EDGEPROBE ADVANCED

RF, ASI, IP Monitoring

THE IDEAL TOOL FOR ACCURATE & COST-EFFECTIVE MONITORING OF THE QUALITY OF DTV DISTRIBUTION OVER SATELLITE.

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 monitoring of the signal at different levels:

- RF satellite distribution: measures key RF signal parameters (Level, CNR, Eb/N0, link margin, 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).
- T2-Mi: checks the distribution link at L1 pre & post signaling level.
- BTS: checks the TMCC & IIP packets.
- OneBeam/SingleIllumination: checks the T2-Mi marker and In-Band specific PIDs.

APPLICATIONS

- 24/7 Monitoring and Maintenance of both Uplink and Downlink sites (RF & Baseband)
- Generation of Service Availability reports for Service Level Agreements
- Rebroadcasting receiver (IRD): RF to ASI or IP
- Live transmission recorder

BENEFITS

- Standalone, easy to use and configure, fast deployment, SNMP compatible
- Increase customer satisfaction by detecting & preventing DTV network degradations before your customers do
- Reduce site maintenance cost by anticipating and identifying issues
- Detect Satellite Distribution issues before it affects the whole network
- 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-S & DVB-S2 (S2X) signals at uplink/downlink through the RF inputs (up to 4 in 1RU)

- Signal Level, CNR, Eb/N0, Link Margin, BER
- Multistream support, modulation parameters
- LNB powering & configuration
- Frequency range (L-band after LNB down conversion): 950 to 2150 MHz

Monitor TS & T2-Mi & BTS baseband distribution links at Head-End output and TX site input through the ASI and IP inputs (up to 4 in 1RU)

- Forward the demodulated analyzed TS over ASI or IP output (T2-MI PLP extraction support)
- VLAN support on the IP Data link

Baseband monitoring and TS forward over ASI/IP output

- Signal Level, CNR, Eb/N0, Link Margin, BER, Multistream support, modulation parameters, LNB powering & configuration
- Frequency range (L-band after LNB down conversion): 950 to 2150 MHz

- DVB-S, DVB-S2 & S2X, C-band, Ku-band, Ka-band

- Signal Level, CNR, Eb/N0, Link Margin, BER, Multistream support, modulation parameters, LNB powering & configuration
- Frequency range (L-band after LNB down conversion): 950 to 2150 MHz
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
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

Transcoding solution for confidence monitoring

Coupled with a TRANSBOX device, EdgeProbe can provide service transcoding and forward to third-party analysis systems:
- Service extraction from the input MPEG-2 TS (SPTS or MPTS)
- Real-time audio/video transcoding: 1 to 10 Mbps output bitrate
- Transcoded MPEG-2 SPTS forward over IP Data

Coupled with a TRANSBOX device, EdgeProbe can provide service transcoding and forward to third-party analysis systems:
- Service extraction from the input MPEG-2 TS (SPTS or MPTS)
- Real-time audio/video transcoding: 1 to 10 Mbps output bitrate
- Transcoded MPEG-2 SPTS forward over IP Data

Internal GNSS receiver (Hardware option)
Generates an internal 1PPS reference signal for SFN synchronization measurements (SFN Drift, Frequency Offset)
GPS & GLONASS support
Dual Power Supply (Hardware option):
- Additional Power Supply can be installed on the equipment in order to ensure the power redundancy
Generates an internal 1PPS reference signal for SFN synchronization measurements (SFN Drift, Frequency Offset) GPS & GLONASS support Dual Power Supply (Hardware option):
- Additional Power Supply can be installed on the equipment in order to ensure the power redundancy

T2-MI, BTS & OneBeam Monitor

ETSI TR 101 290 T2-MI packet alarms
T2 L1 pre/post signaling
T2-MI PLP TS analysis and extraction support
BTS: IIP, TMCC packets monitoring
OneBeam: T2-MI marker and In-Band PID monitoring
ETSI TR 101 290 T2-MI packet alarms T2 L1 pre/post signaling T2-MI PLP TS analysis and extraction support BTS: IIP, TMCC packets monitoring
OneBeam: T2-MI marker and In-Band PID monitoring

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)
Alarm logs up to 6 months RF parameter trends up to 6 months TS recording (manual trigger)

Compatible with all Network Monitoring Systems

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)
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

<table>
<thead>
<tr>
<th>RF</th>
<th>Connector in</th>
<th>Standards</th>
<th>Frequency range</th>
<th>Sensitivity (RF lock)</th>
<th>Baseband TS</th>
<th>GNSS &amp; Time Reference</th>
</tr>
</thead>
</table>
|    | Up to 4x RF inputs (F-type female – 75Ω) (LNB power & configuration) | DVB-S, DVB-S2, DVB-S2X | 950 to 2150 MHz (after LNB down conversion) | ~80 to ~5 dBm (28 to 104 dBµV) | Up to 4x ASI in/out (BNC-type female – 75Ω) | 1x GNSS antenna input (SMA-type – 50Ω) 
1x 1PPS input (BNC-type female – 75Ω) 
1x 10MHz input (BNC-type female – 75Ω) |

### Monitoring Features

<table>
<thead>
<tr>
<th>RF Monitor</th>
<th>Demodulation status</th>
<th>Signal level</th>
<th>CNR</th>
<th>BER</th>
<th>T2-MI Monitor</th>
<th>BTS Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lock / Unlock</td>
<td>-90 to -5 dBm ±1 dBm, typically ±0.5 dBm, resolution 0.2 dBm</td>
<td>0 to 51 dB (0.1 dB resolution)</td>
<td>Post-Viterbi (DVB-S), PER (DVB-S2)</td>
<td>ETSI TR 101 290 T2-MI packet, L1 pre/post signaling, PLP extraction and TS PLP analysis</td>
<td>IIP, TMCC packets monitoring</td>
</tr>
</tbody>
</table>

### 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 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

### Mode Codes

- **DVB-S**: QPSK, puncture rates: 1/2, 2/3, 3/4, 5/6, 7/8
- **DVB-S2**: CCM, VCM and ACM modes supported, QPSK code rates: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 6/8, 9/10, 8PSK code rates: 3/5, 3/4, 2/3, 3/4, 5/6, 6/8, 9/10, 16APSK code rates: 3/4, 4/5, 5/6, 6/8, 9/10, 32APSK code rates: 3/4, 4/5, 5/6, 6/8, 9/10

**Symbol rates**: DVB-S QPSK 1 to 65Msps, DVB-S2 QPSK 1 to 65Msps, 8PSK 1 to 60Msps, 16APSK 1 to 45Msps

### Ordering Codes

<table>
<thead>
<tr>
<th>EdgeProbe Advanced DVB-S/S2</th>
<th>DVB-S/S2/S2X Advanced Monitoring Probe</th>
</tr>
</thead>
</table>
| **Included** | DVB-S/S2/S2X RF Monitor 
TS monitoring over ASI/IP input, TS forward over ASI/IP Output |
| **Options** | TS Base Monitor 
TS Advanced Monitor 
T2-MI Monitor 
BTS Monitor 
Service Plan 
Extended Memory 
Dual ADV 
OneBeam Monitor 
Scanning 
Tropicalization HW 
Internal GNSS HW 
Dual Power Supply HW 
Quad ADV HW |

sales@test-tree.com

---

**Copyright 2003-2016 ENENSYS Technologies S.A. - TESTTREE name and logo are registered trademarks of ENENSYS Technologies S.A.**

**DVB is a Trade Mark of the DVB Digital Video Broadcasting Project (1991 to 1996).**

ENENSYS Technologies reserves the right to change the specifications without notice.