sencore.

20G/50G IP Monitoring Software Probe

VB330-V/VB330-APPLIANCE

Building on the incredible IP monitoring capabilities of Sencore's VideoBRIDGE embedded probes, the VB330-V is a software probe that has all the capabilities and options for monitoring thousands of IP stream as the embedded hardware version and adds additional QoE monitoring and archiving options on top of that. The VB330-V is available as a software image that users can install on their own qualified server or it is available pre-installed from Sencore on a high-performance server appliance.

The VB330-V 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, video OTT/ABR streaming, voice trunks, video-on demand unicast, Ethernet packet microbursts, PCAP recording and general traffic protocol inspection.

With the add-on content monitoring and ETR290 options, the VB330-V becomes an all-around QoS/QoE powerhouse supporting simultaneous monitoring of 1000+ streams/services for video/audio quality, MOS scoring, audio loudness, closed captions and continuous ETR 101-290 MPEG monitoring. In addition, with the content monitoring option, the video thumbnails, audio loudness results and captions can be archived in a unique timeline view for later lookup and retrieval.

Key Features
- Continuous monitoring of 20G bandwidth or 2000 IP streams (upgradable to 50G)
- Monitor up to 1000 OTT/ABR streams
- Massive ETR 101-290 Priority 1, 2, and 3 MPEG monitoring with up to 1000 analysis engines
- Powerful content QoE analysis option for 1000 services to find video/audio quality issues quickly
- Content archiving option provides years of video thumbnail, audio loudness, caption and video quality scoring lookup for troubleshooting and compliance purposes
- Visual graphing of jitter, packet loss and bandwidth performance
- Framework for automatic detection of present multicast/unicast stream
- 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 wrapper support for seamless DOCSIS-based distribution monitoring
- EBP Encoder Boundary Point monitoring and analysis
- IGMPv2/v3 protocol logging and analysis framework
- Flexible template based alarming system to allow custom configuration of what parameters result in an alarm being generated 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
- 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-Appliance Physical Specifications

Size:	1RU Rackmount Server 1.7"(H) x 17.2"(W) x 19.8"(D) (43mm x 437mm x 503mm)
Power:	2x Redundant, Hot-Swappable Supplies 100-240 VAC 50-60 Hz
Network Connections:	2x 10GbE/1GbE RJ-45 for Management 2x 10/25/40/50/100G QSFP for Video Input

IP Monitoring & Analysis Features
· Real-time monitoring of up to 2000 multicasts/unicasts
· Monitors Transport Stream in IP according to ETSI TS 102 034 v1.4.1
· Patented MediaWindow™ visualization GUI for simple stream 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 1000 HLS, Smooth Streaming, HDS, MPEG-DASH and RTMP streams
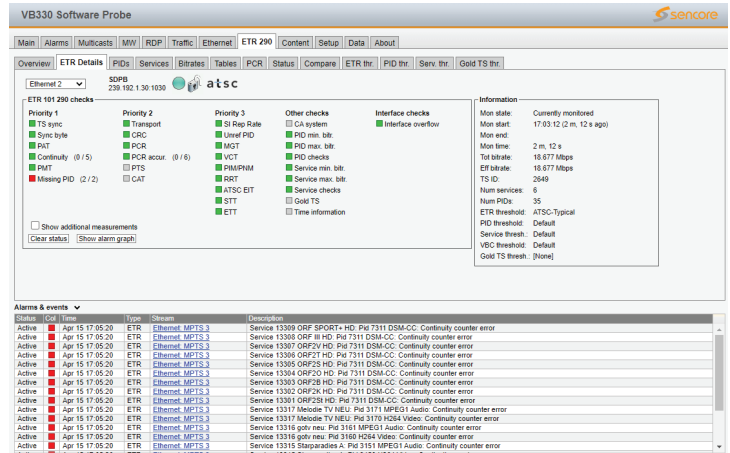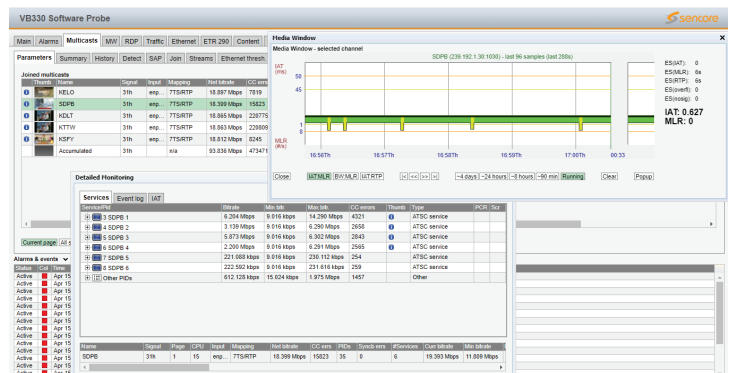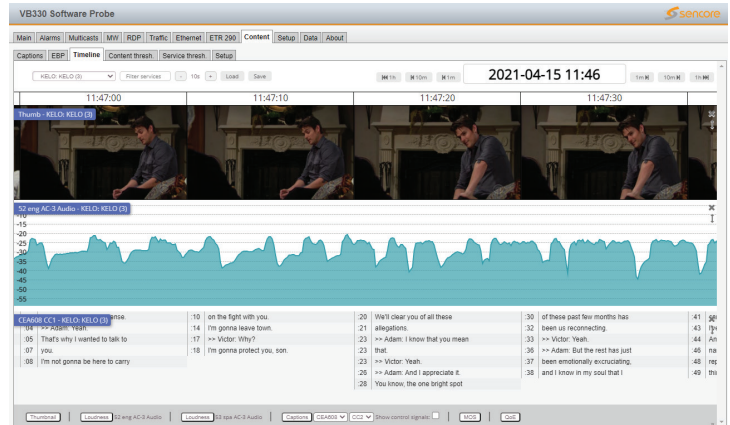
T2MI Optional Features
· T2MI encapsulation breakdown and analysis
· ETSI TR 101 290 analysis of outer and inner streams

SCTE35 Optional Features
· Logging of SCTE35 data on all streams monitored by an ETR290 engine
· Timing analysis, logging of received messages and protocol interpretation

Content Analysis Optional Features
· QoE monitoring of up to 1000 services across OTT and multicast streams
· Tests include black-frame/freeze-frame alarming, audio loudness monitoring, MOS scoring caption extraction and alarming
· Web-based timeline archiving of video thumbnails, audio loudness, captions and MOS/video quality scores with up to 2 years of historical lookup