



# Surveyor™ TS

## High Density, Real-Time QoS Monitoring for IP MPEG Transport Streams

You are responsible for delivering video in MPEG2 Transport Streams - thousands of programs, and tens of Gbps of video traffic. All of the content must arrive on time, all the time; which means your network must reliably provide sufficient Quality of Service (QoS). The introduction of 1+ Gbps to the home, DOCSIS 3.1 and IPTV delivery bring changes to your network which can increase and amplify QoS risks, as your key video content traverses new and immature network infrastructure on its way to your customer. You must detect video impairments as quickly as possible, hopefully before they impact the user's viewing experience, or viewership and revenue are put at risk.

By monitoring your video network's performance with Media Delivery Index (MDI), Program Availability, and ETR 101-290 parameters, you can quickly detect, identify, and resolve problems that could impact the viewer's experience and effectively manage that risk.

Surveyor TS (Transport Stream) is a high capacity, scalable MPEG-2 Transport Stream monitor that provides comprehensive digital QoS monitoring with more capacity in a smaller network footprint than prior generation solutions. Surveyor TS continuously monitors up to 20 Gbps of video traffic at line rate and in real time, measuring, trending and alarming on the TR 101-290 and QoS metrics for each program. Surveyor TS is designed to locate transport impairments as they happen and produce actionable insights that allow you to address issues before they impact the customer viewing experience.

Surveyor TS delivers comprehensive video QoS monitoring, enabling diverse network applications such as:

- Full time 24x7 line rate monitoring of video network performance, at the head end, hub offices and local serving offices.
- Flow-by-flow, program-by-program troubleshooting
- Video network design and engineering

Surveyor TS can be used standalone, or as part of a multi-element video quality assurance platform - through the use of video management solutions such as iVMS and iQ Acquisition solutions such as Inspector LIVE and Cricket QAM. This platform provides operators with a comprehensive view of content quality from origin through network transport.

### Key Benefits

- Proactive visibility into the performance of MPEG transport streams at any point within the IP video delivery network.
- Availability measured in the network for each program to identify issues before customer impact.
- A tool for operations to solve problems in the IP delivery network reducing mean time to resolve.
- Ensuring Ad Insertion SCTE-35 signaling delivered to Ad splicers

## Features

- 24/7 or scan monitoring of transport streams with program-based multi-level drilldown into per PID statistics for rapid fault isolation and reduction of mean time to diagnose (MTTD)
- Real-time, line rate monitoring and measurement of up to 20 Gbps of video traffic and up to 2,000 programs with up to 128K PIDs
- Provides per-program Availability metrics
- RFC 4445 Media Delivery Index (MDI) metrics for IP distribution monitoring
- QoS monitoring for MPEG Transport Streams supporting the following CODECs and others:
  - MPEG-2
  - MPEG-4
  - AVC/H.264
  - HEVC/H.265
- Per program Audio, Video, and Control PID Alarming
- Open API for user access to the Surveyor TS metrics and information
- Detection of SCTE-35 program insertion signals for validation
- Support for new Remote PHY Distributed Access Architecture
- PSI/SI/PSIP table decode and display
- Continuous analysis of TR 101 290 priorities 1, 2 and 3 on all monitored IP transport streams
- Unicast, multicast, and broadcast support for comprehensive stream handling
- Triggered capture of impaired video for post analysis
- 802.1Q VLAN tagging support, selection, and detection
- Configurable alarm handling including severity level definitions
- SD, HD, and UHD support to handle all your video
- Browser-based User Interface with multi-user access
- IGMPv2 and IGMPv3 SSM support
- RMON Statistics
- IPv6 capable

## Technical Specifications

### Model

- Available 1RU appliance-based package or virtual package
- Appliance-based available for AC power or DC power
- Licensable Capacities options providing growth flexibility:
  - 250 programs
  - 500 programs
  - 750 programs
  - 1000 programs
  - 1500 programs
  - 2000 Programs

### Appliance-based Specifications

Description	Specification
Dimensions without Rack Mounting Flanges	Width X Height X Depth 430 mm x 44 mm x 575 mm (16.93" X 1.73" X 22.64")
Dimensions with Rack Mounting Flanges	Width X Height X Depth 483 mm x 44 mm x 602 mm (19" X 1.73" X 23.7")
Weight	10.5 kg (23.2 lbs)
Power (AC Option)	100-240 VAC, 50-60 Hz
Power (DC Option)	-48/-60 VDC (+/-20%)
Typical operation with 2 active 10 Gbps ports	130 watts (444 BTU/h)
Integrated Lights Out	Local & remote Management

