DVStation: Advanced Monitoring for Digital Networks

QAM Transport Stream Processor & Tuner

Demodulating Monitor and TSP

Three versions of the QAM tuner are available to provide support for all worldwide cable standards. Together with the TSP, they offer an all-in-one preventive monitoring solution for cable broadcast networks.

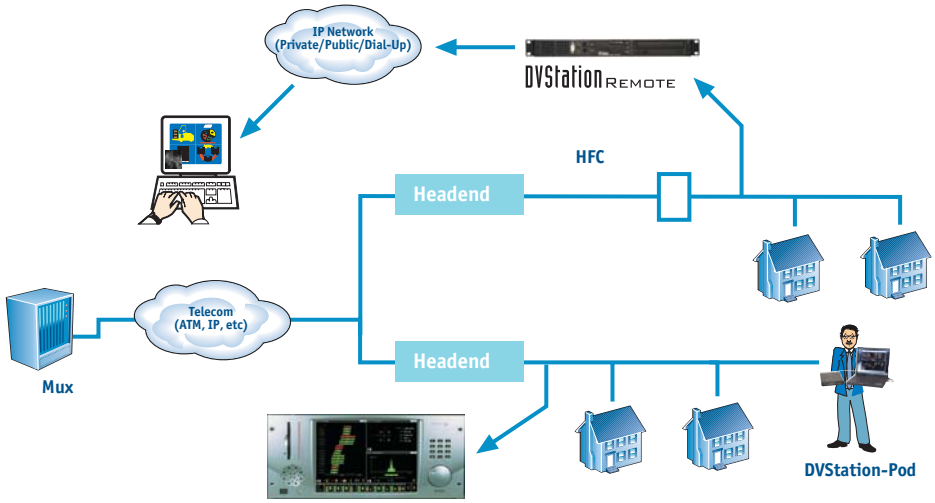
DVStation provides QAM modulation quality monitoring as well as transport stream monitoring in one system solution. The module pair perform QAM signal demodulation and a comprehensive suite of continuous RF, modulation, transport stream, and content validation tests.

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

The DVStation-Pod and DVStation-Remote products also offer this identical functionality in a pair of portable enclosures. Both enclosures can be rack-mounted together into a 1U high by 19-inch rack profile.

Key Features

- J.83 Annex A, B, and C
- DVB-C (EN 300 429) QAM demodulator
- RF input with complete coverage of 47 – 862 MHz range
- IF input at 36.125 MHz
- QAM RF analysis including MER, BER, and RS performance
- Long-term logging of modulation and TS monitoring measurements parameters for trend analysis
- Multi-user remote access over LAN, internet, or modem connection
- Real-time, high resolution constellation display
- Up to 10 complete DVB-C RF and TS monitoring solutions in one DVStation DVS210 mainframe
- Up to 21 complete DVB-C RF only monitoring solutions in one DVStation DVS210 mainframe



RF Measurements and Graphical Displays

Signal measurements include RF level, signal quality, and bit error ratios before and after the forward error correction chain.

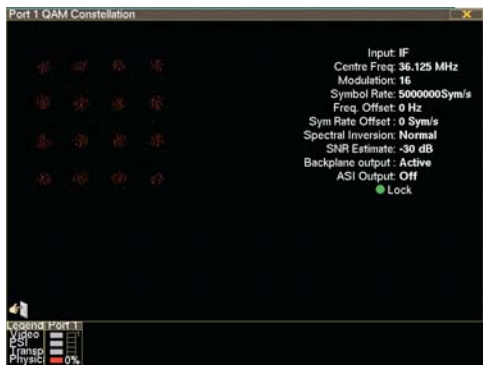
A high resolution graphical display shows actual demodulated constellation points on the I/Q plane.

RF measurements performed by the modules are integrated into the DVStation physical Status-at-a-Glance display.

Alarm and Remote Access

RF, modulation, and transport stream parameters can be monitored unattended through user definable alarms. The comprehensive DVStation Alarm Sub-System can trigger actions that include simple log entries, audible alarms, SNMP traps, contact closures, transport stream recording (96 MB), and even user programmable actions (email notification, SMS paging, etc).

All configuration parameters and SNMP Network Management System can be accessed via the local DVStation touch screen GUI, HTML browser, VNC, XWindows Terminal, SNMP client, or CORBA compliant database application.



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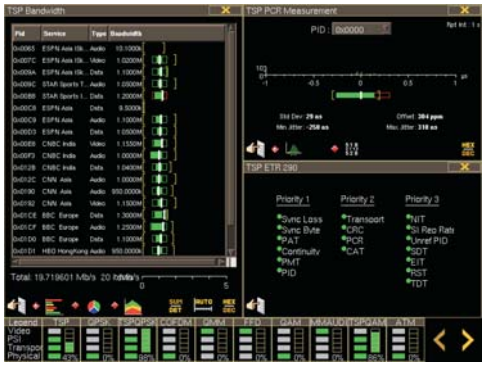
Comprehensive Transport Stream Monitoring

In parallel with RF measurements, comprehensive real-time transport stream operational monitoring tests are performed including:

- Bandwidth of services and individual PIDs
- PCR jitter
- ETR-290 health checks
- Automatic On-Air Content Validation
- IP traffic monitoring
- MHP (Multimedia Home Platform)
- Stream capture

For a complete description of all transport stream related monitoring capabilities, consult the Pixelmetrix Transport Stream Processor (TSP) datasheet.



Standard	RF BW	IF Frequency	Geographhy
***** (based on J.83 Annex A	8 MHz	36.125 MHz	Global standard
J.83 Annex B	6 MHz	44.000 MHz	North America
J.83 Annex C	6 MHz	44.000 MHz	Japan

	J.83 Annex A	J.83 Annex B	J.83 Annex C
RF Input			
Connector	BNC		
Input Impendance	75 Ohm		
Frequency	47.0 to 862.0 MHz	54.0 to 858.0 MHz	
Return Loss	13 dB typ. , 10 dB min	12 dB typ. , 9.5 dB min	
Input Power Level	(-)15 to (+)20 dBmV		
Bandwidth	8 MHz	6 MHz	
Noise Factor	7 dB typ.		
SSB Phase Noise	(-)85 dBc/Hz, max @ 10kHz offset		
Image Frequency Rejection	55 dB typ. , 48 dB min	70 dB typ. , 50 dB min	
Power Measurement	(-)75 dBm to (-)25 dBm, <+/-3 dB, +/- 1 dB typ.		
Inherent MER	36 dB typ.		37 dB typ.
IF Input			
Connector	BNC		
Input Impendance	75/50 Ohm		
Frequency	36.125 MHz	44.0 MHz	
Return Loss	>19dB		
Input Power Level	(-)30 to (+)14 dBm	(-)32 dBm to (-)15 dBm	
Bandwidth	8 MHz	6 MHz	
Inherent MER	40 dB typ.		
Power Measurement	(-)30 dBm to (-)10 dBm, <+/0.3 dB typ.		

***Input Impedance for IF is a factory option.
**Input Power Level range is based on QEF for QAM-64 @ maximum Symbol Rate

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