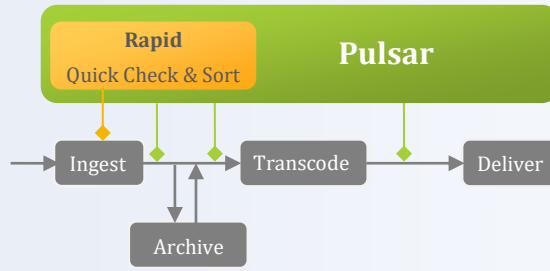


Pulsar makes it incredibly simple.

Broadcast
Post Production
Archiving
IPTV/Cable

- 6x real-time HD Analysis
- Browser based interface
- User-defined templates (General, Smart & Adaptive)
- Monitor, Re-prioritise, Pause, Resume and Cancel jobs



Industry's fastest & most flexible Automated QC for Rapid checking, sorting and in-depth verification

Quick verification of large content volumes

Achieve more with same resources

Automate detection of issues like blockiness and loudness

File based workflows are now common and Industry is progressing with usage of 4K, IMF, HDR and other technologies to improve user experience and workflow efficiency. This is giving rise to additional content validation requirements.

Pulsar helps you ensure consistent content quality and simplifies technological and operational challenges associated with file based QC. You can now perform integrated QC across content types and stages in your workflow, reducing dependency on specialized skills and using existing resources more efficiently.

Flexible and Scalable - Each seat of Pulsar includes the complete analysis engine, as well as the ability to interface with other instances of Pulsar, allowing you to set-up a daisy-chain environment for as many simultaneous files as you need.

4K Ready - With support for various resolutions, formats and colour spaces, Pulsar is ready for checking your 4K assets.

IMF - Detailed analysis of IMF packages using CPL. Pulsar allows package integrity checks, cross checks and audio/video baseband checks based on the composition list.

HDR - HDR metadata reporting and analysis. Pulsar also allows cross-checking of HDR metadata against actual video.

Adaptive Bitrate Content Analysis - Simple, Integrated analysis & reporting for formats such as DASH, HLS and Smooth Streaming. Pulsar works directly on manifest files within local/SAN storage or at HTTP URL.

Automatic Correction - Automatic correction of loudness levels along with a range of correction capabilities at container level.

High Availability - Pulsar can be installed with redundancy so that a standby Pulsar unit can automatically take over in case of hardware failure, ensuring 24x7 operations.

Rapid - Rule based rapid checking and sorting of content. Rapid can be used at stages that don't require in-depth QC to significantly reduce human intervention and to boost the overall throughput of your workflow.

Pulsar also available as Pay-Per-Use

Affordable

Secure

No CAPEX

Ready made templates

Pay by content duration or choose monthly subscription

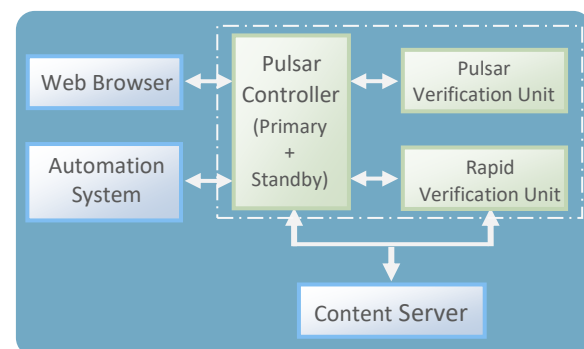
Fastest - Each Pulsar Professional unit can verify up to four simultaneous files and one HD file can be analyzed at an unmatched speed of 6x real-time.

Best ROI - Pulsar license price includes support for all common Video/Audio codecs as well as the ability to use up to 32 cores (for Pulsar Professional). Pulsar provides more value at lower cost.

Versatile - With support for broadcast and adaptive bitrate formats along with capability to perform Rapid checking, sorting and in-depth QC, Pulsar is the most versatile Automated QC solution.

Ease of Use - Pulsar's intuitive interface allows fast operations, including the ability to add, re-order streams in the queue, and review results from the analysis. Reports show stream information, as well as green, yellow or red title bar for each stream. Frame shot along with time-code is available for error locations.

- Hot folders (General, Live, Virtual)
- XML/PDF reports with thumbnails
- Web-services APIs for integration
- Configurable parameter checks
- Email alerts





Audio, Video & Container analysis
Adaptive Bitrate
Up to 32 cores
Failover redundancy

PULSAR EDITIONS

Pulsar Standard

Audio, Video &
Container analysis
Up to 8 cores
Single file analysis

Pulsar PPU (Pay-Per-Use)

Audio, Video & Container analysis
Single file analysis
Pay by usage

Formats

Container	MXF, GXF, LXF, MOV, MP4, 3GPP, MPEG-2 TS, MPEG-2 PS, FLV, WMV, AVI, Matrox AVI, WAV, BWF, AIFF, DPX, JP2, Smooth Streaming, HLS, MPEG-DASH, IMF, DCP (encrypted and unencrypted), Elementary
Video	H.265, H.264 (incl. AVC-Intra 50/100 and SONY XAVC), MPEG-2 (incl. D10, XDCAM, HDCAM, IMX-30/50), VC-1, DV (incl. DVCPro25, DVCPro50, DVCPro100/HD), Avid DNxHD (VC-3), Apple ProRes 422 (HQ, SD, LT, Proxy), ProRes 4444, JPEG-2000, Uncompressed (RGB, YUV)
Audio	LPCM, AES3, AC3 (DD), SMPTE 302M, E-AC3 (DD+), MPEG-1/2, AAC, HE-AAC, WMA (Standard & Pro), Dolby-E
HDR	HDR-10

Verification Checks

General	Compliance, Factory templates - Netflix, DPP, ARD-ZDF, Loudness (R128, CALM, OP-59, ARIB), iTunes & CableLabs
IMF/DCP	CPL based analysis, Package validation, CPL cross checks, PKL cross checks, Netflix Photon validation
ABR	Playlist cross checks. Segment cross checks, Profile cross checks, Encrypted Packages
Video Parameters	Codec, Video Format, Chroma Format, Colour Matrix, Scan Mode, Duration, Frame Rate, Resolution, Display/Pixel Aspect Ratio, GOP Length, GOP Type, Field Order, Frame Sizes, Buffer Size, Bitrate (CBR/VBR), Profile/Level, Entropy Coding, Reference Pictures, MBAFF, Timecode Discontinuity, Timecode frame drop, 2020 Color Space
Video Quality	Black Frames, Blockiness, Brightness, Cadence, Chroma Hits, Chroma Line, Clipping, Coloured Frames, Colour Bars, Colour Gamut, Combing, Credit Roll, Camera Dead Pixels, Dead Pixels, Digital Hits, Field Dominance, Flash Frames, Freeze Frames, Luma/Chroma levels, Cadence, Half/Full lines, Bar Artefacts, Letter/Pillar Box, Active Region, Photosensitive epilepsy (Harding), HDR analysis
Audio	Codec, Sampling Frequency, Quantization Bits, Channels, Bitrate (CBR/VBR), Drops, Silence, Mute, Test Tones, Loudness (R128, CALM), Loudness Range, Dialnorm, Sample Peak (DBFS, PPM), True Peak, Dual Mono, Clipping, Phase Mismatch, Nielsen Watermarks
Container	Conformance, Format, File Size, MD5, No of streams, Incorrect extension MXF: Version, Operational pattern, Timecode presence/track count/mode/start value/source, Index table presence/location/completeness/correctness, Origin parameters, KLV alignment grid/fill elements, Partitions validity/Status/Completeness/Instance count/Index table presence/Essence presence/Max length, Essence wrapping/external check/referencing/partition strategy, Audio track numbers/element size/channel count/configurations, Descriptive metadata presence/scheme, Run-in sequence, Random index pack, Segmentation track, File package count, Index edit rate, Index duration, Audio/Video sample rate, Audio/Video stream type, Audio/Video edit rate, Video line map, System item presence, Block Align, Channel status mode, Fixed channel status data, Stored F2 offset, Display F2 offset, Sampled X/Y offset, Display X/Y offset, Identical GOP indicator, Edit unit byte count, Slice count, Dark metadata, Timecode frame drop, Audio locked/unlocked status, Audio ref level, Index start position, Single index location, Single essence location, Forward index direction, Image start/end offset, Color siting, Padding bits, Black ref level, White ref level, Color range, Constant B picture flag, Single sequence, Low delay, AS-02 Support Transport Streams: SCTE35, Program count, PCR Jitter, Packet Length, PID Usage, PIDs, PID Bitrate, Packet Intervals, PAT checks, PMT checks, Stream checks, PES checks QuickTime: Checks and correction for PASP, FIEL, GAMA, CLAP, COLR. Channel Configuration, Track properties, Movie properties
Cross Checks	Video-Container: Width, Height, Frame rate, Aspect ratio, Bitrate, Profile/Level, Scan mode, Field order, Chroma format, GOP type, GOP length, B-pictures, Low delay, Duration, Component depth Audio-Container: Sampling frequency, Bit depth, Channels, Bitrate, Duration Audio-Video: Duration in meta-data, Actual duration
Correction	Loudness correction for PCM and MPEG-1 L2 audio, QuickTime meta-data
Meta-data	Closed Captions (608/708) presence/conformance/format/location, Line 21 VBI Caption Decode, AFD, Bar, V-Chip, Teletext, HDR meta-data

Rapid Checks

File Rules	Incorrect extension, File Size, Invalid file characters
Video	Codec, Video Format, Chroma Format, Colour Matrix, Scan Mode, Duration, Frame Rate, Resolution, Display Aspect Ratio, Pixel Aspect Ratio, Profile/Level, Bit Depth, Buffer Size, Entropy Coding, Reference Pictures, MBAFF
Audio	Codec, Sampling Frequency, Quantization Bits, Channels, Profile
Container	Format, No of Video/Audio streams, Track Duration, PASP, GAMA, CLAP, FIEL, COLR, Channel Configuration

- In-depth Verification, Rapid QC and Sorting
- Loudness measurement & correction
- HDR analysis
- IMF analysis
- 4K analysis
- Netflix, DPP, CableLabs & ARD-ZDF compliance
- Simple, Integrated Adaptive Bitrate Content Analysis
- Quarantine or pass jobs by moving, deleting or renaming files under test
- Multi-User system
- Wide conformance & quality checks
- Wide format support – Broadcast, New Media & Adaptive Bitrate
- Controller Redundancy – automatic take-over in case of hardware failure
- Run as a Windows Service

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