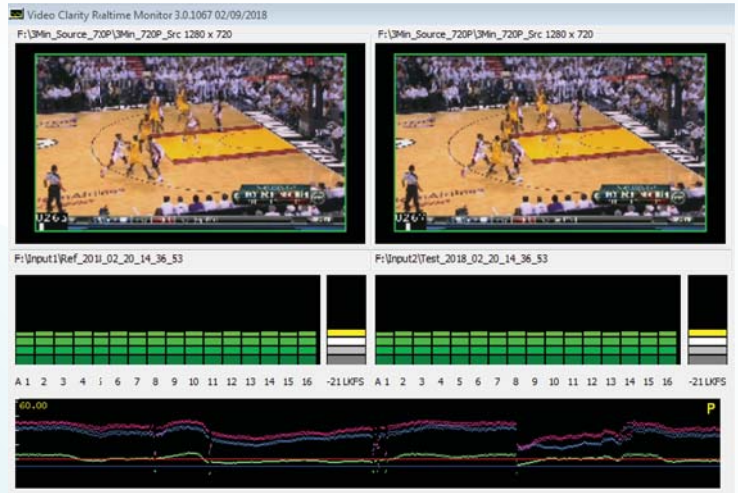


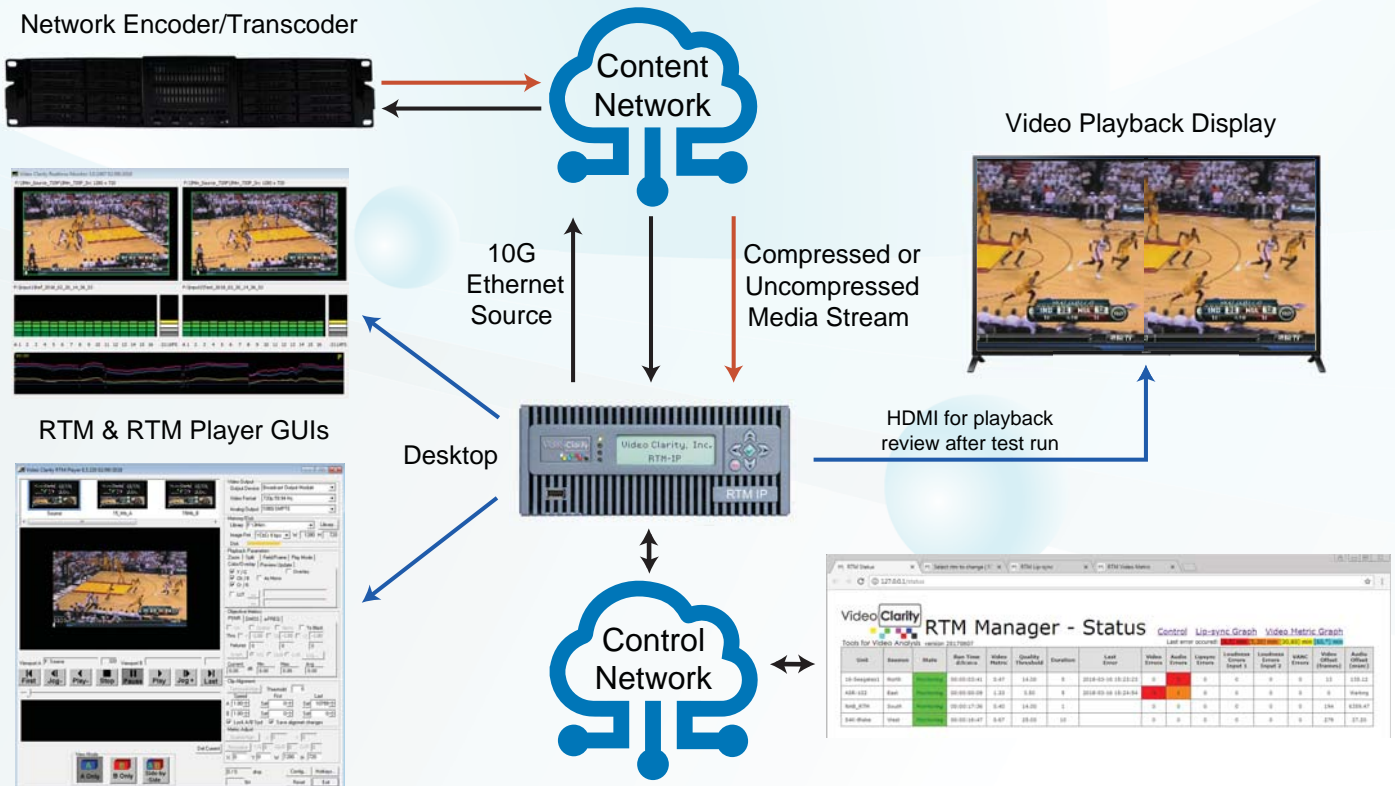
## RTM IP - Uncompressed and Compressed Video and Audio Testing for SMPTE ST 2110 Networks

The real-time test of audio and video quality provides users with certain benefits including...

- The ability to perform long term quality testing on fully uncompressed or compressed streams of video and audio for any length of time.
- A full-reference test that compares video and audio source to a return channel after processing so that highly accurate measurements and fault thresholds can be applied for automatic quality monitoring, and low quality event recording.
- Quality measurements that are not influenced by the creative effects applied to source video material, saving valuable time and effort with no false positives for every test run.



The RTM IP presents a significant step forward in the evolution of reference-based testing by applying a fully uncompressed source playback function to 10G IP Ethernet networks while that source and a chosen processed stream is applied to the RTM system for a real-time test. Simultaneous tests include PSNR or DMOS for video, the aFreq audio quality metric, a millisecond accurate A/V offset (lip sync) measurement and all lines VANC data check. Also the LKFS loudness test is applied to each audio program as a group.



### Real-Time Quality Testing for Network Encoder or Transcoder

## RTM IP Features

- RTM GUI provides visual thumbnail of source and test video inputs with instant test score updates.
- RTM Player gives both a source playback function and after-test playback of recorded error sequences.
- PSNR or DMOS (with MS-SSIM metric) is selectable as the video quality test in RTM.
- aFreq is applied for audio performance and lip sync measurement with audio/video offset thresholds.
- aPeak is applied for LKFS audio program loudness measurement with min and max thresholds.
- VANC data check is selectable per line and is measured for data payload accuracy.
- RTM Log Grapher provides continually updated selectable measurements with timeline pan & zoom.
- RTM Scheduler runs the RTM application on a test schedule with start times and test length per job.
- RTM Manager browser controller and status dashboard is included, providing test control functions for media stream analysis as well as automated file testing operations.

## RTM Manager Browser Control Dashboard

Video Clarity  
Tools for Video Analysis version 20170607

Welcome, admin. Change password / Log out

RTM Manager - Control

Action: ..... Go 0 of 5 selected

Name	IP Address	Input1	Input2	RTM	IPRecord	Action	Result	Alarm	Monitor	Disk free %
16-Seagates1	192.168.1.228	<none>	<none>	3.0.1410.0	0.8.5.8			⊖	⊕	41
RTM-MSI	192.168.1.186					urmonitor		⊖	⊕	
S4K-Blake	192.168.1.219	SDI Input 1	SDI Input 2	3.0.1392.0	0.8.5.8			⊖	⊕	99
ASR-102	192.168.1.140	<none>	<none>	3.0.1427.0	0.8.5.8			⊖	⊕	83
NAB_RT_M	192.168.1.229	SDI Input 1	<none>	3.0.1427.0	0.8.5.8		stop: Command 'rtm /c 127.0.0.1 /t 30 stop' returned non-zero exit status 1	⊖	⊕	92

5 rtm



**Model:** RTM-S2043-IP

**Storage:** 2.5 TB

**Power:** 100 - 240VAC, 47-63Hz, 300 W Max.

**GUI Display Output:** VGA, DP or HDMI

**Includes:**

RTM & RTM Player GUIs, RTM Manager, printed user guide, 2 RU rack ears, keyboard, mouse, RTM Log Grapher, RTM Scheduler

**Media Transport Interface:** 10 Gig Ethernet

- 2 x SFP+ Cages - SFPs not included

**Media I/O:** SMPTE ST 2110 or 2022-6/7

- One media stream playback, video up to 1080p60

- Two media test input, video up to 1080p60 each

HDMI 1.4 - 1 output, standard size HDMI

**Audio I/O:** 24 bit, 48 KHz PCM, or DD+

- 16 channels ST 2110-30 audio per video

- 8 channels output on HDMI

**Ref In:** ST 2110-10 slave or analog ref. on BNC

**IP Inputs For MPEG Decode & Control:**

2 - 1000baseT - RJ45 applied as input or control

1 - 1000baseT - USB/RJ45 as input or control

- up to two inputs, 1 source and 1 test stream

**Dimensions:** 8.6" W x 3.5" H x 13.75" D (2 RU)  
22.0 cm x 9.0 cm x 35.0 cm

**Weight:** 11.5 lbs, 5.4 Kg

**Operating Temperature:** 0 - +40 Celsius

**Storage Temperature:** -20 - +50 Celsius

**Relative Humidity:** 5-95%, non condensing