

QAM/8VSB/IP Probe

VB60



The VB60 is a low-cost, semi-portable monitoring probe for QAM-A/B/C digital cable RF and 8VSB/ATSC digital broadcast RF standards. In addition, the IP ports can optionally be enabled to provide monitoring of multicast, SRT, and OTT content. This makes the VB60 the perfect platform to quickly identify faults in cable/broadcast RF distribution systems and also systems where RF is converted to/from IP.

The VB60 is an integral part of the Sencore VideoBRIDGE monitoring system, with full control possible through the webUI hosted by the unit, or it can be coupled with other VideoBRIDGE monitoring products and managed through the powerful VideoBRIDGE controller to make monitoring a large network and collecting data from hundreds of units a breeze.

Full RF parameter monitoring is included for the RF input and tuning can be fixed on a single channel or round-robin amongst multiple channels. All this RF analysis functionality is complemented by the renowned VideoBRIDGE ETSI TR 101 290 monitoring engines, which provide priority 1/2/3 measurements of the streams carried in the RF to ensure standards conformance at all levels of the signal.

The VB60's rugged chassis contains no moving parts and is intended for continuous, standalone and reliable operation in remote locations over long periods of time.

KEY FEATURES

- 75-ohm RF Input
- Channel bandwidths of 6, 7, or 8 MHz
- Alarming based on RF template settings, unique per channel
- Fixed tuning on one RF channel or round-robin tuning for multiple channels
- Support for digital cable and terrestrial RF modulation types:
 - DVB-C/QAM-A based on EN 300-429 v1.2.1 and ITU-T J.83-AnnexA v3.0
 - QAM-B based on ITU-T J.83-AnnexB v3.0
 - ISDB-C/QAM-C based on ITU-T J.83-AnnexC v3.0
 - ATSC 1.0 based on ATSC A/53-Part2 (2011)
- Capable of monitoring the following RF parameters:
 - RF and TS lock states
 - Channel power RF level
 - Modulation Error Rate MER
 - Signal to Noise Ratio SNR
 - Pre and Post BER rates
 - Constellation Diagram
- Thumbnail decoding of received streams with audio bars and metadata
- Support for MPEG2-TS. H.264/AVC HD, H265/HEVC 4K, J2K, AAC, PCM Audio, and more
- ETR290 analysis engines with detailed analytics of Priority 1, 2 and 3 tests plus extensions to test CA behavior
- Full MPEG, DVB and ATSC table support
- PSI/SI/PSIP table display – high and low level including hex dump and table download
- Flexible template-based alarming system to allow custom configuration of which parameters result in an alarm being generated on a per-stream basis
- Alarm forwarding to 3rd party systems via SNMP TRAPs
- Powerful and openly available XML-based External Integration Interface (Eii) for 3rd party integration
- Autonomous operation. VB60 is a completely freestanding unit with its own CPU and can perform without the need for any external host system
- Easy web-based software and license upgrades
- XML-based configuration saving and retrieval via web
- One year hardware warranty and one year of software maintenance included
- Optional IP monitoring capabilities to provide accurate packet behavior, IAT histogram, protocol analysis, traffic overview of IP uni/multicast and SRT streams
- Optional OTT monitoring capabilities to provide as-received status of all profiles of HLS, MPEG-DASH, and other OTT streams
- Optional SCTE35 ad insertion monitoring including logging of received messages, full syntax analysis and alarming on missing messages. Also includes support for SCTE104 in SMPTE2038

VB60 SPECIFICATIONS

RF FEATURES

- QAM ITU-T J.83 Annex A/B/C for cable applications
- 8VSB for ATSC terrestrial applications
- Frequency range 51-1003 MHz
- Symbol rate 0.7-7.2 MS/s
- Channel bandwidth 6/7/8 MHz
- QAM modes 16,32,64,128,256
- Constellation diagram
- 75 Ohm F-connector input

ETHERNET FEATURES (OPTIONAL)

- 10/100/1000T Gigabit Ethernet interface for video/data analysis
- SFP port for optical Gigabit connectivity
- Web-based management interface available on all ports
- SSH/TELNET terminal
- Real-time monitoring of up to 50 multicast/unicast/SRT streams
- Patented MediaWindow™ visualization GUI for simple stream QoS overview
- Monitors Transport Streams in Remote-PHY/DEPI Tunnels
- Support for monitoring streams in IPv4 and IPv6 multicasts
- 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
- FEC analysis (COP3)
- Monitor up to 50 HLS, Smooth Streaming, HDS, MPEG-DASH and RTMP streams
- Logging and alarming of SCTE35 and SCTE104-in-SMPTE2038 received messages on any IP or OTT streams

PHYSICAL/ENVIRONMENTAL SPECIFICATIONS

Operating Temperature:	0° C to 45° C
Storage Temperature:	-20° C to 70° C
Operating Humidity:	5% to 95% non-condensing
Dimensions:	8.1x8.1x1.2in (205x205x30mm)
Weight:	2.4lbs (1.1kg)
Power Usage (max):	18 Watts
Power Supply:	12V, 3.3A (external adapter included)

SOFTWARE OPTIONS

- IPMON-LICENSE - Enables IP monitoring for 10 streams
- VB1-10STREAM-LICENSE - Adds 10 streams to the IP monitoring (max 4)
- VB-AEO-VB1XX-2XX-LICENSE - Enables advanced ethernet options such as traffic analysis and PCAP capture
- TR290-FIRMWARE - Enables 1 ETSI TR 101 290 analysis engine for an IP stream
- VB-BULK-ETR-D-LICENSE - Enables 25 ETSI TR 101 290 analysis engines for IP streams
- VB-SCTE35-LICENSE - Enables SCTE35 logging and alarming features
- VB-OTT-LICENSE - Enables 1 OTT analysis engine for monitoring up to 10 OTT channels
- VB-PROCARE-SEP-2YR-LICENSE - Two year software maintenance extension
- VB-PROCARE-SEP-4YR-LICENSE - Four year software maintenance extension

