



## DVStation-Mini² VSB

### A COMPLETE SOLUTION

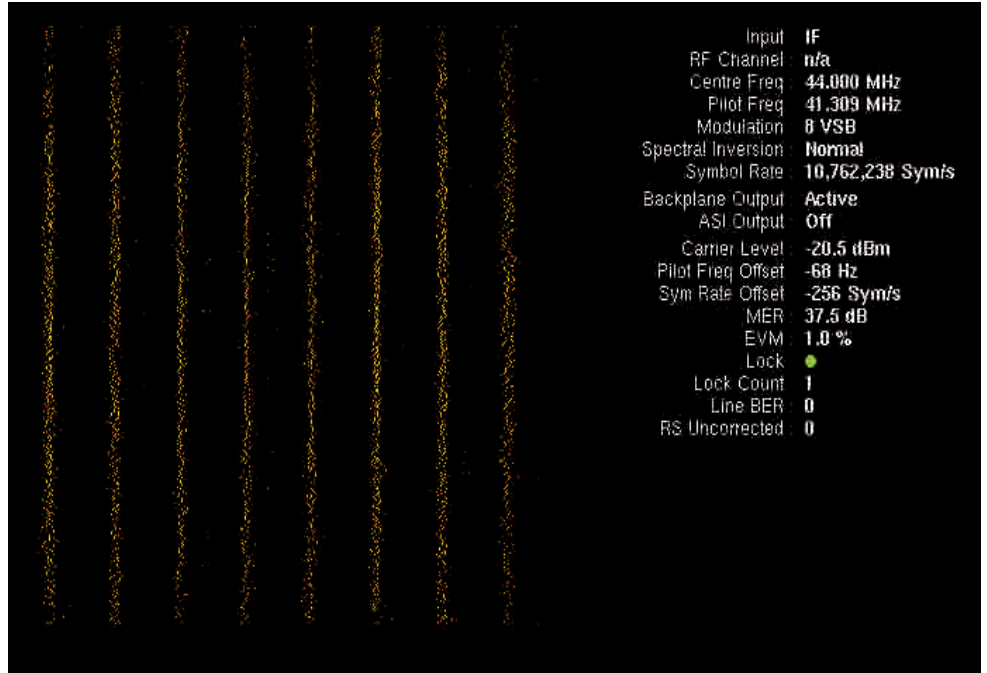
The DVStation-Mini² VSB is an 8VSB monitoring platform probe. It offers a complete preventive monitoring solution for ATSC DTV terrestrial broadcast networks.

The DVStation-Mini² VSB provides 8VSB modulation quality monitoring as well as transport stream analysis in one solution. The DVStation-Mini² VSB has two input ports - RF and ASI/SMPTE-310. Signal demodulation can be done on the RF input and transport stream analysis can be performed on both input ports simultaneously.

A combination of real-time signal measurements with user-configurable alarm thresholds and rich graphical displays make this probe the ideal operational monitoring and troubleshooting tool.

### KEY FEATURES

- ATSC Digital Television Standard (Doc A/53B) 8VSB and 16VSB demodulator
- 8VSB RF analysis including carrier power, MER, EVM and BER (RS performance)
- Supports H.264 SD and HD video
- Long-term logging and trending of modulation and TS parameters
- Multi-user remote access over LAN, internet or modem connection
- Real-time constellation display
- Compact 1RU module to monitor input and output of a transmitter



### RF MEASUREMENTS AND GRAPHICAL DISPLAYS

8VSB signal measurements include RF level, signal quality, symbol rate accuracy and frequency and BER. A graphical display shows actual constellation points in the I/Q plane. RF measurements are integrated into the DVStation-Mini² on-screen Status-at-a-Glance display.

### ALARMS AND REMOTE ACCESS

RF, modulation and transport stream parameters are monitored unattended through user-definable alarms. The comprehensive DVStation-Mini² alarm sub-system can trigger actions that include simple log entries, audible alarms, SNMP traps, contact closures, transport stream recording and user-programmable actions (email notification, SMS, etc). All configuration parameters and SNMP Network Management System can be accessed via remote X-Windows terminal, HTML browser, SNMP client or CORBA compliant database application.

## COMPREHENSIVE TRANSPORT STREAM MONITORING

Comprehensive real-time transport stream operational monitoring tests are performed including:

- Transport Stream health check
- Bandwidth of service and individual PIDs
- PCR jitter
- Automatic On-Air Content Validation
- EIT display monitoring
- Stream capture



DVStation-Mini<sup>2</sup> VSB Front Panel



DVStation-Mini<sup>2</sup> VSB Rear Panel



## EIT MONITORING

EIT tables have a specified minimum repetition rate. The DVStation-Mini<sup>2</sup> VSB checks for this as well as the structural integrity of each EIT table. The structural integrity test analyses tables for overlaps or gaps between the program entries as well as stale program entries. All these tests can be integrated with the comprehensive alarm sub-system for error notifications.

### SPECIFICATIONS

#### 8VSB Tuner/Demodulator

##### Form Factor

- 1 RU 19 inch rack-mountable
- 1 +10 to +30 degrees Celsius, Operating

##### Input (RF)

- Connector: 2 x BNC (IF & RF)
- Impedance: 75Ω
- Return Loss: 10 dB Typical
- RF Power Level: -25 dBm to -80 dBm\*
- Tuner Center Frequency Range: 57 MHz to 855 MHz
- IF Centre Frequency: 44 MHz

##### Input (ASI)

- Connector: BNC
- Impedance: 75Ω
- Max input bitrate: 32 Mbps

##### Output

- Connector: BNC
- Impedance: 75Ω
- Return Loss: >19 dB
- Complies with EN50083-9 (Annex B)

##### Standards

- ATSC Digital Television Standard (Doc A/53B) J.83-Annex D, 8VSB (trellis) and 16VSB

##### Reported Demodulation Parameters

- FEC Frame Lock

##### Measurements

- RF Carrier Level
- Symbol Rate and Pilot Frequency Offset
- EVM (Error Vector Magnitude)
- RS uncorrected Packet
- Line BER
- MER (Modulation Error Ratio)

##### Graphical Presentations

- Constellation

##### Alarms

- FEC Frame Lock Acquired/Lost
- Symbol Rate and Pilot Frequency Offset Exceed User-Specified Threshold
- BER Exceeds User-Specified Threshold
- RF Carrier Level Falls Below User-Specified Threshold
- EVM (Error Vector Magnitude) or MER Exceeds Specified Threshold
- RS Uncorrected Packets Exceed Specified Threshold

\*For QEF at 600 MHz

## Pixelmetrix Corporation

### The Americas

10097 Cleary Boulevard  
Suite 114 Fort Lauderdale  
Florida 33324 USA  
Tel: +1 954 472 5445  
Fax: +1 212 671 1549

### Asia Pacific

31 Kaki Bukit Road 3  
#07-03 Techlink  
Singapore 417818  
Tel: +65 6547 4935  
Fax: +65 6547 4945

### Europe

Affolternstrasse 47a  
8913 Ottenbach  
Switzerland  
Tel: +41 56641 0317  
Fax: +41 56500 0161

[www.pixelmetrix.com](http://www.pixelmetrix.com)

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