



9992-DEC Firmware Version 0.6.X-0.7.X Release Notes

Baseline version: 0.6.0

Version 0.6.1

- Beta-level support for Dolby Digital/Dolby Digital Plus pass-through. Not functional with SD signals or genlock.
- Fix a cosmetic licensing issue whereby the unit would attempt to get a license for a channel that was not configured for decoding.
- Fix a rare application restart issue when the decoding was restarted.

Version 0.6.2

- Final production-level support for Dolby Digital/Dolby Digital Plus pass-through. No known issues.
- Fix a spurious “Genlock Calibration Failed” alarm when the decoder channel with genlock enabled was not connected to any of the SDI outputs. In previous versions, the workaround was to connect the decoder to at least one SDI output and restart the playback. This is no longer necessary.

Version 0.6.3

- Add RTSP decoding support.

Version 0.6.4

- Fixed a bug whereby MPEG-1 audio decoding would not work.

Version 0.6.5

- Add support for DSP version 2.3.
- Add support for decoding Dolby AC-4.

Version 0.6.6

- Dolby AC-4 decoding improvements.
- Add Dolby AC-4 metadata display in the GUI.

Version 0.6.7

- Add Dolby AC-4 pass-through support.

Version 0.6.8

- Add support for Decoder 2 to receive the feed from Decoder 1.
- Add fan alarms.

Version 0.6.9

- Add support for DSP version 2.4.
- Fixed a situation scaling the image was incompatible with low-latency operation.

Version 0.6.10

- Add support for DSP version 2.5.
- Add support for automatically scaling non-standard resolutions.

Version 0.6.11

- Add support for Dolby-E decoding.

Version 0.6.12

- Add a GUI interlock to prevent UDP port conflicts.
- 12G SDI output jitter improvements.

Version 0.6.13

- Add support for DSP version 2.6.
- Further improvements for 12G SDI output jitter.

Version 0.6.14

- ASI input stability improvements.

Version 0.6.15

- Frame accuracy improvements for ST 2038 insertion.
- Cosmetic GUI changes.

Version 0.6.16

- Fixed a crash on Dolby-E metadata display.

Version 0.6.17

- ARQ (RIST) performance improvements.
- Fix the RTT display when the latency is zero (was showing blank).

Version 0.6.18

- Fix an issue with genlock in Decoder 2.

Version 0.6.19

- No user-visible changes.

Version 0.6.20

- Add source address filtering to RIST tunnels.
- Add per-link statistics in multi-link operation.

Version 0.6.21

- Fix a rare crash when applying a configuration.

Version 0.6.22

- Fix a rare crash related to ancillary data insertion.
- Add an alarm for non-compliant streams that lack video Access Unit Delimiters.

Version 0.6.23

- This version has no user-visible changes.

Version 0.6.24

- This version has no user-visible changes.

Version 0.6.25

- Increase firmware upload support from 16Mbytes to 64Mbytes.
- Minor cosmetic changes to log files.

Version 0.6.26

- Add a general-purpose scaler to each decoder channel.
- Add manual/automatic VPID configuration to the SDI outputs.

Version 0.6.27

- Add OP-47 caption support.
- Network receive performance optimizations.
- Add support for back-to-back SCTE-35 transactions.

Version 0.6.28

- Expose the frame interface for use with chassis that have a Gigabit backplane.
- Add transparent support for firmware upgrades through the backplane interface, decreasing the download time to a few seconds.

Version 0.6.29

- Decoder will now restart when a stream transitions from illegal (missing AUDs) to legal, to ensure good playback.

Version 0.6.30

- Restart decoding on transport stream change.
- Correctly handle AAC streams with discontinuous time stamps (from GV AAMP).

Version 0.6.31

- Improve decoder reconfiguration time.

Version 0.6.32

- Correct restart on PCR discontinuity.

Version 0.6.33

- Add support for exchanging RIST keys and certificates with the SafeLink Gateway.
- Fix some rare SDI output configuration issues.

Version 0.6.34

- Fix an issue whereby the unit wouldn't restart the DTLS negotiation on error.

Version 0.6.35

- This version has no user-visible changes.

Version 0.6.36

- Delay decoder start by 2 seconds to ensure good bitstream.

Version 0.6.37

- Add support for receiving HEVC streams over RTSP.

Version 0.6.38

- Add support for setting Dolby DRC.

Version 0.6.39

- Add the option to disable Dolby DRC.
- Default Dolby DRC to off.

Version 0.6.40

- This version adds support for the DashBoard "sideload" functionality, which greatly speeds up board discovery. The backplane interface needs to be enabled and the card must be installed in a frame with a Gigabit Ethernet backplane.

Version 0.6.41

- Improved alarm responsiveness when DashBoard first connects to the card.
- Fix a crash where the wrong URL is specified for an RTSP server that is up.

Version 0.6.42

- Fix a rare case whereby some hardware subsystems failed to come up on boot. This problem could be worked around by removing the configuration in previous versions.

Version 0.6.43

- Allow small negative audio PTS discontinuities for compatibility with GV AAMP.
- Fix an issue with a genlock alarm persisting when the second channel is disabled.

Version 0.6.44

- This version has no user-visible changes, just additional logging of exceptional conditions.

Version 0.6.45

- Add the option to block/unblock illegal streams to the decoder (some illegal streams are decodable).

Version 0.6.46

- Input timeout is reduced from 2sec to 1sec.
- Changes in illegal stream processing are now handled on-the-fly.

Version 0.6.47

- Support for DSP version 2.7, which does not require AUD blocking.
- Add support for AAC LATM/LOAS audio decoding.
- When genlock is enabled, the SDI outputs will be stable during decoder restarts.
- Fixed an issue whereby a PCR discontinuity could cause a decoder channel to stay stopped.

Version 0.6.48

- Fix a Dolby AC-3 passthrough issue when the access units are now aligned with the non-PCM blocks.

Version 0.6.49

- Add the IP Output functionality. Supports up to 130 Mb/s data rate.

NOTE: This is the last version that a 9992-DEC running version 0.6.24 or lower can be directly upgraded to.

Version 0.6.50

- Add SRT support to the mainline firmware.
- Add support for DSP version 2.8.
- Add a CPU utilization display in the Product tab.

NOTE: A 9992-DEC running version 0.6.24 cannot be directly upgraded to version 0.6.50 or later. Such a decoder will need to be upgraded to any version between 0.6.25 and 0.6.49 as an intermediate step, and then upgraded to version 0.6.50 or later.

Version 0.6.51

- Fixed an issue with the License tab not correctly displaying the SRT license.

Version 0.6.52

- Fixed an issue whereby the ASI pass-through configuration in the 9992-DEC was not working.

Version 0.6.53

- When the decoder has genlock, add the option of freezing the last good frame instead of going to black on loss of signal.
- In RIST operation, keep playing smoothly for the duration of the NACK window on loss of network data, and attempt to recover if possible.
- Update the AAC decode libraries.

Version 0.6.54

- Add support for DSP version 3.0, with support for decoding illegal H.264 streams without Access Unit Delimiters.
- Hide the second IP Output tab when the decoder is in single channel mode.

Version 0.6.55

- Fix an issue when dynamically switching from 4K to 2K.
- Add support for selecting the flat field color displayed on loss of input when the decoder has genlock enabled.
- Add support for using an ASI port as a back for the current input configuration.

Version 0.6.56

- Fix an issue whereby, in a dual-channel decoder, a small black bar would flash at the top of the decoded video in one of the channels if the other had bad data.

Version 0.6.57

- Support for DSP version 3.1.
- Correctly scale non-standard signals to the next highest resolution.
- Fix an ancillary data bug that caused the decoder to only accept the first SEI message if multiple SEI messages were present in the same frame.
- 9992-DEC will now respond to RIST RTT Echo messages (to improve interoperability with libRIST).
- Fix a problem whereby the decoder would stop working after several hours when a disabled RIST tunnel is selected as the input interface.
- Support for transparently receiving and processing RIST Main Profile tunnels using the VSF EtherType.

Version 0.6.58

- Stability improvements to the audio output path.
- Robustness improvement: the 9992-DEC is now able to correctly reject data that is completely corrupted.
- Support for optionally setting the source UDP port in SRT caller mode.
- Minor cosmetic change in the way SRT RTT is displayed.
- Jitter improvements when using RIST streams with the IP Output function.

Version 0.6.59

This version is functionally the same as 0.6.58. It can be used to downgrade from version 0.7.0 and later to version 0.6.58 and earlier. The upgrade/downgrade rules are as follows:

1. Any version starting at 0.6.25 can be directly upgraded to 0.6.59 or later (including 0.7.0).
2. Version 0.6.59 can be downgraded to any older version.
3. For versions 0.7.0 and later, the lowest version they can be downgraded to is 0.6.59.

If it ever becomes necessary to downgrade from versions 0.7.0 or later to any version below 0.6.59, the procedure is to first downgrade the unit to 0.6.59, and then to the desired version.

Version 0.7.0

- Frame accuracy improvements for ancillary data in SMPTE 2038, OP-47 and SCTE-104 for interlaced signals.
- If the scaler is enabled (manual output resolution), override vertical zoom resolutions below 100% that cannot be supported. If this happens, a log message is generated. This will only happen if the incoming signal resolution is 1920x1080:
 - If the output resolution is 720x480 or 720x576, the minimum vertical zoom is 95%.
 - If the output resolution is 1280x720, the minimum vertical zoom is 75%.
- Fix an intermittent bug whereby the Video Output Source Selection would not persist across reboots or during a signal change.
- Do not insert VPID in the Chroma lane for HD-SDI signals, to avoid a compatibility issue with some third-party equipment.
- Reject firmware downloads with version lower than 0.6.59, and do not allow selection of previously downloaded firmware with version lower than 0.6.59.
- Video quality improvements for manual scaling when the input is interlaced.

Notes:

- If the previous version is 0.6.59 or earlier, the first time version 0.7.0 boots, that boot will be about one minute longer than normal as additional updates will happen. This will happen only once.
- The first time version 0.7.0 boots, if it detects that the Factory image version is lower than 0.6.59, it will update the Factory image to whatever image is available in the unit that is higher than 0.6.58. This will happen in the first two minutes of operation. During this time, there will be a high CPU alarm. This will happen only once.

Version 0.7.1

- Additional A/V sync issue logging.

Version 0.7.2

- Some AAC streams from software transcoders have occasional issues with inserting extra access units. The 9992-DEC will normally drop those to stay in sync, unless the size of the discontinuity exceeds a threshold – in which case it will restart the playback. This version increases this threshold to 5 access units.
- Support for DSP version 3.2.

Version 0.7.3

- Correct an occasional A/V sync issue when the stream is restarted. The audio will now start being played about 5 seconds after the video starts and will always be in sync.
- Fix an issue whereby setting the two decoder channels to consecutive UDP ports would cause one of them not to receive. This issue only affects UDP reception, not RTP, since RTP ports need to be even.
- Establish a well-defined default gateway priority for traffic leaving the unit that does not specify an interface. The priority is:
 - First Priority: frame interface.
 - Second Priority: Ethernet 1.
 - Third Priority: Ethernet 2.

Version 0.7.4

- Fixed an issue whereby a decoder channel with genlock enabled would occasionally come back with an A/V sync error if the genlock signal had a discontinuity (i.e., disappeared and came back).

Version 0.7.5

- Fixed an issue whereby a decoder channel that encountered an audio error (e.g., due to corrupted streams or uncorrected packet loss) would occasionally come back with an A/V sync error.