Switch™

Telestream® Switch is an award-winning cross platform media player, inspector, and correction tool for professionals. Switch comes in three versions: Switch Player ($9.99), Switch Plus ($199), and Switch Pro ($499).

Switch Player is a robust multi-format media player with deep inspection capabilities. The media player supports high-quality playback for Windows Media, 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 supported in the MP4 container only, otherwise 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, DNxHD, DNxHR, JPEG-2000, and AC-3 audio.

Switch Pro is designed for Broadcast and Media QC analysis professionals. Pro 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 or higher (Includes macOS High Sierra)
- CPU: All Macs that support 10.11 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 graphics memory
- Display: 1280 x 768 or larger, 50 Hz or faster

Windows Minimum System Requirements
- Operating System: Windows 7 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 4.1

NEW

- Added the ability to decode and display Active Format Description codes in the frame metadata overlay.
- Added support for decoding and playing the Google VP9 video.

Customer Requested New Features

- Expanded the range of allowable Teletext pages from 801-999 to 101-999.
- Added video bit depth display to the inspector.

IMPROVEMENTS

- Switch now remembers when you mute/unmute audio and will reapply that setting to subsequent videos that are opened, even after relaunching the app.
- Switch will now persist the last used audio volume levels and reapply those levels to newly opened movies.
- Added additional flag colors for positive and neutral markers/comments on the timeline.
- Added the ability to set a flag out-point via the user interface in the timeline.
- Expanded the height of the flag title field in the inspector to accommodate up to three lines

of text.

- Added keyboard shortcut for Play/Pause All.
- Added additional keyboard shortcuts for jumping to the start and end of the video using the Home and End keys. On Mac computers that do not have these keys, the same functionality can be accomplished with the Function+Left Arrow or Right Arrow, respectively.
- Added menu items and keyboard shortcuts for jumping to mark-in and mark-out points.
- Added the ability to frame step using the Page Up and Page Down keys. These are in addition to the default frame step shortcuts using the Left Arrow and Right Arrow keys.
- Switch will now default the format of the SCC start timecode to the video frame rate, and if it is 29.97 or 59.94 frames per second, it will set it to drop or non-drop frame depending on the use of a semicolon or colon in the timecode values found inside the SCC file.
- Switch will now default the start time for secondary subtitle files to the timecode of the first frame of video.
- Switch will now default to applying a black background to WebVTT subtitles/captions.
- Added the ability to pass-through HEVC into the MP4 container.
- Added DXFP to the list of allowed file extensions when adding a secondary subtitle file using the Open File dialog.
- Switch will now tolerate AAC HeV1 in containers whose decoder-specific information does not indicate SBR. We now parse the essence to determine if we can play back this codec.
- Improved indexing performance when a blank Teletext page is accidentally selected.

FIXES

Customer Issues

- Fixed a bug that prevented Switch from remembering the last Teletext page selected, including both when closing a document and when quitting Switch.
- Switch is now more lenient with MPEG-2 Program Streams that start with invalid data.
- Fixed a bug that prevented the display of the decibel value for the minimum of the loudness range in the audio meters window.
- Added a Matrixed Stereo (Lt and Rt) audio program. This allows audio to be recognized and displayed as such in the inspector rather than referring to it as "Dual Channel".
- Fixed a bug that caused the SCC timecode format to be set incorrectly (the time scale and frame duration were swapped) which resulted in wildly inaccurate durations and an inability to manually sync captions.
- Fixed a bug that caused the default soloing of an audio track to be lost after audio coding analysis (Dolby-E detection) completed.
- Fixed a bug that caused some CEA-608 captions that were extracted from CEA-708 data to have a variety of on screen rendering issues.
- Fixed a bug that caused playback problems with GXF files that had a mark-in point that was not on an I-frame.
- Fixed a bug in the handling of line breaks for vertical placement of SMPTE Timed Text secondary subtitles.

Mac Specific

- Fixed a crash on macOS when clicking immediately to the left or right of the frames on the timeline, which is only possible for files with so few frames that they do not fill the entire timeline.
- Switch for Mac will no longer allow minimization of windows that have a currently open sheet attached to them.

General

- Fixed a bug that caused a crash when exporting from a particular Sony RAW file.
- Fixed a bug that caused a crash when stepping or playing backwards with certain files.
- Fixed a bug that caused a crash when opening a file with 6 channels of AAC audio whose speaker labels were not C, L, R, Lb, Rb, LFE.
- If you enter a start time for a secondary subtitle file that is beyond the last subtitle in the file, we now automatically reset the start time to zero and retry loading the subtitle file. This prevents the situation where a user is unable to open future secondary subtitle files due to a faulty start time retained in the inspector, and unable to change the start time without clearing the application preferences.
- Fixed a bug where some XAVC 100 Mpbs 4:2:2 59.94 fps TIFO files were mistaken for 29.97 fps.
- Removed extra menu item from the Subtitle/Closed Caption Source menu when using Teletext.
- Fixed a bug that caused auxiliary windows like the inspector and audio meters to be closed when closing the Welcome Screen while videos were still open.

KNOWN ISSUES

General

- Decoding of closed captions is not currently supported while Switch is configured to watch for growing files.
- 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.

Switch 4.0

NEW

- Added support for playing back files as they are being created*.
- Added localization for Chinese (Simplified).

*Does not support caption decoding while configured to play back growing files.

Customer Requested New Features

- Added Dolby-E detection. Tracks that are determined to be Dolby-E will be silenced to prevent the white noise that results from playing them back as PCM. Decoding of Dolby-E is not yet supported.
- Added playback statistics as a video overlay, including the number of dropped frames.
- Added frame metadata display as a video overlay which details what metadata is attached to the current frame, such as timecode or captions.
- Added ability to flag frames or sequences of frames and add notes to them. This can be displayed in the timeline.
- You can now specify the timecode format that should be used to interpret SCC files, including frame rate and drop-frame or non-drop-frame.
- Added support for decoding and playing back Teletext captions (OP-47 and OP-42).

IMPROVEMENTS

- Added experimental support for complex CPL files in IMF packages.
- All features can now be demoed before purchasing of the licenses that support them.
- The colorspace settings and display within the inspector now have details that include color primaries, matrix coefficients, and transfer characteristics.

FIXES

Customer Issues

- Switch is now more lenient with MPEG-2 Program Streams that start with invalid data.
- Switch now supports H.264 video streams that lack Access Unit Delimiters.
- Fixed a bug that caused LXF MPEG-2 NTSC 4:3 videos to display as widescreen.
- Fixed a bug that caused line 21 captions to be mapped to line 22 when sent out to a BlackMagic device.
- Switch is now more lenient when opening DNxHD in MOV with an ARES image description extension that does not end with 80 bytes of reserved data.
- Fixed a bug that caused interlaced ProRes exports to use the wrong field dominance.
- Extended the amount of initial delay supported for audio in MPEG-2 TS.

- Fixed a bug that prevented display of captions from HEVC inside an MPEG-2 TS.
- Improved the quality of video when seeking. We no longer rely on IDR frame flags, and instead begin decoding at the second previous I-frame.
- Fixed a bug that prevented opening ASF files created by ffmpeg with an extended stream properties header that has an average time per frame of zero.
- Fixed a bug that caused frames to display out of order when playing an MXF OP-1a from Adobe Premiere if the body partitions do not start with I-frames.
- Fixed a bug that prevented opening MP4 files from Vantage whose 'meta' atoms are written as a full box with an extra four bytes after the type.
- Fixed a bug that caused EAC-3 5.1 audio with speaker labels in a different order than L, C, R, Ls, Rs, LFE to be played out to the wrong speakers.
- Fixed a bug that prevented jumping to a timecode in a ProRes file.
- Fixed a bug that caused audio/video synchronization loss in H.264 MPEG-2 TS due to audio packets being erroneously lost during the transition between stereo and joint stereo.

General

- Fixed horizontal positioning of IMSC captions from MacCaption.
- Fixed display of IMSC captions in terms of font, size, color, outline, and background.
- Fixed loss of audio/video synchronization in TIFO files with mark-out frames.
- Fixed a bug that caused progressive files to come out as interlaced when exporting XDCAM in an MPEG-2 PS or TS container.
- When doing a frame rate conversion alone in the video processor, if we fail to configure the components due to an inability of the format converter, fallback to BGRA and try again. This prevents some export failures.
- Switch will now prevent transcode exports of Dolby-E since decoding is not supported. Pass-through is recommended instead.
- Fixed several bugs that caused distorted audio when playing SMPTE 382M within a Digital Cinema Package.
- Fixed a bug that caused a crash when exporting an audio-only file.
- Added TTML to the list of supported extensions for the open secondary subtitle dialog. This allows them to be chosen without needing to change the extension to XML.