

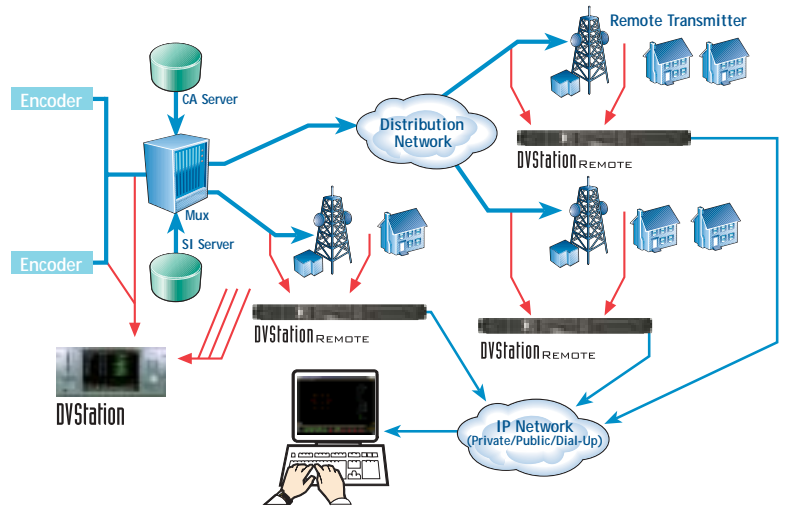
service integrity  
signal integrity  
remote monitoring

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DVStation: Advanced Monitoring for Digital Networks

# COFDM TSP and DVB-T Tuner



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## SPECIFICATIONS

### COFDM TSP and DVB-T Tuner

#### Standards

- ETSI EN 300 744 (DVB-T)
- ETSI TR 101 290 (Measurement Guidelines for DVB Systems)

#### Form Factor

- Standard DVStation™ series hot-swappable module, 2 slots
- DVStation-Pod module

#### Input

- Connector: BNC
- Impedance: 75Ω
- Return Loss: 8 dB Typical
- RF Power Level: -15 to -85 dBm \*
- Tuner Center Frequency Range: VHF 174 to 238 MHz, UHF 470 to 862 MHz
- Tuner Channel Bandwidth: 7 or 8 MHz
- Demodulation:
  - Channel Bandwidth: 7, 8 MHz
  - Transmission Mode: 2K, 8K
  - Constellation: QPSK, 16-QAM, 64-QAM
  - Hierarchical:  $\alpha = 1,2,4$  (demodulation of single priority), user selectability
- Code Rate: 1/2, 2/3, 3/4, 5/6, 7/8
- Guard Interval: 1/32, 1/16, 1/8, 1/4

#### Performance

- Echo Power Compatibility: 0 dB
- PAL Co-Channel Rejection: +12 dB

#### Reported Demodulation Parameters

- Demodulator Lock
- Transmission Mode
- Constellation
- Hierarchy Information
- High Priority Code Rate
- Low Priority Code Rate
- Match of TPS Data vs Actual Modulation

#### Measurements

- RF Carrier Level
- RF Carrier Centre Frequency Offset
- SNR (Signal to Noise Ratio)
- MER (Modulation Error Ratio)
- BER (Bit Error Ratio) Before Viterbi (Inner) Decoder
- BER (Bit Error Ratio) Before RS (Outer) Decoder
- TS Packet Error Count After RS (Outer) Decoder
- Percentage of Carriers Below Confidence Threshold

#### Graphical Presentations

- Constellation: Pilot & Data Carriers (unique colour for each)
- Spectral Power: Relative Power Distribution Over All Carriers
- Carrier Confidence: MER Distribution Over All Carriers
- Impulse Response: Echo Power vs Time or Distance

#### Alarms

- Demodulator Lock Lost/Acquired
- TPS Data vs Actual Modulation Match Lost/Acquired
- RF Carrier Level Falls Below User Specified Threshold
- Percentage of Unconfident Carriers Rises Above User Specified Threshold
- SNR Falls Below User Specified Threshold
- MER Falls Below User Specified Threshold
- BER Before Viterbi Decoder Rises Above User Specified Threshold
- BER Before RS Decoder Rises Above User Specified Threshold
- TS Packet Error Event

#### Transport Stream Testing

- Consult the Pixelmetrix Transport Stream Processor (TSP) datasheet.

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\*Measured at 474MHz, 8MHz, 2K, QPSK, CR=1/2, GI=1/4, BERpreRS<2x10<sup>-4</sup>

