EDGEPROBE ADVANCED DVB-S/S2

RF, ASI, IP Monitoring

THE IDEAL TOOL FOR ACCURATE & COST-EFFECTIVE MONITORING OF THE QUALITY OF DTV DISTRIBUTION OVER SATELLITE LINKS.

Combined with a Network Monitoring System or not, the EdgeProbe Advanced provides a powerful network alert & diagnosis tool allowing DTV network operators to monitor global trends and anticipate potential failures. EdgeProbe Advanced provides monitoring of the signal at different levels:

- RF satellite distribution: measures key RF signal parameters (Level, CNR, Eb/N0, link margin, BER) and indicates the modulation parameters
- MPEG-2 TS: checks the ETSI TR 101 290 (Priority 1, 2 & 3) conformance and provides optional Quality of Service indicators (Service Availability, Service Degradation)
- T2-MI: checks the distribution link at L1 pre & post signaling level
- OneBeam/SingleIllumination: checks the T2-MI marker and In-Band specific PIDs

APPLICATIONS

- 24/7 Monitoring and Maintenance of both Uplink and Downlink sites (RF & Baseband)
- Generation of Service Availability reports for Service Level Agreements
- Gateway from RF to ASI or IP
- Live transmission recorder

BENEFITS

- Standalone, easy to use and configure, fast deployment, SNMP compatible
- Increase customer satisfaction by detecting & preventing DTV network degradations before your customers do
- Reduce site maintenance cost by anticipating and identifying issues
- Detect Satellite Distribution issues before it affects the whole network
- Plan and improve the network configuration by identifying global trends
- Remotely accessible, compatible with low bandwidth control networks (GPRS/3G/4G)
- Low power consumption 25W

Monitor DVB-S & DVB-S2 signals at uplink/downlink through the RF inputs (up to 4 in 1RU)

Signal Level, CNR, Eb/N0, Link Margin, BER, modulation parameters

Multistream support, PLS support

LNB powering & configuration

Frequency range (L-band after LNB down conversion): 950 to 2150 MHz

DVB-S, DVB-S2; C-band, Ku-band, Ka-band

Baseband monitoring and TS forward over ASI/IP output

Monitor TS & T2-MI & BTS baseband distribution links at Head-End output and TX site input through the ASI and IP inputs (up to 4 in 1RU)

Forward the demodulated analyzed TS over ASI or IP output (T2-MI PLP extraction support)

VLAN support on the IP Data link

Complete MPEG-2 TS Monitoring

ETSI TR 101 290 Priority 1, 2, 3

QoS indicators (optional): Service Availability Error & Service Degradation Error

Verify Regionalization: Service Plan view, PID/Service presence, Scrambling

Service & components bitrates

T2-MI & OneBeam Monitor

ETSI TR 101 290 T2-MI packet alarms

T2 L1 pre/post signaling

T2-MI PLP TS analysis and extraction support

OneBeam: T2-MI marker and In-Band PID monitoring

32 GB of internal storage (up to 4 in 1RU)

Alarm logs up to 6 months

RF parameter trends up to 6 months

TS recording: manual, remote trigger

Internal GNSS receiver & Dual PSU - Hardware options

Internal GNSS: GPS & GLONASS support, for internal 1PPS reference signal generation

Dual Power Supply: one additional Power Supply can be installed on the equipment in order to ensure the power redundancy

Compatible with all Network Monitoring Systems

Powerful network alert & diagnosis tool: monitor global trends and anticipate potential failures

Compatible SNMP v2c and v2c INFORM for alarming and device configuration

Web GUI access: support of low bandwidth Internet connection (3G, GPRS/4G)

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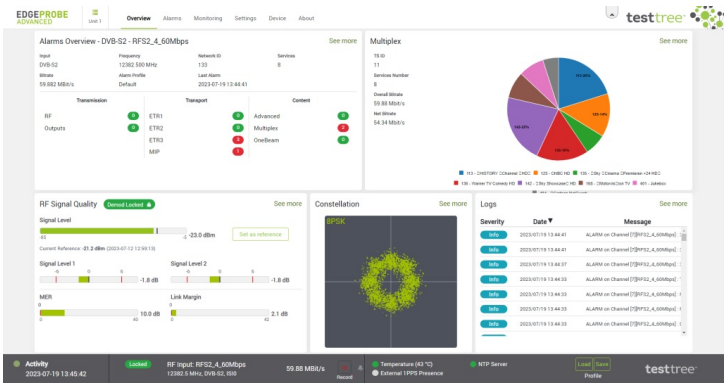

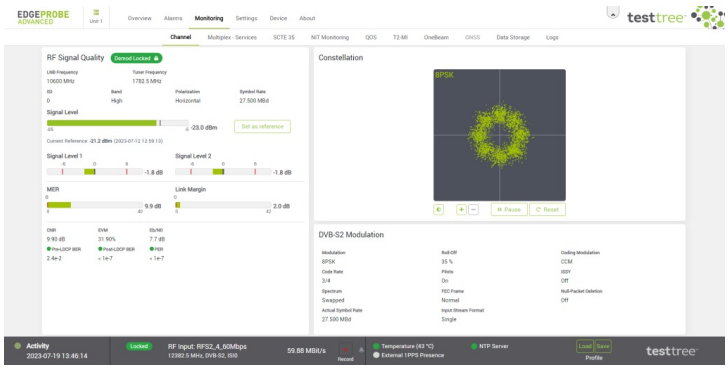

INTERFACES

RF	*
Connector In	Up to 4x RF inputs (F-type female – 75 Ω) (LNB power & control)
Standards	DVB-S, DVB-S2
Frequency range	950 to 2150 MHz (after LNB down conversion)
Baseband TS	Up to 4x ASI in/out (BNC-type female – 75 Ω) Up to 4x Gigabit Ethernet for Data in/out (VLAN support)
GNSS & Time Reference	1x GNSS antenna input (SMA-type – 50 Ω) (GPS/GLONASS) HW option, 3.3V antenna power up 1x 1PPS input (BNC-type female – 50 Ω) 1x 10MHz input (BNC-type female – 50 Ω)

PHYSICAL

Height: 45 mm / 1.7 in, Width: 440 mm / 17.3 in, Depth: 300 mm / 11.8 in
Format: 1 RU, width 19", Power supply: 100-240 VAC +/-10%
Power consumption: 12.5W per active monitoring Unit
Redundant Power Supply (HW option)

ENVIRONMENT

Operating temp.	-20 to 55°C / -4 to 131 °F
Storage temp.	-20 to 70°C / -4 to 158°F
Humidity	0 to 95%, non condensing

MODCOD

DVB-S	QPSK, code rates: 1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2	CCM, VCM and ACM modes supported, roll-off: 15%, 20%, 25%, 35% QPSK code rates: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK code rates: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK code rates: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK code rates: 3/4, 4/5, 5/6, 8/9, 9/10
Symbol rates	DVB-S 65Msps QPSK DVB-S2 65Msps QPSK , 60Msps 8PSK, 45Msps 16APSK

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RoHS

MONITORING FEATURES

RF Monitor	*
Demodulation status	Lock / Unlock
Signal level	-95 to -5 dBm (0.1 dBm resolution, ±2 dBm accuracy)
MER	0 to 40 dB (0 to 36 dB: ±1 dB, 36 to 40 dB: ±2 dB) Constellation display
CNR	-3 to 40 dB (0.1 dB resolution, ±0.3 dB accuracy)
BER	DVB-S: Pre-Viterbi, Post-Viterbi DVB-S2: Pre-LDPC, Post-LDPC, PER
*	Eb/N0, link margin, modulation parameters MultiStream support, PLS support
T2-MI Monitor	ETSI TR 101 290 T2-MI packet, L1 pre/post signaling PLP extraction and TS PLP analysis
OneBeam/Single Illumination	Monitoring of specific PID from the DTH stream used to recover the T2-MI distribution on TX site: T2-MI marker, In-Band
TS Monitor Base	ETSI TR 101 290 Priority 1 and 2
TS Monitor Advanced	ETSI TR 101 290 Priority 3
QoS Monitor	ETSI TR 101 290 SAE, SDE
Service Plan Monitor	Verify regional services, Service & PID bitrates, Scrambling, Service & PID presence
Scanning	Monitor sequentially multiple channel frequencies or PLPs
Extended Memory	Up to 4x 32 GB of internal storage: event logs up to 6 months, trends up to 6 months, TS recording

ORDERING CODES

EdgeProbe Advanced DVB-S/S2	**DVB-S/S2 Advanced Monitoring Probe**
Options	**SW ACCESS** : RF Monitoring, Round-Robin, ETSI TR 101 290 Monitoring (Priorities 1, 2, 3) **SW PERFORMANCE** : RF Monitoring, Round-Robin, ETSI TR 101 290 Monitoring (Priorities 1, 2, 3), Service Plan & Multiplex View **SW ULTIMATE** : RF Monitoring, Round-Robin, ETSI TR 101 290 Monitoring (Priorities 1, 2, 3), Service Plan & Multiplex View, IP Monitoring (Jittering, RTP FEC...), T2-MI Monitoring, OneBeam Monitoring **EPA3-In200VRedundant** : Add 1x redundant 220V AC input in the EPA3 chassis (hardware) **EPA3-GNSS** : Add GNSS support on the module (hardware)

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