

# 10G IP Core Monitoring Blade

VB330



The VB330 is the flagship embedded probe in Sencore's VideoBRIDGE product line. With line-speed 10G performance and a dual input port option, the VB330 can deliver monitoring and analytics of thousands of streams and a multitude of technologies in real-time and in parallel.

The VB330 is aimed at monitoring the full cross section of services commonly found in media-related network operations. It is a very flexible tool for monitoring network performance involving signal formats and areas as diverse as video IP multicast, OTT/ABR streaming, SRT transmissions, Cable TV Remote-PHY/L2TP/DEPI tunnel services, voice trunks and video-on demand unicast. Additional benefit is provided by deeper IP layer inspection including measuring Ethernet packet microbursts, PCAP recording and general traffic protocol inspection.

With the add-on ETSI TR 101 290 MPEG analysis options and OTT capabilities, the VB330 becomes an all-around QoS powerhouse supporting simultaneous monitoring of up to 2000 streams/services with results viewable in the web UI and alarms delivered by SNMP or XML API. Network-wide results from the VB330 and other probes can also be collected and aggregated in the VideoBRIDGE Controller Server.

The ruggedized embedded hardware of the VB330 reduces power usage compared with server-based monitoring tools and provides an extended operating timeframe and lifetime. Up to two VB330 blades can reside in the VB300 or VB300-DC chassis.

## **Key Features**

- Continuous monitoring of 10G+ bandwidth or 2000 IP streams
- Monitor SRT streams and up to 500 OTT/ABR streams
- Massive ETSI TR 101 290 (ETR290) Priority 1, 2, and 3 MPEG monitoring with up to 400 analysis engines
- Visual graphing of jitter, packet loss and bandwidth performance
- Protocol hierarchy view with bandwidth and packet count statistics for each active video interface
- Functionality for relaying any IP multicast monitored to a different IP destination for further analysis or recording (Remote Data Path RDP)
- Built-in Remote-PHY/L2TP/DEPI tunnel wrapper support for seamless DOCSIS-based distribution monitoring
- IGMPv2/v3 protocol logging and analysis framework
- SCTE35 analysis and monitoring option to log messages, alarm on missing inserts and inspect syntax
- Flexible template based alarming system to allow custom configuration alarm parameters on a per-TS level
- PCAP capture of raw IP data for further analysis using Wireshark or similar
- Microbursting jitter analysis for monitoring total 10G trunk load
- IEEE 802.1Q VLAN tagging support
- Thumbnail decoding of multicast/unicast IP transport streams
- SMPTE 2022 FEC support
- Alarm on changes to TOS/DSCP and TTL for detection of changes in network prioritization
- Time loss distance measurements according to RFC3357
- Full-Service Monitoring of any network device via built-in ICMP and HTTP query agents
- Searchable alarm lists and alarm forwarding to 3rd party systems via SNMP TRAP via up to 3 unique destinations
- NTP client time synchronization support according to RFC2030
- Easy web-based software and license upgrade
- XML-based configuration save and retrieval via web
- Powerful and openly available XML-based External Integration Interface (Eii) for 3rd party integration
- Condensed mosaic thumbnail view of all services monitored
- Full MPEG, DVB and ATSC table support
- PSI/SI/PSIP table display high and low level including hex dump and table download
- Proprietary VideoBRIDGE tests of Conditional Access systems



## **SPECIFICATIONS**

VB330 Physical Specifications (In a VB300 Chassis)

Size: 1RU Rackmount

> 1.7"(H) x 17.2"(W) x 15.8"(D) (43 mm x 437 mm x 402 mm)

Weight: 18 lbs (8.2 kg) fully populated Power:

2x Redundant Supplies 100-240 VAC 50-60 Hz or -48 VDC

Power Consumption per VB330: 40 W typical Max Power for Chassis: 150 W 0 to 45 C Operating Temperature: Storage Temperature: -20 to 70 C

5 to 95% non-condensing Operating Humidty: Network Connections: 10/100/1000 Mbps RJ-45 for

Management

2x 10G SFP+ for Video (One enabled by default; 2nd optional)

USB/RS-232 for initial IP setting Other Ports:

1PPS TTL 50 ohm SMA female input for GPS synchronization

#### IP Monitoring & Analysis Features

- · Real-time monitoring of up to 2000 multicast/unicast/STR streams
- · Monitors Transport Stream in IP according to ETSI TS 102 034 v1.4.1
- $\cdot \ \mathsf{Patented} \ \mathsf{MediaWindow^{TM}} \ \mathsf{visualization} \ \mathsf{GUI} \ \mathsf{for} \ \mathsf{simple} \ \mathsf{stream} \ \mathsf{QoS}$ overview
- · Microsoft MediaRoom™ X-bit RTP header extension support
- · Monitors Transport Streams in Remote-PHY/DEPI/L2TP Tunnels
- · Support for monitoring streams in IPv4 and IPv6 multicasts
- · Compatible with Cisco™ VAMS/CMM
- · IGMPv2 and IGMPv3 SSM support
- · 802.1Q VLAN tagging support and detection
- · Thumbnail decoding of MPEG-2, H.264, HEVC, and JPEG-2000 streams up to 4k
- · Packet jitter and media loss measurements
- · Configurable alarm handling including severity level definitions
- · RTP dropped, duplicate and out-of-order measurements
- · Type of Service (TOS) and Time to Live (TTL) displaying
- · Time loss distance measurements (RFC3357)
- · FEC analysis (COP3)

#### **Table Parsing Features**

· Full support for parsing transport stream tables

MPEG: ISO/IEC 13818-1

DVB: ETSI 300 468 and ETSI TS 101 211

ATSC: A/65

### OTT/ABR Optional Features

· Monitor up to 500 HLS, Smooth Streaming, HDS, MPEG-DASH and RTMP streams

#### **T2MI Optional Features**

- · T2MI encapsulation breakdown and analysis
- · ETSI TR 101 290 analysis of outer and inner streams

## SCTE35 Optional Features

- · Logging of SCTE35 and SCTE104-in-SMPTE2038 received messages on any IP or OTT streams
- · Timing analysis, protocol interpretation, alarming on missing inserts





