Switch 5.3
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, Switch Plus, and Switch Pro.

Switch Player is a robust multi-format media player with deep inspection capabilities. Leveraging the Telestream Media framework, Switch supports high-quality playback of 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 only supported when converting Windows Media content to H264 in the MP4 container. Exports using other combinations of source and output formats are watermarked or limited to 30 seconds/half the duration of the media file. Reduced frame decoding is available for reliable and performant playback of >UHD media, along with hardware acceleration to ensure a smooth experience.

Switch Plus is perfect for video editors and post-production professionals. Plus adds support for embedded caption playback and subtitle files; professional-grade 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 a complete solution for Broadcast and Media QC 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. Switch Pro also supports the decoding of ProRes RAW, and the opening of DCP and IMF packages.

Copyright © 2024 Telestream, LLC

System Requirements

Mac Minimum System Requirements

- Operating System: macOS Sonoma 14 or Sequoia 15
- CPU: All Macs made in 2014 and later that support macOS Sonoma 14 or Sequoia 15 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 11, 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. Try using the “Reduced scale decoding” option, which you can find in the Preferences menu.

Copyright © 2023 Telestream, LLC

Switch 5.3

General

- Switch will run on the Mac ARM Apple silicon and will not require the Rosetta Translation Layer.
- Add user alert when there is a conflict between container and essence metadata.
- Added support for macOS 14 (Sonoma) and 15 (Sequoia)

Improvements

Customer Requests

- Added support for passing timecode to external device.
- Added support for automatic Teletext page detection.

Fixes

Customer Issues

- Addressed issue where DNX Specification 2.0 DNxHD 36 would not open
- Addressed an issue with CEA 608 and CEA 708 captions not being shown in the Switch Inspector.
- Addressed an issue with collecting support information on MacOS. The System Profile support information is now gathered in a file called “SystemProfile.spx” on MacOS systems.
- Addressed an issue with OP47 436M Teletext not being displayed in Switch.
- Disabled sync correction in the MPEG-1 system and MPEG-2 transport stream and program stream container readers. This avoids insertion of black frames to fill gaps, overlaps and discontinuities in the timestamps in the file. Please note that files with timestamp gaps/discontinuities in the video may result in AV sync issues.
- Improved external playout via AJA Kona and Blackmagic cards to no longer downscale 4K/2K files to 1080p on Mac.

NOTE: The ARM version of Switch will not be able to decode Cineform because the open source project has not been ported to ARM.
Any Switch user who needs to be able to play Cineform video on ARM Macs will need to quit Switch, and relaunch it using Rosetta in order to view the file.

Previous Versions:

Switch 5.2

New Features

Customer Requests

- Added support for AJA Kona LHi.

General

- Added support for macOS Ventura 13.

Improvements

Customer Requests

- Improved scrubbing performance. If the user is moving the scrubber to within 500ms of video, we will continue trying to seek to B-frames and P-frames. If the user has moved the scrubber more than 500ms away from the previous seek attempt, we will instead seek to the nearest Iframe. The user can also hold down the shift key while scrubbing to force Switch to seek to any frame. This can be helpful if they want precision scrubbing and their machine can handle it.
- Made it easier to passthrough Dolby-E by automatically setting the volume to full for external playout and muting it for desktop playback. This removes the need for the user to change a preference setting for analyzing audio to detect SMPTE 337M.
- Removed embedded web browser for purchasing via web store. This allows customers to buy with PayPal again, and avoids potential security concerns. Activation of Switch serial numbers can now be done by clicking on a hyperlink.
- Improved support for sending selected timecode to external devices.

Fixes

Customer Issues

- Fixed a bug that prevented changes to the starting timecode and format for some secondary subtitle files from taking effect the first time they were changed.
- Fixed a bug that caused halos around the borders between masked objects in videos with alpha channels on Mac.
- Fixed a bug that, on rare occasions, caused some very large files to take a very long time to load.
- Fixed a bug that prevented quadraphonic MOV/MP4 files from opening if they lacked a channel configuration.

Copyright © 2023 Telestream, LLC

- Fixed a bug that caused TTML caption top/bottom placements to be swapped in Hebrew and Arabic languages.
- Fixed a bug that prevented opening of UTF-16 SRT subtitle files.
- Fixed a bug that prevented opening of files that contain AC-3 audio in little-endian byte order.

Known Issues

General

- Frames with long durations make the time display appear to stall, because it always shows the presentation time of the frame.
- ASF files with variable frame rate display incorrect frame rate in the inspector.
- In the luma scope on Mac, tent and pluge are missing for files that should show them.

Switch 5.1

New Features & Improvements

Vector Scopes (Technical Preview)

- Added several video scopes, including a luma scope for plotting histograms of brightness, a vector scope for plotting U-V brightness distribution, and a component parade for plotting RGB brightness distribution. Note that this is the initial implementation of video scopes, which is being considered a technical preview, not a completely finished feature set. Future releases of Switch will add more capability to the video scope features.

Index Advancement During Seek

- Added the ability to advance the indexer during any seek operation, including flag navigation, chapter navigation, jump to mark in/out, 10 second skip, etc. Use the normal controls but hold down the option (Mac) or alt (Windows) keys. Once you do this, subtitle/caption playback will be disabled, as that requires indexing the entire file. Also, our support for advancing the indexer only exists in MPEG-2 TS and MPEG-2 PS containers. If the indexer cannot advance to the desired point within 30 seconds, the operation will be aborted.

Other New Features

- Added the ability to play Microsoft ADPCM audio from a WAV file.
- Added the ability to play AMR audio files.
- Added the ability to play HEVC MPEG-2 PS files.
- Added support for displaying timecode from SEI, MPEG-4 Sony Metadata, Seachange ANC & VBI.

Fixes

- Fixed a bug that caused scrambled playback for non-standard resolutions, wherein widths were not a multiple of sixteen, on macOS.

- Fixed a bug that prevented the display of outlines of subtitles for SMPTE Timed Text files generated by EZ Titles.

- Fixed a bug that could cause audio from ASF files to go out of sync with the video if the file specified a pre roll.

- Fixed a bug that prevented playback of Broadcast Wave (BWF) files from Logic Pro X.

Copyright © 2024 Telestream, LLC

Fixed a bug in dark mode on macOS where the timecode source popup in the jump-to- time interface was obscured.

Known Issues

General

- Frames with long durations make time display appear to stall because it always shows the presentation time of the frame.

- ASF files with variable frame rate display incorrect frame rate in the inspector.

- No detection of interlaced content is done for Windows Media files.

- ProRes Raw on recent versions of macOS displays almost black on Intel machines, and with a stride problem on ARM machines.

Windows

- Ancillary LTC timecode is not passed when using the KONA 4G with the 4k driver.

- Ancillary LTC timecode is not passed when seeking/scrubbing to a KONA 3G or KONA 4G.

Switch 5.0

IMPROVEMENTS

- ProRes RAW decoding (Pro)
- DCP/IMF Playback (Pro)
- Hardware accelerated decoding (all versions)
- Reduced scale decoding option (all versions)
- Ability to export media as TIFO (Plus and Pro)
- Ability to skip indexing for faster media load times (all versions)
- Dolby-E passthrough via SDI (Pro)
- Support for up to 64 tracks of audio (all versions)
- SwitchEngine API available for 3rd party integration (Pro)
- Improved verbosity of displayed alerts from Vidchecker (Pro)

FIXES

- Improved readability in Dark Mode (all versions, Mac)
- AC-3 loudness measurement accuracy improved (Pro)
- V-Chip code detection accuracy improved (all versions)
- Multiple improvements and fixes to Telestream Media Framework (all versions)

KNOWN ISSUES

General

- Frames with long durations make time display appear to stall because it always shows the presentation time of the frame.
- ASF files with variable frame rate display incorrect frame rate in the inspector.
- No detection of interlaced content is done for Windows Media files.
- Cavena 890 subtitles not supported.
- Opening a ProRes RAW media file with Switch 5.0 on a Windows 10 system with a NVIDIA Quadro P1000 graphics card might return an unsupported video format message. If so, this is caused by an outdated version of the NVIDIA Quadro P1000 graphics driver. To resolve the issue, update the graphics driver to the latest available version.

Windows

- Ancillary LTC timecode is not pass when using the KONA 4G with the 4K driver.
- Ancillary LTC timecode is not passed while seeking/scrubbing.

Switch 4.5.7

IMPROVEMENTS

Customer Requested Improvements

- Updated the Inspector title bar to allow for standard macOS functionality such as CommandClick to show path, reveal in finder, or initiate dragging.

FIXES

- Fixed the licensing button coloring in Dark Mode on macOS so that they remain visible in the preferences.
- Fixed a bug that would cause the video dimensions shown in the window title bar to disappear when changing to Dark Mode on macOS Mojave and remain hidden until a relaunch using Light Mode.

- Modified the display of the video filename in the player window title bar so that it can easily be read in macOS Light and Dark modes.
- Changed the preferences text coloring in macOS Light and Dark modes so that all user interface elements remain clearly legible in both modes.
- Changed the Inspector text coloring in macOS Light and Dark modes so that all user interface elements remain clearly legible in both modes.
- Changed the Welcome screen text coloring in macOS Light and Dark modes so that all user interface elements remain clearly legible in both modes.

Switch 4.5.6

NEW

- Added support for macOS Catalina.

FIXES

- Fixed instability the could occur when playing back files with large numbers of audio tracks and channels while the audio meters were open.

Switch 4.5.5

Not released to the public.

Switch 4.5.4

FIXES

Customer Issues

- Fixed a bug that would incorrectly report the presence of the ‘Sexually Suggestive Dialog’ flag in V-Chip data when a file was flagged with ‘Violence’ and ‘Sexual Situations’.
- Fixed an issue that prevented opening and viewing of MP4 files created using Hybrik.
- Fixed an issue that prevented full playback of MP4 files created using the Elemental encoder.
- Modified the logic used to select external preview audio devices to prevent a situation where audio output could be disabled unintentionally.
- Added support for adjusting synchronization of SRT subtitle files to resolve cases where some SRT secondary subtitle files would fail to display with the video.

Switch 4.5.3

NEW

- Added new tab to preferences dialog which allows the user to configure the Dynamic Range Compression for AC-3 and E-AC-3 decoding.
- Add a new preferences option to control the default export/save location for media or flags files.

IMPROVEMENTS

Customer Requested Improvements

- Improved the default export folder behavior so that the ‘last used’ folder is updated for both media export and the saving of a flags file.

FIXES

Customer Issues

- Fixed a bug that prevented certain Panasonic MOV proxy files from opening and being played back.
- Fixed an issue that would prevent an export from initiating when trimming some ProRes source files and transcoding to H.264.
- Fixed a bug that would result in lost frames when exporting from some XDCAM sources to ProRes outputs.

- Fixed a bug that caused some XDCAM sources to decode with fields out of order resulting in out of order frames in exports, dropped frames during playback, and A/V sync problems during playback.

•

Switch 4.5.2

NEW

- Added the ability to decode Sony MPEG-4 Simple Studio Profile (SStP).
- Added the ability to change the color range in edit mode and see the effects in the player window.
- Changing the color matrix coefficients in the colorspace section of the inspector window while in edit mode will now update the image in the player window.

Customer Requested New Features

- Added the option to display safe area (title, action, and caption) overlays.
- Added a preference to control whether the default export folder is the same as the source directory or the last directory used.

IMPROVEMENTS

Customer Requested Improvements

- Navigation key commands will now work when the inspector window has the focus unless the selected control accepts the keystrokes.
- Added stepper controls to crop settings in the inspector.
- Lowered the minimum required license level for Windows Media Audio & Video exports from 'Pro' to 'Plus'.
- Switch is now more lenient with MPEG-2 Transport Streams and will correct for EBP descriptors with a length of zero.

General

- Audio track languages are preserved in MPEG-2 Program Stream containers.
- Switch will now show an error and automatically revert to the previous color matrix coefficients when there is no conversion path to the user selection in the inspector.
- Improved performance when playing FLAC files on Windows while indexing.
- Switch will now display an error in the export summary dialog when trying to export LPCM into an MPEG-2 Transport Stream with a track containing a number of channels other than 2, 4, 6, or 8. Previously there was no error and the export would fail using this unsupported configuration.

FIXES

Customer Issues

Fixed a bug that prevented the complete playback of WAV audio files made by Dalet.
- Switch is now more lenient and will try to recover from malformed ‘wave’ atoms in MOV files, when possible.
- Fixed a bug that prevented Switch from learning the user’s preferences regarding which timecode sources are preferred and displayed by default.
- Fixed several display issues in the Audio Meters window.

General

- Fixed a bug that prevented the display of ProRes 4:4:4:4 on macOS X 10.14 (Mojave).
- Fixed a memory leak when exporting PCM audio to MPEG-2 Transport Streams.
- Fixed a bug that caused flags to be hidden in the inspector when located between two deleted flags.
- Fixed the keyboard shortcuts for looping so that they are unique. This, unfortunately, requires additional keystrokes for the shortcut combination.
- Fixed a bug that prevented the display (in the timeline) of any flag on the first frame of video.

Windows

- Fixed a crash on Windows when decoding HEVC files with only a single IDR frame.
- Fixed a bug that caused the colon/semi-colon and single/double quotes keys to have swapped behavior on Windows.

Switch 4.5.1

FIXES

Customer Issues

- Fixed a crash that occurred when opening a file if the computer language was set to German or Chinese.
- Fixed a bug that prevented the decoding of MPEG-4 Part 2 MP4 files from aQ Broadcast Recorder.
- Fixed a bug that caused horizontal banding of ProRes HQ during playback.
- Fixed a bug that caused exported files from some MP4 H.264 sources to be unplayable if the tail was trimmed.
- When attempting to activate a license on a private network that does not have access to the Internet, the manual activation window will now appear. Previously, an error was encountered.

•

General

- Fixed a crash that occurred when trying to open a malformed file with audio samples that had a zero duration.
- Fixed a crash that occurred when trying to play some MPEG videos in reverse.
- Fixed a bug that prevented decoding of 8-Bit Packed YUV 4:2:2 U:Y:V:Y.

Mac

- Fixed a bug that prevented the decoding of ‘SN40’ video on Mac.

Switch 4.5

NEW

- Switch is now able to export to the Windows Media format (WMV and WMA in the ASF container).
- Added support for display of CEA-608 background colors.
- Added support for pass-through exports of HEVC into the MP4 container.
- Added support for pass-through exports of DNxHR into an MXF OP-1a container.
- Added support for decoding and playback of Avid Meridien files.
- Added support for decoding and playback of DV in MXF OP-Atom containers.
- Added support for decoding and playback of MCC secondary subtitle files.

Customer Requested New Features

- Switch now displays all supported timecodes and allows selection of the source to display.
- Added the ability to view alpha channels.
- Added the ability to view safe area overlays for action, titles, and captions.
- Added the ability to export inspector information as a text or JSON file.
- Audio tracks and channels can now be muted or soloed directly from the inspector window.
- Added the ability to adjust synchronization of MCC and TTML (DFXP, iTT, etc…) secondary subtitle files.
- Added support for pass-through exports of HEVC into an MPEG-2 TS container.
- Added the ability to display Active Format Description (AFD) codes in the frame metadata overlay.
- Added the ability to decode and display Extended Data Services (XDS) metadata, including VChip.
- Added support for decoding and playback of FLAC audio as well as from FLAC containers.

- Added the ability to loop playback within trim in/out points.
  Switch will now recognize the DCI P3 colorspace.
- Added display of video bit depth to the inspector.
- Audio track name metadata from Quicktime MOV files will now be displayed in the inspector.
- Switch now recognizes Discrete-0, Discrete-1, etc… speaker labels.
- Added support for decoding and displaying DVB Teletext from MPEG-2 Transport Streams.

IMPROVEMENTS

- Expanded the title fields for flags in the inspector.
- Added additional flag colors to denote good or neutral flags.
- Added the ability to set 'Out' points for flags on the player timeline.
- Switch now remembers when you mute/unmute audio and will reapply that setting to subsequent videos that are opened, including after relaunching the application.
- Switch now displays the default black background for WebVTT secondary subtitle files.
- Switch will no longer display roll-out frames from MXF containers.
- Switch will now peek into SCC files and determine if the timecode format inside is drop or nondrop frame before opening the file. Switch will default the timecode format to the video's frame rate, and if it is 29.97 or 59.94 it will set it to drop or non-drop frame based on the SCC file data. Instead of defaulting the start time for secondary subtitle files to the last one used, Switch will now default to the timecode of the first frame of video.
- Switch now automatically displays the flags tab in the inspector immediately after a flags file is opened.
- Added support for the .dfxp file extension as a synonym for the existing TTML extensions (.ttml, .itt, .xml).
- Added support for language tagging in MXF exports, with limitations. MXF OP-1a will only support language/locale tags for audio, not for video. If you specify only a language (i.e. "de" for German) and not a region (i.e. "de-DE" for German spoken in Germany) Switch will append the current region (i.e. "de-US" for German spoken in the United States).
- Added a Matrixed Stereo (Left Total & Right Total) audio program.
- Added a preference option to disable desktop playback while playing out over SDI/HDMI external preview in order to reduce the burden on the computer and improve playback performance.
- Switch will automatically default to the supported speaker labels for AAC 7.1 surround sound.
- Added the ability to specify the timecode format including frame rate for interpreting Lambda CAP secondary subtitle files.
- Switch will now preserve subtitles, captions, and/or Teletext when exporting to a codec that supports the metadata container type (DVB, VBI, ATSC A/72 SEI, etc…), or when exporting to MOV which allows for this data to be placed into a caption track.

•

- Added the following new speaker labels: Left Wide (Lw), Right Wide (Rw), LFE2, Left Rear Surround (Lrs), Right Rear Surround (Rrs), and Mono (M).

Windows

- Added keyboard shortcuts for jumping to the first or last frame via the ‘Home’ and ‘End’ keys.

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.
- When exporting flags files, the XML inside will now have a single <Switch> root element in order to improve compatibility with other applications. Both old and new flags files can still be opened by Switch so backwards compatibility is retained.
- Fixed a bug that caused DFXP captions to be truncated.
- Fixed a bug that caused chroma displacement of some interlaced AVC content.
- Fixed a bug that prevented Windows Media Audio 9 from playing in certain files.
- Fixed a bug that prevented PAC secondary subtitle files from displaying.
- Fixed a bug that prevented playback of MPEG-2 content that changed between field and frame encoding partway through the file.
- For SDI output via AJA devices, Switch will now respect the reference source for playback timing specified in the AJA Control Panel.
- Fixed a bug that caused the SCC timecode format to be set incorrectly.
- Fixed a bug that prevented the display of MXF material timecode in some cases.
- Fixed a bug that prevented the use of some HEVC videos while in split-screen or difference view of the Compare Alternate Media feature.
- Fixed a bug that caused Switch to use the estimated container duration rather than the actual duration obtained by indexing if the estimate duration was larger. This behavior is still necessary when watching for growing files, but not in other cases.
- 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 decoding problems with some Motion JPEG-2000 content.
- Fixed a bug that caused color quality problems in some ProRes 4:2:2 exports.
- Fixed a bug that caused 30fps EBU STL subtitle files to play out of sync.
- Fixed a bug that caused MPEG-1 System files containing MPEG-2 video to display using the wrong default pixel aspect ratio.
- Fixed a bug that prevented playback of certain GXF files with a mark-in point.
- Fixed a bug that prevented display of the decibel value for the minimum of the loudness range in the audio meters window.
- Fixed a bug that caused some ProRes CEA-608 captions to be scrambled on playback.
- Fixed a crash that occurred when opening some malformed files.

Copyright © 2021 Telestream, LLC

- Fixed a bug that caused a particular Omneon MOV MPEG file to display as progressive when it was actually interlaced.
- Fixed a bug that caused H.264 MP4 exports from certain XDCAM MXF files to be missing two frames.
- Fixed the ‘chan’ atom in MOV/MP4 exports so that it matches the “implicit” AAC speaker labels that Switch supports for 5.1 and 7.1 surround sound.
- Fixed the sound sample description in MOV files to be version 2 when using more than 2 channels, as required by the Quicktime File Format specification.

General

- Fixed a bug that caused field-encoded AVCHD exports to MXF to have frames out of order.
- Fixed a bug that caused the desktop preview to be blank when outputting 10-bit video to an external device.

Windows

- Fixed a bug that caused some Windows exports to ProRes 4:2:2 HQ to come out as ProRes 4:4:4 XQ.
- Fixed a bug that caused vertical positioning of WebVTT to be ignored on Windows. This fix will only work on Windows 8 and later.

Copyright © 2021 Telestream, LLC

Copyright © 2021 Telestream, LLC