

## VB272 DVB-S/S2 SATELLITE RF INPUT MODULE

The VB272 input card offers monitoring and analysis of QPSK/8/16/32APSK signals found in DVB-S/S2 satellite transponders. A chassis can be equipped with a VB120 or VB220 PROBE controller and up to two VB272 input cards under its control.



Figure - A 1RU Enhanced Chassis with a VB120 module used as a controller for two VB272 DVB-S/S2 satellite input modules for a total of 4 independent RF inputs.

A complete configuration with a fully licensed VB120 and two VB272 interface cards provides real-time monitoring and alarming for up to four DVB-S/S2 RF inputs, 10 IP MPTS/SPTS multicasts (upgradable to 50 streams) and one ASI TS input and output. Full ETSI TR 101 290 analysis is performed on all DVB-S/S2 inputs, the ASI input and the IP input in parallel. If the VB220 PROBE is used as master card the IP monitoring capacity is increased to impressive 260 MPTS/SPTS multicasts. The VB272 DVB-S/S2 card is delivered with one input and the second input can be enabled by a simple license upgrade.

Together with the VB120 or VB220 controller the operation of the VB272 is via an intuitive web interface, a gui providing a graphical overview of scanning status and ETR290 TS data as well as a full constellation diagram of the transponder together with all relevant RF levels.

The combined unit is ideal for hybrid networks where IP is used as a carrier from head-end to the satellite uplink station. The built-in round-robin functionality allows sequential analysis of multiple VB-S/S2 multiplexes, making it possible to monitor a complete transponder using a single VB272 interface card.

The VB272 also comes equipped with full power/level control of RF input switches and can also use the DISEqC 1.2 protocol for additional switch control. With support for modern modulation types as 16 or 32 APSK, the VB272 is future proof. The VB272 is delivered with standard 75 Ohm F-Connectors or as an optional factory ordered VB272-SMA with 50 Ohm SMA Connectors.

### TECHNICAL FEATURES

- Hardware ready with two independent tuners and demodulators
- One input activated by default - second input available through VB272-RF-OPT
- Available with 50 ohm SMA female connectors (VB272-SMA) or 75 ohm F female connectors (VB272)
- 9-pin male D-SUB alarm relay
- Capable of demodulating DVB-S, DVB-S2 8PSK, 16APSK, 32APSK
- Supports DVB-S2 GOLD CODES, ROOT CODES and BOTH
- Input frequency range from 950 to 2150 MHz
  - Automatic symbol rate detection requires only frequency to be configured by user
- Symbol rate range between 1 to 45Msym/s
- Input stream selection (for DVB-S2)
- PL scrambling mode setting (for DVB-S2)
- PL scrambling code setting (for DVB-S2)
- DVB-S 1/2, 2/3, 3/4, 5/6, 7/8 FEC
- DVB-S2 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 FEC
- Configure LNB local oscillator frequency and set input satellite frequency directly
- 13V/18V/22kHz antenna signalling present
- DiseqC 1.1 compatible for control of Committed L-band Switches
- Modulation Error Rate (MER) in dB
- Signal to Noise Rate (SNR) in dB
- Error Vector Magnitude (EVM) in% and in dB
- Constellation diagram maintained in GUI
- BER pre Viterbi (for DVB-S)
- BER post Viterbi (for DVB-S)
- BER post LDPC-BCH (for DVB-S2)
- RS Packet Error Count
- Front-end lock indication in GUI and through front panel red/green LED
- Channel power with an absolute accuracy of +/- 3 dB and a resolution of 1 dB
- Trend graphs over time for Channel Power and MER up to 2 years - requires VideoBRIDGE Controller server
- Carrier level
- Carrier frequency offset
- Symbol rate offset
- Energy per information bit to noise power spectral density ratio (E<sub>bit</sub>/N<sub>0</sub>) in dB
- Energy per transmitted bit to noise power spectral density ratio (E<sub>b</sub>/N<sub>0</sub>) in dB
- Energy per symbol to noise power spectral density ratio (E<sub>s</sub>/N<sub>0</sub>) in dB
- Pilot detection (for DVB-S2)
- Frame length (for DVB-S2)
- Null packet deletion (for DVB-S2)
- Input Stream Synchronization Indicator (ISSI) (for DVB-S2)

### OPTIONS

SECOND INPUT VB272-SMA ETR290

### RELATED PRODUCTS

VB273-SAT-SWITCH

### CHASSIS OPTION

ACC DCC EC EC-DC

### TECHNOLOGIES

ET ETR290 DiSeqC DVB-S/S2

### PHYSICAL AND ENVIRONMENTAL SPECIFICATIONS

Operating temperature: 0°C to 45°C  
 Storage temperature: -20°C to 70°C  
 Operation humidity: 5% to 95% non-condensing

### POWER SUPPLY REQUIREMENTS

Input voltage: 100 to 240V AC  
 Power required: 15VA  
 Power dissipated: maximum 5W

### COMPLIANCE AND SAFETY

Compliant to requirements for US and Canada. Designed for CSA approval. Bridge Technologies continuously improves on products and reserves the right to modify the specifications without prior notice.

EMC: EN 55022 CISPR 22 Class A, EN 55024 CISPR 24, EN 61000-3-2/ IEC 61000-3-2, EN 61000-3-3/ IEC 61000-3-3, 47 CFR, Class B SAFETY: EN 60950-1, IEC 60950-1 Edition 2.0

### ENVIRONMENTAL COMPLIANCE POLICY

Bridge Technologies co as is committed to fulfilling all statutory environmental requirements in accordance with the WEEE scheme.

In order to prevent the generation of hazardous waste, Bridge Technologies undertakes the responsibility for taking back and recycling electrical and electronic equipment.

This will provide incentives to design electrical and electronic equipment in an environmentally more efficient way which takes waste management aspects fully into account.

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- Number of input streams (for DVB-S2)
- Capable of Short and Normal frames
- Stream types:
  - Generic Packetized Stream
  - Generic Continuous Stream
  - Transport Stream
- Coding and modulation
  - Constant Coding and Modulation
  - Adaptive/Variable Coding and Modulation (ACM/VCM)
- Roll-off factors: 0.35 / 0.25 / 0.20
- Capable of Multi Input Stream (MIS) with tuning selection of individual Input Stream Identifiers (ISI)

#### RF SPECIFICATIONS

- Frequency range: 950 to 2150 MHz
- RF power level: -65 to -25 dBm
- RF power level accuracy: +/- 2 dB
- RF power level resolution: 0.1 dB
- SNR: >30 dB
- BER and PER readings

#### PRODUCT ORDERING CODES

VB272	DVB-S/S2 Demodulator Interface Blade single RF input - 75 ohm female F-connector model
VB272-SMA	DVB-S/S2 Demodulator Interface Blade single RF input - 50 ohm female SMA connector model
VB272RF-OPT	Additional RF input option for VB272 card for a total of two, factory ordered
VB272RF-UPGR	Additional RF input option for VB272 card for a total of two
VB273-SAT-switch	Satellite Redundancy Switch System - EC/VB120/VB272-SMA/VB272-RF-OPT/VB273/SWITCH-OPT