

## Quad Port RF Monitoring Blade

VB258



The VB258 is a quad port RF blade with worldwide support for terrestrial and cable digital RF standards, and it is an integral part of the Sencore VideoBRIDGE monitoring system. Each blade has four separate RF inputs that enable monitoring of digital terrestrial and cable RF transmissions, including support for ATSC 3.0. Two VB258 blades can be installed in a single 1RU chassis together with a controlling VB120 or VB220 probe, providing eight RF inputs and a high monitoring capacity occupying a minimum of rack space.

Full RF parameter monitoring is included for each RF input and tuning for each input can be fixed on a single channel or round-robin amongst multiple channels. The Advanced RF Option adds impulse response graphing and analysis to the VB258, making it possible to check signal reflection conditions at the probe location.

The full suite of digital terrestrial and cable RF standards supported include ATSC 1.0, ATSC 3.0, DVB-T, DVB-T2, ISDB-T(b), QAM-B, DVB-C, DVB-C2, and others. In addition, T2MI analysis is an option in the controller probe blade.

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.

### KEY FEATURES

- Quad 75-ohm RF Inputs. One enabled by default, three are optional
- 1PPS GPS input for SFN Drift measurements
- One red/green LED TS sync indicator per RF input
- Excellent phase noise resistance and multipath equalization
- Channel bandwidths of 6, 7, or 8 MHz
- Alarming based on RF template settings, unique per channel
- Support for worldwide digital terrestrial and cable RF modulation types:
  - DVB-T based on EN 300-744 v1.6.2
  - DVB-T2 based on EN 302-755 v1.4.1
  - ISDB-T based on ARIB STD-B31 v2.2
  - SBTVD-T/ISDB-TB based on ARIB STD-B31 v2.2
  - ATSC 1.0 based on ATSC A/53-Part2 (2011)
  - ATSC 3.0 based on ATSC A/321 (2016), A/322 (2017), A/330 (2019)
  - DVB-C based on EN 300-429 v1.2.1 and ITU-T J.83-AnnexA v3.0
  - DVB-C2 based on EN 302-769 v1.3.1
  - QAM-B based on ITU-T J.83-AnnexB v3.0
  - ISDB-C/QAM-C based on ITU-T J.83-AnnexC v3.0
- 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
  - 1PPS Input Lock
  - Pre and Post BER rates
- Channel impulse Response diagram
- Constellation diagram
- SFN Drift monitoring

## SPECIFICATIONS

### RF SPECIFICATIONS

RF Power Level:	-80 dBm to -20 dBm
RF Power Level Accuracy:	+/- 1.5 dB (and 1.5 dB port-to-port)
RF Power Level Resolution:	1 dB
Maximum SNR:	> 38dB +/- 1.5dB
Maximum MER:	> 38dB +/- 1.5dB (and 1.5 dB port-to-port)
Frequency Range:	42 – 1002 MHz
SFN Drift:	0 to 500ms
SFN Drift accuracy:	+/- 2us

### CONNECTOR SPECIFICATIONS

RF Input:	4x 75-Ohm F-Connectors, Female
1PPS Input:	50-Ohm SMA, Female

### ENVIRONMENTAL SPECIFICATIONS

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

### SOFTWARE OPTIONS

VB258RF-LICENSE - License to enable one additional RF input port for tuning. One port is enabled by default and the other three must be enabled with licenses

VB258-ADVA-LICENSE - Advanced RF Option for VB258 with impulse response graphing and alarming

### ADVANCED RF OPTION DETAILS

- Constellation diagram
- Channel Impulse response diagram with advanced alarming capabilities
- Configurable alarm template to verify position of CIR echoes in both time and relative amplitude (300 us/50 dB)
- Supports alarming on up to 10 CIR echoes