



# TeleSight



## Multi-Viewer With Built-In Conformance Tester

### Media Complexity Conformance Simplicity

Monitoring your video feeds is becoming more complex every day. Multiple standards, various codecs with combinations of HD and SD require the next generation multi-image processor. Monitor the whole stream as well as your audio and video and see what has never been seen before with such ease.

#### TeleSight Highlights

- H.264/AVC, VC-1, MPEG-4, MPEG-2
- VCHIP, CC, CGMS-A Display
- HD and SD, PAL and NTSC
- Multiple Audio Streams
- IP, ASI, SDI, or QAM/QPSK

#### TeleSight Applications

- IPTV, VOD
- Broadcast
- Mobile Production
- Telco Transmission
- Satellite Transmission
- IP Network Distribution

#### For Technical Users

- Ability to mix a variety of compression formats including H.264/AVC, VC-1, MPEG-4v2, MPEG-2, AAC, HE-AAC, AC-3, MPEG Audio and SMPTE 302M.
- Ability to mix a variety of input types such as ASI, IP, SDI, and QAM/QPSK)
- Performs real-time validation at system, video and audio layers, including ETR-290 tests, video conformance tests, black and frozen video detection, audio clipping and silence detection.
- Supports up to 64 streams
- Ability to view real-time playback of all input channels simultaneously or zoom in on one
- Option to capture streams when errors are detected for troubleshooting

#### For Organizations

- Cost effective solution for monitoring content distribution
- Real-time performance allows flexibility for more test points in a streaming delivery system.
- Guarantee a higher level of service to customers by identifying and fix problems faster.

### The Business Challenge

The media distribution industry operates in an extremely competitive business climate. Agility, reliability, and performance are key success factors for organizations working within this industry. There is little room for error in executing strategies aimed at striking the perfect balance between achieving goals for revenue growth, customer retention, and improved service levels.

Up until now, the focus of multi-image processors has been on baseband audio and video. As owners of content and content contributors move forward, media delivery often incorporates compression in delivery systems. It is important to ensure that media standards and operational conformance is achieved with minimal effort. The massive volumes of media produced, as well as the increasing complexity of video standards, and the growing popularity of HD resolutions have created a demand for fast and efficient analysis tools to validate and ensure an acceptable level of service for customers. This is where MiraVid has set a new standard of excellence in digital video solutions.

### TeleSight Multi-Image Processor

TeleSight is the industry's first multi-image processor that is capable of validating and monitoring up to 64 IP or ASI programs simultaneously. TeleSight makes it possible to perform quality assurance on the entire streaming delivery system from transmission to receiving and in between any operations where errors can occur such as transcoding and re-multiplexing.

Designed for the media distribution industry, including content providers, broadcasters, IPTV providers, and content distribution houses, TeleSight Multi-Image processor supports all MPEG video standards. It is designed to validate and analyze real-time compressed video and audio so that companies can provide a greater quality of service to their customers.

TeleSight offers unparalleled performance with real-time decoding, displaying, and analysis for all input streams simultaneously including ETR-290 tests, video conformance tests, black and frozen video detection, audio clipping and silence detection, as well as real-time graphing of video quant, video bitrate, and audio wave.

TeleSight complements MiraVid's existing MSight media analyzer, and together they provide companies with a complete solution for monitoring and validating large volumes of digital media right down to inspecting and debugging any problems encountered at the bitstream level.

### Transport Protocols

- TS over ASI
- TS over UDP (Multicast or Unicast)
- TS over RTP/UDP (Multicast or Unicast)
- TS over TCP

### Streaming Protocols

- Signaling: RTSP (RFC 2326), SDP (RFC 2327)
- Transport: RTP (RFC 3550, RFC 3551)
- Video Payload  
MP4V-ES (RFC 3016): SP and ASP profiles  
H264 (RFC 3984): Baseline, Extended, Main & High profiles
- Audio Payload  
MP4A-LATM (RFC 3016): AAC and HE-AAC  
mpeg4-generic (RFC 3640): AAC-lbr and AAC-hbr  
AMR (RFC 3267): AMR-NB and AMR-WB

**Note:** currently payload interleaving mode is not supported.

### Video Compression Formats

- MPEG-1 Video (ISO/IEC 11172-2)
- MPEG-2 Video (ISO/IEC 13818-2)  
Supported Profiles (All Levels):
  - Simple
  - Main
  - 4:2:2**Note:** HD is supported by Main Profile @ High Level
- MPEG-4 Part 2 Video (ISO/IEC 14496-2)  
Supported Profiles:
  - Short Video Header
  - Simple (L0 – L5)
  - Advanced Simple (L0 – L5)Supported Object Type:
  - Rectangular
- H.264/AVC Video (ITU-T H.264)  
Supported Profiles (All Levels):
  - Baseline
  - Main
  - Extended
  - High
- SMPTE VC-1 Video (SMPTE 412M)  
Supported Profiles (All Levels):
  - Simple
  - Main
  - Advanced

### Video Layer Analysis

- Video Stream Information
- Video Picture Graph and Bitrate Profile
- Video Conformance tests from sequence level down to block level.
- Black Video Detection
- Frozen Video Detection

### Audio Compression Formats

- MPEG-1 Audio (ISO/IEC 11172-3)
- MPEG-2 Audio (ISO/IEC 13818-3)
- MPEG-2 AAC (ISO/IEC 13818-7)
- MPEG-4 AAC (ISO/IEC 14496-3)
- MPEG-4 HE-AAC (ISO/IEC 14496-3/Amd.1)
- AC-3 (ATSC A/52B)
- SMPTE 302M (SMPTE 302M)

**Note:** Multi-channel audio is down-mixed to stereo audio for output and level analysis.

### Closed Caption

- EIA-608B over SCTE-20
- EIA-608B over ATSC A/53

### XDS

- Program Name (Title)
- Content Advisory (V-Chip), including MPA, U.S. PG, Canadian English, Canadian French
- Copy Generation Management System, Analog (CGMS-A)

### Transport Layer Analysis

- Dropped packet detection for RTP layer
- ESTI TR 101 290 tests for Transport Stream layer
  - First Priority
    - TS sync loss
    - Sync byte error
    - PAT error
    - Continuity count error
    - PMT error
    - PID error
  - Second Priority
    - Transport error
    - CRC error
    - PCR repetition error
    - PCR discontinuity indicator error
    - PCR accuracy error
    - PTS error
    - CAT error
  - Third Priority
    - NIT actual error
    - NIT other error
    - Unreferenced PID
    - SDT actual error
    - SDT other error
    - EIT actual error
    - EIT other error
    - EIT PF error
    - RST error
    - TDT error

### Audio Layer Analysis

- Audio Stream Information
- Audio Wave Monitor
- PPM
- Audio Level Test (Silence, Max Level, and Digital Clipping Detection)