

# EDGEPROBE ADVANCED DVB-C QAM

DVB

## Cable distribution monitoring at the Head-End

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 DVB-C AND DVB-C2 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 (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 Cable 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

## Monitor DVB-C QAM signals at TX output through the RF inputs (up to 4 in 1RU)

Signal Level, MER, BER

Modulation parameters

## Complete MPEG-2 TS Monitoring

ETSI TR 101 290 Priority 1, 2, 3

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

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

Service & components bitrates

## Dual Power Supply (Hardware option)

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

## Baseband monitoring and forwarding over ASI/IP interfaces

Monitor TS 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

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

Alarm logs up to 6 months

RF parameter trends up to 6 months

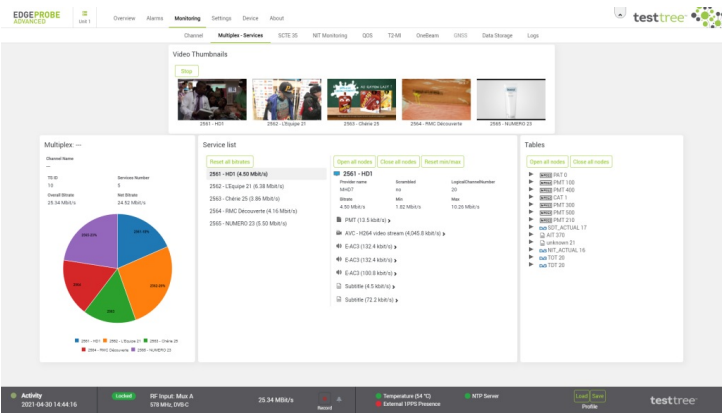
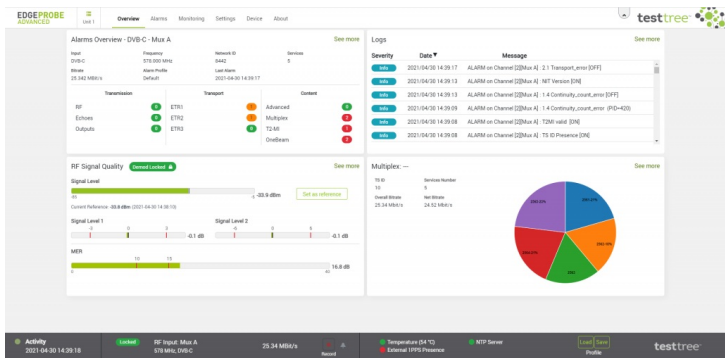
TS recording (manual trigger)

## 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)



INTERFACES

RF	*
Connector In	Up to 4x RF inputs (N-type female – 50 Ω)
Standard	DVB-C: ITU-J83 Annexes A, B, C (roll-off 0.15), DVB-C2
Frequency range	40 to 1000 MHz
Sensitivity	-80 to -5 dBm
Channel bandwidth	6 & 8 MHz
Symbol rate Modulation	1.8 to 7.2 Msymbols/s
Symbol rate Modulation	16QAM, 64QAM, 128QAM, 256QAM, 1024QAM, 4096QAM
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
MER	0 to 40 dB
BER (DVB-C)	Viterbi, RS
BER (DVB-C2)	LDPC, BCH
Modulation parameters	L1 part2 signaling in DVB-C2
TS Monitor Base	MPEG-2 TS Monitor, 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	32 GB of internal storage for: Event logs up to 6 months, Trends up to 6 months, TS recording

ORDERING\_CODES

EdgeProbe Advanced DVB-C/C2	DVB-C QAM Advanced Monitoring Probe
options	<b>SW ACCESS</b> : RF Monitoring, Round-Robin, ETSI TR 101 290 Monitoring (Priorities 1, 2, 3) <b>SW PERFORMANCE</b> : RF Monitoring, Round-Robin, ETSI TR 101 290 Monitoring (Priorities 1, 2, 3), Service Plan & Multiplex View <b>SW ULTIMATE</b> : RF Monitoring, Round-Robin, ETSI TR 101 290 Monitoring (Priorities 1, 2, 3), Service Plan & Multiplex View, IP Monitoring (Jittering, RTP FEC...) <b>EPA3-In200VRedundant</b> : Add 1x redundant 220V AC input in the EPA3 chassis (hardware) <b>EPA3-GNSS</b> : Add GNSS support on the module (hardware)

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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)

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