with GPI Forwarding enabled is used for more than one audio output on different backup levels
- Fixed Icecast client issues with Icecast streams with ContentType audio/mpegurl
- When switching between different elementary streams (e. g. Ravenna streams) the device may crash and gets unresponsive
- General security and access control improvements
- Improved PTP synchronization of AES67 output, improving AES67 output stability
- PTP did only work with domain 0
- Changing just the audio buffer level of an input source is not (always) applied
- Fix the possibility that the TS decoder does not provide the service list (showing 0 services)

- After settings updates (loading a settings file or loading factory settings) input source changes may not be applied