

EDGEPROBE ADVANCED

ATSC 3.0/1.0

RF & SFN Monitoring Receiver

THE IDEAL TOOL FOR ACCURATE & COST-EFFECTIVE MONITORING OF THE QUALITY ACTUALLY DELIVERED TO ALL POINTS OF ATSC 3.0/1.0 NETWORKS.



Combined with a NMS or TestTree's GlobalViewer, 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 transmission: measures key RF signal parameters (Power Level, SNR, BER), the SFN Drift and monitors the Channel Impulse Response (Echoes)
- STLTP: checks the distribution link integrity

APPLICATIONS

- 24/7 Monitoring and Maintenance:
 - Head-End: STLTP distribution (over IP, Satellite)
 - TX sites: RF transmission quality & stability, SFN synchronization
 - Reception area (SFN overlapping): RF signal quality & Echoes (w/ TX ID)
- Generation of Service Availability reports for Service Level Agreements
- Plan and improve the network configuration by identifying global trends

BENEFITS

- Standalone, easy to use and configure, fast deployment, SNMP compatible
- Reduce TX sites maintenance cost by anticipating and identifying issues
- Increase customer satisfaction by detecting & preventing DTV network degradations before your customers do
- Remotely accessible, compatible with low bandwidth control networks (GPRS/3G/4G)
- Low power consumption 25W

Monitor ATSC 3.0/1.0 signals at TX output through the RF inputs (up to 4 in 1RU)

Signal Level, SNR, BER LDPC iteration

SFN time synchronization: SFN Drift

Channel Impulse Response (Echoes): TX ID decoding and echo association

Compatible ATSC 1.0

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

Alarm logs & RF parameter trends* up to 4 months

CSV format files, available for download via web GUI or FTP connection (automation scripts)

Demodulated TS recording (*.ts) for ATSC 1.0

Dual Power Supply (HW option)

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

ATSC 1.0 TS monitoring

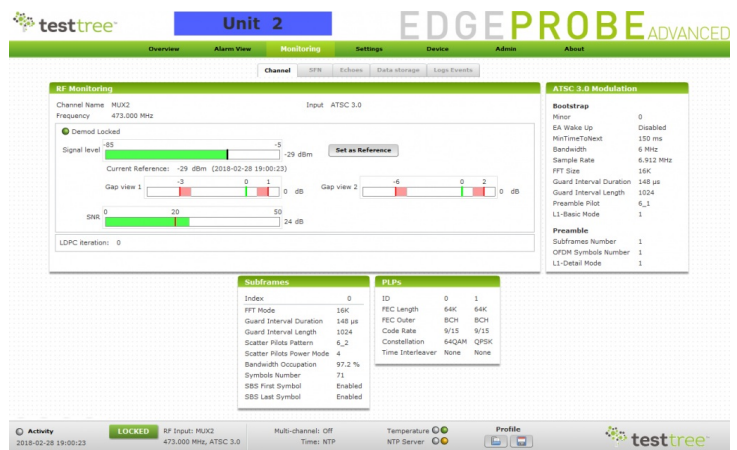
ETSI TR 101 290 priority 1, 2, 3

Multiplex Service structure: service/PID list, bitrate, scrambling/ PCR presence

Internal GNSS receiver (HW option)

Generates an internal 1PPS reference signal for SFN synchronization measurements – which is independent from the modulator's reference signal

GPS & GLONASS support



INTERFACES

RF Connector In	Up to 4x RF inputs (F-type female 75 Ω or N-type female 50 Ω)
Standards	ATSC 3.0/1.0
Frequency range	40 to 1000 MHz
RF Sensitivity	-80 to -5 dBm
BaseBand	Up to 4x Gigabit Ethernet for DATA in/out (VLAN support)
*	Up to 4x SMPTE 310M in/out (BNC-type female 75 Ω)
GNSS & Time Reference HW option	1x GNSS antenna input (SMA-type 50 Ω) (GPS/GLONASS), 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: -100 to -5 dBm SNR: 0 to 50 dB LDPC Iteration
Channel Impulse Response	CIR – Echoes: Delay/Level alarm mask per echo, TX ID detection and echo association
Synchronization Monitor	SFN Drift measured at RF level. Allows rapid identification of which TX site is causing SFN issues
ATSC 1.0 Transport Stream	MPEG-2 TS Monitor, ETSI TR 101 290 Priority 1, 2, 3
ATSC 1.0 Service Plan	Verify regional services, Service & PID bitrates, Scrambling, Service & PID presence
Scanning	Monitor sequentially (round-robin) multiple frequencies over 1 RF input. Monitoring status & context is kept between two successive monitoring rounds
Extended Memory	Up to 4x 32 GB of internal storage (per monitoring unit): alarm logs, RF trends* up to 4 months. CSV format files. Available for download via web GUI or FTP connection. Demodulated TS recoding (*.ts) files.

ORDERING CODES

EdgeProbe Advanced ATSC 3.0/1.0	ATSC 3.0/1.0 Advanced Monitoring Probe
<i>Included</i>	2 parallel Monitoring Units 2x (RF in, SMPTE 310M in/out, IP DATA in/out) RF Monitor : RF parameters, SFN synchronization, Channel Impulse Response 32 GB Internal Storage for 2 Monitoring Units : Event logs and RF trends storage up to 6 months Scanning Round-Robin : Sequential monitor of more than one input channels (RF, IP)
<i>Options</i>	ATSC 1.0 TS monitor : ATSC 1.0 TS monitor ATSC 3.0 STLTP Monitor : ATSC 3.0 STLTP Monitor Internal GNSS HW : GPS/GLONASS internal receiver generating internal 1PPS reference Dual Power Supply HW : Additional power supply for redundancy

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www.test-tree.com

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: 25W, 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