



DVStation: Advanced Monitoring for Digital Networks

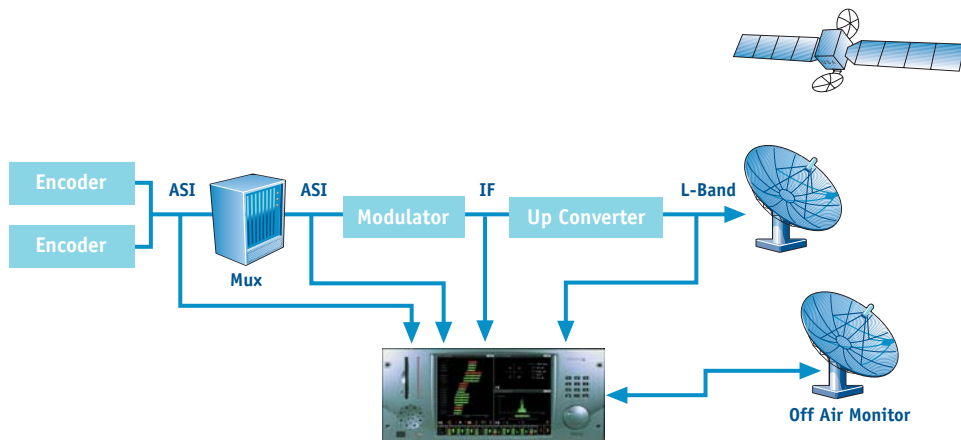
QPSK Intermediate Frequency TSP

The QPSK TSP is a 70 MHz intermediate frequency signal and performance monitor module for DVStation™. It provides real-time evaluation of QPSK modulation quality, monitors RF characteristics and has a real-time implementation of the general transport stream health checks according to DVB TR101-290.

Impairments, such as Bit Error Ratio (BER) and Reed-Solomon uncorrected block error, are quickly identified.

KEY FEATURES

- Real-time constellation display
- Transport Stream Processor Functionality
- 70 MHz intermediate frequency
- Alarm and performance logging management of:
 - RF carrier level
 - Signal to Noise Ratio (SNR)
 - Bit Error Ratio (BER)
 - Error Vector Magnitude (EVM)
 - Modulation Error Ratio (MER)
 - Reed Solomon uncorrected block counts (RS UNCORR)
- HTML, VNC, X-Window, SNMP and CORBA Remote Control



SIGNAL AND PERFORMANCE MONITOR

DVStation™ QPSK IF TSP can monitor RF carrier frequency/level, Signal to Noise Ratio (SNR), Bit Error Ratio (BER), Error Vector Magnitude (EVM), Modulation Error Ratio (MER) as well as Reed-Solomon uncorrected block counts.

Impairment detection and problem isolation of picture quality, transport protocol, and RF signal performance with full time correlation is achieved by combining the DVStation™ QPSK IF TSP, and Quality Monitor Module (QMM).

A quick look at the DVStation™ log file reveals the full relationship between RF signal impairments and quality.

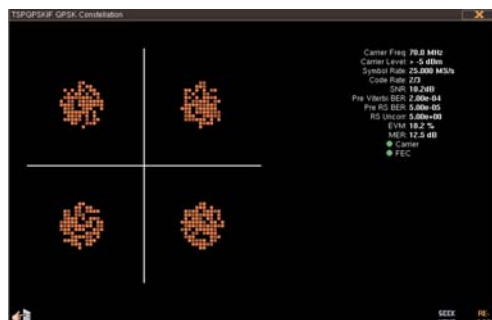
IMPAIRMENT DETECTION

The QPSK IF TSP supports specific measurement functions and status indicators for use in evaluating and monitoring received signals.

Alarm thresholds can be set on any of the DVStation™ QPSK IF TSP's parameters:

- RF signal level threshold
- Signal to Noise Ratio (SNR) threshold
- Error Vector Modulation (EVM) threshold
- Bit Error Rate (BER) threshold

Correlating quality data with other modules such as TSP or QMM enables impairment sources to be quickly identified.



70 MHZ INPUT

The module features a standard 70 MHz intermediate frequency input allow you to monitor performance between the QPSK modulator and the upconverter.

REAL-TIME CONSTELLATION DISPLAY

The constellation measurement is based on a matrix of 2000 I/Q symbol points. It shows real-time display of the QPSK constellation.



TRANSPORT STREAM PROCESSOR FUNCTIONALITY

In addition to QPSK IF measurement, QPSK IF TSP offers full TSP functionality, allowing you to monitor both QPSK signals and the embedded transport stream with one card.

Transport Stream functionality includes bandwidth by service, transport stream capture, and automatic on-air content validation.

SPECIFICATIONS

Input Signal Format

- ETSI EN300421 (DVB-S)
- Connector type: BNC (75Ω)
- 70MHz IF signal
- Symbol rate 1 Mbaud to 30 Mbaud
- Code rate 1/2, 2/3, 3/4, 5/6, 6/7, 7/8
- IF Power level 0 dBm to -35 dBm

Impairment Detection

- IF carrier level
- IF frequency
- Signal to Noise Ratio (SNR)
- Bit Error Rate (BER)
- Error Vector Magnitude (EVM)
- Modulation Error Ratio (MER)
- Reed Solomon uncorrected block error counts (RS UNCORR)



Pixelmetrix Corporation

The Americas

965 N. Nob Hill Rd. #114
Ft. Lauderdale, FL 33324
Tel: 954-472-5445
Fax: 954-472-6989

Asia Pacific

31 Kaki Bukit Road 3
#07-03 Techlink
Singapore 417 818
Tel: +65 6547 4935
Fax: +65 6547 4945

Europe

Haldenstrasse 24
CH 8967 Widen, AG
Switzerland
Tel: +41 79742 7454
Fax: +41 86079 742 7454

www.pixelmetrix.com

Ref: PPN30131
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