Switch™

Telestream® Switch is an award-winning cross platform media player, inspector, and correction tool for professionals. Switch comes in three versions: Switch Player (free), Switch Plus ($49), and Switch Pro ($295).

Switch Player is a robust multi-format media player with deep inspection capabilities. The media player supports high-quality playback for MXF, GXF, MPS, MTS, MOV, MP4, LXF and more. The inspector displays media properties including audio channels, aspect ratio, bitrate, encoding formats and more. In Switch Player, export is watermarked or limited to 30 seconds or half the duration of the media file.

Switch Plus is perfect for video editors and post-production professionals. Plus adds support for embedded caption playback and subtitle files; professional audio meters; export to MP4, QuickTime MOV, MXF (OP-1a and OP-Atom), and MPEG-2 Program Streams and Transport Streams; publish to Vimeo, YouTube and Facebook; as well as additional playback support for HEVC, MPEG-2 (Windows), WMV, and AC-3 audio.

Switch Pro is designed for Broadcast and Media QC analysis professionals. Pro adds full playback support for additional formats: IMF, DNxHD, DNxHR, and JPEG-2000; extends the professional Audio Meters (included in Plus) to include a loudness panel with options to calculate loudness gated (BS1770-3) or un-gated (BS1770-2); as well as deeper inspection of application specific metadata (e.g., AS-11 with DPP metadata). Switch Pro also includes visual representation of the video's GOP structure; an interlacing option to display fields, and a Compare Alternate Media feature to easily check multiple adaptive bitrate files in ABR workflows for easy comparison of multi-format media. Switch Pro includes all the export support of Switch Plus and adds an iTunes export preset for creating asset-only iTunes store packages.

System Requirements

Mac Minimum System Requirements
- Operating System: OS X 10.11 and higher (includes macOS Sierra)
- CPU: All Macs that support 10.11 and higher. 2.4 Ghz Core 2 Duo or faster. Any Core i3, i5, or i7
- RAM: 4 GB or more
- 256 MB or more graphics memory
- Display: 1280 x 768 or larger, 50 Hz or faster

Windows Minimum System Requirements
- Operating System: Windows 7 64-bit SP1, Windows 8.1, Windows 10
- CPU: 2.4 Ghz Core 2 Duo or faster. Any Core i3, i5, or i7
- RAM: 4 GB or more
- Any graphics adapter that supports Direct3D feature level 10.1 or better
- 256 MB or more graphics memory
- Display: 1280 x 768 or larger, 50 Hz or faster

*Note: Minimum specifications are the required hardware for playback of standard definition content. Playback of demanding content such as 4K, HEVC, and high frame rate video may require more powerful hardware.

Switch 3.2

IMPROVEMENTS

Customer Feature Requests

- Added support for decoding Sony RAW MXF files.
- Added support for decoding CineForm video.
- Added support for decoding ProRes in an MXF OP-1a container.
- Added support for decoding E-AC3 (Dolby Digital Plus) audio.
- Switch can now detect AAC-ELD (Enhanced Low Delay) and can decode it on macOS.
- Switch now allows external preview of remapped audio, as long as the video is still in pass-through mode.
- Switch will now include QuickTime metadata in MP4 exports.
- Added support for external preview of 4K video via four quadrants of SDI on certain AJA devices.
- Added support for AJA Io Express devices for external preview.
- Added a keyboard shortcut for switching between inspect and edit mode in the inspector.
- Added a 24p preset for BluRay exports.

General

- Improved our experimental support for IMF packages by updating to the 2016 specifications.
- Added support for VBI captions in MPEG-2 long-GOP video.

FIXES

Customer Issues

- Switch will now ignore invalid byte counts in MXF partitions.
- Fixed a bug that prevented playback of some files using the BT.2020 colorspace.
- Fixed a bug that prevented detection of captions from some interlaced files when the "Improve playback performance by giving up search for captions after the first few samples" was enabled.
- Fixed a bug that degraded the performance of scrubbing through MOV and MP4 files.
- Fixed a bug that prevented playback of some frame-wrapped MXF IMX files.
- Fixed a bug that prevented deletion or modification of files that were previously opened in Switch bug had been closed.
- Fixed a bug that caused loss of audio/video synchronization in some files when using external preview through an AJA Io 4K or Kona 4 device.
- Fixed a bug that caused loss of audio/video synchronization when exporting long-GOP content to container other than MOV or MP4 when there was a trim that was not aligned to an I-frame.
- Switch will now be more lenient when decoding some Elemental Server HEVC MP4 files whose 'hvcC' atoms are missing parameter sets.
- Fixed a bug that caused loss of audio/video synchronization with progressive segmented frame video when using external preview to an AJA Kona LHi.
- Fixed a bug that prevented display of closed captions from HEVC/H.265 MPEG-2 Transport Stream files.

General

- Fixed a crash when attempting to export some AVC MPEG-2 Transport Streams to MXF OP-1a containers.
- Fixed a bug that prevented localizations from working on macOS 10.12 Sierra.
- Fixed a bug that caused Switch to be unable to find timecode in an MXF file that has no source-package timecode track but did have a material-package timecode track.
- Fixed a crash when encountering invalid timecode.
- Fixed a bug that prevented playback of some ASF files.
- Switch now prefers the audio settings obtained from AC-3 and EC-3 essence over redundant settings in the MOV container.
- Switch can now correctly recognize Avid JPEG-2000 ('AVj2') video.

KNOWN ISSUES

General

- Frames with long durations make time display appear to stall because it always shows the presentation time of the current frame.
- ASF files with variable frame rate display incorrect frame rate in the inspector.
- Detection of interlaced content in Windows Media files is not currently supported.
- WMV sources exported to H.264 in either MPEG-2 TS or PS containers can results in A/V synchronization problems.
- Publishing settings are lost when canceling to edit settings to meet requirements.

Windows

- Ancillary LTC timecode is not passed when using the KONA 4G card with the 4K driver.
- Ancillary LTC timecode is not passed while seeking or scrubbing through media.

Mac App Store

- In the Mac App Store version of Switch, when opening a file that references other files, such as QuickTime Reference Movies or IMF XML files, Switch will prompt the user to explicitly give permission to open each of the referenced files in order to satisfy the sandbox security requirements. Users who purchase Switch directly from Telestream will not have to perform these additional steps.
- Users who purchase Switch Plus from the Mac App Store and then decode to purchase Switch Pro are not offered upgrade pricing, but instead must pay full price.

Switch 3.1

IMPROVEMENTS

- Improved subtitle format support including PAC, Lambda CAP, and Ruby Text from WebVTT.
- Added support for 'MJPG' variant of Motion JPEG.
- Redundant audio tracks are no longer merged when using external preview
- Added a preference in the Display tab that allows the user to decide whether or not Switch should perform an exhaustive search for captions. It defaults to only checking the first few samples and if no captions are found, the searching stops. This dramatically increases playback performance, particularly over the network, at the cost of not displaying captions in some files where the captions don't appear until later in the movie. This preference can be changed at any time and does not require reopening the file or relaunching Switch.
- Trimmed MPEG-2 Transport Stream exports will now periodically repeat the PAT/PMT in order to support some third-party software.
- Added support for drag and drop of STL subtitle files onto the secondary subtitle section of the inspector.
- Switch will now tolerate malformed 'udat' atoms in MP4 and MOV files.

Customer Feature Requests

- Switch now allows for adjusting the synchronization of secondary SCC subtitle files.
- Offline activations now only need to be done once per computer rather than once per user.

FIXES

Customer Issues

- Fixed a bug that caused the AAC bitrate to revert to 160 kbps when selecting a different track.
- Fixed a bug that caused a crash when opening multiple files on Windows 10 with external preview.
- Fixed several bugs that prevented the compressor's quality and standard popup menus from being populated if the presentation was changed before the views were loaded.
- Fixed a bug that prevented the preservation of captions when doing a pass-through export if the captions were contained in the source file but not the video essence.
- Fixed a bug that caused captions to drift out of synchronization over time.
- Fixed a bug that caused a crash when opening a CPL file from a 4K IMF package.
- Offline activations no longer expire after ten days.
- Fixed a bug that caused display problems with some MXF XDCAM files.
- Fixed a bug that caused frame-wrapped MXF OP-Atom PCM audio to play as static.
- Fixed a playback problem with AVC files whose GOPs have chains of references.
- Fixed a bug that caused display errors with STL subtitle files that include user data.
- Fixed a bug that caused loss of audio/video synchronization in H.264 MPEG-2 Transport Streams with empty audio packets.
- Fixed a bug that caused misidentification of file dominance in some MP4 files.

General

- Fixed a crash when attempting to resize to a height greater than 4320 pixels.
- Fixed a bug that caused exported files to be unusable when doing frame rate conversion from source files with non-standard timescales.
- Fixed a bug that prevented exporting of the current frame from files whose video decompressor's create Packed 4:2:2 UYVY in BT.709.
- Fixed a bug that prevented the creation of chapters when using certain source files.
- Fixed a bug that prevented the exporting of certain HEVC MPEG-2 Transport Streams.
- Fixed a bug that caused some exported MP4 and MOV files to be larger than necessary if their source files used a large timescale.
- Fixed a bug that caused some AVI files to misreport their scanning and field dominance.
- Fixed a bug that prevented the export of the current video frame when external preview was enabled.
- Fixed a bug that prevented dragging and dropping of secondary subtitle files with capitalized extensions.

- Fixed a bug that caused all prior exports to be labeled as "Canceled" when pressing the Cancel button on the export progress dialog.
- Fixed a crash on Windows when using external preview with certain frame dimensions.

Switch 3.0.3

- Fixed a bug that would deactivate any activated license upon re-launching of Switch without an internet connection.

Switch 3.0.2

- Improved product licensing so that licenses activated on one user account are made available to all other user accounts on the system.

Switch 3.0.2 MAS

- Fixed a bug that could result in ProRes and AVC exports incorrectly indicating that they are interlaced.

Switch 3.0.1

- Fixed a bug where the volume controls would fail to change the output volume with some audio configurations.
- Fixed a bug where launching the software could indicate that the product build had expired.

Switch 3.0

NEW

- Switch can now compare alternate versions of videos, including a full view, a split view for side-by-side comparisons, and a difference view for highlighting the pixels that have changed.
- Added support for publishing content directly to Vimeo, YouTube, and Facebook.
- Added support for SeaChange DVL files.
- Added support for export to MXF OP-1a and OP-Atom containers.
- Added support for Avid DV playback.

Customer Feature Requests

- Switch now supports external preview using BlackMagic devices.
- Switch now supports external preview of low resolution Apple ProRes 4:2:2 Proxy files by conforming them to an SDI standard.

IMPROVEMENTS

- Improved the preservation of color fidelity in exports.

<u>FIXES</u>

Customer Issues

- Fixed bugs that prevented interlaced video from being displayed on Windows when any mode other than Weave Fields was selected and hardware rendering was disabled.
- Switch is now more lenient when encountering errors in GXF files and will continue trying to play them.
- Added support for padded strides in Biplanar YUV 4:3:0 ('NV12') uncompressed video to avoid display problems on Windows 10.
- Fixed a bug that caused audio problems when exporting one channel from a source track with multiple channels if the speaker label chosen for the exported track happens to also exist in the source at the same track and channel indexes.
- Fixed a bug that caused matrixed stereo speaker labels (Left Total & Right Total) to be misinterpreted as stereo (Left & Right) in Quicktime MOV files.
- Fixed a bug that prevented the clean aperture from being applied to the exported chapter thumbnail images when doing an iTunes Store Package export.
- Fixed a bug that caused unusable files to be created when exporting 24-bit PCM in an MOV or MP4 file if the last transcoded audio chunk had fewer than expected samples.
- Fixed a bug that prevented hearing more than 16 channels of audio at one time.
- Fixed a bug that prevented the display of embedded timecode from MXF files with linked packages.
- Fixed a bug that caused closed captioning to appear on VANC line 12 instead of line 9 when using external preview to AJA devices.
- Fixed a bug that caused exports from open-GOP content with a trimmed tail to not be frame accurate.
- Improved the color accuracy on Windows.
- Switch is now more lenient when encountering unregistered picture-coding universal labels for AVC-Intra in MXF.

General

- Fixed external preview of 720p25 footage.
- Fixed a bug that prevented the display of a warning when quitting Switch via the Dock while there is still an export in progress.
- Fixed a bug that prevented deinterlacing when exporting to H.262 or H.264, with the exception of using a custom preset.
- Avoid scrambling of closed captioning in external previews when fast forwarding or rewinding by disabling VANC output when not at 1x playback speed.
- Fixed a problem exporting MPEG-2 Transport Streams that contain empty audio samples.
- Fixed a crash when playing back 708 captions with more than 15 lines on screen at once.

Windows

- Fixed a crash on Windows when trying to play AVC from FLV files that lack a description of

the width, height, time scale, and frame duration. We now extract this information from the Sequence Parameter Set in the video instead.

• Added support for playing AAC audio with more than six channels and sample rates higher than 48kHz on Windows.

OS X

• Fixed a crash on OS X when quitting with multiple videos in full screen mode.