LAB & FIELD

24/7
MONITOR

# EDGEPROBE ADVANCED

DVB C/C2

**RF, ASI, IP Monitoring!**

ADVANCED
Digital TV Advanced Monitoring Probe

EDGEPROBE

testtree

**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.

## 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

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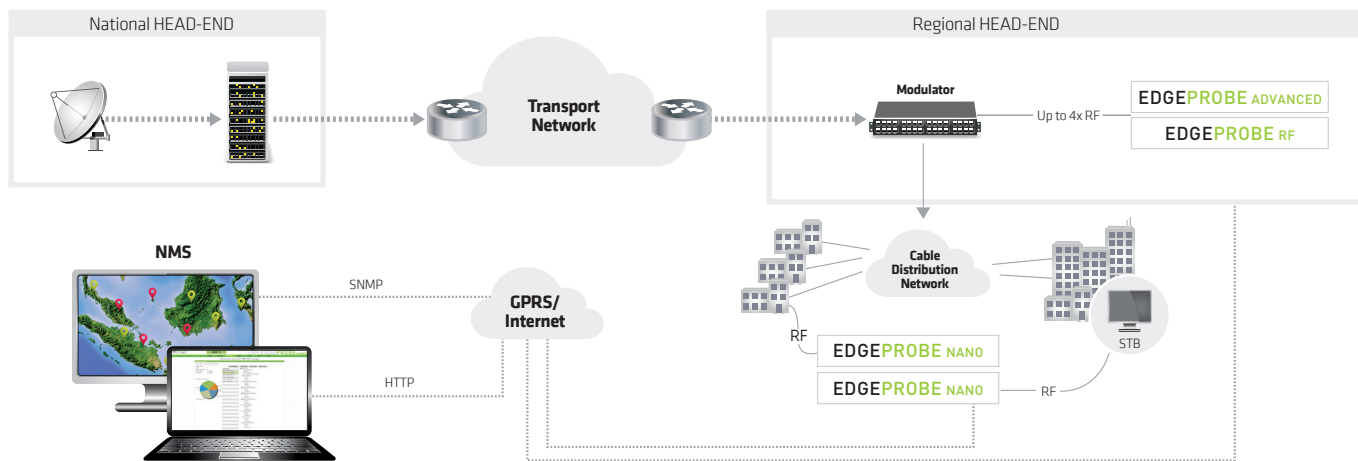↘ **RF, TS ANALYSIS**

## CHARACTERISTICS

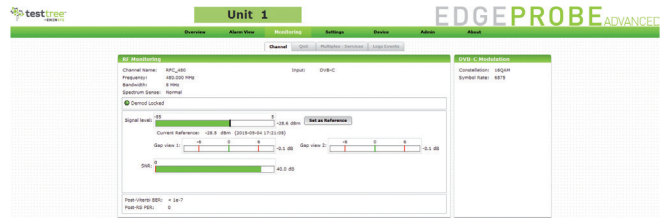| |
|---|
| 1, 2 or 4x [RF in, ASI in/out, IP Data in/out (VLAN support)] in 1 RU |
| 1PPS (internal/external), 10MHz |
| 1 or 2x IP Control for low bandwidth remote Web GUI |
| EdgeProbe Advanced models: DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb |
| RF accurate measurements: signal level, MER, BER |
| Multiplex & 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 |

## 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



National HEAD-END

Transport Network

Regional HEAD-END

Modulator

Up to 4x RF

EDGEPROBE ADVANCED

EDGEPROBE RF

NMS

SNMP

HTTP

GPRS/ Internet

Cable Distribution Network

RF

STB

EDGEPROBE NANO

EDGEPROBE NANO

RF

RF

testtree™

# INTERFACES

| | |
|---|---|
| **Control** | Up to 2x Gigabit Ethernet for Web GUI, SNMP-V2C |
| **RF** | 1 x RF input (N-type female - 50 Ω) |
| Standard | 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) |

# MONITORING FEATURES

| | |
|---|---|
| **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 Avaibility 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 |



DVB-T2 RF Channel monitoring view
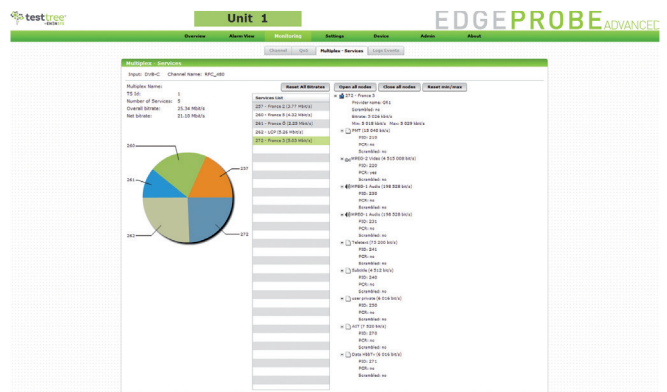


Channel Impulse Response monitoring view

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

RoHS