



The VB220 is an integral part of the breakthrough Full Service Monitoring concept.



The RFC4445 based MDI Media
Window displays content loss and
network jitter in a comprehensive
"flow" view for correlation and status
at-a-glance.



Return Data Path enables sourcing of the remote signal back to the NOC or HeadEnd for detailed analysis. Limits travel expenses and need for remote engineering. The VB220 is the most modern monitor and measurement platform in the industry. Built specifically to industry needs, the tool is ideal for both pure IPTV networks and hybrid networks with IP transport cores such as cable and DTT. Featuring both optical and electrical GigE inputs, separate management and ASI input, the VB220 has the widest range of inputs in the industry..

The ability to monitor continuously 180 services with all measurements makes the VB220 invaluable for deployment in the largest of systems and facilitate future growth. The innovative RDP<sup>TM</sup> (Return Data Path) enables easy rerouting of remote signals to the NOC or Head-end for decryption and advanced analysis without truck rolls with costly equipment needed in the field.

With full support for both the MPEG2-TS and MSRTP encapsulation standards and detection of all modern codecs, the VB200 is built for real-world use. The hardware comes in a 1RU telcograde chassis. It is designed for telco closet deployment and is supplied with a choice of either AC or 48v DC PSU. The VB200 chassis can accommodate 3 x VB220 modules, giving the system the ability to monitor up to a staggering 540 services in a 1RU space.

Critical parameters such as MDI and detailed jitter values give an accurate reading of network performance. Through the use of the MDI Media Window (patent pending) historical data can be easily accessed and visualised in an intuitive manner. The MDI Media Window makes sense of the media flow in an IP network. With full SNMP support, the IP-Probes can be implemented in any NMS system either directly to the probes themselves or through the VBC server. Amongst the advantages of using the power of the VBC server to access the measurement data is the provision of advanced alarm correlation and sifting, as well as eliminating the necessity to install custom software on the monitoring computers. Basic setup is achieved through the built-in USB to RS-232 converter, eliminating the need for an external converter and facilitating the setting of IP addresses for access to the IP-Probes.

- 1x 10/100/1000 Mbps Ethernet port
- 1x SFP GigE port
- 1x 10/100 Mbps Ethernet management port
- 1x ASI Input port
- Up to 3 units in 1RU with 540 services continuously monitored
- · DC 48v PSU Option
- · Analysis of 180 IP streams per unit
- · Analysis of video and network parameters
- MPEG-2, h.264/AVC and WM9/VC-1
- RFC4445 MDI measurement and analysis
- RFC4445 based MDI Media Window (patent pending)
- PSI/SI analysis
- · Line speed ASI measurements
- SNTP Time Server support
- Full DHCP support
- MPEG2-TS and MFRTP support
- RTP drop, duplicate and out-of-order measurements
- RDP™ Return Data Path
- Optional central management via VBC Server
- · Built in USB to RS-232 converter

# **ANALYSIS FEATURES:**

- Analysis of up to 180 IP multicasts in parallel
- Channel name/multicast address mapping
- Protocol mapping details
- Max, min, average bandwidth
- PID detection, PSI/SI analysis
- IAT Pacet jitter measurement and drops
- RFC 4445 MDI measurement re. IETF Draft
- RFC 4445 basedMDI Media Window (patent pending)
- MPEG2 analysis
- h.264/AVC analysis
- WM9/VC-1 analysis
- · RTP Packet measurement and monitoring
- MPEG2-TS and MSRTP encapsulation support
- SNMP support with detailed MIB
- Access control with login
- XML Alarm, event and setup import/export
- RDP™ relaying

### **NETWORK SPECIFICATIONS:**

10/100/1000 Base-T Ethernet (IEEE 802.3) Optical support via SFP modules 10/100 Base-T Ethernet managment (IEEE 802.3)

### MECHANICAL SPECIFICATIONS:

Standard 19" rack-mount (1RU) W x H x D: 483 x 43x 400mm Weight: 4,2 kg fully populated

### **CONTROL AND MANAGEMENT:**

Basic setup/control through RS232 via USB Remote access through HTTP/TELNET Optional control via VBC Server

### **ENVIRONMENT SPECIFICATIONS:**

0oC to 50oC Operating temperature: -20oC to 70oC Storage temperature:

Operating humidity: 5% to 95% non-condensing

### **CONNECTOR SPECIFICATIONS:**

10/100/1000 GigE input: **RJ-45** 10/100 Ethernet managment **RJ-45** Optical input SFP Module ASI input: 75 ohms BNC RS232 port: USB Type A connector

IEC 320 connector AC power:

## **POWER SUPPLY REQUIREMENTS:**

Input voltage: 100 to 240V AC

Power required: 20 VA, typical @ 220VAC

Maximum 50W Power dissipated:

# COMPLIANCE:

CE-marked in accordance to low voltage directive (LVD) 73/23/EEC and EMC directive 89/336/EEC. Compliant to requirements for US and Canada. Designed for CSA approval. Specifications and product availability are subject to change without notice.

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