Medialooks

VIDEO SDK

MFormats SDK Release notes

Version 2.12.1.15125

Release at a glance

98	22	71	5	0
TOTAL	ADDED	FIXED	UPDATED	CHANGED

Browse the MFormats SDK changes by area. Each overview item links to a technical description that explains why the change was needed and what it delivers.

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Change overview

Select a change to jump to its technical description.

01 Common Changes

Added GPU conversion from r210 to v210.

Fixed Crash while processing r210 with the GPU pipeline disabled.

Added OpenGL texture access from IMFFrame.

Fixed Unwanted black bars after video rotation.

Fixed Cropping planar video formats.

Fixed YUY2 scaling with MFOverlayRect on the GPU.

Fixed CPU overlay of frames created from memory.

Added Clock-based rate control with preview enabled.

Added Per-guest server-side mute in WebRTC 2.0 mix-minus sessions.

Fixed WebRTC 2.0 video displayed at double height in a browser.

Fixed WebRTC sample audio dropouts when minimized on NVIDIA GPUs.

Added MServer process priority through MFFactory.

Fixed MServer memory leak.

Updated FFmpeg 9.

02 File Recording and Network Streaming

Fixed Audio loss after hours of continuous recording.

Fixed Dropped frames during NVIDIA hardware encoding.

Fixed NVIDIA encoder stopping on YUY2 GPU inputs.

Fixed Full-range levels in 10-bit encoding.

Fixed Slice count reported by the NVIDIA encoder.

Fixed Missing video in AVI recordings encoded with NVIDIA HEVC.

Fixed Upside-down SDI or NDI recordings with MFWriter and NVIDIA H.264.

Fixed Interlaced video encoding with Intel Quick Sync.

Fixed Intel hardware encoder crash in external-process workflows.

Fixed ADPCM audio encoding.

Added Writing SMPTE ST 436 ANC tracks to MXF.

Fixed Picture artifacts when transwrapping MXF to MOV.

Fixed Missing audio tracks during MXF transwrapping.

Fixed Closed-caption insertion during video passthrough.

Fixed CEA-708 insertion from MCC files during transwrapping.

Fixed CEA-708 captions from MCC files in YouTube streams.

Added Arabic and Hebrew DVB Teletext encoding.

Added Binary SCTE-35 packet insertion into MPEG-TS.

Added Configurable SCTE PID in MPEG-TS output.

Fixed SCTE-35 program splice flag for immediate splices.

Fixed DVB MPEG-TS compatibility.

Fixed MPEG-1 Layer II audio signaling in the DVB PMT.

Fixed DVB reception with re-encoded video and passed-through audio.

Added SRT sender IP in connection statistics.

Fixed Stuttering on received 50i SRT video.

Fixed SRT reception in third-party applications.

Added Opus audio for Icecast streaming.

03 Input/Output Devices

Added OP-47 subtitle carriage in second-field VANC.

Fixed False CEA-708 detection on live SDI input.

Updated Blackmagic Desktop Video SDK 16.0.

Fixed Pink tint on DeckLink v210 output.

Fixed Frame drops and audio stutter on four DeckLink HDR outputs.

Fixed Interlace artifacts during GPU L-band squeeze on DeckLink.

Fixed External keying on DeckLink.

Fixed External keying on Blackmagic UltraStudio HD Mini.

Fixed HDR metadata on fill and key output.

Added Configurable color range for Bluefish444 capture and output.

Updated Bluefish444 SDK 6.6.2.0.

Fixed HDR signal output through Bluefish444.

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Fixed Audio on Deltacast live passthrough.

Updated AJA SDK 18.1.

Added Renderer notification for invalid SCTE-104 triggers.

Fixed MFLive audio channel mixing in an external process.

Fixed WASAPI audio recovery after a UAC desktop switch.

Fixed Switching ASIO audio renderers during preview.

04 Decoding and Seeking

Added Reading SMPTE ST 436 ANC packets from MXF.

Added SCTE ancillary data extraction from MXF.

Added MXF System Scheme 1 timecode.

Fixed MFReader opening a growing MPEG-2 MXF file.

Fixed Frame-number seeking in a growing MP4 without a moov atom.

Fixed Consecutive frame-number requests in MFormats.

Fixed GXF seeking through the tc_pos property.

Fixed Seeking with the NVIDIA decoder and GPU pipeline.

Fixed Intermittent green frame with NVIDIA decoding.

Fixed MFReader timecode with GPU decoding.

Fixed Missing or noisy audio in affected media.

Fixed Audio loss in certain files after the FFmpeg 8.0 update.

Fixed PCM audio detection in ProRes MOV files.

Fixed Reconnect-on-open behavior for network sources.

Fixed Black frames and bitrate drops on received DVB streams.

Fixed HLS multivariant playlist decoding with FFmpeg 9.

Fixed Frame delivery delay after a playback-rate change.

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Fixed Negative coordinates for video items in CG groups.

Fixed Relative CG positioning at non-Full HD resolutions.

Fixed CG items added to a block with AddNewItem.

Fixed Ticker dimensions from Character Generator XML.

Fixed Interlaced video flicker in CG with the GPU pipeline.

Fixed Excessive CPU use in the Character Generator.

Fixed Character Generator memory leak with raster fonts.

Fixed Character Generator add-on licensing in MFormats.

Added 16-bit Unicode characters in CEA-708 captions.

Added Korean CEA-708 decoding with KS X 1001:2004.

Added Automatic CEA-708 code page detection.

Fixed CEA-708 display when video conversion is enabled.

Added Decoding OP-47 subtitles.

Added Displaying OP-47 Teletext subtitles in MCCDisplay.

Fixed Cyrillic subtitles in MCCDisplay.

Fixed MCCDisplay rendering quality.

Fixed Green stripe in subtitle rendering.

Fixed V-Chip information after video downconversion.

Fixed Mask rendering in the GPU pipeline.

Fixed Application shutdown hang with the Chroma Key plugin.

Fixed Unexpected logo when using Video Filters with MFormats Expert or Ultimate.

Technical details

Each change describes the problem or the workflow that prompted it, followed by the result in this release.

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01 Common Changes

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ADDED

GPU conversion from r210 to v210

Description Some DeckLink outputs require `v210` for 4K at 50p or higher. A GPU pipeline that starts with 10-bit RGB `r210` needs to convert it before sending the signal to those outputs.

Result With `gpu_pipeline=true`, the SDK can convert `r210` frames to 10-bit YUV `v210` frames.

FIXED

Crash while processing r210 with the GPU pipeline disabled

Problem Previewing `r210` video could crash the application with `gpu_pipeline=false`.

Result MPreview and MFPreview render the affected `r210` frames through the CPU pipeline.

ADDED

OpenGL texture access from IMFFrame

Description An application that composites SDK video in an OpenGL scene needs to transfer the picture into a texture owned by its rendering context.

Result `MFFrameGetOpenGLTexture` on `IMFFactoryOpenGL` copies the video from an `IMFFrame` into a caller-supplied texture when the texture's OpenGL context is current.

FIXED

Unwanted black bars after video rotation

Problem Rotating a source left or right with the `rotate` property could introduce black bars along the image edges, which were especially visible when using a chroma key.

Result The affected rotation path preserves the image edges without adding the unintended bars.

FIXED

Cropping planar video formats

Problem Operations that accessed or saved a planar video frame could unexpectedly move the data in its planes in place. This could affect wrapped frames and subsequent processing.

Result The affected crop path avoids modifying the source frame's planes in place, preserving the original data for later use.

FIXED

YUY2 scaling with MFOverlayRect on the GPU

Problem When `MFOverlayRect()` composited onto YUY2 source frames with the GPU pipeline enabled, the overlay could retain its original size instead of scaling to the requested rectangle.

Result The overlay is scaled to the destination rectangle in the affected GPU path.

FIXED

CPU overlay of frames created from memory

Problem In CPU mode, `MFOverlayRect` processed frames created with `MFFrameCreateFromMem` incorrectly, producing an incorrect overlay.

Result CPU overlay processing handles frames created from memory correctly in this path.

ADDED

Clock-based rate control with preview enabled

Description Operators may need to monitor playback in a preview window while the application continues pacing frame delivery from the clock.

Result The preview can remain enabled with its own rate control disabled, allowing the clock to pace frame delivery.

ADDED

Per-guest server-side mute in WebRTC 2.0 mix-minus sessions

Description A server operator may need to silence a single guest's noisy microphone in a WebRTC mix-minus session while that guest continues to hear the other participants.

Result MConnect can mute an individual guest server-side with `mix_minus` enabled. That guest is removed from the other participants' audio mixes and continues to receive their audio.

FIXED

WebRTC 2.0 video displayed at double height in a browser

Problem The affected WebRTC 2.0 browser view displayed the video at twice its intended height, with a white area occupying the lower half.

Result The browser receives the intended frame dimensions and displays the image without the extra white area.

FIXED

WebRTC sample audio dropouts when minimized on NVIDIA GPUs

Problem On systems with certain newer NVIDIA GPUs, minimizing the WebRTC Streamer sample could cause audio dropouts for browser viewers.

Result The sample continues delivering audio when minimized in the affected configuration.

ADDED

MServer process priority through MFFactory

Description Applications that run SDK components in MServer may need to set the helper process's scheduling priority when it shares a host with other workloads.

Result Applications can configure MServer's process priority through `MFFactory`.

FIXED

MServer memory leak

Problem MServer failed to release memory in the affected operating scenario.

Result The affected operation now releases that memory.

UPDATED

FFmpeg 9

Description Playback compatibility issues had surfaced with the bundled FFmpeg 8 libraries. File and network workflows needed an updated baseline for media handling.

Result The SDK now bundles FFmpeg 9.x for media decoding, encoding, and muxing.

02 File Recording and Network Streaming

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FIXED

Audio loss after hours of continuous recording

Problem After several hours of continuous recording, audio could disappear and subsequent output files could contain video only.

Result The timecode path now handles rollover at midnight when `timecode.time_sync=2`, addressing the audio loss in the affected workflow.

FIXED

Dropped frames during NVIDIA hardware encoding

Problem The NVIDIA hardware encoder could skip frames, leaving gaps in the encoded output in the affected workflows.

Result The affected encoding path retains those frames.

FIXED

NVIDIA encoder stopping on YUY2 GPU inputs

Problem NVENC could stop mid-session when it received affected YUY2 GPU textures that the CUDA encoding path could not use directly.

Result The SDK converts those textures to a CUDA-compatible format so encoding can continue.

FIXED

Full-range levels in 10-bit encoding

Problem The affected 10-bit DeckLink-to-NVENC workflow converted full-range BT.2020 video to limited range and back. The round trip clipped color levels in the encoded output.

Result The encoding path preserves the source's full-range BT.2020 levels by avoiding the intermediate limited-range conversion.

FIXED

Slice count reported by the NVIDIA encoder

Problem NVIDIA H.264 output could report an incorrect number of slices per frame.

Result The affected encoding path reports the correct slice count.

FIXED

Missing video in AVI recordings encoded with NVIDIA HEVC

Problem An AVI recording made with NVIDIA H.265 hardware encoding could contain no visible picture.

Result The recorded AVI contains the expected video picture in the affected encoding workflow.

FIXED

Upside-down SDI or NDI recordings with MFWriter and NVIDIA H.264

Problem Recording SDI or NDI input through MFWriter with the NVIDIA H.264 n264 encoder could produce a video that was flipped vertically.

Result MFWriter preserves the source's vertical orientation in the affected recordings.

FIXED

Interlaced video encoding with Intel Quick Sync

Problem With Intel Quick Sync hardware that could not initialize interlaced encoding, a request to record interlaced video could stop the writer before output began.

Result The encoder retries in progressive mode after interlaced initialization fails, so the writer can start with a supported mode.

FIXED

Intel hardware encoder crash in external-process workflows

Problem The Intel hardware encoder could crash when packet data was accessed across processes in an external-process workflow.

Result Packet data is now handled correctly across the process boundary in the affected encoding path.

FIXED

ADPCM audio encoding

Problem The affected writer configuration could not encode audio with ADPCM.

Result ADPCM audio encoding works with that writer configuration.

ADDED

Writing SMPTE ST 436 ANC tracks to MXF

Description Broadcast recording and interchange workflows need to retain frame-associated ancillary data, such as OP-47 subtitles or SCTE-104 cues, in the MXF output.

Result MXF writers can record ancillary packets into an SMPTE ST 436 track when `mxf.anc_write=true`, preserving their frame and line association.

FIXED

Picture artifacts when transwrapping MXF to MOV

Problem Transwrapping an affected MXF file to MOV with video and audio packet copy produced visible picture artifacts in the output.

Result The affected source transwraps to MOV with its picture intact.

FIXED

Missing audio tracks during MXF transwrapping

Problem Packet-copy transwrapping of an affected MXF file could omit separate audio tracks even when track merging was disabled.

Result The output retains the separate audio tracks when track merging is disabled in this workflow.

FIXED

Closed-caption insertion during video passthrough

Problem The recorded transport stream omitted CEA-608 closed captions when video packets were copied without re-encoding.

Result Closed captions are inserted while the original video packets pass through.

FIXED

CEA-708 insertion from MCC files during transwrapping

Problem When an MP4 was transwrapped with video packet copy, CEA-708 captions supplied from an external MCC file could be missing even with caption embedding enabled.

Result The transwrapping path embeds the captions in the copied video packets and preserves their decode order.

FIXED

CEA-708 captions from MCC files in YouTube streams

Problem CEA-708 captions loaded from an external MCC file could be delivered incorrectly when streaming to YouTube over RTMP.

Result YouTube receives the CEA-708 captions from the MCC file correctly in the affected workflow.

ADDED

Arabic and Hebrew DVB Teletext encoding

Description Broadcasters distributing subtitles through DVB Teletext need to encode Arabic and Hebrew alongside the existing language options.

Result The DVB Teletext encoder supports Arabic and Hebrew subtitle text.

ADDED

Binary SCTE-35 packet insertion into MPEG-TS

Description Some playout systems already receive SCTE-35 cues as encoded packets. The previous XML-based insertion path required those systems to reconstruct the cue before writing it to MPEG-TS.

Result The writer can insert a binary cue supplied as `SCTE-35.PKT` side data directly into MPEG-TS.

ADDED

Configurable SCTE PID in MPEG-TS output

Description Broadcast systems may reserve a specific MPEG-TS packet identifier for SCTE-35 so downstream equipment can find the cue stream at the expected PID.

Result Writers with SCTE-35 embedding enabled accept `scte35_pid` to set the cue stream PID. A value of `-1` keeps automatic assignment.

FIXED

SCTE-35 program splice flag for immediate splices

Problem For a program-level SCTE-35 splice, setting `spliceImmediateFlag=1` could clear `program_splice_flag` even though a program was specified.

Result Immediate splices now retain the program splice flag when the cue specifies a program.

FIXED

DVB MPEG-TS compatibility

Problem The affected DVB MPEG-TS output contained formatting and signaling errors identified against the DVB specifications.

Result The transport-stream formatting and signaling have been corrected for the affected output.

FIXED

MPEG-1 Layer II audio signaling in the DVB PMT

Problem The DVB Program Map Table identified MPEG-1 Layer II audio with incorrect audio signaling, even though the stream carried Layer II audio.

Result The table now identifies the audio correctly so receivers can interpret the stream.

FIXED

DVB reception with re-encoded video and passed-through audio

Problem A receiver could not play the affected DVB stream when the writer re-encoded video but copied the original audio packets.

Result The resulting DVB stream is playable with re-encoded video and audio passthrough in the affected configuration.

ADDED

SRT sender IP in connection statistics

Description Applications receiving SRT streams need to identify the remote sender when monitoring connections or troubleshooting the origin of a stream.

Result SRT readers expose the connected sender's IP address through `stat::srt.peer_ip`.

FIXED

Stuttering on received 50i SRT video

Problem Incoming 50i video from an SRT stream could stutter when it was processed with the GPU pipeline enabled.

Result The affected 50i reception path plays at an even cadence.

FIXED

SRT reception in third-party applications

Problem Some third-party applications could no longer receive affected SRT streams from the SDK.

Result The affected SRT outputs are compatible with those receivers again.

ADDED

Opus audio for Icecast streaming

Description Icecast publishing workflows that use Opus need that codec to be selectable in the SDK's Icecast output configuration.

Result Opus is available as an audio codec for Icecast streams.

03 Input/Output Devices

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ADDED

OP-47 subtitle carriage in second-field VANC

Description Playout systems need to carry OP-47 subtitle packets from source files into SDI output while keeping the VANC line assignment. Interlaced signals can carry these packets in the second field.

Result MFReader, MFRenderer, and MFLive support OP-47 VANC passthrough. DeckLink output and capture preserve the original second-field line number in the supported interlaced workflow.

FIXED

False CEA-708 detection on live SDI input

Problem DeckLink SDI input could report a Caption Distribution Packet containing only CEA-608 data as CEA-708.

Result Enabling `vanc.cc_708_native_only` makes CEA-708 detection require native 708 data. CEA-608 extraction remains available.

UPDATED

Blackmagic Desktop Video SDK 16.0

Description Blackmagic capture and output workflows need to support Desktop Video 16 while installations still running Desktop Video 15 need a compatibility path.

Result The integration uses the Blackmagic Desktop Video SDK 16.0. Set `bmd.new_api=false` to use the compatibility path for Desktop Video 15 drivers.

FIXED

Pink tint on DeckLink v210 output

Problem HDR video sent to DeckLink in 10-bit `v210` could appear pink or magenta.

Result DeckLink output reproduces the expected colors in the affected `v210` configuration.

FIXED

Frame drops and audio stutter on four DeckLink HDR outputs

Problem Driving four simultaneous 4K UHD 50p HDR outputs through DeckLink could cause visible frame drops and audible stutter.

Result The affected four-output configuration delivers video and audio without the reported interruptions.

FIXED

Interlace artifacts during GPU L-band squeeze on DeckLink

Problem When the GPU pipeline was enabled, animating an L-band squeeze on 1080i50 video produced visible scan-line artifacts and jagged moving edges on DeckLink SDI output.

Result GPU scaling now handles the interlaced fields correctly during the squeeze-in and squeeze-out, removing those artifacts from the affected SDI output.

FIXED

External keying on DeckLink

Problem External keying could produce an incorrect result in the affected DeckLink output configuration.

Result The renderer applies external keying correctly in that configuration.

FIXED

External keying on Blackmagic UltraStudio HD Mini

Problem On Blackmagic UltraStudio HD Mini, validation for 1080p50, 1080p59.94, or 1080p60 could reject the BGRA format in external keying mode. A fallback to YUV then discarded the alpha channel.

Result External keying validates the selected mode for BGRA keying and preserves the alpha channel.

FIXED

HDR metadata on fill and key output

Problem The renderer could lose HDR metadata when fill/key output was enabled.

Result The renderer passes through HDR metadata in the affected fill/key configuration.

ADDED

Configurable color range for Bluefish444 capture and output

Description Bluefish444 capture and output may need different level conventions to match the incoming signal and the equipment receiving it.

Result Applications can select `auto`, `cgr`, or `smpte` through `video_input_color_range` and `video_output_color_range`. `auto` preserves the device's default behavior.

UPDATED

Bluefish444 SDK 6.6.2.0

Description The device integration for Bluefish444 capture and playout needed to move to the newer vendor API baseline.

Result The integration now uses Bluefish444 SDK 6.6.2.0.

FIXED

HDR signal output through Bluefish444

Problem In the affected Bluefish444 Kronos K8 configuration, 10-bit HDR output was choppy and had long black gaps on the SDI monitor.

Result The renderer delivers continuous HDR output in the affected configuration.

UPDATED

Deltacast device support for driver 6.35

Description The SDK could fail to enumerate Deltacast devices on systems running version 6.35 of the driver, leaving those devices unavailable to applications.

Result The updated Deltacast integration restores device discovery with driver version 6.35.

FIXED

Audio on Deltacast live passthrough

Problem Switching a playlist from a file to a Deltacast live passthrough input could leave the live segment without audio.

Result The affected Deltacast passthrough delivers audio during the live segment.

UPDATED

AJA SDK 18.1

Description The AJA hardware integration needed to move to a newer vendor SDK baseline for capture and playout.

Result The integration now uses AJA SDK 18.1.

ADDED

Renderer notification for invalid SCTE-104 triggers

Description An application submitting SCTE-104 triggers to a renderer needs to know when a trigger is rejected and which trigger caused the failure.

Result The renderer reports `invalidTrigger` through `OnEventSafe` when SCTE-104 parsing fails. The event includes the original trigger string.

FIXED

MFLive audio channel mixing in an external process

Problem When MFLive captured NDI with `external_process=true`, a recording could omit mixed channels assembled from input channel pairs through `audio_channels`. The same mapping worked when MFLive ran in process.

Result Recordings now contain the requested channel mix when MFLive runs in an external process.

FIXED

WASAPI audio recovery after a UAC desktop switch

Problem After a User Account Control desktop switch, `MFDeviceSCR` could resume desktop video capture while WASAPI loopback audio stayed silent.

Result WASAPI loopback audio resumes after the desktop capture session is reinitialized.

FIXED

Switching ASIO audio renderers during preview

Problem Switching preview to an ASIO renderer with different sample-rate capabilities could mute audio and slow video playback. The issue was observed when switching from a device configured for 192 kHz to one limited to 48 kHz.

Result Preview continues playing audio and video after the affected renderer switch.

04 Decoding and Seeking

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ADDED

Reading SMPTE ST 436 ANC packets from MXF

Description MXF files can carry broadcast ancillary packets in an SMPTE ST 436 data track. Downstream processing needs those packets associated with the correct video frame and original line.

Result The reader extracts the packets and associates them with their video frames while preserving DID, SDID, payload, and line numbers, including lines in the second field.

ADDED

SCTE ancillary data extraction from MXF

Description File-based playout needs access to SCTE-104 cues stored in the ancillary data of an MXF source so the cues can be used downstream.

Result The SDK parses SCTE-104 messages in SMPTE ST 436 ANC tracks and exposes the decoded cue as `SCTE-104` frame metadata.

ADDED

MXF System Scheme 1 timecode

Description Some MXF sources carry timecode in System Scheme 1. Applications ingesting those files need access to the embedded source timecode on the corresponding video frame.

Result The reader recognizes System Scheme 1 and exposes its timecode as source metadata on decoded frames.

FIXED

MFReader opening a growing MPEG-2 MXF file

Problem MFReader could throw an exception when opening an affected growing MPEG-2 MXF file for play-while-recording.

Result MFReader opens the affected file while recording is still in progress.

FIXED

Frame-number seeking in a growing MP4 without a moov atom

Problem When a growing MP4 had yet to write its `moov` atom, `SourceFrameGetByNumber` could return a frame next to the requested one.

Result Frame-number requests return the requested frame while the affected MP4 is still being written.

FIXED

Consecutive frame-number requests in MFormats

Problem For an affected source, a second consecutive request through `SourceFrameConvertedGetByNumber` or `SourceFrameGetByNumber` could return the frame one position after the one requested.

Result Both methods now return the requested frame on repeated calls for the affected source.

FIXED

GXF seeking through the tc_pos property

Problem With an affected GXF file that had a starting timecode, setting `tc_pos` could place the reader several frames away from the requested position.

Result The reader seeks to the requested timecode on the affected GXF source.

FIXED

Seeking with the NVIDIA decoder and GPU pipeline

Problem Seeking on affected media could fail when the GPU pipeline and NVIDIA decoding were both enabled through `gpu_pipeline` and `decoder.nvidia`.

Result Seeking works for the affected media with both settings enabled.

FIXED

Intermittent green frame with NVIDIA decoding

Problem When the NVIDIA decoder opened an affected stream, a green frame could flash at the start before normal playback.

Result The stream starts without the transient green frame.

FIXED

MFReader timecode with GPU decoding

Problem With NVIDIA GPU decoding enabled, MFReader could discard a source's nonzero timecode and report timecode starting at zero.

Result MFReader preserves the original source timecode in the affected hardware-decoding path.

FIXED

Missing or noisy audio in affected media

Problem Decoding audio from an affected MP4 file produced loud noise instead of the original sound.

Result The SDK decodes usable audio from the affected source.

FIXED

Audio loss in certain files after the FFmpeg 8.0 update

Problem After the SDK moved to FFmpeg 8.0, certain MOV files played without audio even though they contained an audio track.

Result The SDK plays the audio track in the affected files again.

FIXED

PCM audio detection in ProRes MOV files

Problem The SDK could miss the PCM audio track when opening an affected MOV file with ProRes video.

Result The PCM track is detected and its audio is available during playback.

FIXED

Reconnect-on-open behavior for network sources

Problem The `network.reconnect_open` property did not trigger the configured reconnect behavior during source opening in the affected case.

Result The source now follows the reconnect-on-open setting.

FIXED

Black frames and bitrate drops on received DVB streams

Problem In the affected DVB reception workflow, the receiver could show black frames as the incoming bitrate dropped.

Result The receiver displays the video correctly in the affected DVB reception case.

FIXED

HLS multivariant playlist decoding with FFmpeg 9

Problem After the upgrade to FFmpeg 9, some HLS multivariant playlists stopped decoding.

Result The SDK can open and decode the affected HLS playlists again.

FIXED

Frame delivery delay after a playback-rate change

Problem Changing the playback rate could delay delivery of the next video frame while the audio resampler initialized for the new rate.

Result Playback-rate rounding avoids expensive resampler initialization in the affected cases, shortening the pause in frame delivery.

05 Plugins

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FIXED

Negative coordinates for video items in CG groups

Problem After a video item was moved into a Character Generator group, negative X and Y coordinates were ignored. This prevented the item from being positioned past the group's origin.

Result Grouped video items now honor negative coordinates in the same way as ungrouped items.

FIXED

Relative CG positioning at non-Full HD resolutions

Problem `SetItemPos` could calculate a relative Character Generator item's position against Full HD dimensions even when the active source used a different resolution.

Result Relative positions now follow the active video dimensions in the affected workflow.

FIXED

CG items added to a block with AddNewItem

Problem Passing a complete `cg-item` containing a nested `<block>` to `AddNewItem` created the item, but the block's contents were missing from the rendered output.

Result `AddNewItem` now creates the block's child elements, so they appear in the Character Generator output.

FIXED

Ticker dimensions from Character Generator XML

Problem When width and height were passed as zero to `TickerAddNew`, it could ignore the ticker dimensions set in the `<cg-props>` element of the XML description.

Result `TickerAddNew` uses the XML dimensions in this case. Explicit width and height still take priority.

FIXED

Interlaced video flicker in CG with the GPU pipeline

Problem Interlaced video could flicker after it was added to Character Generator with `gpu_pipeline=true` and no format conversion. The issue was visible in layouts such as an L-shaped overlay.

Result Character Generator displays the affected interlaced video without flicker while the GPU pipeline is active.

FIXED

Excessive CPU use in the Character Generator

Problem Enabling the Character Generator raised CPU use in affected 1080i59.94 workflows. The increase was most apparent when the same workflow also used NDI output or encoded video for streaming.

Result The updated conversion path reduces Character Generator CPU use in these workflows.

FIXED

Character Generator memory leak with raster fonts

Problem The Character Generator leaked memory when rendering text with legacy `.FON` raster fonts.

Result The Character Generator releases the resources that leaked in this font workflow.

FIXED

Character Generator add-on licensing in MFormats

Problem In 64-bit Release builds of MFormats Pro, Expert, and Ultimate, the Character Generator could run without its add-on license.

Result The Character Generator checks for the required add-on entitlement in those builds.

ADDED

16-bit Unicode characters in CEA-708 captions

Description CEA-708 captions can carry 16-bit characters in `P16` commands. An ANSI code-page conversion could alter the intended characters in captions that use native Unicode.

Result The caption renderer handles `P16` values as native Unicode by default. Applications can still select a code page explicitly.

ADDED

Korean CEA-708 decoding with KS X 1001:2004

Description Korean CEA-708 subtitle services can carry character data encoded as KS X 1001:2004, which needs the correct character mapping to be rendered.

Result MCCDisplay can decode and display the Korean captions in this encoding. The affected workflow can select code page 949 with `cc_codepage`.

ADDED

Automatic CEA-708 code page detection

Description CEA-708 sources can use different code pages. An application ingesting multiple sources may have no reliable way to specify the code page for each one up front.

Result The caption decoder can detect the code page automatically when decoding CEA-708 text.

FIXED

CEA-708 display when video conversion is enabled

Problem CEA-708 captions could disappear from MCCDisplay when video conversion was enabled.

Result MCCDisplay continues to render captions through the affected conversion workflow.

ADDED

Decoding OP-47 subtitles

Description Applications that ingest OP-47 from files or DeckLink capture need to assemble Teletext pages and extract subtitle text from their ancillary packets.

Result The reader and capture paths can decode OP-47 pages and expose text for a selected page. The original packets remain available for passthrough.

ADDED

Displaying OP-47 Teletext subtitles in MCCDisplay

Description A subtitle preview needs to reproduce the selected OP-47 Teletext page on the video, including the page's visual layout and styling.

Result MCCDisplay can render the selected page with its text positions, colors, and background.

FIXED

Cyrillic subtitles in MCCDisplay

Problem Selecting the Russian-language track in an affected file with several subtitle tracks produced punctuation in place of the Cyrillic text.

Result MCCDisplay renders the Russian subtitle track correctly.

FIXED

MCCDisplay rendering quality

Problem Subtitles rendered through MCCDisplay showed a visible drop in quality after a rendering performance change.

Result The affected MCCDisplay workflow restores the earlier subtitle rendering quality.

FIXED

Green stripe in subtitle rendering

Problem A green stripe could appear over subtitles when progressive RGB subtitle graphics were converted to planar YUV420 in parallel.

Result Subtitle compositing fills the affected rows correctly, removing the green stripe.

FIXED

V-Chip information after video downconversion

Problem V-Chip information could be decoded incorrectly after video was downconverted to a lower format.

Result The V-Chip information is decoded correctly after the affected downconversion.

FIXED

Mask rendering in the GPU pipeline

Problem A frame mask passed to `MFOverlay` was ignored when `gpu_pipeline=true`. Compositions that used GPU-powered plugins could lose the mask.

Result The GPU pipeline applies the supplied mask during frame compositing.

FIXED

Application shutdown hang with the Chroma Key plugin

Problem On affected systems, an application using the Chroma Key plugin could hang during shutdown if SDK objects were still open.

Result The affected Chroma Key workflow shuts down without that hang.

FIXED

Unexpected logo when using Video Filters with MFormats Expert or Ultimate

Problem The Video Filters workflow could show a licensing logo for users with valid MFormats Expert or Ultimate licenses.

Result Video Filters recognize the entitlement and omit the licensing logo in the affected workflow.