EDGEPROBE ADVANCED ISDB-T/TB

ISDB-T/Tb

Head-End, SFN TX & SFN Reception DTTV Monitoring: RF, ASI, IP

THE IDEAL TOOL FOR ACCURATE & COST-EFFECTIVE MONITORING OF THE QUALITY ACTUALLY DELIVERED TO ALL POINTS OF ISDB-T AND ISDB-TB NETWORKS.

Combined with a Network Monitoring System or not, the EdgeProbe Advanced provides a powerful broadcast network alert & diagnosis tool allowing DTV network operators to monitor global trends and anticipate potential failures.
EdgeProbe Advanced is able to monitor ISDB-T and ISDB-Tb signals at transmitter outputs, through its RF inputs (up to 4 in 1RU), as well as at modulator input and at Head-End/distribution links, through its ASI and IP inputs.

APPLICATIONS

- 24/7 Monitoring and Maintenance of both Head-End and TX sites (SFN/MFN, RF/Baseband)
- Generation of Service Availability reports for Service Level Agreements
- Rebroadcasting receiver: RF to ASI or IP, with transcoding capacities
- 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 TX sites maintenance cost by anticipating and identifying issues
- Plan and improve the network configuration by identifying global trends
- Remotely accessible, compatible with low bandwidth control networks (GPRS/3G)
- Low power consumption 20W

Accurate ISDB-T/Tb RF signal quality monitor

Signal Level, MER, SNR, BER per Layer A/B/C

Modulation parameters: TMCC, Layer A/B/C

RF Spectrum & Constellation display

RF shoulder attenuation

SFN monitor in TX or Reception area

Transmission site SFN monitor: quick identification of which TX site is causing SFN issues!

- RF Frame Delay & Drift
- Carrier Frequency Offset & Drift
- Before modulator: BTS stream integrity

SFN overlapping Reception Area monitor: Channel Impulse Response (Echo Delay and Level alarming thresholds) – with **TestTree's Unique Echo Pattern** monitor

TS monitor and forward over ASI/IP interfaces

Monitor TS & 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 analyzed TS over ASI or IP output

VLAN support on the IP Data link

Complete TS & BTS monitor

ETSI TR 101 290 Priority 1, 2, 3

BTS monitor: IIP packet and TMCC alarms

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

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

Service & components bitrates

Transcoding solution for confidence monitoring:

Coupled with a TRANSBOX device, EdgeProbe can provide service transcoding and forward to third-party analysis systems

Controlled by the EdgeProbe, the TRANSBOX performs:

– service extraction from the input TS (SPTS or MPTS)

– real-time audio/video transcoding: 1 to 10 Mbps output bitrate

– transcoded SPTS forward over IP Data

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 trigger)

Internal GNSS receiver (Hardware option)

Generates an internal 1PPS reference signal for SFN synchronization measurements (SFN Drift, Frequency Offset)

GPS & GLONASS support

Dual Power Supply (Hardware option):

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

Remote connection

Compatible with all Network Monitoring Systems, providing a 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)

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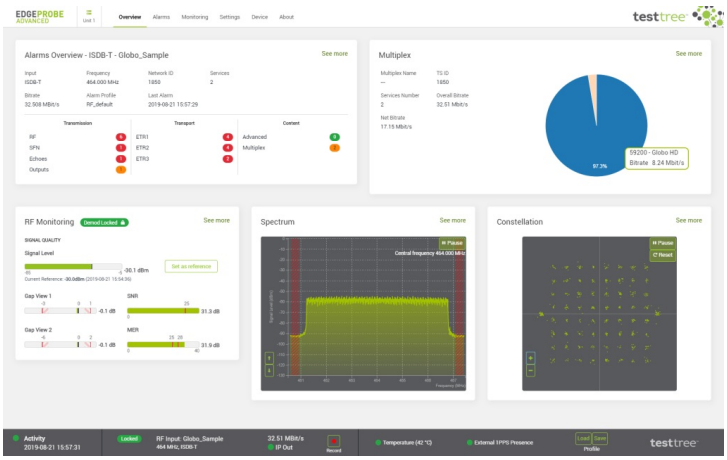

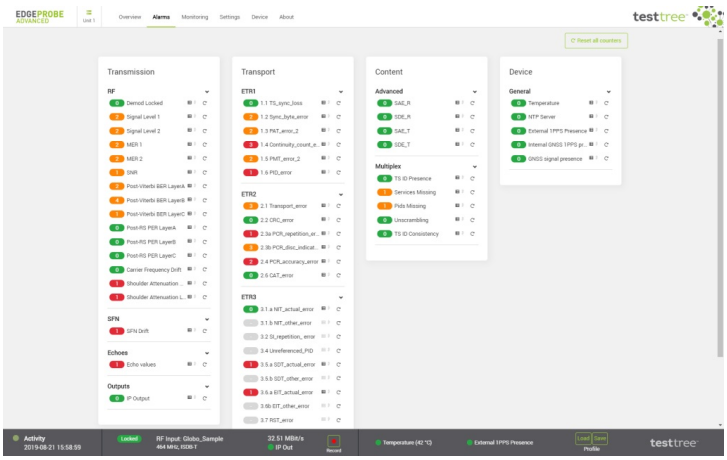

INTERFACES

RF	*
Connector In	Up to 4x RF inputs (default F-type female 75 Ω, or optional N-type female 50 Ω)
Standard	ISDB-T/Tb
Frequency range	40 to 1000 MHz
Sensitivity	-80 to -5 dBm; RF lock down to -80dBm
Channel bandwidth	6, 7 & 8 MHz
Control	Up to 2x Gigabit Ethernet for Web GUI, SNMP-V2C
Transport Stream (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)

MONITORING FEATURES

RF Monitor	*
Demodulation status	Lock / Unlock
Signal level	-90 to -5 dBm: measure range
MER	0 to 40 dB
SNR	0 to 40 dB
BER	Post-Viterbi, Post-RS per Layer A/B/C
Modulation parameters	TMCC, Layer A/B/C
.	RF Spectrum & Constellation display RF Shoulder Attenuation
SFN Monitor at RX site	Channel Impulse Response (CIR) monitoring in the SFN overlapping reception area: Echoes Delay and Power Level alarming masks With **TestTree's unique Echo Pattern** monitor: more reliable echo in error identification even if the main (strongest) echo suffers changes!
SFN Monitor at TX site	Quick identification of which TX site is causing SFN issues ! Time Synchronization: RF Frame Drift Frequency Synchronization: Carrier Frequency Offset (±1 Hz, resolution 0.1 Hz)
BTS Monitor	IIP, TMCC packets monitoring
TS Monitor Base	ETSI TR 101 290 Priority 1 and 2
TS Monitor Advanced	ETSI TR 101 290 Priority 3, QoS (SAE/SDE)
Service Plan	Verify regional services, Service & PID bitrates, Scrambling, Service & PID presence
Scanning	Monitor sequentially multiple channel frequencies over 1 RF input
Extended Memory	Up to 4x 32 GB of internal storage for: Event logs up to 6 months, Trends up to 6 months, TS recording

PHYSICAL

Height (1 or 2 monitoring units) : 45 mm / 1.7 in, Width: 440 mm / 17.3 in, Depth: 145 mm / 5.7 in
Height (4 monitoring units) : 45 mm / 1.7 in, Width: 440 mm / 17.3 in, Depth: 300 mm / 11.8 in
Format: 1 RU (19"), Power supply: 100-240 VAC ±10%
Power consumption: 10 W per active monitoring unit
Redundant Power Supply (HW option)

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ORDERING_CODES

EdgeProbe Advanced ISDB-T/Tb	ISDB-T/Tb 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...), BTS 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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