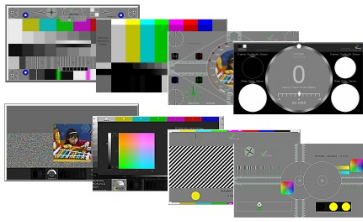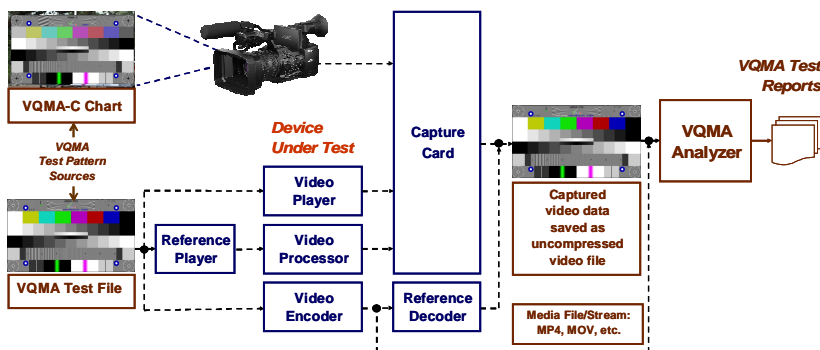# SPARTAK-VQTS4K – Ultimate 4K UHD Video Testing System

PASS / FAIL

Industrial PC with SDI/HDMI Interfaces, VideoQ Test Patterns, VQMA and VQV Analyzers

- VQTS4K is a self-contained solution, combining test pattern generator, uncompressed capture and image quality analyzers
- Ideal tool for development labs, software developers and high-volume manufacturers
- Easy-to-use tool, instantly revealing your compression codec, video camera or other video device performance
- Manual and automated performance measurement, instant firmware verification and benchmarking
- Via its SDI & HDMI uncompressed inputs & outputs VQTS4K tests and measures the performance of any video system

Bringing the proven reliable objective analysis methodology to modern multi-format video QA/QC environment

VQMA Analyzed Parameters

- **Geometry**: Scaling, Position, Tilt, Keystone
- **Levels**: Black, White, Color Balance, Gamma
- **H & V Shading** (Levels Spatial Uniformity)
- **Frequency Response**: in dBs vs. scalable tvl
- **UV vs. Y Gain** (Color Saturation)
- **K-rating** on needle pulse
- Comprehensive **Noise Analysis**

VQMA Analyzer Features

- Software executable under Windows™
- Auto-analysis on the companion VQMA4-C Matrix Test Pattern
- VQMA-C formats: Optical Chart, File, Test Signal, Test Stream
- Built-in Software Scope: YUV / RGB waveform monitor
- Noise Measurement and Scope work on any static image
- Windows **GUI Mode** for R&D and product verification
- **CLI Batch Mode** for automated QA/QC operation

Resolutions supported

- Ϋ **VQMA:** from **640x480** to **4096x2160**
- Ϋ **VQV:** from **192x108** up to **4096x3112**

AV Formats

- Ϋ **All file formats supported by ffmpeg**
- Ϋ **Video I/O: YUV 422 10 bit, RGB 444 10bit**
- Ϋ **Audio I/O: PCM 48kHz, 24 bit**

VQV Viewer-Analyzer Features

- Software executable under Windows™
- Variety of **compressed** and **uncompressed** video file formats
- Comprehensive **Transfer Function Controls**: **HDR-PQ**, **HDR-HLG**, **LOG**, **SDR**, and various **HDR to SDR** conversion options
- Comprehensive **Color Space Controls**: YUV⇔ RGB Matrices, RGB Primaries, YUV ⇔ RGB Levels Schemes: Full Range / Narrow Range
- **Tools**: Color Picker, Waveform Monitor, FrameScope™, RGB & Light Levels Histograms, ChromaScope, Smart VectorScope, RGB and Light Levels Statistics, Bitrate & GOP Analyzer, RGB & YUV BarGraphs, Noise and Activities Meter, MSB / LSB, RGB, R, G, B, Y, UV, LL, and Compression Artifacts View Modes, Temporal & Spatial Filters
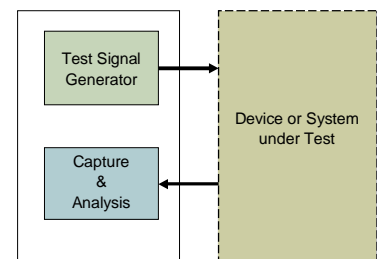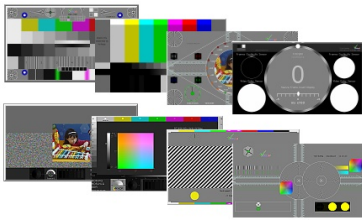
Typical **VQTS4K Test Workflow** is of "closed loop" type, where test signal is returned to the same unit where it was originated.
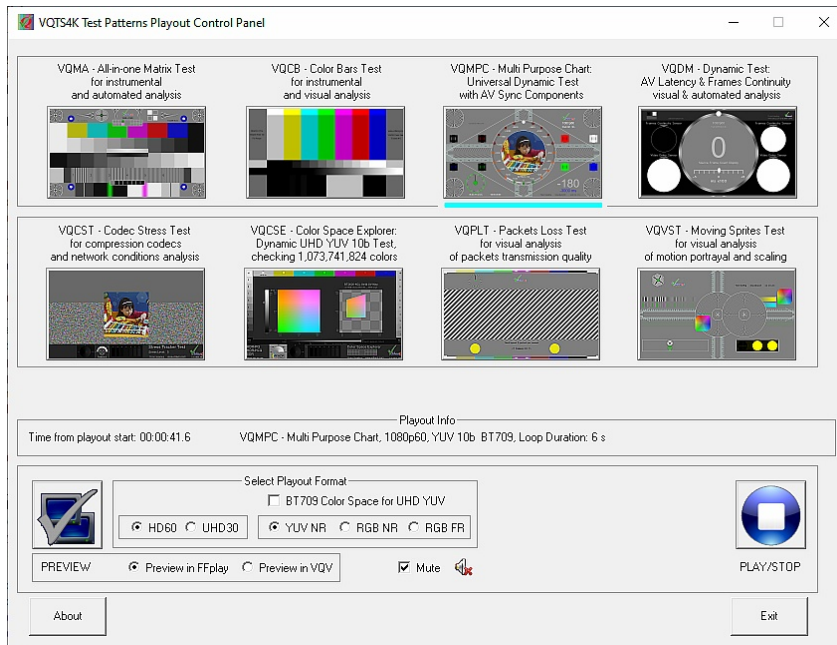

Alternatively, there are various "open loop" Test Workflows. In such cases Test Signal Generator and Capture-Analysis Modules are either not involved or located at different places.

SPARTAK-VQTS4K – Ultimate 4K UHD Video Testing System
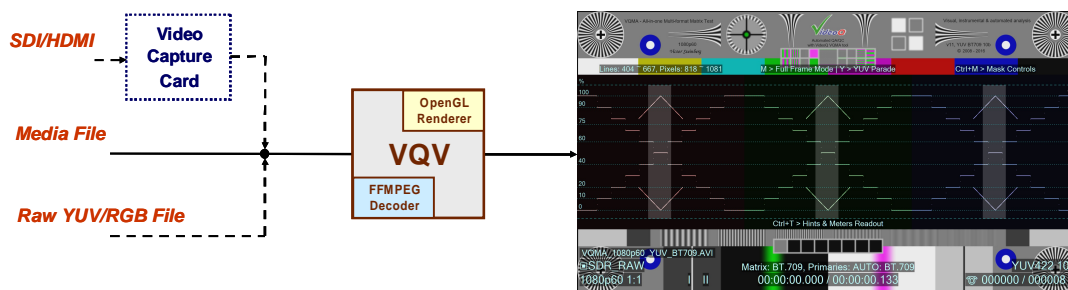

PASS / **FAIL**

Fast and effective tool for 6G-SDI/HDMI equipment testing and video data fidelity verification

- Playout of HD and UHD uncompressed video materials – YUV & RGB, bit by bit, pixel by pixel, frame by frame
- Live preview and multi-frame capture of uncompressed video and audio data
- Visual, instrumental and automated tests using VideoQ VQL Test Patterns Library and built-in VQMA & VQV Analyzers

UHD & HD Test Patterns

- **VQMA** – All-in-one Matrix Test for instrumental and automated analysis
- **VQCB** – Advanced Color Bars Test for instrumental and visual analysis
- **VQMPC** – Multi Purpose Chart: Universal Dynamic Test with AV Sync Components
- **VQDM** – Dynamic Test: AV Latency & Frames Continuity visual & automated analysis
- **VQCST** – Codec Stress Test for compression codecs and network conditions analysis
- **VQCSE** – Color Space Explorer: Dynamic UHD YUV Test checking 1,073,741,824 colors
- **VQPLT** – Packets Loss Test for visual analysis of packets transmission quality
- **VQVST** – Moving Sprites Test for visual analysis of motion portrayal and scaling

A rendered image with the unique VQV readout and VQV filters/meters overlays

VideoQ, Inc. – California-based company, focused on video test & measurement and video enhancement technologies, products and services. More than 50 man-years of award-winning experience in the field of Broadcast, Consumer Electronics, Transcoding and Video Data Compression.
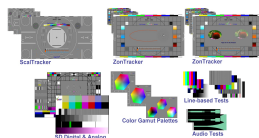
VideoQ is a renown player in calibration and benchmarking of Displays, Video Projectors, Transcoders, Graphics and Video Processors, instantly revealing artifacts, problems and deficiencies, thus raising the bar in video quality experience.
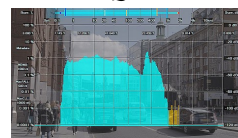
Other related VideoQ products:

VQDM-100	VQL	VQV	VQMA

info@videoq.com • www.videoq.com