

# RTM

## Real-Time Quality Monitoring



RTM is an Automated, Quality-of-Experience (QoE) Monitor, which measures the quality at the endpoints - before the encoder/after the IRD and after the set-top-box (STB). It measures the differences between the incoming feed (reference) to the encoded, transmitted, and decoded feed (processed). RTM is used by broadcasters and equipment manufacturers to monitor, QA/QC the robustness of their solution over an extended duration.

RTM saves valuable man-hours by vigilantly comparing streams and reporting frozen frames, breakups, loss of audio & video, and A/V synchronization. It measures the digital uncompressed signals after the receiving gear (normally a Set-top Box and a Satellite IRD) has performed error correction/concealment. It monitors lip-sync, audio and video quality degradation, and VANC.

RTM alerts you before your customers do of potential problems.

RTM generates periodic information about the A/V quality as well as error logs when quality has dropped below the predetermined threshold. These reports can be compared to previous reports for quality control.

### Features & Benefits

- Real-time, In-Service, Quality of Experience Monitoring
- Audio, Video and VANC
- Logged Results with Pass/Fail
- Errors Saved for Archival or Further Analysis

### Applications

- Monitor Broadcast Signals
- Monitor Re-transmitted Broadcast
- Automated Production QA

RTM records the reference and processed streams using professional HD/SD SDI (with adapters for HDMI, Component, & Composite) inputs.

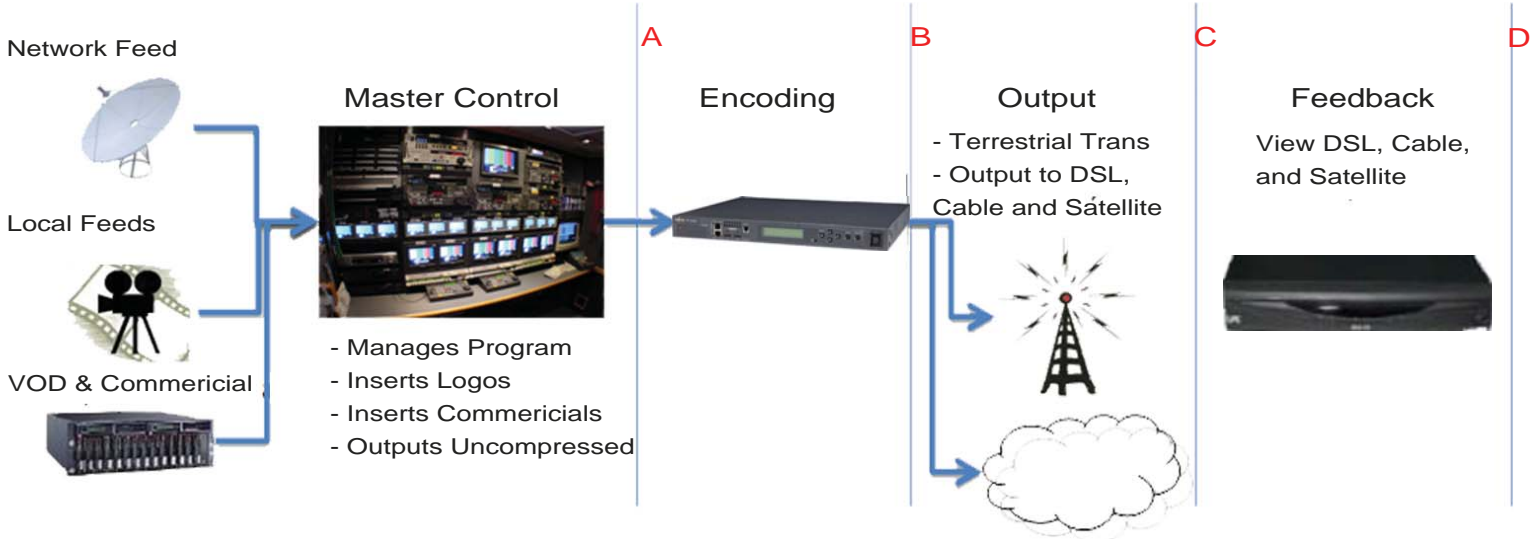
In real-time, RTM reads two live streams, aligns them temporally and spatially (up to 25 seconds), and keeps them aligned.

RTM monitors the lip-sync and reports errors with audio sample accuracy.

RTM monitors audio and video quality and reports drops in quality below a pre-determined threshold.

The alarms are categorized based on duration, frequency, and severity. When the preset limits have been exceeded the 2 streams are recorded for offline analysis/archival.

Select your failure criteria, sit back, and RTM will do the tedious work.



## Monitors

- A/V Quality from points A or B to B, C, or D

## Alarmed Events

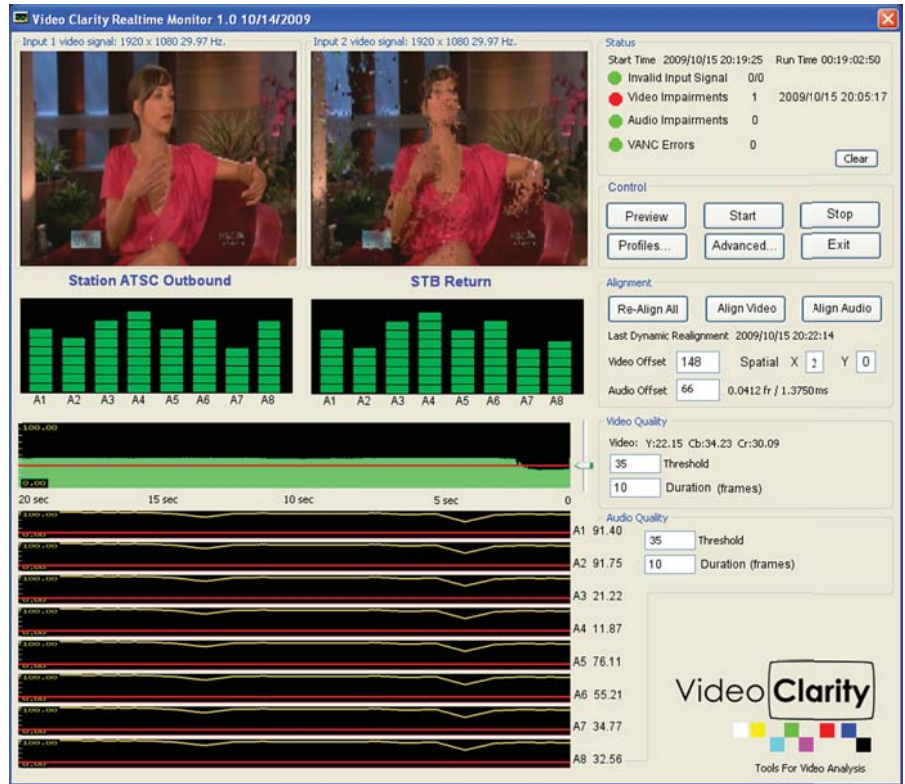
- Degraded A/V Quality
- Lost Synchronization (automatic resync)

## A/V Sync

- Video Sync to the frame/field
- Audio Sync to the ms/sample
- A/V Lip-Sync mismatch reported

## Controls

- GUI (shown to the right)
- Scriptable
- SNMP



### RTM Basics

Disk Storage = 2TB  
Supports video rates up to 1080i/720P 4:2:2 Y'CbCr

PS-2 Keyboard & Mouse  
1Giga-bit Ethernet Port  
4 USB 2.0 Ports,

### Broadcast I/O

ITU-601, SMPTE 259/292/296/424/425,  
10-bit digital, video up to 4:2:2 single-link.  
HSD-SDI, HD-SDI, 3G Input  
8 channels of Embedded Audio

**Video Inputs**  
2, HD/SD SDI

**Audio**  
2, HD/SD SDI Embedded

### Physical Specifications

Dimensions 19"W, 5.25"H, 24"D  
48.26cm x 13.34cm x 60.96cm  
Weight 27lbs, 12.25Kg

Temperature Operational  
+5 - +35C, 95%, non-condensing

Temperature Storage  
-20 - 50C, humidity, 95%, non-condensing

Power  
90-250 VAC, 47-63Hz, Audiodetect, 300W Max.