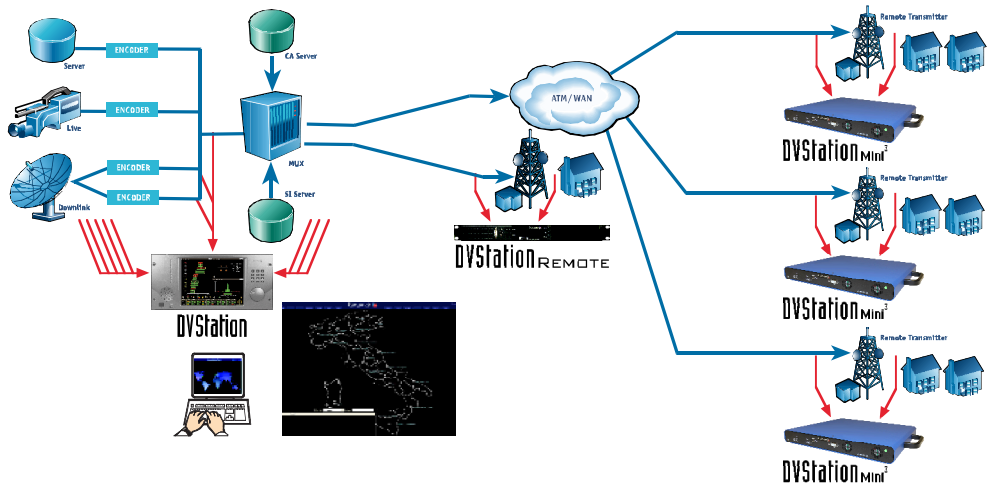


DVStation-Mini³ DVB-T

OVERVIEW

The DVStation-Mini³ DVB-T is a cost-effective, full featured monitoring probe designed for 24/7 operational monitoring and assurance of the quality and continuity of DVB-T services. With comprehensive and in-depth checks of both the radio frequency (RF) as well the transport stream (TS) layers, the DVStation-Mini³ DVB-T raises notifications for every unacceptable deviation from the expected norm.

When deployed on every transmitter within the network, the DVStation-Mini³ DVB-T provides unparalleled visibility into the quality of service as seen by your target audience. Features such as video thumbnail generation for H.264 video streams in SD and HD ensure that your investment in DVB-T monitoring remains future-proof.



MONITORING DIGITAL TERRESTRIAL TRANSMISSION

The DVStation-Mini³ DVB-T is an affordable monitoring and analysis tool, designed with consideration for the numerous monitoring points within a DTT network topology. With in-depth RF measurement capability and comprehensive TS analysis, the DVStation-Mini³ DVB-T provides visibility of the transmission, all the way from the physical to the content layers.

With configurable thresholds for every data point measured, the DVStation-Mini³ DVB-T can be customized for every network operations. SNMP TRAP support, customizable scripts for contact closure alarming and the capability to send an SMS/email ensures that no error or warning goes unnoticed. All errors and warnings can also be retrieved for analysis.

RF monitoring

With a high MER resolution capability and constellation display, the DVStation-Mini³ DVB-T goes above and beyond mere RF measurements to ensure that DVB-T modulators and transmitters are working as expected. Tracking transmitter health is the first step in quality assurance of terrestrial transmission.

The DVStation-Mini³ DVB-T can operate in SFN monitoring mode. DTT has the added complexity of managing synchronization amidst adjacent towers when transmitting on a single frequency. A drift in synchronization between transmitters can reduce the coverage area. With impulse response masking, the DVStation-Mini³ DVB-T can detect potential synchronization drifts before subscribers are affected. It can also be used as a portable troubleshooting tool. Designed to operate in a mobile environment, it comes with a carry-handle and shock-mounted storage.

TS monitoring

The DVStation-Mini³ DVB-T provides in-depth TS analysis. With regional content insertion deployed across geographically diverse DTT networks, TS integrity needs to be ensured deep within the network. The DVStation-Mini³ DVB-T allows comprehensive TR 101 290 and SI table checks to ensure that the TS structure is up to specification and that all the services are accessible by subscribers.

Bandwidth allocation is another important data point that forms the basis of most Service Level Agreements (SLA) between content providers and DTT network operators. Bandwidth allocations can go wrong at various places, including but not limited to, multiplexer or encoder setup. The DVStation-Mini³ DVB-T can support SLA assurance by keeping track of bandwidth slices used by each service and its metadata.

KEY FEATURES

- DVB-T (EN 300 744) COFDM demodulator
- In-depth RF monitoring
 - High MER resolution
 - SFN monitoring
 - Constellation and spectrum visualization
 - Impulse response visualization and masking
 - Complete forward error correction chain monitoring
- Comprehensive TS analysis
 - TR 101 290 compliance - Priority 1, 2 and 3 plus SFN monitoring
 - MPEG-2 and H.264 video thumbnail generation for both SD and HD standards
 - Real-time PSI/DVB SI decode
 - Complete forward error correction chain
 - Bandwidth measurement and logging
- ASI input monitors transmitter input
- Sequential round-robin RF and TS monitoring of different channels
- Configurable thresholds for custom monitoring requirements
- SNMP GET, SET and TRAP support
- Configurable alarm actions including:
 - GPI contact closure
 - Email, SMS, chat, etc
- Shock-mounted hard disk for portable operation
- 19 inch rack-mountable, 1RU height
- Local KVM capability - no PC required

OPTIONS

On-Air Content Validation (OCV)

Automatically identify discrepancies between the expected baseline and actual broadcast content: missing or extra services, incorrect service names, loss of subtitles, wrong language or incorrect age-rating.

DVB-H analysis

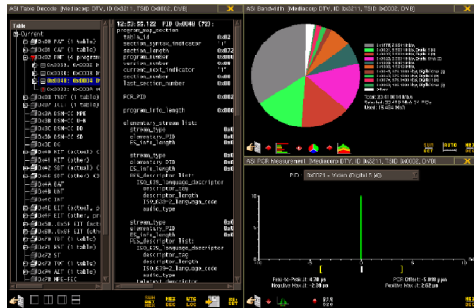
Analyze time-slice generation and DVB-H FEC performance. Long-term performance monitoring and logging capability.

Additional ASI Input

Monitor ingest to the transmitter site. ASI input capped at 32Mbps TS bitrate.

High MER

Increase MER to 40dB.



DVStation-Mini³ DVB-T front panel



DVStation-Mini³ rear panel

APPLICATION SCENARIOS

Transmitter monitoring

- Detect age-related transmitter performance degradation with a high MER resolution capability
- Keep tabs on your modulator and transmitter setup with constellation visualization

Single Frequency Monitoring (SFN) monitoring

- Detect drifts in transmitter synchronization using impulse response masks, before these cause problems
- Ensure DVB-Compliance with MIP tests

Portable troubleshooting tool

- Comprehensive RF and TS analysis in one unit
- Shock-mounted storage for use in mobile environments

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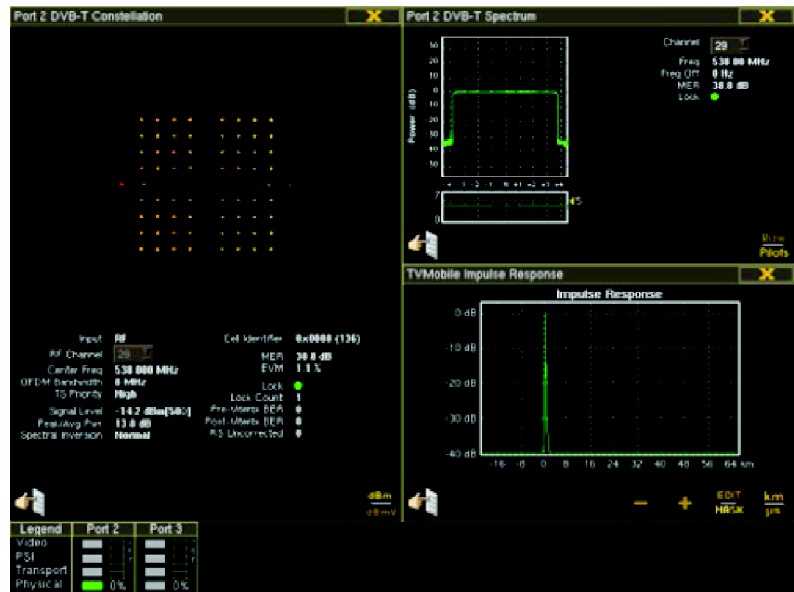
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SPECIFICATIONS

Standards

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

Mechanical Characteristics

- 1RU Portable with handle or 19 inch rack-mountable
- Operating Temperatures
 - +10°C to +40°C
- Storage Temperature
 - 0°C to +50°C

Electrical Characteristics

- Power Input
 - 90-240 V AC; 43-63 Hz
- Current Requirement
 - 2.5A

Control Interfaces

- HTML Web Browser
- VNC Remote Client

Mass Storage

- 80 GB shock-mounted HDD

Chassis Dimensions

- 342.2 mm W x 314.92 mm D x 40.01 mm H

System Interfaces

- Management Port
 - 10/100/1000 Base-T
 - RJ-45 Copper Connector
- Serial Port
 - 9-pin DE-9P Connector
- GPI Contacts
 - 3 Contacts
 - 9-pin DE-9P Connector
- USB 2.0 Connectors (2x)
- VGA (HD-15) Connector

Input (IF)

- Connector: BNC
- Impedance: 50Ω or 75Ω, user-configured
- Return loss: > 30 dB at 50Ω, > 22 dB at 75Ω
- Signal level: -35 to 0 dBm*
- Center frequency: 4.57, 36.125 and 44 MHz

Input (RF)

- Connector: BNC
- Impedance: 75Ω
- Return loss: > 15 dB
- Signal level: -85 to -5 dBm*
- Center frequency: 47 to 1000 MHz

* For stronger signals, attenuators can be used

Demodulation

- All DVB-T 2K and 8K mode modulations as per EN 300 744
- Bandwidths of 6 MHz, 7MHz and 8 MHz

Reported Demodulation Parameters

- Signal lock and lock count
- Mode, constellation, hierarchy and code rate(s) of actual modulation and TPS data
- Cell identifier
- Spectral inversion
- MER vs Carrier
- Phase Jitter

Measurements

- Signal level
- Peak to average ratio
- Center frequency offset
- Symbol rate offset
- MER and EVM
- Pre-Viterbi and post-Viterbi BER
- RS uncorrected count

Network Management

- SNMP MIB for NMS integration

Distributor Contact

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