

## Switch 1.6.2 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 multiformat media player with deep inspection capabilities. The media player supports high-quality playback for MXF, GXF, MPS, MTS, MOV, MP4, MKV and more. The inspector displays media properties including audio channels, aspect ratio, bitrate, encoding formats and more. In Switch Player, export is watermarked and 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 AC3 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., AS11 with DPP metadata). 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 10.9 Mavericks or later
- CPU: All Macs that support 10.9 and above, 2.4 Ghz Core 2 Duo or faster. Any Core i3, i5, or i7
- RAM: 4 GB or more
- Display: 1280 x 768 or larger, 50 Hz or faster

### Windows Minimum System Requirements

- Operating System: Windows 7 SP1, Windows 8, Windows 8.1
- CPU: 2.4 Ghz Core 2 Duo or faster. Any Core i3, i5, or i7
- RAM: 4 GB or more
- Graphics: Intel HD Graphics 3000 or higher. Any discrete graphics card with support for DirectX 11 or better (hardware level DirectX 10.1 at minimum)
- 256 MB or more
- Display: 1280 x 768 or larger, 50 Hz or faster

## Switch 1.6.2

### NEW

- Now available on the Mac App Store.
- Added support for Avid AVC Proxy in MXF OP-Atom.
- Dramatically improved speed of indexing MXF files.
- Audio track languages are now displayed in the tooltips of the menu items for muting and soloing tracks.
- Fixed an issue that prevented animation of user interface elements, such as audio meters, on Windows with Nvidia GeForce drivers of version 352.86 or later.

### FIXES

- Improved support for IMF by tolerating missing required elements in the CPL file.
- Fixed a bug that caused poor playback quality of MXF OP-1b files containing AVC Ultra because field 2 decoding was failing without multiple PPS NAL units.
- Fixed a bug that caused the current mute/solo configuration to reset if you opened the inspector while playing.
- Fixed a crash that occurred when exporting multiple audio tracks that used the same source channels.
- Fixed a bug that caused the playback of 20-bit PCM audio to be too loud.
- Fixed a crash when attempting to open an FLV file with complex script objects.
- Fixed a bug that caused invalid iTunes Store Package metadata.xml files to be created in packages with an asset type set to "Preview" and a territory other than "WW" (Worldwide)
- Fixed a bug that caused the export dialog to display black bars after resizing the audio meters.

### Closed Captions & Subtitles

- Fixed a bug that prevented the display of some subtitles if the ITT file specified a text region that was too small to show all of the subtitles in the specified character set.
- Fixed a bug that prevented the display of CEA-708 captions containing unicode characters.
- Fixed a bug that either caused a crash or prevented the display of DVB subtitles where the bitmap object data contained pixel lines of different lengths.

### Windows

- Fixed a crash on Windows when exporting after resizing the audio meters.
- Improved performance of playback of JPEG-2000 on Windows.

### KNOWN ISSUES

- 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 been 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.
- Rewinding jumps forward before rewinding.

- JPEG-2000 video in an MOV container may cause a crash.
- Double-rate deinterlacing produces shaky video.
- 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.
- Changes to audio settings in the inspector are lost after adding or removing a secondary audio file.
- Some HEVC files cause a crash.
- Lightspeed servers do not meet the minimum requirements for Switch for Windows.
- Switch is unable to open any files on storage devices that do not support file locks.
- iTunes Packages: Files with a ".scc" extension are being assigned a role of "subtitles" instead of captions in the data\_file element

## 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.

## Switch 1.6.1

### Bug Fixes

- Fixed a Memory Leak that occurred when playing back Closed Captions on Windows
- Fixed a bug that caused exported DNxHD content to be incompatible with Switch
- Changed Ungated Loudness to display BS 1770-1 rather than BS 1770-2
- Corrected an outdated link so that the application directs to the current User Guide

## KNOWN ISSUES

- Very loud audio from PCM AES SMPTE 302M 20-bit audio files
- Bad Timecode generated from exported H.262 or H.264 content when converting the Framerate
- Drop-down lists in the Inspector will reset following video playback
- Changes in the Inspector are not registered until focus is shifted away from the field in question

## Switch 1.6

### Fixes and Enhancements

- **New! Switch Plus (\$49) license level.**
- **New! External preview/SDI out to AJA** T-Tap, ioXT, io4K (Mac), and AJA Kona 3G, & Kona 4 (Win).
- **New! Professional Audio meters** with decibel scale, average loudness, maximum peak,
- **New! Additional export support to:** MP4 (MPEG-4 Part 14), MPEG-2 Transport Stream,

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and Program Stream file formats; as well as x.264, MPEG-2 Video (including HDV, IMX, XDCAM, XDCAM HD, XDCAM EX, XDCAM HD 4:2:2), AAC-LC, MPEG-2 Audio.

- **New! Added playback support for:** IMF (Interoperable Master Format) files; as well as JPEG-2000, DNxHR, DNxHD SQ TR (Thin Raster).
- **New!** Added playback support for subtitles from Spruce STL and SubRip SRT files
- **New!** Now localized in English, French, German, Spanish, and Japanese.
- Added keyboard shortcuts for enabling closed captions
- Added a “Clear” button to the welcome dialog that allows you to remove one or more videos from the recent media list.
- Added an option to turn off the welcome dialog
- The export summary dialog’s video section now displays both the storage and display dimensions, when the two differ. It will also display the pixel aspect ratio (PAR)

## Bug Fixes

- Fixed a crash when launching Switch for Windows 64Bit on older AMD CPUs.
- You can now double-click the title bar to zoom in OS X 10.10 (Yosemite).
- Fixed a crash that occurred if you were exporting from a file over a network and then lost or disabled the network connection
- Fixed an issue with files that have multiple video tracks, where Switch was playing the wrong video track.
- Fixed the vertical positioning of captions from WebVTT files.
- Fixed a bug that caused timecode from a GXF file to show as non-drop-frame when it was actually in drop-frame format.
- Fixed a bug that caused the display of subtitles and closed captions to be cut off when applying a clean aperture.
- Fixed a bug that prevented the resize constraint and resize mode settings from being reverted when reverting the video settings.
- Fixed the preservation and conversion of timecode when using double-rate deinterlacing.
- Fixed a hang that occurred when closing the last video window and returning to the welcome dialog.
- Fixed a bug that caused a static timecode to be displayed for MXF OP-Atom files that do not contain timecode.
- Fixed a bug that allowed spurious CEA-608 CC3 data to prevent Switch from displaying some captions from CC4.
- Fixed the export progress dialog so that new exports are placed at the top and more easily visible.
- Fixed a bug that caused MPEG-2 Transport Stream files with 24-bit SMPTE 302M audio to be mistakenly identified as 20-bit audio.
- Fixed VANC extraction from DV video essence. Added CEA-708 caption extraction from VANC.
- Fixed the vertical positioning of CEA-708 captions with anchor IDs other than zero.
- Fixed the preview of double-rate deinterlacing when the video is not displayed at full size.
- Fixed a bug that caused Switch to open multiple instances of the same media file rather than bringing the existing instance to the front.
- Fixed the display of export progress when unlicensed.
- Fixed the audio sample rate converter so that it no longer attenuates the audio by -0.2 dB.
- Fixed a bug that caused an incorrect clean aperture to be read from LXF IMX files.
- Fixed a bug that caused the Gather-Support-Information feature to collect crash dump files from other applications. (Windows Only)
- Fixed a crash when quitting the application while in full-screen mode. (Mac OS X Only)

## KNOWN ISSUES

- Some 10Bit DNxHD & DNxHR files will cause a crash on Windows if the CPU does not support SSE4.1
- If an ITT file specifies a text region that is too small to show all of the subtitles in the specified character set, some will not be displayed. This is handled differently on OS X than on Windows.
- CEA-708 captions inserted into H.264 video in an MP4 file via Vantage may have been 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.
- Rewinding jumps forward before rewinding.

## Switch 1.5.1

### Fixes and Enhancements

- Fixed a bug that caused multi-line CEA-708 captions to only show the first line if the captions contained certain special characters.
- Fixed a bug that caused roll-up CEA-608 captions at the top of the screen to only show a single row, when it was configured to show multiple rows.
- Fixed a bug that prevented the display of CEA-708 captions embedded in AVC A/72 Supplemental Enhancement Information (SEI).
- Fixed a bug in the rendering of CEA-608 captions with mid-row style changes.
- Fixed a bug in the rendering of CEA-708 captions on Windows which prevented them from displaying the colored background.
- Switch will now ensure that blank lines in CEA-708 captions have the same height as non-blank lines to preserve the correct vertical spacing.
- Fixed a bug that prevented Switch from detecting PCM audio in certain WAV files.
- Fixed a bug that caused timecode from MXF files not to be displayed
- Switch will now warn you before exporting an iTunes Store package, if you have trimmed off any chapters. If you choose to continue, these chapters will now be automatically omitted from the package. In addition, all chapters' starting timecodes will now be automatically adjusted during export to account for trimming.
- Fixed a crash when adding an invalid or malformed secondary subtitle file.
- Fixed problems with opening files larger than 4GB, including the failure to open in some cases, as well as the inability to get creation and modification dates.
- Fixed the command key equivalent for muting audio to avoid conflicts with the operating system's command key equivalent for viewing all windows in the current application. (Mac only)
- Fixed problems when exporting to a path that contains multi-byte unicode characters. (Windows only)

## Switch 1.5

### Fixes and Enhancements

- **New! Now available for Windows**
- **New!** Supports extraction and playback of CEA-608 & CEA-708 captions
- **New!** Supports playback of SCC, DVB, TTML (iTT and SMPTE-TT captions) and WebVTT subtitle files.
- **New!** Fullscreen playback.
- **New!** Supports playback of MXF OP-1a Proxy and MXF OP-1b files.
- **New!** Supports playback of Apple ProRes XQ.
- **New!** Supports playback of Avid DNxHR.
- **New!** Supports playback of 10bit uncompressed YUV ('v210') video.
- **New!** Now includes validation of audio and video codecs for iTunes Store packages.
- **New!** Now supports exporting of 32-bit signed integer and 32-bit floating point LPCM audio in both big and little endian formats.
- Modernized user interface appearance.
- Improved viewing of AS-11 DPP metadata.

- The screensaver is now disabled during playback.

## Bug Fixes

- Chapter order is now recalculated if the chapter time is changed manually using the timecode box and chapter time is set before/after another chapter
- MXF DNxHD 4:4:4 10 bit RGB files made with Adobe Premiere will now open and play in Switch
- A-Law and  $\mu$ Law PCM are now audible in Switch
- Fixed several bugs that could cause exports to be malformed if the movie, track, or media duration could not be expressed in the given timescale in 32bits.
- Fixed an issue where files created by Switch could not be used in Omneon or Vantage Server 6.3 because the component type value of the 'hdlr' atom was null
- Alpha channel are now passed on in transcoded exports to ProRes4444
- Displayed position of captions is now adjusted for changes to CLAP
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## Known Issues

- HEVC support is experimental, please notify Telestream Desktop Support if you have an HEVC file that cannot play back in Switch
- When using SCC caption files, the first caption must be at zero timecode to be displayed in sync with the video
- 59.94 timecode is displayed in 29.97 with two frames per timecode when doing double rate de-interlacing

## Switch 1.1

### Fixes and Enhancements

- **New!** iTunes Timed Text (ITT) subtitle files can now be added as secondary subtitle files and will be included in iTunes Store Package exports.
- **New!** The table columns in the inspector are now resizable horizontally.
- Updated the code signing of Switch to support the new Gatekeeper requirements of OS X 10.9.5 and later.
- Added support for muting or soloing entire secondary audio files via the Audio menu or via contextual menus in the Audio Meters window.
- Moved the Container Metadata section to second from the top in the inspector, just below the File section, and above the Secondary Audio and Secondary Subtitle sections.
- Added support for reporting a problematic file via the Help menu, even if the file is not open.
- Container, video, and audio metadata field now requires a Switch Pro license for viewing and/or editing.

### Bug Fixes

- Fixed a bug that caused the inspector to enter Export mode whenever the user changed tabs.
- Fixed a bug that caused a crash on Mavericks when scrubbing to the end of the video and then holding the “J” key to rewind.
- Fixed a bug that caused a crash when adding more than 32 channels of audio.
- Fixed a bug that caused the current display scale of the video to be lost when reverting changes, resulting in improper calculations for video edits, when the movie was not displayed at 100%.

- Fixed a bug that allowed the crop top inset to persist when changing from video transcode to passthrough.
- Fixed a bug in the remapping of audio input channels to output channels that prevented the preservation of old mappings when the speaker label order of the source did not match the order defined by the program (i.e. Source: L C R Lb Rb LFE, Export: L R C LFE Lb Rb) and the source contained another track with the desired speaker label. Previously, the remapping code would only preserve the mapping if it was in the same order with the same speaker label. Now, if that fails, we also accept the first unused old mapping with the desired speaker label.
- Fixed a bug with stuttering when pausing and resuming playback.
- Fixed a bug that occasionally caused the loss of 1 or 2 video frames off the end of a video in transcode exports if the compressor was more than 1 frame behind in delivering its output.
- Fixed a bug that prevented the purchase of a new serial number if a deactivated serial number was installed.
- Fixed a bug that prevented the increase and decrease size menu items from working with the shift key down if the video had no audio tracks.
- Fixed a bug that caused black bars on the top, right, and bottom of non-square-pixel H.264 video decoded by Core Video and shown with the pixel aspect ratio (PAR) disabled, such as when in crop, resize, or clean aperture modes.
- Fixed three bugs where Switch incorrectly mapped Left Center (Lc) and Right Center (Rc) speaker labels to Left Side (Ls) and Right Side (Rs), respectively.

## Switch 1.0 Features

### Media Playback

Switch has the playback control features of a professional player, such as: Fast forward and rewind, slow motion, as well as single-frame forward and back. Switch also supports playback of secondary audio files as well as SCC files.

#### Containers:

- AAC
- AC3\*
- AIFF
- AVC (AVC Elementary Stream)
- AVI (open DML)
- DV
- HEVC (HEVC Elementary Stream)\*
- GXF
- LXF
- MOV
- M1V (MPEG-1 Video Elementary Stream)
- M2V (MPEG-2 Video Elementary Stream)
- MP3 (MPEG Layer 1/2/3 Audio Elementary Stream)
- MP4 (ISO Based Media Format)
- MPG (MPEG-1 System Stream)
- MPS (MPEG-2 Program Stream)
- MTS (MPEG-2 Transport Stream)
- MXF (OP-1a; AS02, AS03, AS11)
- MXF (OP-Atom)



- SCC
- WAV

**Video Codecs:**

- Apple ProRes
- DNxHD\*
- DV 25
- DVCPro 25
- DVCPro 50
- DVCPro 100
- DVCPro HD
- H.263
- H.264
- H.265\*
- JPEG
- MPEG-1
- MPEG-2
- MPEG4

**Audio Codecs:**

- AAC
- AC3\*
- Microsoft ADPCM
- MPEG Audio Layer 1,2,3
- IMA ADPCM
- G.711 aLaw
- G.711 uLaw
- G.726
- PCM

\*Note: due to royalties DNxHD, HEVC and AC3 playback is watermarked in Switch Player.

## Media Inspection

Switch enables inspection of container, video and audio codec properties, and subtitle assets.

**Container information**

File name, location, size, type, duration, creation date, modified date, secondary audio, secondary SCC files, metadata

**Video codec information**

Format, bit rate, subsampling, color space, locale, duration, frame rate, whether the file is interlaced or progressive, encoded size, clean aperture, pixel aspect ratio, display size and additional metadata\*

**Audio codec information**

Per track: source file, channels, format

Per channel: speaker labels, source track

Additional information: bit rate, sample rate, locale, duration and additional metadata

\*Note: Advanced inspection of application-specific metadata included only in Switch Pro.

## Media Edit and Export

In export mode, users can make changes to the file: Trim, scale or crop the video; change the aspect ratio and clean aperture; rearrange audio tracks; edit speaker assignments; add metadata; insert chapter markers; and add caption tracks. Video and Audio pass-through mode enables users to make non-encoding-related changes to media. For more in-depth details see below.

### Edit Details

#### Container:

Edit: file name, file type and metadata

#### Video:

Edit: format, color space, locale, trim, scale, crop, change the aspect ratio and clean aperture

#### Audio:

Edit: format, rearrange audio tracks, channels, edit speaker assignments, sample rate, and locale

Video and Audio pass-through mode enables users to make non-encoding related changes.

#### Subtitle\*:

Inspect your subtitle track

#### Time:

Set trim in-and-out points and add chapter markers\*

\*Note, export of SCC files and chapter markers are only supported as part of an iTunes store package. iTT files can be added as secondary file for export as part of an iTunes store package.

### Export formats

#### Containers:

- MOV
- SCC (only as part of an iTunes package export)

#### Video Codecs:

- Apple ProRes

#### Audio Codecs:

- PCM

### Export to iTunes

Switch contains an iTunes export option that creates a complete asset-only iTunes store package.

### Coming Features

- Full screen playback
- Switch for Windows
- Support for embedded closed captions
- Support for adding captions to file export
- Support for opening and displaying chapter markers in MOV files
- Support for adding chapters to exported movies
- Additional containers and codecs for export

### Known Issues

- HEVC support is experimental, please notify Telestream Desktop Support if you have an HEVC file that cannot play back in Switch
- Chapter order is not recalculated if the chapter time is changed manually using the timecode box and chapter time is set before/after another chapter
- Displayed position of captions is not adjusted for changes to CLAP
- When using SCC caption files, the first caption must be at zero timecode to be displayed in sync with the video
- Alpha channel is not passed on in transcoded exports
- 59.94 timecode is displayed in 29.97 with two frames per timecode sample