

# Telestream QC Products

Brochure



Vidchecker

Aurora

## Telestream QC Products

Your partner in reducing rejection costs and improving customer experience.

[Aurora](#) | [Vidchecker-base](#) | [Vidchecker-post](#) | [Switch Pro](#)

## Aurora and Vidchecker

With quality becoming more and more important, it's essential that your file-based QC platform drives efficiency, quality and cost saving within your workflow. Vidchecker and Aurora are our complimentary file-based Quality Control products. Both offer a comprehensive, up to date range of quality tests for video, audio and file containers.

Each product is equipped with a set of default test templates for major broadcasters and OTT platforms, helping you quickly identify content that does not meet requirements.

Vidchecker additionally offers our patented intelligent correction, which can fix your files automatically, saving valuable edit suite time. Aurora offers the ability to process ABR packages, and includes a number of features positioned for the growing OTT/VOD industry.

Media technology is constantly changing, so it's essential that your QC platform stays up to date in order to provide the best quality experience for your customers. Telestream QC products are future proof, with UHD, WCG, HDR and IMF technology at the core of our feature set and roadmap.

#	Thumbnail	Input File	Size	Template	Type	Started	Completed	Status	Corrected
1		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 14:03:11	--	🟡	--
2		\\qaeng-fileshare\source\media\WARNING\photosensitive epilepsy (psel)\sources\LondonLive\source\MP\LFFPW-test-65003_b.mxf	1.40 GiB	Photosensitive Epilepsy check		2018-10-25 13:59:16	--	🟡	🔴
3		\\qaeng-fileshare\source\media\WARNING\photosensitive epilepsy (psel)\sources\BBC\News_flash.mpg	43.82 MB	Photosensitive Epilepsy check		2018-10-25 13:58:51	2018-10-25 13:59:36	🟡	🔴
4		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-MXF IM030 Levels		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
5		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
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8		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
9		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
10		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
11		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
12		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
13		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
14		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
15		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
16		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
17		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
18		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
19		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢
20		\\qaeng-fileshare\source\media\MP\IM030_5.MXF	514.24 MB	-Video Levels re-encode		2018-10-25 13:36:53	2018-10-25 13:38:02	🟡	🟢

Vidchecker User Interface

Job ID	Date/Time Started	Container	Template	E	W	Time Remaining	Progress	User	Processing VU
20035	26/11/2019 16:47:03	A19000_6_BigCatCountry_TheNextDynasty_AM_HM5_4420_CTC_HD_2398_20191108.mov	mov syntax	0	0	00:13:34	100%	Admin	
20034	20/11/2019 15:32:53	TEST-SEQ_VIDCHECKER_02_C-185_DNoI86444_20191118.mov	Blankin	2	0	00:12:01	100%	Admin	
20033	19/11/2019 16:32:33	98min_XDCAM50.mxf	GOP STRUCT	1	0	00:40:08	100%	Admin	
20032	19/11/2019 16:04:26	30MIN_XDCAM50_1080I50_MXF.mxf	GOP STRUCT	1	0	00:12:22	100%	Admin	
20031	06/11/2019 09:55:11	0055488_Imagin_Aligemlin_87226MD9byGermany_BONUS_A1_149_1080_p_25_MPEG2_TC00000000.mxf	Loudness	0	0	00:00:17	100%	Admin	
20030	30/09/2019 13:32:28	ca30m.m2t	Codec and Container Syntax	3	0	00:17:56	100%	Admin	
20029	25/09/2019 12:31:00	MAL_WILD_CARD_060919_WIND TUNNEL_CARRIER_30SEC FR TV MIX_MASTER.wav	Loudness	0	0	00:00:03	100%	Admin	
20028	24/09/2019 09:30:36	FBENC0.mxf	syntax check	1	0	00:01:30	100%	Admin	

Aurora User Interface

## Key Features



### Processing

- Process multiple files at once.
- Scalable, enterprise class architecture.
- Optimized for use with modern, multi-core CPUs.
- Flexible deployment options – On-premises, Cloud and SaaS.



### Integration

- Vantage connector provided free of charge.
- Many existing integrations with 3rd party products available – contact your vendor.
- API web services for full integration with production and broadcast workflows and media asset management systems.



### Results

- Simple, searchable web dashboard to monitor progress.
- Detailed alert information, with timecode and thumbnails.
- Mature algorithmic detection engineered to improve accuracy and mitigate false positives.



### Reporting

- Clean, easy to read reports, available as XML or PDF.
- Customizable with your brand identity and graphics.
- Change alerts and add notes and comments for an interactive QC workflow.



### Checking and Correction

- Wide range of audio, video and file tests to ensure quality, compliance and legality.
- Optional correction features allow automated correction of video levels, audio loudness and peaks—and PSE flash patterns.

## The Telestream QC Advantage

### Industry Experts

Telestream's ethos is centered on Quality - from end to end of your workflow. Our teams stay in contact with our customers and ensure that exciting and relevant features are implemented regularly. We maintain close relationships with industry standards bodies such as the DPP, EBU, SMPTE, NABA, and ARIB, to name a few. Our products have been proven by some of our industry's most demanding customers.

### Ready for the Future

Telestream QC Products are always ahead of the curve. Emerging technology such as UHD, ABR, HDR, WCG and IMF are at the forefront of our feature list.

### Easy to Set Up, Intuitive to Use

Simple to install on standard PC hardware, our products are operator friendly. Both offer an intuitive web-GUI, and offer an integrated media player for hybrid auto/manual review of QC reports.

### Bad content? We'll fix it, too

Our Vidchecker product offers patented automatic audio and video correction, as an additional option. If we find a problem with your content, we can fix it automatically with minimal impact on audio/video quality, saving valuable edit suite time. Aurora also offers an AutoFix option, allowing audio levels to be fixed and re-encoded.

### Automated workflows

Aurora includes tools for implementing end-to-end workflows, including Smart Test Plans for automatically applying test plans to your incoming files, and a Decision Engine that enables automated post QC test file movement and corrective actions.

### Systems integration

Aurora QC includes an easy to use SOAP API, as well as the legacy CeriTalk API, allowing leading vendors to seamlessly integrate Aurora QC into their solution workflows. Major partners include Amberfin, Aspera, Astec, Imagine Communications, iBroadcast, DataMiner, Vidispine, Dalet, and FileCatalyst.

## The Telestream QC Product Family

### **Vidchecker-Base – Easy to use, scalable feature-filled solution with intelligent automated correction for large volumes of content**

- Vidchecker can be used at any point in your workflow – from the ingest of rushes, through to delivery to your end-user.
- Fast and efficient – each license can process 4 jobs simultaneously, and use all available CPU resource.
- Wide range of audio and video tests available, including Dead Pixels, Levels, Dropouts, Media Offline.
- Support for many high end formats, such as ProRes, J2K, DNxHD, DPX, OpenEXR and IMF.
- Operator friendly, easy to use web-GUI.
- Class leading HDR testing of HLG and PQ encoded files.
- In depth MXF analysis and support for many MXF constraints, such as AMWA AS-11 and AS-10.
- DPP approved PSE test included at no extra cost, and unique PSE Correction available as an additional option.
- Enterprise class software, rigorously tested and maintained.
- Easily scalable with GRID option, or when used with Vantage.
- Flexible deployment options – use in the Cloud, or on premises.
- Intelligent file-correction option available, to automatically fix issues such as video and audio levels, RGB Gamut, dead pixels, black frames, color bars and many more.

### **Vidchecker-Post – Less content doesn't mean lower quality**

- Same feature-set as Vidchecker-Base, but processing 1 job concurrently and limited to 8 CPU cores.
- Wide range of audio and video tests available, including Dead Pixels, Media Offline, Levels and Dropouts.
- Support for many high end formats, such as ProRes, J2K, DNxHD, DPX, OpenEXR and IMF.
- Professional, responsive support team.
- Easy upgrade path to Vidchecker-Base

### **Aurora – Enterprise class, scalable solution with a multitude of test and measurement functionality for demanding broadcast environments**

- Fully featured, file-based QC software which can be used at any point in your workflow – from the ingest of rushes, through to delivery to your end-user.
- Easy to read QC report, featuring unique graphs and charts.
- ABR package analysis (Dash, HLS, Smooth) allowing all renditions to be tested.
- EBP and IDR alignment tests for seamless transition between different representations.
- Intuitive web-GUI.
- Unique PVQ and TekMOS video quality tests, produce metrics that align with the ITU 5-point scale.
- Comparison mode allows you to compare the reports of two files, and see what the difference is.
- Easily scalable, cluster-based solution with flexible deployment options.
- Software predictable and sustained high-performance architecture regardless of load.
- Industry proven – has tested millions of hours of content.

### **Switch Pro – Frame accurate media player – perfect for a final QC review**

Switch Pro is Telestream's advanced, frame accurate media player. It integrates with both Aurora and Vidchecker and forms an invaluable link between the auto-QC results and your operators' eyes. Switch lets you play a variety of web and professional media formats, inspect and adjust the properties of the file, and then even export a new file. It enables visual file inspection on screen or via SDI, with single file transcoding –and even lets you compare/contrast multiple files at the same time.

- Integrated with Vidchecker and Aurora, allowing you to jump straight from QC report to the relevant part of the asset.
- Frame accurately plays back a variety of web and professional formats, including captions.
- Compatible with Mac or PC systems.
- Single file transcoding
- SDI output compatible with AJA and Blackmagic devices.
- Allows you to compare two media files, side by side.

## Specifications

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### Vidchecker

#### Compliance Testing

*Many Pre-configured templates included:*

ATSC, SMPTE, DPP, NABA, CALM, iTunes, EBU R 128, Netflix, Amazon Prime, UK & Japan PSE Flashing, ARD\_ZDF\_HDF, DDV2, AS-10 DAP for France, AS-02, AS-03, AS-07, AS-10, AS-11, AS12, PBS

#### Supported Formats

*Containers*

MXF (All OP's including AS formats), ProRes in MXF (SMPTE RDD 44), DNxHD/DNxHR in MXF (SMPTE ST 2019-4:2009), MPEG-2 TS, MPEG-2 PS, MP4, MOV (inc. ref. files), ASF, AVI, LXF, GXF, Flash, MKV, IMF

*Video Codecs*

MPEG-1, MPEG-2 (XDCAM, IMX, D10), DV/DVCPRO 25/50/100, MPEG-4, AVC/H.264 (all profiles), HEVC/H.265, WMV/ VC-1, ProRes (all profiles), ProRes 4444 XQ, DNxHR, DNxHD, MJPEG, JPEG2000, DPX and OpenEXR image sequences, RAW uncompressed YUV / RGB, Huffman, Canopus, Meridien

*Audio Codecs*

MPEG1/2, PCM, AAC, AES3, LATM, ADPCM, LPCM, WAV, MP3, BWF, WMA, DV, AC-3, Dolby Digital Plus

*Closed Captions / Subtitles*

CEA-608, CEA-708, SMPTE 436M, Line 21, DVB subtitles, Teletext, support for pass-through of SMPTE ST 436 captions

#### Intelligent Automated Correction

*Patented Video Correction*

- Corrects Luma/Chroma levels if outside limits
- Corrects black level if outside limits
- Corrects RGB gamut if outside limits
- Corrects Analog video dropouts
- Insertion / removal / change of length of color bars
- Insertion / removal / change of length of black sequences
- Correction of start timecode
- PSE flashing correction (Ofcom / ITU)
- Dead Pixel correction

*Audio Correction*

- Peak levels: peak level correction if TP dB limits exceeded
- Loudness: loudness correction if given LKFS/LUFS exceeded
- Audio levels: correction if PPM level limits exceeded and peak attenuation
- Audio bit depth correction

#### Tests Available

*Container Checks*

MXF structure, DPP metadata, compare wrapper/ essence, number video/audio streams, PIDs, file, bitrate, SPS/PPS, video/audio duration, timecode start/continuity, clean aperture, AFD, MOV Atom (iTunes), IMF validation of metadata & essence, Enhanced Syntax Check

*Video Checks*

Video codec/profile, encoding syntax, MBAFF, video bitrate VBR/CBR, frame size, frame rate, video buffer size, frame aspect ratio, pixel aspect ratio, GOP length, GOP structure, field order flagged/baseband, cadence, drop frame, chroma format, luminance, black level, chroma level, HDR MaxFALL/MaxCLL. RGB gamut, quality/blockiness, analog drops, digital drops, video stripes, corrupt frames, letterboxing/pillarboxing, black frames/sequence, color bars, freeze frames, layout checks, PSE flashing/harmful patterns (Ofcom / ITU), video segment reporting, Dead Pixels, Media Offline

*Audio Checks*

Each track: audio codec, bit depth, sample rate, audio bitrate, number of channels, channel layout, channel mapping, tones, phase coherence between channels, track present during video, min levels, peak levels, clipping, clicks and pops, PPM, DialNorm, integrated/short term/momentary loudness (ITU/EBU/ATSC/ CALM/ BS-1770), BLITS, GLITS & EBU test tone checks, digital silence. Supports 32-channel audio.

## Specifications

### Aurora

#### Compliance Testing

*Many Pre-configured templates included:*

Aurora has predefined tests for most popular distribution formats, including CableLabs VOD, CableLabs ABR/EBP, iTunes, Netflix, ATSC, DVB, ISDB-T/TB, XDCAM/RDD-9, AS-02, AS-10, AS-10 French PAD and DPP/AS-11.

#### Supported Formats

*Container wrappers*

MXF (All OP, including AMWA defined AS, RDD-9, P2, SxS), Transport Stream, Elementary Stream, Program Stream/VOB, AVI, WMV/ASF, QuickTime/MOV, GXF, MP4, LXF, R3D, DPX, DXW, HLS, DASH, Smooth Streaming, IMF, and DCP (unencrypted).

*Video codecs*

H.265 (HEVC), H.264 (AVC/AVC-Intra/XAVC), MPEG-2 (including XDCAM, IMX and D-10), ProRes, JPEG 2000, DNxHD and DNxHR (VC-3), Cineform (VC-5), VC-1 (and WMV), DV/DVCP, Flash VP-6/7, RAW (Huffman, YUV, RGB, Blackmagic), EXR, DPX, RED, Canopus, and MPEG-4 (SStP). 1

*Audio codecs*

Standard codecs include PCM Audio (WAV/AES/BWF), AAC, HE-AAC, WMA Standard Pro, MPEG-2 (L1,2,3) and MPEG-1. Audio correction is available on constant bit rate codecs only. Optional codecs are available to support Dolby Digital (AC-3), Dolby Digital Plus (EAC-3), Dolby TrueHD (MLP), and Dolby E.

*Captions / subtitles / text*

CEA-608/CEA-708 in Line 21 video, ATSC 53, DVB-Teletext, SCTE 20, SCTE 128 and SMPTE 436M; SMPTE Timed Text and variations, including DFXP; EBU Subtitles, including STL; SRT; SCC.

#### Tests Available

*Video essence tests*

Aurora video essence tests include Macro-block Noise, Up-conversion, Picture Quality (TekMOS, Perceptual Video Quality), Comb Artifacts, Field Order Swaps, Tape/Digital Hits, Perceptual & Film Artifacts, Black/Freeze Frames, Letterboxing/Pillarboxing, Dead Pixel Detection, Color Bars, PSE/ Flash Detection (Harding FPA), and Cadence Change.

*Audio essence tests*

Aurora audio essence tests include Silence, Drop-outs, Peaks (dBTP, PPM, dBFS), Average Levels (R128, ATSC, ARIB), Clipping, Snaps/Clicks/ Pops, Test Tones, Phase Swaps and Hiss/Hum. Aurora also applies a user-defined Audio Service Map for processing AES wrapped tracks or when mono channel audio essence tracks are tested together.

*Metadata tests*

Aurora metadata tests include Container Syntax, Video Essence Syntax, Caption Syntax, Container Essence Contents, Cross-Check Container- Essence, Rude Word Detection in Text, Start Time code, Time code Discontinuity, Video Resolution and Run-times. Additional metadata tests for Dolby Audio Syntax and Dolby E Guard Band Alignment are included with the optional Dolby codecs.

#### Scalable speed

Using high CPU allocation or a lower CPU allocation combined with Aurora's unique GPU accelerated processing capability, QC throughput approaching wireline limits can be achieved, rather than being constrained by a legacy decoding, buffering and testing architecture.

#### QC report analytics

Aurora includes QC Analytics to enable media organizations to analyze results of multiple QC Reports and search across reports for specific criteria. Aurora can identify QC artifact trends and compare results from QC done at different workflow stages, pipeline issues and trends or identify vendors for KPI and SLA documentation.

#### 4K production work flow

Aurora can test and play back the Interoperable Master Format (IMF), the distribution master format agreed on by major motion picture studios, and the supplemental IMF packages. Aurora has the ability to QC and play back complex Composition Play Lists (CPLs) and can test 4K at real-time or faster in any other container or codec, including JPEG 2000, DPX, DNxHR, HEVC, H.264/AVC/AVCI/XAVC. 1

#### Enhanced Adaptive Bit Rate (ABR) support

Aurora is the first file-based QC solution on the market capable of both testing and playing back HLS/HSS/HDS/DASH and CableLabs intermediate ABR playlist file sets. Aurora includes tests that have been specifically designed to catch the most common causes of adaptive bit rate streaming problems.

## Switch Pro

Switch lets you play a variety of web and professional media formats, inspect and adjust the properties of the file, and then export a new file. Designed for media professionals, Switch enables visual file inspection, single file transcoding and is an affordable software solution for professional media Quality Control. With the addition of a hardware graphics output card (AJA or Black Magic) Switch Pro can provide playback support via SDI/HDMI. Switch Pro also provides loudness monitoring, advanced metadata display, a “compare media” feature, preview to an external monitor, and iTunes package export..

### Play It

- Multiformat playback – formats include MOV, MP4, MXF, GXF, MPEG Program Streams & Transport Streams, and more
- Step, skip or jump forward/reverse, slow motion navigation including JKL navigation. Jump to a specific timecode, frame or time.
- Windows Media Playback
- HEVC (H265), JPEG2000, DNxHD, DNxHR, AC3 Playback
- CEA 608/708, Teletext (OP-42 & OP-47), SCC, MCC, DVB, TTML (iTT and SMPTE-TT) captions, and WebVTT, SRT, STL, Lambda CAP (Japanese) subtitle file playback

### Check It

- Team collaboration (Markers & Comments)
- File properties: size, type, duration, metadata
- Video properties: format, bit rate, subsampling, color space, aspect ratio, Clean Aperture, and more
- Audio properties: audio channels, speaker labels, format, sample rate
- Professional audio meters displaying true-peaks and momentary loudness values
- Loudness monitoring panel displaying average momentary loudness, average short-term loudness, integrated loudness and loudness range
- Preview to external monitors via Blackmagic Design or AJA devices. Includes VANC data display
- Advanced inspection of application-specific metadata such as AS11 with UK DPP metadata, AS03, and others
- Compare Alternate Media: Load multiple versions of your media to compare frame by frame
- Timeline feature displaying video GOP structure and data rate information

### Fix It

- Pass through export
- Export
- Publish directly to Vimeo, YouTube, or Facebook
- iTunes package preset including media content, secondary subtitle or audio files, chapter information and an XML file

