



Switch 2.1 Release Notes

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, MPEG-2 Program Streams and Transport Streams; as well as additional playback support for: HEVC, MPEG-2 (Windows), 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, 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 ungated (BS1770-2); as well as deeper inspection of application specific metadata (e.g., AS-11 with DPP metadata) as well as visual representation of the video's GOP structure. Switch Pro also has an interlacing option to display Fields. Switch Pro also adds export capabilities including an iTunes export preset for creating asset-only iTunes store packages.

System Requirements

Mac Minimum System Requirements

- Operating System: OS X 10.10 or higher
- CPU: All Macs that support 10.10 and above, 2.4 Ghz Core 2 Duo or faster.
- Any Core i3, i5, or i7
- RAM: 4 GB or more
- 256 MB or more

- Display: 1280 x 768 or larger, 50 Hz or faster

Windows Minimum System Requirements

- Operating System: Windows 7 64-bit SP1, Windows 8, 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
- Display: 1280 x 768 or larger, 50 Hz or faster

Switch 2.1

NEW

- Added support for decoding and displaying subtitles embedded by ScreenFlow.
- Added support for reading and playing fragmented MP4 files.

IMPROVEMENTS

- Improved the keyboard commands for skipping forward and backward.
- Reduced the amount of memory used when creating and storing chapter thumbnails.
- Switch now caches thumbnails for the recent media list to avoid redundant processing on launch. Cached thumbnails are updated when the file size or modification date changes.

FIXES

General

- Captions for external preview are now embedded on line 9 when the device supports it. Otherwise, they are embedded on line 12.
- Fixed a bug that caused XDCAM HD422 1080p25 to be labeled 1080p30 and vice versa.
- Fixed a bug that caused color degradation with sources that use any colorspace other than Rec. 601.
- Fixed a crash when scrubbing through a particular video with CEA-608 captions.
- Fixed a bug that caused I-frames and B-frames to be labeled as P-frames in MPEG-2 videos which are wrapped in an MP4 container and are missing their sample dependency tables. Switch will now parse them at the sample level to determine the frame type in this case.
- The chapter thumbnail images are once again fixed to the frame that was visible when the chapter was created. The user can change the chapter start time and it will not change the thumbnail. Changes to the video, such as cropping, resizing, etc. will still be applied to the thumbnail. If the user wishes to use a different frame as the thumbnail, they will have to

delete the chapter and create a new one.

- Fixed a bug that would cause pass-through exports of MPEG-2 Program stream files with trimmed leaders to generate unusable files if the sequence headers only existed in the portion that was trimmed off. Sequence headers will now be placed on every I-frame.
- Fixed a bug that caused exports to generate unusable files when you applied certain trim values and changed the frame rate, such as with double-rate deinterlacing.
- Fixed a bug that caused exports to generate unusable files when the source file has less than 256 video samples and no audio and you choose MPEG-2 Program Stream or Transport Stream containers.
- Fixed a bug that caused color degradation when exporting from Apple ProRes 4444 on OS X 10.11 El Capitan.
- Fixed a bug that caused both pass-through and transcode exports to fail with a particular MXF source file.
- Fixed a bug that caused an export failure when attempting to pass-through AC-3 audio into an MPEG-2 Transport Stream.
- Fixed a bug that caused failed exports when transcoding to MPEG-2 with the DVD preset, if you added or deleted an audio track after selecting MPEG-2.
- Fixed a crash that occurred when reading invalid time code values.

Windows

- Fixed a bug that caused files that no longer exist to remain in the recent media list.

KNOWN ISSUES

General

- Frames with long durations make time display appear to stall because it always shows the presentation time of the frame.
- VANC is not output in fast forward and reverse playback modes.
- SF files with variable frame rate display incorrect frame rate in the inspector.
- If the first video sample cannot be read within 3 seconds, opening the file will fail.
- No detection of interlaced content is done for Windows Media files.
- WMV sources export files with A/V synchronization issues when transcoded to H.264 in a MPEG-2 TS or MPEG-2 PS container.

Windows

- Ancillary LTC time code is not passed when using the KONA 4G with the 4k driver.
- Ancillary LTC time code is not passed when seeking/scrubbing.

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 requirements. Users who purchase Switch directly from Telestream do not have to perform these additional steps.
- Users who purchase Switch Plus from the Mac App Store and then decide to purchase Switch Pro are not offered upgrade pricing, but instead must pay the full price.

Switch 2.0.2

IMPROVEMENTS

- Added support for the 'R10g' video four-character-code from AJA as an equivalent format for 'R10k' (AJA 10-Bit RGB).
- The default frame rate for transcode templates is now the source frame rate when possible.
- Switch's video preview now uses Lanczos scaling by default in OS X 10.11 and later, to improve the quality of the video when scaled. This can be controlled via the "Use high-quality scaling for video playback" preference.
- When multiple audio tracks are present, and they contain more than one channel each, Switch will now automatically solo the first track that matches the system language. If none match the system language, then the first track will be soloed. This avoids having multiple languages of audio playing simultaneously by default.
- Audio meters will now continue to update even when playback is muted. They will be dimmed to reflect that they are muted.
- Added support for Apple Lossless Audio Codec (ALAC) decoding.
- The current playback rate will now persist while looping.
- A "Pause All" menu item is now available when all currently opened videos are playing.
- Clicking anywhere in a secondary file in the container tab of the inspector now selects that row. Previously, there was an area within that row which, when clicked, would display a popup revealing the path of the file. Since this area took up most of the row, it would frequently get in the way of making a selection. You can still determine the path of the file using the "Show in Finder" or "Copy URL" menu items in the action (gear) button.
- In an attempt to aid in determining when caption tracks are present in source files, without having to do an exhaustive search of the media that would cause delays, Switch will now search the metadata for each video sample that is displayed, regardless of whether captions are enabled. A caption track will be added in the inspector when caption metadata is found.
- Switch will now differentiate between C608 and C708 captions in the track list in the inspector. Therefore it is now possible to view caption tracks for 608 and 708 captions in the inspector.

- Added fit-to-screen constraint sizes for iPhone 5/6/6 Plus, iPad 3/4/Air/Pro, Apple Watch, 2K, UHD, & 4K.
- Enabled support for raw 8-bit unsigned LPCM in AVI containers.
- For exports, the default resize mode is now Letterbox/Pillarbox.
- Improved the mapping of Microsoft Wave Format audio codes to four character codes so that ASF and AVI containers can more frequently identify codecs.
- Switch will now skip bad packets in ASF containers rather than aborting. This allows for playback of the rest of the movie after the bad packet.
- Added support for E-AC3 System B (DVB) audio track detection in MPEG-2 Transport Stream and Program Stream containers. Decode support is not available.
- Switch will now drop out of full screen mode when the application or front most player window becomes inactive.
- Multiple secondary audio or subtitle files can now be added at once.
- Improved subtitle/caption menu items for clarity.
- Added an error to the export summary dialog if you attempt to export video with a non-zero clean aperture to MPEG-2 Program or Transport Streams as these containers don't support it.

FIXES

- When encountering multiple audio tracks, where some are supported and others are not, Switch previously was unable to play any audio. Now, we skip the unsupported audio tracks and play the supported ones.
- Fixed a bug that caused corrupted audio playback when an unsupported audio track preceded a supported one.
- To aid in distinguishing between unsupported audio and audio that contains silence, there are now badges in the audio track table in the inspector that label each track as either available, unsupported, requiring Switch Plus, or requiring Switch Pro.
- Fixed a bug that prevented playback of DNxHR from within MOV and MP4 containers.
- Fixed a bug that prevented the use of the x264 bitrate command line parameter for exports.
- MXF XDCAM files now show commercial name in the format section instead of 'mp2v'.
- Fixed a crash when trying to open a particular Digital Cinema Package (DCP) JPEG 2000 MXF file.
- Fixed a problem that prevented the use of EBU STL subtitle files whose Time Code: Start-of-Programme (TCP) value is larger than the Time Code: First In-Cue (TCF), TTI Time Code In (TCI), and TTI Time Code Out (TCO) values.
- Fixed a bug that caused split captions from WebVTT files to display without a space between some words.
- Switch now tolerates the incorrect use of the VC-3 picture coding (DNxHR HQX) label in Blackmagic DaVinci Resolve MXF files.
- Relaxed validation requirements for DFXP caption files to support those created by 3PlayMedia which fail to include the XML declaration node.

- Switch can now detect Packed RGB 555, Packed RGB 565, and Microsoft RLE in AVI containers, even though these formats are not playable.

General

- Switch no longer aborts indexing AVI files when unsupported audio is encountered. This allows playback of the other supported media in the file.
- Fixed several problems, including a crash on Windows, when opening a video while the store window was open.
- Fixed a crash when attempting to open files with unsupported video.
- Fixed a crash when opening MP4 or MOV containers with null media headers and no timecode.
- Improved performance when resizing causes the window to extend past the bounds of the screen.
- Fixed a bug that caused the "Subtitle/Caption Source" menu item on Windows to always be disabled.
- Fixed a bug that caused any x264 command line parameters entered in custom mode to continue to be used when switching to a preset.
- Fixed a bug that caused external preview to stop working after switching devices.
- Fixed a bug in the AIFF container reader that made it assume all audio was PCM. This resulted in compressed audio being tagged as LPCM which resulted in corrupted audio playback in Switch.
- Updated the AVI container reader to support detecting audio formats that are specified by the subformat field of the WAVEFORMATTEXTENSIBLE structure.
- Enabled identification of AAC and AC-3 in AVI containers.
- Fixed a bug that caused trimmed exports to always have one additional video frame and caused the "Go" button in the trim section of the inspector to jump to that same one extra frame past the originally intended end of the trim.
- Fixed a bug that caused the truncated duration of unlicensed exports to be incorrect when exporting to a compressor preset that uses a different timescale than the source.
- Fixed a hang when attempting to play an H.262 MPEG-2 Program Stream file exported by Switch.
- Fixed a crash when playing MXF OP-1b.
- Fixed a bug that caused AAC audio in an MPEG-2 Program Stream to be silent in Switch.
- Fixed a bug that caused either wasted time, or lost frames, in exports with trimmed leaders and changed frame rates.
- Fixed a bug that caused transcode exports with trims and reduced frame rates to include superfluous hidden frames, thereby bloating the file size unnecessarily. Transcode exports will no longer include any hidden frames.
- Fixed display of GOP timeline at high resolutions.
- Fixed a bug that prevented the export of the current video frame with files whose decompressors generate 'NV12' video.

- Fixed a bug that caused the magnifying glass button in the export progress dialog to reveal all prior exports, when it should only reveal the one export it is associated with.
- Fixed a bug that caused the audio sample rate popup in the inspector to be blank if the source used a sample rate that Switch does not support for export. Now, Switch will default to 48kHz.

OS X

- Fixed a bug that caused the wrong external device to be marked as active.
- Pending changes in the inspector are now automatically committed when initiating an export.
- Fixed a bug that caused display problems when pasting multiple lines of text into text fields.
- Disabled user-invoked completion in text fields via the escape key as they are inappropriate.
- Fixed a bug that prevented the system-provided undo and redo from working in text fields.

Windows

- Fixed several bugs that prevented playback navigation via the keyboard after interacting with the timeline.
- Audio meters will now work even without an audio device on Windows.

KNOWN ISSUES

General

- CEA-708 captions inserted into H.264 video in an MP4 file via Vantage may have be displayed at improper positions in Switch on Windows, and may cause problems with the video quality on OS X. Both platforms may exhibit audio/video synchronization issues.
- Frames with long durations make time display appear to stall because it always shows the presentation time of the frame.
- VANC is not output in fast forward and reverse playback modes.
- ASF files with variable frame rate display incorrect frame rate in the inspector.
- If the first video sample cannot be read within 3 seconds, opening the file will fail.
- No detection of interlaced content is done for Windows Media files.
- WMV sources export files with A/V synchronization issues when transcoded to H.264 in a MPEG-2 TS or MPEG-2 PS container.

Windows

- Ancillary LTC timecode is not passed when using the KONA 4G with the 4k mode firmware.
- Ancillary LTC timecode is not passed when seeking/scrubbing.

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 requirements. Users who purchase Switch directly from Telestream do not have to perform these additional steps.
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Switch 2.0.1

FIXES

Customer Issues

- Prevent Switch from launching on OS X 10.9, which is unsupported
- Prevent opening of bundle directories, such as Final Cut Pro X Camera Archives and ACHD packages, to prevent the OS from changing the permissions and making them unusable
- Fixed a crash that occurred when certain system fonts were disabled, corrupted, or missing on OS X
- Added the ability to toggle between 2 or more SDI devices in External Preview

General

- Fixed the export audio bitrate popup in the inspector to not be empty by default
- Fixed an issue where A/V sync was off when adding a trim in audio transcode mode
- Fixed a problem where export menu options and key commands fail to respond
- Fixed situations where AJA devices would output noise when audio is disabled
- Fixed a problem where frame count and timecode display modes were enabled when there was no video
- Fixed a problem where changing the interlacing mode using SDI will cause the player to stop working (WINDOWS ONLY)
- If Flip4Mac is installed, Windows Media decoding will be available in Switch Player

Switch 2.0

NEW

General

- Added support for displaying interlaced fields side by side.

- Added support for decoding Windows Media Video and Windows Media Audio in ASF files, including WMA 7/8, WMA 9 Standard, WMA 9 Pro, WMA 9 Lossless, WMA 9 Voice, WMA 10 Pro, WMV 7, WMV 8, WMV 9 Standard, WMV 9 Advanced, and Microsoft SMPTE VC-1.
- Add support for scrubbing using the mouse wheel, track pad, and magic mouse.
- Audio peak meter displays will now be dimmed for muted channels.
- The mute and solo buttons on the audio meter window can now be used to control an entire track.
- Added support for running Switch for Windows on a Lightspeed Server.
- Added persistence of setting for enabling closed captions in all files.

Customer Requested Features

- Added support for omitting video and exporting only audio.
- Added timeline view of GOP structure and data rate.
- Added the ability to open multiple secondary audio or subtitle files at once.
- Added the ability to drag and drop media onto the welcome dialog to open them.
- Added the ability to drag and drop secondary audio and/or subtitle files on to the container tab of the inspector.
- Added support for 24-bit and 32-bit Apple QuickTime Animation RLE decoding.
- Added persistence of the time display type setting.
- Added the ability to pass closed captions (608 and 708), AFD, V-chip, and timecode as VANC to external preview device.
- Added support for AJA and Blackmagic 10-bit RGB decoding.
- Added support for preserving '@mak', '@mod', and '@xyz' metadata in QuickTime MOV files.
- Added the ability to jump to a desired time, timecode, or frame number.
- Added support for audio devices with more than 8 channels.
- Added support for restoring the placement of the inspector and audio meter windows.

FIXES

Customer Issues

- Worked around a bug in Final Cut Pro X that creates H.264 MOV files whose container reports a frame rate of 29.97 fps but whose essence reports a frame rate of 25fps. To be consistent with Apple applications, the essence frame rate is now ignored in this case.
- Fixed a bug that caused audio output to AJA hardware to be 6 dB too low.
- Improved performance of playback from MPEG-2 Transport Streams with captions displayed.
- Fixed a hang that occurred while playing backwards with loop enabled.
- Improved playback performance at end of video with closed caption enabled.
- Improved tolerance of malformed GXF files.
- Fixed a bug that caused the color of HEVC files created by Episode to be washed out.

- Fixed a crash when opening some SCC files.
- Fixed a bug that prevented timecode from displaying properly in MXF proxy files.
- Fixed a bug that prevented MPEG-2 GOP timecode from displaying.
- Fixed a bug that caused the wrong key to be used for geographic location metadata.
- Fixed a bug that caused SD video to be cropped when viewed full screen.
- Fixed a bug that prevented the last line of captions from being displayed in ProRes files.
- Fixed a bug that prevented display of timecode and captions in MP4 files.
- Fixed a bug that caused loss of A/V sync when opening the audio meters window while playing.
- Fixed a bug that prevented playback of HEVC files created by Episode.

General

- Fixed a bug that caused a 404 error when signing up for the mailing list in the Mac App Store version.
- Fixed a bug on Windows 7 that caused the audio meters to flash.
- Fixed a bug that prevented the iTunes Store Package Profile popup menu to not display under certain conditions.
- Fixed a bug that prevented the display of warnings in the export summary dialog when exporting iTunes Store packages.
- Fixed a bug that caused the container type in the export summary dialog to always be MOV, regardless of the settings, when exporting iTunes Store packages.
- Fixed a crash when encountering invalid IMF files.
- Audio from secondary files will be omitted from the primary media file in iTunes Store package exports.
Additionally, any audio tracks that contain audio from both primary and secondary sources will also be omitted, and you will be warned about these mixed tracks.
- Fixed an audio clicking distortion in MXF OP-1b files.
- ITT files will be assigned the data_file role of "subtitles" and SCC files will be assigned the role of "captions" in iTunes Store Package metadata XML. In addition, the iTunes Store Package validator will display a warning when users try to create iTunes Store Packages with subtitles that are not from ITT or SCC files.
- Fixed a bug that caused preferences to be all cleared on Windows when resetting. Now they return to their default values.
- Prevented a crash in the x264 encoder by not allowing odd (as opposed to even) video dimensions.
- Subtitle tracks that require indexing now have their durations updated with the results of indexing.
- Fixed several bugs that prevented opening and playback of IMF packages created by Vantage.
- Improved network audio playback.
- Fixed a bug that caused preview to display interlaced when double-rate deinterlacing was enabled, if the window was not full size.

- Added persistence of preference for showing loudness meters.
- Fixed a bug that caused changes to audio settings to be lost after adding or removing a secondary audio file.
- Fixed a crash while playing HEVC.
- Fixed a bug that caused the loss of A/V sync when resizing the preview window while playing.
- Added tolerance for MPEG-2 video that only contains the the sequence header in the first GOP.
- Improved double-rate deinterlacing to avoid shaky video.

KNOWN ISSUES

General

- Some 10-Bit DNxHD & DNxHR files will cause a crash on Windows if the CPU does not support SSE4.1.
- CEA-708 captions inserted into H.264 video in an MP4 file via Vantage may have be displayed at improper positions in Switch on Windows, and may cause problems with the video quality on OS X. Both platforms may exhibit audio/video synchronization issues.
- JPEG-2000 video in an MOV container may cause a crash.
- Switch assumes that secondary subtitle files are authored in sync with the video with the first caption starting at zero time.
- Chapter markers in QuickTime MOV files are neither read nor written.
- Performance problems are noticeable with ASF files in reverse playback mode.
- Frames with long durations make time display appear to stall because it always shows the presentation time of the frame.
- Colors are off when transcoding video from any colorspace other than Rec.601.
- Hang while canceling exports during shutdown.
- VANC is not output in fast forward and reverse playback modes.
- ASF files with variable frame rate display incorrect frame rate in the inspector.
- Playing AAC in MPEG-2 Program Stream results in silent audio.
- If the first video sample cannot be read within 3 seconds, opening the file will fail.
- No detection of interlaced content is done for Windows Media files.
- WMV sources export files with A/V synchronization issues when transcoded to H.264 in a MPEG-2 TS or MPEG-2 PS container.

Windows

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