Node/EdgeCaster Release Notes

2023-09-11 V9.6.0.146.3

Bug Fixes / Improvements

- > Facebook RTMP integration API updates
- > HDMI color space detection bug fix
- > SDI stability enhancements:
  - ● Enhanced PLL lock handling
- > Web UI enhancements to show that UTC time zone is the default time setting under Device Settings
- > Debug log enhancements:
  - ● SDI video and audio status
- > Web UI configuration improvements:
  - ● Graphic Overlay "lower third" selection configuration UI bug fix
  - ● Amazon IVS RTMP integration tooltip bug fix
- > Graphic Overlay device storage utilization enhancements
- > Enhancements to device memory utilization when ingesting SDI sources feeding closed caption data

2023-08-01 V9.5.0.146.3

Features

- > Native Zixi Feeder support
- > SMPTE-2038 ancillary metadata supported on TS outputs - web UI toggle added under Data Configuration
- > Custom output naming
- > Local REST API schema updates to support formatting and unmounting storage devices

Bug Fixes / Improvements

- > Bug fix causing device malfunction while using an SDI source containing closed captions data with "Limit to 30 FPS" enabled
- > Docker logging scheme alignment
- > SDI stability enhancements:
  - Video and audio source detection
  - Audio error handling improvements
  - Addition of SDI Phase data toggle in REST API
- > Improvements to DASH outputs for ULL compatibility
- > Web UI Improvements:
  - Universal browser support for tooltips (Safari)
  - Enhanced web browser window error handling
  - Increased accuracy of status reporting from outputs
  - Tooltip formatting changes for universal browser/mobile support
  - New tooltip added for Quality/Latency description
- > Enhancements to debug logging:
  - Improvements to external storage device logs, device network statistics logs, reboot logs, reduced amount of duplicated debug logs, and log export options via ADB
- > GOP structure changes for "High" Quality/Latency configuration when encoding in H.265 (HEVC) mode for improved player support
- > Adjusted the port for RTCP traffic with RTP outputs
- > Enhancements to UDP-based TS outputs to provide consistent packet sizes
- > UDP outputs kernel parameters modified to reduce TR-101-290 Continuity Count errors
- > Enhancements to XML configuration
  - Multi-Channel Audio schema changes
  - Devices will no longer accept a null entry for Device Name
- > Enhancements to Web UI handling of SRT encryption

- > "Limit to 30 FPS" Web UI configuration renamed to "Limit to Maximum 30 FPS"
- > Software now always ensures at least 1 audio and video encoder are present at all times
- > LiveEdge Core V9.5.x will be the last software version to support Community Ultra Low Latency HLS streaming

2023-01-09 V9.0.0.144.3

Features

- > One-click enrollment in LiveEdge Cloud
- > Addition of user-defined KLV Metadata in streaming via REST commands
- > Added ability to format attached USB drives and SD cards under Storage Device Management on the web UI to FAT32 filesystem

Bug Fixes / Improvements

- > Bug fixes/improvements around SRT protocol
- > Bug fix for HLS streams downloading instead of playing back on Safari web browser
- > General constant bitrate bug fixes
- > Web UI branding changes from "AWS IVS" to "Amazon IVS"
- > REST API documentation updates
- > Debug log improvements
- > When factory reset, EdgeCaster will default to the assigned serial number of the unit for the device name

2022-09-30 V8.6.0.143.3

Features

> New enhanced SCTE-35 REST API endpoint including the following:
- Scheduled start times of splice command insertion
- Configurable pre-roll time of splice event
- Canceling active splice command insertions
- Deleting future splice command insertions
- Time signals with segmentation descriptor

Bug Fixes / Improvements

> Bug fix for SRT stream re-establishing connection each time XML was polled when using SRT encryption configuration via XML
> Web UI improvements with closing out help textboxes

2022-08-29 V8.5.0.143.3

Features

> ETSI-TR-101-290 compliance
> Outputs with all connected encoders (audio and video) set to Constant Bitrate will now use a constant-bitrate (padded) mux

Bug Fixes / Improvements

> Network handling improvements
- Inclusion of configuring optional backup DNS server
  - Devices assigned a static IP configuration will now require a DNS server to be specified. If a DNS server is not desired, use 127.0.0.1.
- DHCP IP address no longer populates the static IP address fields
- Bug fix for Android failure to renew DHCP lease. Previous behavior was that a device would not always try to obtain a new DHCP lease until a reboot
- IPv6 explicitly disabled
- Devices set to static IP address will no longer attempt to obtain a DHCP lease on bootup

- DNS servers will no longer erroneously report 0.0.0.0 in DHCP mode
- Bug fix for race condition on connection reset that would cause a device to become unresponsive
- Devices now compliant with RFC3927 for Link Local connections. Devices no longer defaulting to an IP address of 192.168.1.100
- Devices that fail to renew a DHCP lease or that are booted on a network without a DHCP server will now fallback to Link Local IP address (169.254.1.X - 169.254.254.X)
- Minor miscellaneous security improvements around web server
- SRT library updates
  - Update from version 1.4.3 to 1.5.0
- FFMPEG updates
  - Update from major version 4 to major version 5
- HLS EXT-VERSION tag changed to be less strict
- SRT encryption passphrase retained when encryption is disabled
- Deprecated [setting XML via system API](#)
  - XML endpoint required to set XML configuration

- REST API feedback improvements
  - Current Video Profile bitrate displayed when encoding
- Factory reset will now clear any Docker containers running on the device

2022-06-20 V8.4.0.141.3

Features

- Vertical video encoding (9:16 vs 16:9) now supported in AV Input > Input Settings > Video Input Rotation

Bug Fixes / Improvements

- Separation of ADB enablement from LiveEdge® Compute feature set
  - ADB license key must be obtained from Videon Support Team
- Graphic Overlay web UI improvements
  - Previews added for graphic selection
  - Unnecessary settings hidden for specific Overlay Positions
  - Support for selection of a new graphic with the same name
  - Graphic Overlay feature changed verbiage from "Lock Resolution Ratio" to "Lock Aspect Ratio" to properly reflect what the field controls

> Security enhancements
> Bug fix for Generic RTMPS stream URL requiring manual selection of 'rtmps://' protocol

V8.3.2.141.3

Bug Fixes

> Resolved issue where downloaded file recordings are corrupted when downloading multiple simultaneously
> Resolved an issue where key frame interval limits were not being enforced when set through XML.

Improvements

> Software update reliability enhancements

> Added additional EXT-X-PROGRAM-DATE-TIME tags to HLS manifests, which improves Akamai Instant TV compliance
> Improvements to verbiage of error messages for Graphic Overlay and File Record features
> Added a checkered background to Graphic Overlay image preview to show transparency
> Increased the AV Input Preview max width from 320 pixels to 1920 pixels.

Known Issues

> Generic RTMPS stream URL requires manual selection of 'rtmps://' protocol

V8.3.1.117.3

Improvements

> Key security enhancements added for increased reliability

Known Issues

> Android OS update bug that may require cold boot during a software update
> Generic RTMPS stream URL requires manual selection of 'rtmps://' protocol

V8.3.0.117.3

Features

> Addition of Graphic Overlay support

Improvements

> 720x480 encoder scaling resolution replaced with 854x480 resolution in support of 16:9 widescreen
> Improved reliability of network diagnostics via SD card or USB drive

Known Issues

> Android OS update bug that may require cold boot during a software update
> Generic RTMPS stream URL requires manual selection of 'rtmps://' protocol

V8.2.0.117.3

Features

> SCTE-35 ad marker insertion via REST API command
  ● Current maximum supported splice duration is 1 hour

Bug Fixes / Improvements

> Further improvement of SDI lock
> Videon Web UI is now supported across Firefox, Safari, and Edge web browsers in addition to Chrome
> Videon Web UI rebranded to match Videon's new look & feel
> Video bitrate minimum adjusted to 100kbps
> Keyframe interval minimum adjusted to 1 frame (for iframes only)
> SRT streaming status now included within HTTP query parameters for XML
> Configurable file recording filename date/time settings
> Improved load time of AWS IVS RTMP channel list when using multiple channels

Known Issues

> Generic RTMPS stream URL requires manual selection of 'rtmps://' protocol

V8.1.4.117.3

Bug Fixes

> SDI signal lock bug fix
  ● ***Note: In environments where the video format is switched mid-stream using SDI, in some cases there can be static in the output audio feed. Stopping and starting the stream corrects the issue. This issue is resolved in the next release after V8.1.4.117.3***

Known Issues

> Generic RTMPS stream URL requires manual selection of 'rtmps://' protocol

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V8.1.3.117.3

Bug Fixes / Improvements

> Fix for Web UI bug placing red X for invalid FTP file path in wrong location
> Fix for large recorded files not able to be played back when "Delete Oldest File When Full" and "Limit Max File Size" are enabled

V8.1.2.117.3

Bug Fixes / Improvements

> Fix for file recording showing unsaved changes on web UI during FTP Upload
> Fix for web UI slowing down during FTP Upload
> Fix for Device Settings page not being displayed on web UI when using port forwarding
> Improvement of video playback quality for SD resolutions
> Improvements to prevent connection issues when RTMP server is in a faulty state
> Improvements to SRT connectivity
> Security improvements to hide and encrypt passwords and keys of confidential configurations for the following:
> - RTMP Integrations
> - SRT Encryption
> - FTP Authentication
> - XML Authentication
> Improvements to XML web UI feedback when invalid URL is entered
> Removed "NONE" option for SRT encryption in XML schema and REST API
> Updated license naming to match newly defined product line names:
> - "Custom Compute Toolkit" > "LiveEdge® Compute"
> - "Origin Server" > "LiveEdge® Streaming"

V8.1.1.117.3

Features

> Added software version and serial number to XML status
> Added the ability to set a Custom Update Path for Custom Compute Toolkit Feature Set

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Bug Fixes / Improvements

> Improved SDI input source detection
> Improved update notification of a failed download
> Improved logging for update retrieval
> Fixed multiple sporadic streaming hangs on AV input changes
> Fixed a crash in some cases of disabling HTTP Push/Pull
> Fixed an issue where users were experiencing poor 4K stream playback to YouTube

V8.1.0.116.3

Features

> Added support for SRT Listener
> Mux RTMP Integration

Improvements

> Akamai MSL4 Live to VOD archiving by ensuring HLS EXT-X-ENDLIST tag is added to final media manifests

V8.0.0.115.3

Features

> Added support for multiple (3) SRT outputs
> Added support for SRT stream ID

Bug Fixes / Improvements

> Fixed possible failure to load static IP configuration on boot
> Improved logging of unexpected errors
> Fixed issue where Facebook stream would not start when set up using REST actions
> Fixed an issue where some SRT socket options were failing to set
> Improved NTP time accuracy
> Updated web UI for increased compatibility with port forwarding

V7.10.0.109.3

Features

> AWS IVS RTMP Integration
  ● Refer here for guidelines on streaming to AWS IVS:
    https://support.videonlabs.com/hc/en-us/articles/4404815170963-Stream-to-AWS

Bug Fixes / Improvements

> Fixed issue where web UI was sometimes failing to load all outputs

Known Issues

> Techole and Cable Matters HDMI Splitters are not recognized as a valid source with Videon encoders.
> USB drives must have a partition table to mount. Ensure the drive has a partition table and is formatted to FAT32.
> When a storage device is unplugged, a new storage device must be manually selected.

V7.9.1.109.3

Bug Fixes / Improvements

> Facebook Stream Title & Description no longer disappear after a reboot.
> Disabling one output from an MBR Group using multiple outputs no longer disables all outputs.
> Modified sub-playlist title names of HLS streaming for compliance with Akamai reserved playlist file names.
> Network improvements were added to automatically re-establish a lost connection.

V7.9.0.102.3

Bug Fixes / Improvements

> Changed AV Input Preview max Thumbnail size to 320px to help prevent performance issues when using Input Preview
> Updated stream outputs (RTMP, Unicast, Recording, etc.) to enable when their settings are changed.

V7.8.2.102.3

Bug Fixes / Improvements

> File recording's "Time Remaining" field now shows when the selected storage device is full
> Facebook and YouTube RTMP integrations now dynamically adjust pairing poll interval to conform with respective platform API requirements to avoid pairing

attempts being cancelled by Facebook or YouTube
> Failed Facebook and YouTube pairing attempts now show an error message
> HTTP streaming now separately chunks audio and video to improve general playback performance
> HTTP streaming now supports extremely long segment windows; at least 2400 segments
> HTTP Streaming stability and latency drift improvements

V7.8.1.96.3

Bug Fixes / Improvements
> UI now shows an error on save if no video profile is selected for an output
> YouTube and Facebook integrations were updated to meet ToS, new privacy and branding requirements, as well as use the latest API calls
> Fixed and issue with early-adopter EdgeCasters not automatically receiving Origin Server features with the new feature licensing system

V7.8.0.96.3

Features
> Multi-channel audio support for non-HTTP outputs
> Added a product registration splash screen on boot to appear until device has been registered
> Added license key entry field in the advanced menu to activate advanced features

Bug Fixes / Improvements
> Fixed HLS PROGRAM-DATE-TIME drifting from clock time
> Fixed DASH manifest containing an invalid audio sample rate
> Fixed File Recording sometimes failing to record to file

V7.7.2.96.3

Bug Fixes / Improvements
> Fixed an issue where some TCP resets were unhandled when streaming to an HTTP origin server, causing players to stall on a missing video/audio segment
  – When a TCP reset is encountered, we now retry segment upload until the duration of the segment has passed

V7.7.1.96.3

Features

> AV Input Preview feature added to Input Settings for confidence monitoring
>> – This allows viewing up to 5 FPS of the video input and a real-time audio input level meter
> Digest Authentication support added to XML Control
>> – Users can now host XML configuration files on digest authentication protected servers
> Factory Reset now clears all recorded files on the Internal Storage
> XML REST API control has been moved to its own /xml endpoint and the xml control in the /system endpoint has been deprecated
>> – The XML fields in /system will continue to function for V7.7, but **will be deactivated** in a future release
>> – **If using the REST API to configure XML control**, please migrate functions to the new /xml endpoint according to the updated REST API documentation here

Bug Fixes / Improvements

> File Recording device selection policy removed to simplify File Recording setup
>> – Storage device is now always manually selected
> File Recording Max File Size now set only in GB since most users had only used GB
>> – Valid configurable range is from .01GB up to size of storage device
> HTTP Streaming stability improvements
> Secure streaming connection stability improvements (ex: SRT, HTTPS, SFTP)
> DASH AvailabilityStartTime now represented in decimal format instead of integers, allowing more precise ULL streaming
> Improved the Facebook RTMP integration to more accurately populate scheduled streams based on recent changes to Facebook's Live Video API

V7.6.1.85.3

Features

> Akamai service provider option now available in RTMP Outputs
> HTTP Pull now serves HLS/DASH over port 8080 instead of port 80
>> – This was a result of resolving CORS issues on HLS/DASH playback
> HTTP Pull now has the option to enable ULL, functioning the same as in HTTP Push
> NTP section added to Device Settings to allow users to configure the time server the encoder syncs with

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Bug Fixes

> UI no longer fails to fully load when USB or SD card is improperly removed while recording
> MBR group now properly shuts down when removed from Outputs
> SRT now requires users to enter a password no shorter than 10 characters

V7.4.1.77.3

Bug Fixes

> -10dB audio drop on encode fixed

V7.4.0.75.3

Features

> Added support for SMPTE-334-2 608/708 Closed Captions via SDI for HD/UHD resolutions
> Added Audio/Video Input statuses
> HDMI connection EDID updated to "Videon"

Bug Fixes

> Fixed an infrequent issue where the encoded video would frame shift with some sources
> Improved UI load time
> Audio and Video profiles are now removed properly from Output Source selection when deleted
> File record error LEDs corrected to reflect error states
> HTTP Push and Pull status corrected to reflect the on/off state
> Improved network connectivity stability with static networks
> DHCP lease renewal improved
> Color space improvements on encode
>   – Correct identification of Full vs. Limited scale
>   – Correct identification of BT.601 vs BT.709 color space

V7.3.0.73.3

Features

> Input Settings now shows a status in the UI
> All Outputs now show status in the UI

> "Recording and FTP" label changed to "Recording"
> fMP4 is now the default media type for HTTP Pull and HTTP Push
> MBR group can no longer be selected as a source if it does not contain any Video Profiles

Bug Fixes

> AV Synchronization stability fixes
> Buffer management improvements
> RTSP startup stability improvements
> Recording now has the correct LED statuses reported
> Device Name now appears next to Current Device in the Advanced tab
> DASH Representation ID no longer changes mid-stream
> ManifestType is now optional in XML control
> HLS Master manifest now only uploads on start of HLS stream
> Facebook RTMP integration now loads "Stream List" information properly

V7.2.0.61.3

Features

> The hardware button on the front panel now controls all RTMP outputs
> The currently select device now shows in the "Select a Device" dropdown on the Encoder Control page
> B-frame control for HEVC was added to be the same as the Quality/Latency control for H.264
> The MBR Group is now created automatically when accessing the Web UI
> DASH manifest Representation IDs are now static rather than dynamically generated for each stream instance
> HTTP Push now has the option to upload only the HLS manifest, only the DASH manifest, or both

Bug Fixes

> Unplugging the Ethernet cable while running no longer reverts Static network settings to DHCP
> SDI input locking stability improvements

V7.1.0.61.3

Features

> B-frames are now supported for HEVC encoding as the Quality/Latency setting

> Video and Audio profiles now have status messages in both the left sidebar and in the settings window when selected
> Video profiles with MBR Group Member enabled can now be used for non-MBR outputs
> Video profiles now report an error and associated error status when total resolutions encoded exceeds 4Kp30
> Audio Source selection in outputs now allows "None" for Video-only streams
> Facebook now supports selecting scheduled streams on pages managed by the paired user
> File Recording now has new features
  – MP4 record
  – Option to delete oldest recording from storage device when full
  – Storage device selection policies
  – 16GB internal storage now accessible
> FTP is now part of File Recording settings

Bug Fixes

> File Recording is re-enabled
> FTP Upload is re-enabled
> XML is re-enabled: Videon V2 XML
> Hardware Stream button is re-enabled
> Storage device management in the Advanced tab is re-enabled
> YouTube RTMP integration more reliably generates a pairing code
> Auto detect in AV Input settings now works properly
> Encoded resolutions now correctly always report progressive, even when input is interlaced

V7.0.0.61.3

Features

> EdgeCaster upgraded with the new Videon V2 User Interface
> EdgeCaster upgraded with the new Videon V2 REST API
> EdgeCaster now supports multiple Video Profiles, enabling synchronized Multiple Bitrate streaming for HTTP outputs
  – See UI walkthrough, linked above, for more information
  – Up to a combined total of 4Kp30 encoding can be done at the same time
  – Using multiple unsynchronized (not in MBR group) Video Profiles is possible across all available outputs

Bug Fixes

> HLS Master Manifest BANDWIDTH and AVERAGE_BANDWIDTH attributes are now more accurate

V6.5.0.61.3

Features

> Release for Qualcomm-based VersaStreamer SDI

V6.4.0.61.3

Features

> Facebook RTMP integration now supports editing event titles and descriptions

Bug Fixes

> Improvements were made to file record stability
> Software update logging improvements

V6.3.0.61.3

Features

> Facebook RTMP integration now has support for scheduled streams.
> Auto detect option added for AV input.
>   ● If both HDMI and SDI have valid video inputs, SDI will be used.
>   ● If both embedded HDMI/SDI audio and 3.5mm audio are detected, the embedded audio will be used.

Bug Fixes

> Fixed issues where HTTP push files did not get uploaded to MediaStore if the segment length was larger than 3 seconds when Ultra Low Latency was turned off.
> Enabled second HTTP push URL to work when streaming with Ultra Low Latency turned off.
> Fixed playback issues when Quality/Latency was set to Normal for HTTP Push.
> Fixed issue where Encoder Settings would sometimes reset when EdgeCaster was rebooted.

V6.2.0.61.3

Features

> Modified encoder firmware update to include previous firmware files so the update does not have to be incremental.
> Recordings on the Storage Device list are now ordered by date modified.
> Improved DASH manifest compliance with DASH IOP
> "srt://" dropdown was added to the SRT output tab so "srt://" is now automatically inserted into the URL.

Bug Fixes

> Smoothed out "bursty" network transmission for unicast and multicast out
> Allow SRT settings to save even if the URL or port textfield(s) are blank
> Modified the REST API so it does not save blank RTMP information

2020-01-31 V6.1.0.61.2

Features

> Interlaced input support
  ● Note: After updating, reboot the board to get interlaced input support.
> SRT XML control
> Dual URLs for HTTP Push
> Web UI displays banner when used on outdated versions of Chrome or an unsupported browser.

2019-12-20 V6.0.0.43.1

Features

> SRT output
  ● We currently support the "Caller" mode
> XML configuration from SD card
> Advanced options resetting search by name box improvements
> Socket is now opened on file completion for HTTP Push
> Added "HTTP chunk size must be less than or equal to half the segment length" error message to HTTP Push

Bug Fixes

> Fixed issue where web UI wrongly prompted after a change made to HTTP Push and

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Pull
> Fixed issue where recorded files couldn't be downloaded from the web UI.
> Fixed issue where "Error Saving Data" error occured when down scale video with frame rates of 23 and 24 fps as input source.

2019-12-10 V5.0.1.43.1 Release

Bug Fixes
> Updated YouTube integration to use YouTube's new API.

2019-12-06 V5.0.0.43 Release

Features
> First official release that is available using the "Check for Update" button in the Advanced page. All future updates will be released this way
> TS support for HTTP streaming
> Added error message of HTTP chunk size must be less than or equal to half the segment length for HTTP push.
> HTTP streaming settings were added to XML control

2019-11-04 V0.1.206.43 Engineering Release

HTTP Streaming Improvements
> HTTP XML control
> Separate Push and Pull HTTP streaming outputs

2019-10-07 V0.0.19.43 Engineering Release

HTTP Streaming Improvements
> A User-Agent header set to "Videon EdgeCaster4K 0.3" has been added to HTTP requests.
> MPD@availabilityStartTime for DASH was fixed to never change after initially being set with the initial upload of the manifest.
> HLS manifest names were changed to master.m3u8 for the master playlist, and playlist.m3u8 for all variant playlists.
> HLS master manifest is now only uploaded at the start of the stream.
> SegmentTimeline@startNumber and segment numbering now begin at 1, instead of

0
> suggestedPresentationDelay was added to the DASH manifest

2019-08-27 V0.0.445.43 Engineering Release

DASH Improvements
> Support for HEVC
> Configurable chunk duration by frames and milliseconds
> Simultaneous HLS and DASH

2019-08-08 V0.0.319.43 Engineering Release

DASH Improvements
> Separate Segments for Video & Audio for HTTP Streaming
> Ultra Low Latency features were added to the DASH manifest - minBufferTime, availabilityTimeOffset, availabilityTimeComplete.
> More accurate timing was added to the DASH manifest
> Upon stopping the stream, DASH manifests will be converted to a static version referencing the "left over" segments from the final playback window

2019-07-19 V0.0.181.43 Engineering Release

DASH Improvements
> Audio has been enabled in HTTP Streaming
  ● This uses the same, muxed segment, referenced in separate Adaptation Sets
> DASH manifest updated with more accurate metadata

Web UI Updates
> The DASH tab in Output Settings was updated to be HTTP Streaming to make the web UI more generic

2019-07-11 V0.0.114.43 Engineering Release

HTTP Delete
> Any segments uploaded to the ingest server are deleted from the server once they

are no longer on the device file system

2019-07-01 V0.0.57.43 Engineering Release

DASH Proof of Concept
> DASH proof of concept
> Video only
> No HLS
>