

IP Distribution Monitoring Probe

VB12-RF



The VB12-RF is a highly portable RF/ASI/IP monitoring appliance for terrestrial and cable applications. With integrated RF, ASI and IP ports and built-in ETR101-290 analysis and alarming, RF measurements, OTT monitoring and SCTE35 logging, the VB12-RF provides today's headend and field engineers with all the inputs and features needed for broadcast or IP analysis at any location in the transmission chain for cable, IPTV and terrestrial broadcast operations.

Designed for the rigors of real-world use, the VB12-RF is smaller and lighter than many comparable monitoring/troubleshooting solutions and requires no external equipment or power supply.

The VB12-RF interfaces are Gigabit Ethernet, ASI and QAM/8VSB RF inputs as well as a separate Gigabit Ethernet management interface for easy connection to either a laptop or the management network. There is also an SMA input for 1PPS timing reception as used in DVB T2MI scenarios.

RF specific parameters are measured and analyzed, and alarms are raised if measurements are not within user-specified limits. Measurements include MER, SNR, BER and signal level. A QAM/8VSB constellation diagram is displayed to visualize symbol integrity. The VB12-RF incorporates many of the most advanced and patented technologies from the VideoBRIDGE End-to-End monitoring system. The product features an integrated web server and can easily be installed as part of a multi-probe system with a central server.

For on-site analysis, an engineer can use the VB12-RF's interface to measure directly in the field or capture the input signal for later use in the lab. The product can be left in the field for continuous monitoring and can easily be controlled remotely with the VideoBRIDGE Controller.

KEY FEATURES

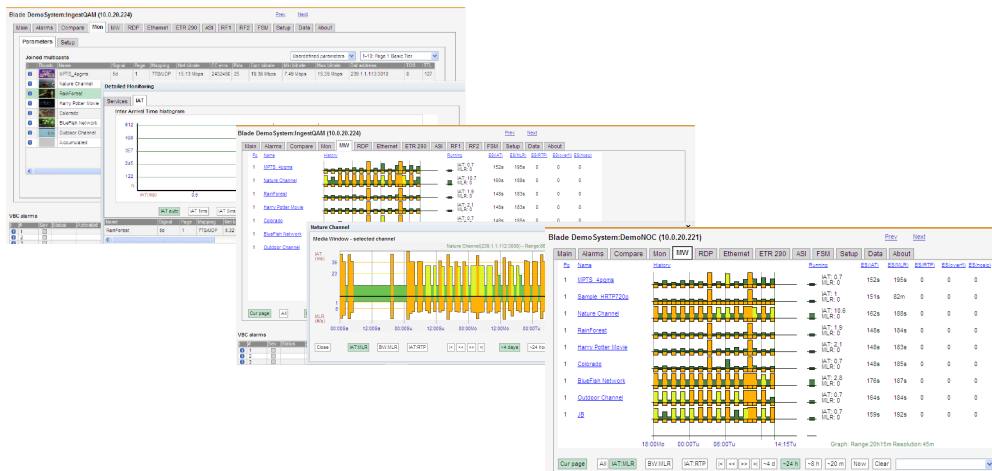
- 1x 10/100/1000T RJ45 Management port
- 1x 10/100/1000T RJ45 video port
- SFP GigE video port
- 1x ASI Input and 1x ASI output port
- Built-in 100-240VAC PSU
- Built-in USB to RS232 converter
- RF input for QAM/VSB signal monitoring
- Thumbnail decoding of video services
- Framework for relaying any IP multicast monitored to a different IP destination for further analysis
- Automatic record trigger based on up to 3 configured alarm criteria with pre fill in order to catch fault
- Flexible template based alarming system to allow custom configuration of what parameters result in an alarm being generated on a per-TS level
- Alarm forwarding to 3rd party systems via SNMP TRAP via up to 3 unique destinations
- Easy web-based software and license upgrade
- XML-based configuration save and retrieval via web
- Full DVB and ATSC table support
- PSI/SI/PSIP table display - high and low level including hex dump and table download
- ETR 101 290 engines for IP, RF and ASI inputs
- Framework for monitoring and alarming on max/min service/PID bandwidth
- Visual tree representation of all PSI/SI tables with drill-down functionality
- PCR Accuracy (PCR-AC) jitter histogram for selectable PIDs

The VB12-RF also comes pre-licensed with features that are optional on most other probes.

- ETR 101 290 analysis engine for IP (1 engine), ASI and RF
- Advanced ethernet tools
- T2MI protocol analysis
- OTT monitoring (1 engine) for HLS, MPEG-DASH, SmoothStreaming, HDS or RTMP
- SCTE35 digital cue tone logging and analysis

SPECIFICATIONS

IP Distribution Monitoring Probe VB12-RF



ENVIRONMENT SPECIFICATIONS

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

CONNECTOR SPECIFICATIONS

10/100/1000T GigE input: RJ-45
10/100/1000T Ethernet management: RJ-45
GigE Optical input: SFP Module
ASI input: 75 ohms HD-BNC
ASI output: 75 ohms HD-BNC
RF Input: 75 ohm F connector, Female
Serial port: USB Type A connector
AC power: IEC 320 connector
1 PPS input: 50 ohm SMA Female

POWER SUPPLY REQUIREMENTS

Input voltage: 100 to 240V AC
Power required: 20 VA
Power dissipated: maximum 20W

MECHANICAL SPECIFICATIONS

W x H x D: 4.5 x 2.2 x 15.2 in. (115 x 56 x 385 mm)
Weight: 3.3 lbs (1.5 kg)

IP MONITORING AND ANALYSIS

Real-time monitoring of up to 50 multicasts/unicasts (Expandable to 50)
Monitors Transport Stream in IP according to ETSI TS 102 034
MediaWindow patented intuitive GUI for ease of system overview
Microsoft MediaRoom™ X-bit RTP header extension support
Compatible with Cisco™ VAMS/CMM
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
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)
MediaWindow™ visualization technology

RF MONITORING AND ANALYSIS

Single RF input for QAM/VSB signals
Round-robin operation for scanning up to 50 frequencies
Fully compliant to ETS 300 249
ITU-T J.83 Annex A, B and C compliant
QAM modes: 16, 32, 64, 128, 256
Wide symbol rate range (0.87 to 7.0 MS/s)
Excellent adjacent channel isolation
Pre/post-FEC BER, SNR, MER, Level
Symbol offset, frequency offset
Spectrum inversion
Constellation diagram
VSB modes: 8VSB

ADVANCED ETHERNET TOOLS FUNCTIONALITY

FSM™ monitoring of middleware services
IGMP monitoring and logging
Advanced real-time IP protocol breakdown and analysis, with individual bandwidth and frame size displaying

ETSI TR 101 290 MONITORING ENGINES

Full real-time ETSI TR 101 290 alarming and analysis (Pri 1, 2, 3) for additional Ethernet transport streams
One ETR engine included for IP and expandable to 50 ETR engines included for ASI and RF

DVB-T2 ENCAPSULATION MONITORING

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

OTT/ABR MONITORING OPTION

Monitor HLS, SmoothStreaming, HDS, MPEG-DASH and RTMP Streams in parallel
One OTT engine (10 streams) included. Expandable to 5 engines (50 streams)