IP Core Monitoring Blade

VB220

The VB220 IP-PROBE is a monitoring platform for all applications in any network where digital video is carried across an IP infrastructure. This network service tool is ideal for both pure IPTV networks and hybrid networks with IP transport cores (such as digital cable and terrestrial networks).

The ability to monitor continuously 260 services makes the VB220 blade just as powerful as its portable version, the VB20. 3 x VB220 blades can be placed in one 19" 1RU chassis, giving a total of 780 streams monitored in a small form factor. This is an invaluable tool for any network engineer attempting multicast detection on multiple VLANs or in the process of IGMP tracking.

The monitoring of critical parameters such as loss distance measurements and detailed jitter values will give operators invaluable and precise feedback of network performance. With the patented MediaWindow™ historical data can be easily accessed for meaningful visualization of media flow in IP networks.

The power of confidence monitoring is further enhanced by continuous monitoring and alarming for vital parameters like bandwidth overflow/underflow, RTP errors and signal loss. Based on a threshold template system alarm granularity can be set to reflect actual status, irrelevant alarms being effectively masked. The unique FSM™ framework also allows checking and continuous monitoring of middleware and network services vital to customer QoE.

The VB220 may be used with optional demodulator interfaces, resulting in a very compact monitoring solution particularly suited for systems that use IP distribution to regional nodes. The VB220 monitors IP, ASI and optional demodulator inputs simultaneously, and the transport stream and service compare mechanism makes it easy to validate correct local insertion at regional head-ends.

SNMP trapping and XML export enable the IP-Probes to be implemented in any NMS system with alarm generation; either directly from the probes themselves, or via the VBC server for advanced alarm correlation and filtering. Each VB220 contains the Eii (External Integration Interface) API for seamless and easy integration into any 3rd party system.

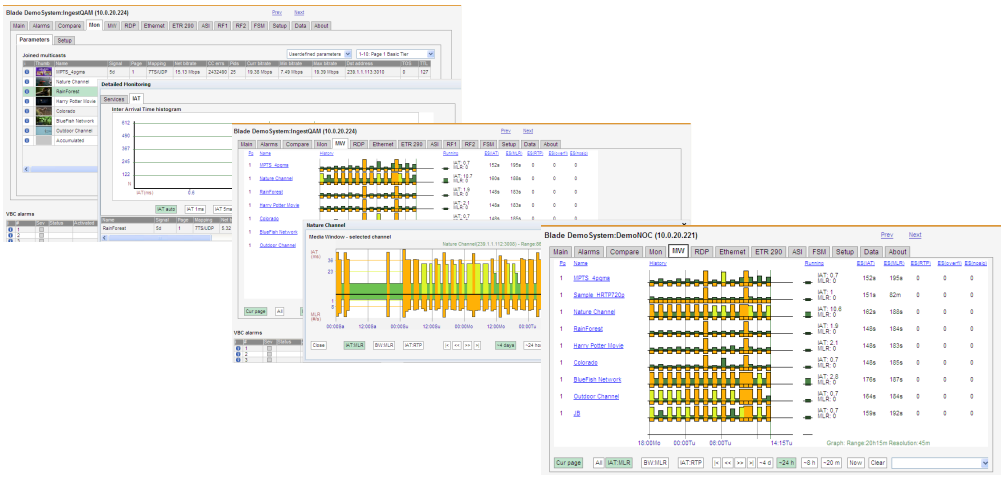
KEY FEATURES

- 1x 10/100/1000T Mbps Ethernet ports
- 1x SFP GigE port
- 1x 10/100T Mbps Ethernet management port
- 1x ASI Input port
- Built-in USB to RS232 converter
- Blade based hardware for use with rack mount chassis
- 3 selectable blades can be placed in one 1"RU chassis
- Chassis with built-in 100-240V AC or 48V DC power supply
- Optional demodulator blades supported (QAM, DVB-S/S2, COFDM)
- Real-time monitoring of 260 multicasts/unicasts
- Monitors transport stream into IP according to ETSI TS 102 034
- Microsoft MediaRoom™ X-bit RTP header extension support
- IGMPv2 and IGMPv3 SSM support
- 802.1Q VLAN tagging support and detection
- Thumbnail decoding of MPEG2 and MPEG4 streams, SD and HD
- Packet jitter and media loss measurements
- RTP dropped, duplicate and out-of-order measurements
- Type of Service (TOS) and Time to Live (TTL) displaying
- Time loss distance measurements (RFC3357)
- FSM™ monitoring of middleware services
- IGMP monitoring and logging
- Advanced real-time IP protocol breakdown and analysis with individual bandwidth and frame size displaying
- Alarm triggered recording of a multicast/unicast or selectable service from any input RDP™ of transport stream or selected service from any input
- Searchable alarm lists
- Built-in web-based management with access control
- SNMP multi-destination trapping
- Eii™ External Integration Interface for easy integration into any 3rd party OSS / NMS system
- Compatible with Cisco™ VAMS/CMM
- NTP client functionality (RFC2030)
- DHCP client support (RFC2131)

Each IP-Probe runs an HTTP server with the client as a web browser, so no need to install custom software on computers needing access to the measurement data. Modern web 2.0 techniques such as AJAX are used to facilitate advanced interface behavior in a standard web browser without the need for any plug-ins.

SPECIFICATIONS

IP Core Monitoring Blade VB220



ENVIRONMENT SPECIFICATIONS

Operating temperature: 0˚C to 50˚C
Storage temperature: -20˚C to 70˚C
Operating humidity: 5% to 95% non-condensing

CONNECTOR SPECIFICATIONS

10/100/1000 Ethernet video: RJ-45
10/100 Ethernet management: RJ-45
Optical input: SFP module
ASI input: 75 ohms SMB, female
ASI output: ASI input:
Initial setup: USB Type A

POWER SUPPLY REQUIREMENTS

Input voltage: 100 to 240V AC
Power required: 2+ VA
Power dissipated: Maximum 50W

NETWORK SPECIFICATIONS

10/100/1000 BASE-T Ethernet (802.3u and 802.3ab)
SFP interface for optical networks
10/100 BASE-TX Ethernet management (802.3u)

MECHANICAL SPECIFICATIONS

Standard 19” 1RU rack-mount
W x H x D: 19 x 1.7 x 15.75 in. (483 x 43 x 400 mm)
Weight: 9.3 lbs (4.2 kg) fully populated

ETSI TR 101 290 OPTION FUNCTIONALITY

Full real-time ETSI TR 101 290 alarming and analysis (Pri 1, 2, 3), one transport stream per input monitored in parallel
Configurable round-robin functionality for each ETSI TR 101 290 analysis engine
Conforms to both DVB and ATSC specifications
Table and descriptor parsing of PSI/SI and PSIP presented as table summary and full table breakdown (including hex dump)
Bitrate monitoring and alarming (TS, service and PID level)
Monitoring of vital CA parameters
Compare view for comparison of transport streams and services across different interfaces
Sophisticated threshold template system for detailed alarm handling control at transport stream, service and component level
Monitoring of demodulator parameters (demodulator option)

ADDITIONAL ETSI TR 101 290 MONITORING ENGINE OPTION

Full real-time ETSI TR 101 290 alarming and analysis (Pri 1, 2, 3) for additional ethernet transport streams

DVB-T2 ENCAPSULATION MONITORING OPTION

T2-MI encapsulation breakdown and analysis
ETSI TR 101 290 analysis of outer and inner streams

TRAFFIC MODULE OPTION

Detailed traffic protocol breakdown
Traffic graphing