

IP Core Monitoring Blade

VB220



The VB220 core monitoring blade offers a dense and powerful monitoring solution, covering the most commonly available signal formats. In particular, the VB220 is capable of monitoring IP unicasts and multicasts, OTT/ABR streams, SRT streams, L2TP/DEPI streams, as well as a whole range of RF formats.

In addition to the onboard 1 Gbps RJ-45 and SFP ports and the ASI in/out ports, the VB220 can be paired with a full set of interface blades to cover RF signal formats such as DVB-T/T2, DVB-S/S2, DVB-C/C2, QAM-B, 8VSB, and ISDB-T.

The VB220 probe hardware is custom designed and built to telco-grade standards for maximum reliability and minimum maintenance. Each VB220 blade consumes less than 12W of power. Up to 3 blades are installed in the 1RU VB200 or VB300 chassis.

The ability to continuously measure all your media services makes the VB220 invaluable for confidence monitoring, thus facilitating a more rapid network expansion. In addition, the VB220 can perform deep analysis of the broadcast signal, reducing the need to travel to remote locations when changes in the system are made or to find the reason behind alarms.

KEY FEATURES

- 10/100/1000-T RJ-45 video port
- SFP GigE video port
- 10/100/1000-T RJ-45 Management port
- ASI input and output ports
- 1PPS input port for GPS synchronization
- USB Type-A connector for initial setup
- Expansion blades available for common formats such as DVB-S/S2, DVB-C/C2, DVBT/T2, QAM-B, 8VSB, ASI
- Receive and analyze SRT internet transport streams
- Monitor streams encapsulated in L2TP/DEPI-tunnels
- Thumbnail decoding of transport streams with audio bars and metadata
- Framework called RDP for relaying any IP multicast monitored to a different IP destination for further analysis
- Recording 200 MB of the whole or parts of any transport stream monitored (RDP framework)
- Automatic record trigger based on up to 3 configured alarm criteria with pre-fill
- Flexible template based alarming system to allow custom configuration of which parameters result in an alarm being generated on a per-TS level
- Alarm forwarding to 3rd party systems via SNMP TRAPS
- NTP client time synchronization support according to RFC2030
- DHCP client support on management and video ports according to RFC2131
- Easy web-based software and license upgrade
- XML-based configuration save and retrieval via web
- ETSI TR 101 290 engines automatically activated per RF/ASI interface module present in chassis controlled by VB220
- Full MPEG, DVB and ATSC table support
- PSI/SI/PSIP table display – high and low level including hex dump and table download
- Analysis of EIT p/f and EIT Schedule
- MIP table analysis according to TR 101 190 and TR 101 191
- Proprietary VideoBRIDGE tests of Conditional Access systems
- Optional ETSI TR 101 290 analysis functionality on all IP multicasts in either round-robin fashion across all monitored IP multicasts or continuously on all monitored IP multicasts
 - All Priority 1 tests (TS sync, Sync byte, PAT, CC, PMT, Missing PID)
 - All Priority 2 tests except Buffer Fill (Transport, CRC, PCR, PCR acc., PTS, CAT)
 - All Priority 3 tests (NIT, SI rep rate, Unref. PID, SDT, EIT, RST, TDT)
 - Custom tests (CA system, PID bitrates, Service bitrates, MIP, Content)
- Framework for monitoring and alarming on max/min service bandwidth
- Framework for monitoring and alarming on max/min PID bandwidth
- Visual tree representation of all PSI/SI tables with drill-down functionality
- PID overview
- Service overview
- PCR Accuracy (PCR-AC) jitter histogram for selectable PIDs
- Intuitive bitrate overview – service and PID based
- Comparison framework where a visual comparison between two transport streams or two services is possible in terms of ETR290 parameters and table set
- Transport stream service status view with visual color-coded indication of problem areas
- TR 101 290 alarm trending graph over last 24 hours
- Powerful and openly available XML-based External Integration Interface (Eii) and SNMPv1 for 3rd party integration
- Gold TS Protection™
- Condensed mosaic thumbnail view of all services monitored
- Non volatile system memory ensures recovery from power failure with no configuration loss

SPECIFICATIONS

CONNECTOR SPECIFICATIONS

Video Inputs:	10/100/1000-T RJ-45 GigE SFP Optical
Management Port:	10/100/1000-T RJ-45
1PPS Input:	50-Ohm SMA, Femal
ASI Input:	75-Ohm HD-BNC, Female
ASI Output:	75-Ohm HD-BNC, Female
Initial Setup Port:	USB type A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature:	0° C to 45° C
Storage Temperature:	-20° C to 70° C
Operating Humidity:	5% to 95% non-condensing

CHASSIS SPECIFICATIONS

Size:	Standard 19 in. 1RU rackmount
WxHxD:	19x1.7x15.75 in. (483x43x400 mm)
Input Voltage:	100-240 VAC 50/60 Hz
Power Consumption:	12W per blade

IP MONITORING AND ANALYSIS FEATURES

- Real-time monitoring of 260 multicast/unicast/SRT streams
- 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 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)

ASI MONITORING FEATURES

- Onboard ASI input monitors streams compliant with ETSI TR 101 892 and DVB ASI EN 50083-9

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

ADVANCED ETHERNET FEATURES

- Full-service monitoring (FSM™) of middleware services
- IGMP monitoring and logging
- Advanced real-time IP protocol breakdown and analysis with individual bandwidth and frame size displays

OTT/ABR OPTIONAL FEATURES

- Monitor up to 50 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

