



BRIDGETECH products adhere to The Global Standard of Digital Television.



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



Return Data Path enables sourcing of the remote signal back to the NOC or HeadEnd for detailed analysis. Reduces OPEX through fewer truck rolls and on-site visits.

**The VB220 IP-PROBE is the flagship monitoring platform for all applications in any network where digital video is carried across an IP infrastructure. Built specifically to high-end industry needs, 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" IRU chassis, giving a total of 540 streams monitored in a small form factor. With full support for both the MPEG-2 TS and MFRTMP encapsulation standards carrying all modern coding formats, the VB220 is perfect for network core and region use. This is an invaluable helpmate for any network engineer attempting multicast detection on multiple VLANs or in the process of IGMP tracking. Fault finding in complex IP networks just got a lot easier.

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 visualisation of media flow in IP networks. Whether establishing or modifying service settings on complex routers and switches, the VB220 facilitates the whole process.

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 highly sophisticated 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.

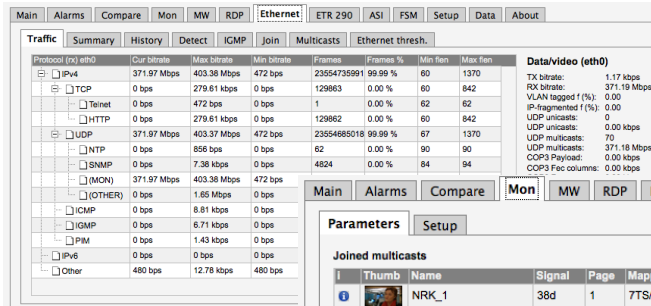
The VB220 may be used with optional demodulator interfaces, resulting in a very compact monitoring solution particularly suited for systems that use IP distribution to regional nodes. The VB220 monitors IP, ASI and optional demodulator inputs simultaneously, and the transport stream and service compare 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.

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 behaviour in a standard web browser without the need for any plug-ins.

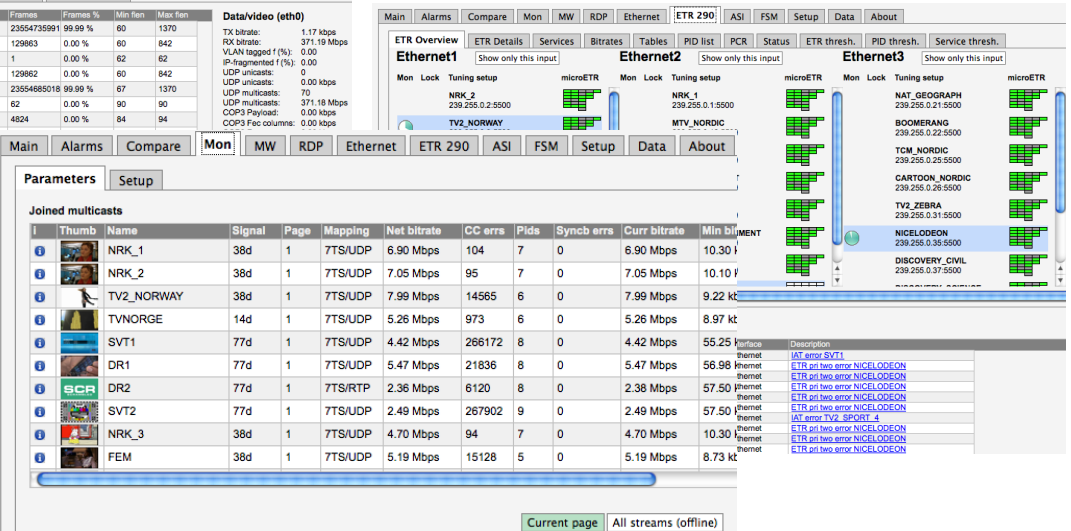
#### FEATURES INCLUDE:

- 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 19"RU chassis
- Chassis with built-in 100-240V AC or -48V DC power supply
- Optional demodulator blades supported (DVB-S/S2, COFDM, QAM/VS2)
- Stream selection allows large thumbnail and audio level bar displaying for one service from any input
- 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 MPEG-2 and MPEG-4 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)
- FEC analysis (COP3)
- MediaWindow™ visualisation technology
- 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
- Intuitive GUI using patented visualisation Techniques for ease of system overview: MediaWindow and microETR (ETR290 option)
- Optional central management via VideoBridge Controller server
- 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)
- Remote software and license upgradeable



VBC alarms

#	Sw	Clear	Time	Description
1		Cleared	Sep 21 08:22:15 - Sep 21 08:23:16	HEADEND_I
2		Cleared	Sep 21 05:58:15 - Sep 21 06:00:17	HEADEND_I
3		Cleared	Sep 21 05:47:15 - Sep 21 05:48:16	HEADEND_I
4		Cleared	Sep 21 05:38:15 - Sep 21 05:37:15	HEADEND_I
5		Cleared	Sep 21 05:25:15 - Sep 21 05:26:16	HEADEND_I
6		Cleared	Sep 21 05:14:16 - Sep 21 05:15:15	HEADEND_I
7		Cleared	Sep 21 05:05:16 - Sep 21 05:06:15	HEADEND_I
8		Cleared	Sep 21 05:03:15 - Sep 21 05:04:15	HEADEND_I
9		Cleared	Sep 21 04:50:15 - Sep 21 04:53:15	HEADEND_I
10		Cleared	Sep 21 04:38:16 - Sep 21 04:40:15	HEADEND_I



## 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  
 Initial setup: USB Type A

## POWER SUPPLY REQUIREMENTS:

Input voltage: 100 to 240V AC  
 Power required: 2+ VA, typical @ 220V AC  
 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" IRU rack-mount  
 W x H x D: 483 x 43 x 400 mm  
 Weight: 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

## COMPLIANCE:

CE-marked in accordance to low voltage directive (LVC) 73/23/EEC and EMC directive 89/336/EEC. Compliant to requirements for US and Canada. Designed for CSA approval.

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## BRIDGE TECHNOLOGIES Co AS

Address: Mølleparken 4  
 N-0459 Oslo  
 Norway

Phone main: +47 22 38 51 00  
 Telefax: +47 22 38 51 01

E-mail: info@bridgetech.tv  
 Internet: www.bridgetech.tv