EDGEPROBE ADVANCED

DAB+

SFN TX and Reception Monitoring for DAB transmission

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



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 complete monitoring of the RF transmitted signal: key RF signal quality parameters (Level, MER, SNR, BER), time synchronization via the SFN Drift at the Transmitter level and the SFN reception area quality via the Channel Impulse Response (CIR) monitoring and the TII decoding.

APPLICATIONS

- 24/7 Monitoring and Maintenance of the SFN networks: TX transmission and SFN Overlapping Reception Areas
- 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 network degradations before your customers do
- Remotely accessible, compatible with low bandwidth control networks (GPRS/3G/4G)
- Low power consumption 25W

DAB/DAB+ monitoring through the RF inputs (up to 4 in 1RU)

Signal Level, MER, SNR, FIC BER, MSC BER (Pre/Post, per sub-channel)

Compatible Band III VHF (168 to 240 MHz)

Channel RF Spectrum and Constellation display

RF Shoulder Upper/Lower measurement

Mode I, II support; automatic detection

Local analog audio output: via front panel controls

SFN monitoring at TX or Reception area

On TX site:

- RF signal time synchronization; detects up to +/- 1.2 seconds time drift

In Reception area (SFN overlapping area):

- Channel Impulse Response (Echoes), with advanced **Echo Pattern** mode: better echo in error identification even if the main (stongest) echo suffers changes; no time shift if the main echo disappears
- TII detection (Main/Sub ID)

DAB Transport monitoring

Ensemble Service Plan: check ensemble structure and alarm Service ID presence

Service information (SI)

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)

Internal GNSS receiver (HW option)

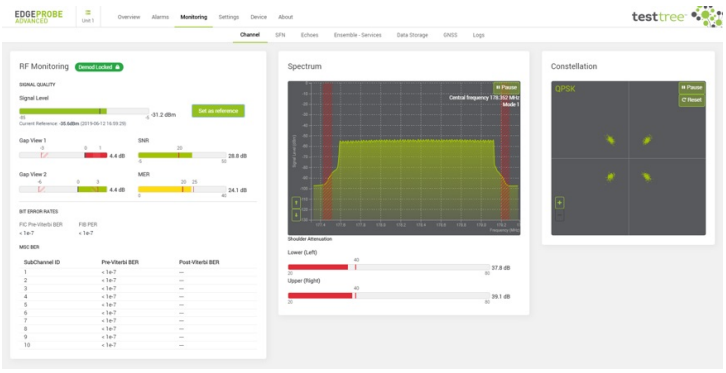
Generates an internal 1PPS reference signal for SFN synchronization measurements – which is independent from the modulator's reference signal

GPS & GLONASS support

Dual Power Supply (HW option)

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





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RoHS

INTERFACES

RF Connector In	Up to 4x RF inputs (N-type female 50 Ω)
Standards	DAB/DAB+
Frequency range	168 to 240 MHz
RF Sensitivity	-80 to -5 dBm; RF lock down to -80dBm
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) Up to 4x analogue audio outputs (TRS 3.5mm) – front panel

MONITORING FEATURES

RF Monitor	Demodulation status: Lock / Unlock Signal level: -100 to -5 dBm measure range, ± 1 dBm MER: 0 to 40 dB, ± 1 dB, 0.1 dB resolution SNR: 0 to 50 dB, ± 1 dB, 0.1 dB resolution FIC Pre-Viterbi BER MSC Pre/Post-Biterbi BER (per sub-channel) Channel RF Spectrum and Constellation display RF Shoulder Upper/Lower attenuation
Channel Impulse Response	CIR – Echoes: TII extraction (Main ID, Sub ID). Validation of the field reception quality. With **TestTree's unique Echo Pattern** mode: better echo in error identification when the main (strongest) echo suffers changes; prevent time shift of all echoes when main echo disappers.
Synchronization Monitor	SFN Drift measured at RF level. Allows rapid identification of which TX site is causing SFN issues
Ensemble Service Plan	Check ensemble structure: service & component information Alarming Service ID presence Service information (SI)
Scanning	Monitor sequentially (round-robin) multiple frequencies over 1 RF input. Monitoring status & context is kept between two sucessive 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

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

ORDERING CODES

EdgeProbe Advanced DAB/DAB+	**DAB/DAB+ Advanced Monitoring Probe**
Included	**2 parallel Monitoring Units 2x (RF in, ETI-NI in/out, IP DATA in/out)** **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 channel (RF frequency, TS over ETI or IP inputs)
Options	**RF Monitor** : RF parameters, SFN synchronization, Channel Impulse Response (TII extraction) **Transport & Ensemble Service Monitor** : Monitor the description of the multiplex: service/component list **RF N-type connector HW** : N-type 50 Ω (by default HW is provided with F-type 75 Ω connector) **Internal GNSS HW** : GPS/GLONASS internal receiver generating internal 1PPS reference **Dual Power Supply HW** : Additional power supply for redundancy **Quad ADV HW** : Add two additional monitoring units, total of 4x (RF in, ETI in/out, IP DATA in/out) **RF N-type connector for Quad ADV HW** : N-type 50 Ω (by default HW is provided with F-type 75 Ω connector) for Quad ADV

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www.test-tree.com

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