

EDGEPROBE ADVANCED

DVB-C/C2

RF, ASI, IP Monitoring!



EDGEPROBE ADVANCED DVB-C/C2 IS A DIGITAL CABLE STANDALONE ANALYZER USED FOR CONTINUOUS MONITORING OF CRITICAL RF, MPEG-2 TS OR C2 FRAME PARAMETERS AND HEALTH DIAGNOSIS OF CABLE NETWORKS.

Combined with a **Network Monitoring System** or not, the EdgeProbe Advanced provides a powerful network alert & diagnosis tool allowing Cable network operators to monitor global trends and anticipate potential failures.

EdgeProbe Advanced is able to monitor **DVB-C** and **DVB-C2** signals at transmitter outputs, through its **RF inputs (up to 4 in 1 U)**, as well as at modulator input and at Head-End/distribution links, through its **ASI and IP inputs**.

EdgeProbe Advanced can continuously log all events & measurement values in an archive file, and can send **SNMP** traps if selected parameters' values exceed defined thresholds. For troubleshooting, a low bandwidth remote Web GUI gives access to all monitored parameters, from RF to baseband.

EdgeProbe Advanced provides monitoring of the signal at different levels:

- **RF transmission:** measures key RF signal parameters (Level, MER, 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).

The **Service Plan** provides the means to check the **description of your multiplexes** and verify your **regional services**.

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

- **STAND ALONE ANALYZER (24/7)**
- **MULTI CHANNELS MONITORING**
- **MULTI STANDARDS MONITORING**
- **REAL-TIME MONITORING**
- **RF, TS ANALYSIS**

CHARACTERISTICS

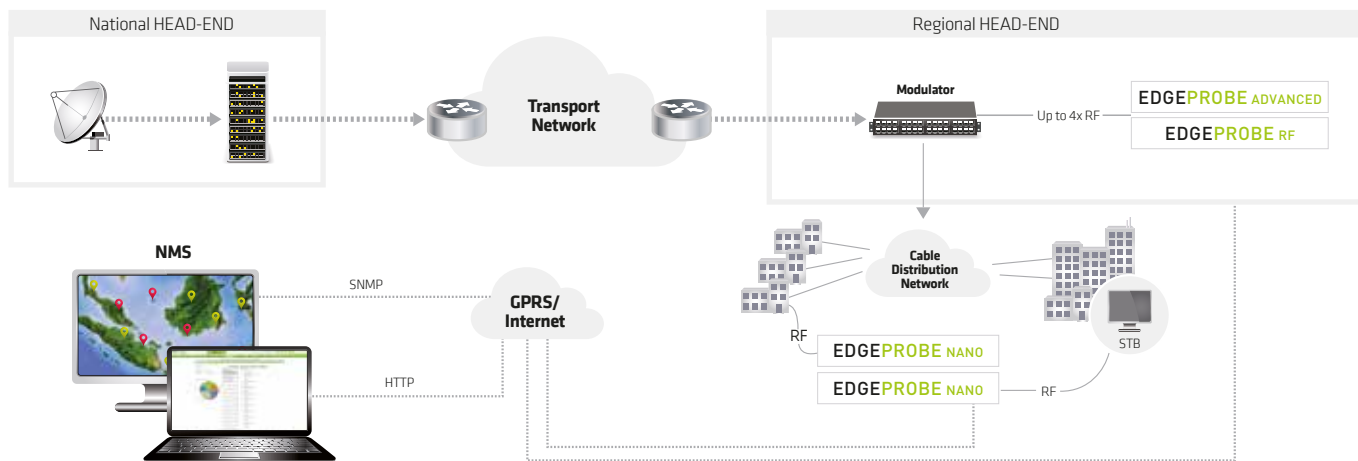
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|---|
| 1, 2 or 4x [RF in, ASI in/out, IP Data in/out (VLAN support)] in 1 RU |
| 1PPS (internal/external), 10MHz |
| 1 or 2x IP Control for low bandwidth remote Web GUI |
| EdgeProbe Advanced models: DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb |
| RF accurate measurements: signal level, MER, BER |
| Multiplex & Service Plan check |
| ETSI TS 101 290 validation: Priority 1, 2, 3 and QoS SAE/SDE |
| TS over ASI out or IP forward for video QoE monitoring |
| 1, 2 or 4x 32 GB storage for TS record and 6 months logs & trends |
| Internal GNSS receiver (GPS, GLONASS), dual Power Supply |

APPLICATIONS

- 24/7 Monitoring and Maintenance of both Head-End and TX sites
- Multi-channel monitoring
- Generation of Service Availability reports for Service Level Agreements
- Rebroadcasting receiver: RF to ASI or IP
- Live transmission recorder

KEY BENEFITS

- **Standalone, easy to use and configure**, fast deployment, SNMP compatible
- Increase customer satisfaction by **detecting & preventing CATV network degradations** before your customers do
- **Reduce TX sites maintenance cost** by anticipating and identifying issues
- Remotely accessible, compatible with **low bandwidth control networks** (GPRS/3G)
- Low power consumption 20W



INTERFACES

| | |
|----------------------------|--|
| Control | Up to 2x Gigabit Ethernet for Web GUI, SNMP-V2C |
| RF | 1 x RF input (F-type female - 75 Ω) DVB-C, DVB-C2 Frequency range 40 to 1000 MHz Sensitivity -80 to -5 dBm Channel bandwidth 6 & 8 MHz Symbol rate 1.8 to 7.2 Msymbols/s Modulation 16QAM, 64QAM, 128QAM, 256QAM, 1024QAM, 4096QAM |
| 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) HW option 1x 1PPS input (BNC-type female - 50 Ω) 1x 10MHz input (BNC-type female - 50 Ω) |



DVB-T2 RF Channel monitoring view

MONITORING FEATURES

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|----------------------------|--|
| RF Monitor | Demodulation status Lock / Unlock Signal level -90 to -5 dBm MER 0 to 40 dB BER (DVB-C) Post-Viterbi, Post-RS PER BER (DVB-C2) Pre/Post-LDPC, Post-BCH Modulation parameters L1 part2 signaling in DVB-C2 |
| TS Monitor Base | ETSI TR 101 290 Priority 1 and 2 |
| TS Monitor Advanced | ETSI TR 101 290 Priority 3 |
| QoS Monitor | SAE (Service Availability Error) SDE (Service Degradation Error) |
| Service Plan | Verify regional services Service & PID bitrates, Scrambling, Service & PID presence |
| Scanning | Monitor sequentially multiple channel frequencies or PLPs over 1RF input |
| Extended Memory | Up to 4x 32 GB of internal storage: event logs up to 6 months, trends up to 6 months, TS recording |



Channel Impulse Response monitoring view

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: 20W, Redundant Power Supply (HW option)

ENVIRONMENT

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

ORDERING CODES

| EdgeProbe Advanced | DVB-C/C2 Advanced Monitoring Probe | |
|--------------------|---|---|
| <i>Included</i> | RF to ASI, RF/ASI to IP, RF monitoring, VLAN | |
| <i>SW options</i> | Scanning TS Monitor Base TS Monitor Advanced QoS Monitor Service Plan Extended Memory Dual ADV | Multiple RF channels sequential monitoring over 1 RF input ETR290 Priority 1, 2 monitoring ETR290 Priority 3 monitoring SAE, SDE monitoring Multiplex Service/PID monitoring Up to 4x 32 GB storage: trends, logs, TS record Two units: 2x (RF + ASI + IP Data) in 1 RU |
| <i>HW options</i> | Quad ADV Dual Power Supply Internal GNSS Tropicalization | Four units: 4x (RF + ASI + IP Data) in 1 RU 100-240 VAC redundant power supply Internal GNSS receiver (GPS, GLONASS) for internal 1PPS generation Preserve the HW from corrosion |