



## **EASyCAP Encoder/Decoder Release History**

### **Version 23.02, 2/7/23**

- 1) Updated EAS and CAP message handling for the EAS rule changes required by the FCC Report and Order that was released in September of 2022.
- 2) Poll for CAP messages at least 10 seconds after receiving a legacy EAS message. If a CAP version of the message is available, retransmit it rather than the legacy EAS message.
- 3) Change the text for the PEP Originator code to: “United States Government”.
- 4) Remove the NIC Event code.
- 5) Change the text for the EAN Event code to: “National Emergency Message”.
- 6) Change the text for the NPT Event code to: “Nationwide Test of the Emergency Alert System”.
- 7) If an NTP is received as a legacy EAS message for the entire United States, use the following text: “This is a nationwide test of the Emergency Alert System, issued by the Federal Emergency Management Agency, covering the United States from [time] until [time]. This is only a test. No action is required by the public.”
- 8) Added an option to send Emails every time a user attempts to login to the Web GUI.
- 9) Install all Linux updates and security patches that were available on 1/17/23.
- 10) Version 23.02.02 Patch (4/24/23)
  - Install the latest certificates required to verify IPAWS CAP message signatures.
  - Change security settings to allow the use of SHA1 certificates.
- 11) Version 23.02.03 Patch (4/28/23)
  - Fixes a problem that can sometimes occur when trying to read the software version license.
- 12) Version 23.02.04 Patch (8/22/23)
  - Fixes an LCD initialization problem that can occur on EASyCAP 20 series models with a specific CPU/LCD hardware configuration.
- 13) Version 23.02.05 Patch (2/8/24)
  - Install the latest certificates required to verify IPAWS CAP message signatures.

### **Version 21.02, 3/22/21**

- 1) Added support for StrataSync to provide a Management System for the EASyCAP Encoder/Decoders.
- 2) Upload configuration changes to the management system
- 3) Download configurations deployed from the management system
- 4) Upload status updates about active alerts and monitoring sources to the management system
- 5) Upload the EAS Alert Log and EAS Compliance Reports to the management system

- 6) Download licenses and firmware upgrades deployed from the management system
- 7) Version 21.02.03 Patch (6/10/21)
  - Fixed a problem writing the PPS and SPS elements to the MPEG-DASH manifest
- 8) Version 21.02.04 Patch (9/13/21)
  - Fixed a problem producing MPEG-DASH live audio segments for an EAN that includes more than 13 FIPS codes.
- 9) Version 21.02.05 Patch (9/17/21)
  - Fixed a problem with file permissions that prevented EAS message origination via SNMP
  - Roll the Plugin Manager debug log when the service is restarted
  - Fixed a problem that could cause a CAP HTTP Delivery failure when Spanish audio is enabled for CAP HTTP Delivery but not enabled for any audio output
  - Removed invalid error notifications about restarting the MyStateUsaFeed by ensuring keep-alive file was written within an acceptable timeframe.
- 10) Version 21.02.06 Patch (8/26/22)
  - Fixed a problem that can cause high CPU utilization and intermittent SNMP communications when the SNMP Operations OIDs are polled more frequently than once every 20 seconds.
- 11) Version 21.02.07 Patch (9/20/22)
  - Allow abort and cancellation messages to be sent to DNCS and SCTE-18 recipients when there is not an alert in progress.

### **Version 20.12.01, 2/4/21**

- 1) Upgrade the Linux operating system to Debian Version 10, including all updates and security patches that were available on or before 12/1/20.
- 2) Added the ability to duplicate a MPEG stream to a second address, port, or ethernet interface.
- 3) Added the ability to provide a continuous MPEG stream. Each MPEG output can be configured to stream continuously or only during an alert message.

### **Version 19.10, 10/30/19**

- 1) Hosted Email Server
  - Add support for a hosted Email server to eliminate the need for users to provide their own Email server.
- 2) CAP HTTP Delivery Protocol
  - Do not include a Spanish info block if the *Use Spanish* option is disabled.
  - Ensure that the EAN cancellation message identifier uses the same location codes as the EAN CAP message that it references.
- 3) MPEG DASH
  - Fixed a problem during a live audio message that could cause the last audio segment to be omitted.
  - Retain MPEG DASH media for 30 days.
- 4) MPEG Stream Output
  - Add support for RTP protocol.

- Add support for two MPEG streams, providing the ability to stream SD and HD at the same time.
- 5) File Maintenance
    - Retain MPEG DASH media for 30 days.
    - Retain alert audio files for 90 days.
  - 6) Logging
    - Add links to the audio files that were played during alert messages.
    - Ensure that the EAS header information is included in logs of messages that could not be decoded due to EAS protocol errors.
  - 7) Licensing
    - Add license warning to warn users if a license is nearing its expiration.
  - 8) Mediaroom
    - Add an option to make the ID element configurable.
  - 9) Remote Receivers
    - Add an *EASyCAP Remote Receiver Feed* option to simplify the configuration of remote receivers.
  - 10) SDI Video Output
    - When the SDI video output is configured to crawl the alert text and the *Show Event Text* option is enabled, automatically adjust the position of the Event text to avoid the crawl.
  - 11) Web API
    - Add an option to use an HTTP interface for the Status and Operations Web API's.
  - 12) Version 19.10.02 Patch (1/13/20)
    - Update the EASyCAP Atom Server to pass the Station ID and configured channel name through the Atom feed so that logs on the receiving EASyCAP show the Station ID and input channel name from the remote EASyCAP receiver.

### **Version 18.10, 10/24/18**

- 1) Changed the software versioning to use year.month.
- 2) Rebranded for Viavi Solutions.
- 3) Added an option for a text crawl on the SDI video output.
- 4) Added the Compliance Reporting feature, which analyzes incoming and outgoing alert messages for compliance with EAS Regulations and then Emails the reports to a list of configured recipients. Reports are automatically generated at the end of each week and at the end of each month
- 5) Modified the Email feature to make it compatible with Gmail SMTP servers.
- 6) Added Help buttons to all windows available from the Web Interface.
- 7) Added the option to configure which SSL protocols are accepted by the Web Interface.
- 8) Changed the validation of an EAN to reject the message if the origination time is more than 15 minutes in the future or if the message has expired.
- 9) Fixed a problem that caused Ethernet Interfaces 3 and 4 to be omitted from the configuration screens when an expansion card with one Ethernet interface is installed.

- 10) Limited the MPEG Stream Program Map ID value to 16-7936 to prevent configuring it for an invalid value.
- 11) Fixed a problem that caused duplicate logs to be shown when the Optional Log Information option “MPEG-DASH” was enabled.
- 12) Fixed a problem that caused the logs to show the configured Call Letters in the EAS Header text rather than the received Call Letters.
- 13) Fixed a problem with MPEG-DASH live audio when both the MPEG Stream and MPEG-DASH were configured.
- 14) Fixed a problem with the MPEG-DASH audio content when it was configured for AAC HEv2 audio.
- 15) Version 18.10.02 Patch (11/5/18)
  - Add support for high definition video (720p and 1080i) to the MPEG Stream output.
- 16) Version 18.10.03 Patch (11/12/18)
  - Add options to allow the Generic Character Generator and Alert Text message protocols to use a network or serial interface.
- 17) Version 18.10.04 Patch (11/20/18)
  - Fixed a problem that omitted the voice message recorded from the Telephone when originating EAS messages from the Telephone Interface.
- 18) Version 18.10.05 Patch (12/3/18)
  - Fixed a problem with scheduling the compliance monthly report when the next report is scheduled for a new year, causing the report to be Emailed repeatedly.
- 19) Version 18.10.06 Patch (1/17/19)
  - Fixed a problem that could cause the MPEG-DASH video duration to be too long when the audio duration was longer than the video.
  - Added an option to enable/disable Spanish info blocks for the CAP HTTP Delivery feature.
- 20) Version 18.10.08 Patch (8/13/19)
  - Fixed a problem generating audio for CAP HTTP Delivery and DNCS/Evertz when only Spanish audio is configured, and the alert does not include Spanish audio.
  - Fixed a problem generating audio for CAP HTTP Delivery and DNCS/Evertz when Spanish audio is not configured for any of the EASyCAP local audio interfaces (analog audio out, MPEG, DASH, or SDI), but Spanish audio is configured for a CAP HTTP Delivery or DNCS/Evertz recipient.

### **Version 3.04, 5/10/18**

- 1) Linux operating system updates and security patches (all updates as of 5/9/18).
- 2) Added the Blue Alert event code (BLU).
- 3) Added support for Spanish audio and text
  - Construct FCC Required EAS translation text in Spanish, and retrieve Spanish CAP text when present
  - Added an option to produce Spanish text-to-speech audio when Spanish audio is not present in the received message
  - Audio outputs can be configured to use English or Spanish audio

- Video outputs can be configured to show English and/or Spanish text
  - Configure the language for audio and text sent to each message delivery recipient
- 4) HD/SD SDI Video output
    - Added support for an optional HD/SD SDI video output board
    - Video display modes can be set to 480i, 720p, and 1080i at 59.94 or 60 Hz
    - Video can be configured to show English and/or Spanish text
    - Eight (8) channels of embedded audio can be configured, and each channel can be configured to use English or Spanish audio
  - 5) MPEG output stream enhancements
    - English and Spanish audio streams can be configured
    - Video can be configured to show English and/or Spanish text
    - Ensure that the MPEG stream has the same duration for both audio and video
    - Improved the timing and PCR accuracy
    - Stream at a constant bitrate (with some variation)
  - 6) MPEG\_DASH enhancements
    - English and Spanish can be configured
    - Separate English and Spanish manifests and media are produced per configuration
    - Changed the MPEG-DASH manifest AudioChannelConfiguration element to include the correct value for mono audio
  - 7) Added Lead-in and Lead-out messages
    - Added the ability to configure lead-in messages, which are presented immediately before an alert message
    - Added the ability to configure lead-out messages, which are presented immediately after an alert message
    - Audio, images, and text can be configured for each lead-in and lead-out message
    - A lead-in and lead-out message can be configured for each event type and severity
  - 8) CAP HTTP Delivery includes English and Spanish information, including audio and DASH manifest resources (depending on the configuration)
  - 9) Fixed a problem in the Web GUI that wouldn't save locations for the RWT unless Random RWT was enabled.
  - 10) Fixed a problem with the audio sample rate from EASyIP Network Receivers.
  - 11) Fixed a problem where an EAN was delivered to DNCS/Evertz recipients regardless of the recipients configured locations.
  - 12) Change the allowable SSL ciphers if Compliance Assistant is licensed.
  - 13) V3.04.03 Patch released on 6/15/18
    - Added a public announcement feature that allows operators to originate messages for a configurable duration. This feature is used to tune televisions and set-top boxes to a non-EAS details channel. The audio and video for the details channel is provided by an external source.
    - Modified the MPEG output stream to minimize UDP packet bursts to prevent packet losses at receivers with small buffer space.
    - Enable the MPEG Stream Null Packet Stuffing by default to prevent problems with low bitrate, audio only streams.
    - Fixed a problem with determining the correct duration for an EAN received from a CAP source that includes an audio file resource.

### **Version 3.03, 10/13/17**

- 1) Linux operating system updates and security patches (all updates as of 10/4/17).
- 2) Added monitoring and status information for temperatures and fans.
- 3) Changed the audio input signal detection to use the radio receiver's measured RSSI values for determining if a radio station's signal is good.
- 4) Updates to the MPEG-DASH feature
  - Write a temporary file when updating the DASH manifest and then copy it to the manifest file that's accessible to external clients in order to avoid racing issues with client requests.
  - Fixed a problem with MPEG-DASH live audio media, where the first audio segment included the correct PID but other segments included a different PID.
- 5) Added user configuration for processing EAS EOM's, including the amount of time wait for an EOM and the action to take if a timeout occurs.
- 6) Fixed a problem that occurred when configured to show the Station ID in the alert display text, where the received Station ID was shown rather than the Station ID configured for the EASyCAP.
- 7) Added the ability to backup and restore all configuration settings for the EASyCAP except for machine specific information such as licenses, serial number, and user accounts. Network settings, NTP settings, and Certificate files used by the EASyCAP software can be optionally backed up and restored.
- 8) The random weekly test feature was updated to allow operators to configure two time slots per day as the allowable times that weekly tests can be automatically generated.
- 9) Updates to the Alert Log
  - Added transmit times for alert message deliveries
  - Added MPEG-DASH information
  - Added an HTTP/HTTPS endpoint to retrieve the alert log as a JSON payload, and an option to specify a maximum number of log records that are returned.
  - Added an option to log all failures to deliver alert messages to CAP HTTP Delivery recipients
- 10) Updates to SNMP and SYSLOG
  - Added temperature status and warnings
  - Added fan status and warnings
  - Added MPEG-DASH manifest and media errors
  - Added audio and video media errors
- 11) Added debug, web access, and web error logs for troubleshooting purposes
  - SYSLOG is used to maintain the logs, and allows them to be sent to remote logging servers
  - A separate MPEG-DASH access log is maintained for clients attempting to retrieve MPEG-DASH manifests and media
  - The logs can be viewed from the Web Interfaces Alert/System Log screen
- 12) Added a user configurable option to view system status and configuration without requiring the operator to login.
- 13) 3.03.01 patch was released on 10/30/17
  - All Linux operating system updates and security patches as of 10/30/17

- Added support for Analog Devices AD1989 HDA CODEC
  - Added support for each process to handle upgrading its own configuration when an older configuration file is detected
- 14) 3.03.03 patch was released on 12/14/17
- All Linux operating system updates and security patches as of 12/7/17
  - Add option to use AC-3 audio in the MPEG stream
  - Fixed problem that could sometimes increase the bandwidth of the MPEG stream

### **Version 3.01, 6/26/17**

- 1) Updates to allow software to run on 64-bit Debian Jessie
- 2) Updates to support EASyCAP Series 30 hardware
- 3) Improved audio quality and processing
- 4) Removed EASyPLUS/EASyCAST support
- 5) Added the following SNMP and syslog alarms
  - Certificate warning
  - NTP warnings and errors
- 6) IPAWS Atom feed
  - Add the ability to immediately check for CAP messages when an EAS message is received from an audio input.
  - Added certificate configuration to allow users to easily configure certificates used for CAP servers and digital signatures.
  - Added an option to ignore Required Weekly Tests from IPAWS Atom feeds.
  - Add option to use the EASText element for the alert text.
- 7) Added configuration to allow the user to configure each individual general purpose input and output, including the outputs on IP switches.
- 8) Added options to quickly view logs for today, this week, last week, this month, and last month.
- 9) Changed the EAS message's sender element to the Station ID rather than the Originator code in order to be able to track alerts back to the original source when using the EASyCAP Atom feed.
- 10) Changes to the MPEG-DASH manifest
  - Changed manifest xmlns to "urn:mpeg:dash:schema:mpd:2015"
  - Added segmentAlignment to AdaptationSet
  - Changed AudioChannelConfiguration schemeIdUri to "urn:mpeg:dash:outputChannelPositionList:2012"
  - Changed the Audio AdaptationSet mimeType back to "video/mp2t"
  - Added <SupplementalProperty schemeIdUri="urn:scte:dash:powered-by" value="Trilithic\_EASyCAP-3.01.1">