TEST & MONITORING

2016/2017

TestTree history

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TestTree is a proud member of the ENENSYS Technologies group, founded in 2004. ENENSYS designs and manufactures innovative professional equipment for Digital TV Broadcast industry. The company is the world leader for DVB-T2 technology, and covers other standards such as DVB-T, DVB-C/C2, DVB-S/S2, ISDB-T, ATSC, DAB+, T-DMB, IP... More info at www.enensys.com

Since its early days, the company was offering Test & Monitoring equipment as part of its portfolio. In 2010, the company decided to spin off the Test & Monitoring part to create TestSystems Business Unit, managed by a dedicated team including R&D, Support, Marketing and Sales. The objective was clear: develop the best products and give the best support to each and every Test & Monitoring customer.

Leveraging on the launch of successful products and on the acquisition of major references, the decision was made in 2016 to take the Business Unit to the next level by creating the TestTree brand.

TestTree today

TestTree develops Test & Monitoring equipment for RF and R&D Labs, Broadcast Network Operators, TV Channels, Chipset & STB/TV, Regulator Agencies, FM & Digital Radio & Info Traffic. TestTree's ambition is to become a reference brand in this area.

TestTree's team is composed of highly experienced engineers, gathering a broad technology base such as hardware design, RF, signal processing and software.

Our corporate culture is rooted on strong human values such as anticipation, creativity, empathy and reactivity to be ahead of your needs and achieve customer care excellence.
More info at www.test-tree.com

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SERIAL INVENTOR

TestTree culture is based on innovation. TestTree is working since its creation on novelty products and solutions based on latest technologies and standards. TestTree team participates to the major standardization working groups (DVB, ATSC, ...).

The company has more than 25 patents, all dedicated to the broadcast industry. Linked to this innovation work, TestTree is proud to be the first to introduce new test devices to support customers in their network improvements and deployments.

MADE IN FRANCE

All products are fully developed and produced in France by TestTree: hardware, firmware, software, ... providing the complete knowledge and flexibility to our team to deliver new features according to customer requests and to imagine new solutions.

2 PRODUCT LINES

LAB & FIELD

24/7

MONITOR

OUR CUSTOMERS

R&D Labs
→ Chipset and Receivers manufacturers
→ Digital TV R&D centers
→ Broadcast equipment manufacturers
→ Network Operators
→ Automotive, Telecom, Defense

Factory testing
→ End of production equipment test and validation

Demos
→ Receivers Promotion, exhibition, ...

Broadcast operators
→ Operational team for:
- Installation
- Field testing
- Maintenance and troubleshooting

→ Network Monitoring

Broadcast regulators
→ Field testing & recording
→ Network Monitoring

FM & Digital Radio & Info Traffic
→ Field testing & recording
→ R&D Lab investigation

TEST TOOLS FOR LAB & FIELD

RF CAPTURE/PLAYBACK & GENERATE

70 MHz – 6 GHz frequency range with down conversion for Ku/C band

ANALYZE RF & BASEBAND

Multi-standard (**DVB-T/T2, DVB-C/C2, DVB-S/S2, ISDB-T/Tb**) **professional measurement receivers** and **pocket-size analyzers**, **recorders** and **players**; connected via USB to MS Windows OS PC running the DiviSuite analysis software

48HMAX SHIPMENT

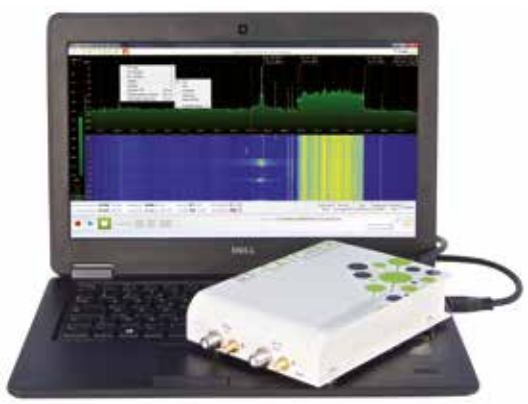

LAB & FIELD
REFERENCE
STATUS
GPS

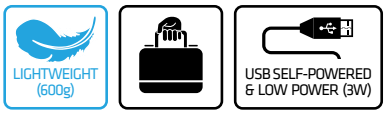
RF-CATCHER PLATFORM

The Most Compact RF Capture & Playback device!

Covering a frequency range from 70 MHz up to 6 GHz, RF-Catcher can record and play real-time RF bandwidth up to 55 MHz.

RF-Catcher allows experimentation of a wide range of signals including Radio (FM, DAB...), TV broadcast (DVB-T/T2, C/C2, ISDB-T, etc...), cellular, Wi-Fi, up to satellite signals (DVB-S/S2). The RF-Catcher is equipped with LNB control for frequency down conversion of Ku/C bands. The integrated GNSS receiver provides precise location information; KML file, metadata, NMEA compatible.





The RF-Catcher is compact, robust, lightweight (600g) and cost-effective: your technicians and engineers can bring it everywhere in their hand bag.

TECHNICAL CHARACTERISTICS

2x RF inputs, **2x RF outputs** for RF Capture & Playback (SMA/F connectors)*
Frequency range from **70 MHz up to 6 GHz**, resolution 1kHz
Variable bandwidth from 1 up to 55 MHz
Automatic filtering: harmonic suppression for playback, out of band signal suppression for capture
RF reception: • Status indicators: USB connection / IQ sample loss / In band saturation (ADC) / Out of band saturation (LNA) • FFT display: Spectrum measurements: FFT resolution, FFT markers insertion / Averaging functions: RMS, min/max hold / FFT window functions: rectangular, Hamming, Blackman, Hann... • Signal waterfall plot (three-dimensional spectra) • Power in band measurement
Trigger mode for synchronized capture/playback between several devices
RF capture: variable gain, **automatic gain setting** (AGC), **rolling buffer** mode
RF playback: variable attenuation
Lightweight and compact 163 x 115 x 32 mm, 600 g, 3 W typical power consumption
Connected to PC via USB3.0 connectivity (SuperSpeed) (USB2 backward compatible, but with lower performances due to limited USB2 bitrate)
IQ files stored on the PC: 12 Msps sample rate, 170 min of record = 512GB
Nonproprietary IQ file format, compatible by Matlab software
Integrated GNSS (GPS, Glonass) receiver: KML file, metadata, NMEA protocol
Compatible MS Windows 7/8/8.1/10 (x64 versions only)

*Both input/output connectors cannot be used at the same time

APPLICATIONS

- **Chipset, STB/TV field test debugging (a great tool to support your pre-sales team)**
- **Easy & simple usage: no need for RF experts to capture field RF signals (ex: DAB/FM, TV broadcast, Satellite broadcast, Wi-Fi,...), your sales force can do it for you anywhere in the world**
- **Handy demonstration setup: bring real RF sources into your laptop**
- **RF sources stored on a PC: easy to duplicate/transfer between head-quarter and regional sites**
- **Radio/TV Broadcast/Telecom RF troubleshooting**
- **Test automation (command line tools)**
- **Telecommunications Regulation Agencies validation tool**

Easy to use & Responsive GUI

High degree of parameterization for measures

FFT resolution bandwidth:
30 Hz (for 2 MHz) to 210 kHz (for 55 MHz)

LNB configuration for Satellite capture

Auto-test control: evaluate the PC performance for RF capture/playback max bandwidth

AGC (Automatic Gain Control) for RF reception

WATERFALL SECTION
Allows detection of bursts & transients (Wi-Fi, 4G, ...)

RSSI (Received Signal Strength Indication)

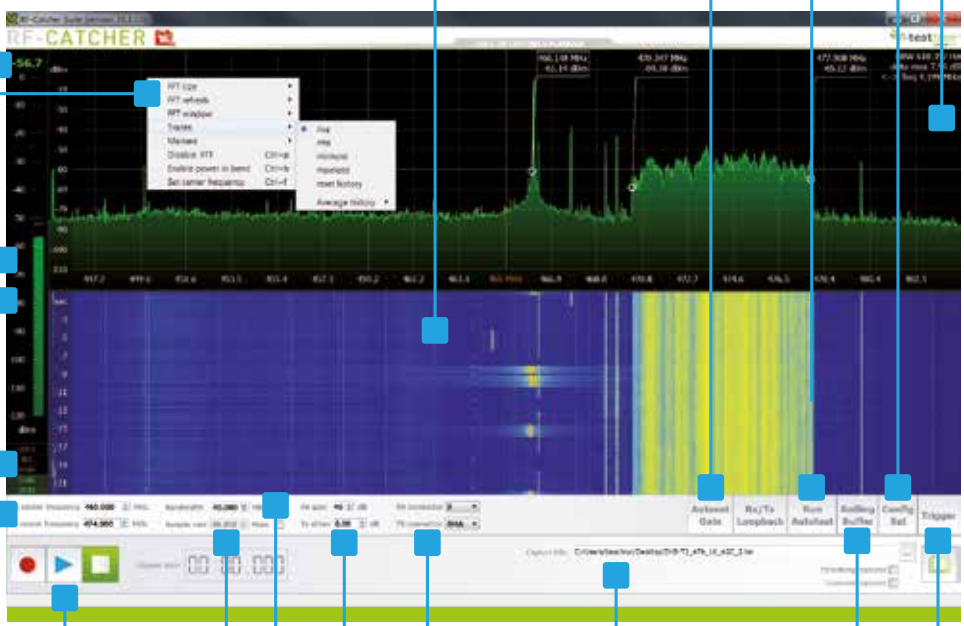
SPECTRUM ANALYSIS
- Power in band
- Averaging functions
- FFT windows functions

IQ max power

IQ average power

Status indicators
USB: connection (USB2 or USB3)
LOSS: IQ sample loss
IBS: in band saturation (ADC)
OOBS: out of band saturation (LNA)

Frequency setting
for capture (Rx) / playback (Tx)
Range 70 MHz to 6 GHz
1 kHz resolution



RF Capture & Playback controls

Sample rate up to 61.44 Msps

Variable acquisition **bandwidth from 1 up to 55 MHz**

Gain setting for capture
Attenuation setting for playback

Rx/Tx connector setting: **F or SMA**

RF capture file stored on PC:
170 min of 12 Msps bandwidth record = 512GB
NONPROPRIETARY IQ FILE FORMAT

Rolling Buffer
mode for RF capture

Trigger mode
for synchronized capture/playback between several RF-Catcher devices

RF-CATCHER PLATFORM

INTERFACES

RF input	1x SMA-type female - 50 Ω 1x F-type female – 75 Ω (up to 2 GHz)
RF output	1x SMA-type female - 50 Ω 1x F-type female – 75 Ω (up to 2 GHz)
1PPS/Trigger input	1x SMA-type female - 50 Ω
Trigger output	1x SMA-type female - 50 Ω
10MHz	1x SMA-type female - 50 Ω
GPS	1x SMA-type female - 50 Ω
Power & Data	1x USB3 B-Type
Auxiliary power	1x USB3 B-Type

PHYSICAL

Dimensions	163 x 115 x 32 mm / 6.4 x 4.5 x 1.2 in
Weight	600 g
Power supply	USB self-powered
Auxiliary power	USB connector (additional power supply for satellite captures using LNB controller)
Power consumption	3 W

ENVIRONMENT

Operating temperature	-20°C to +55°C
Storage temperature	-20°C to +70°C

PC MINIMUM REQUIREMENTS

Core i5/i7 processor
4 GB of RAM
USB 3.0 connectors
SSD for storage (Solid State Drive)

RX MODE

Frequency	
Frequency band	70 MHz to 6.0 GHz
Frequency resolution	1 kHz
Real-time bandwidth	1 MHz to 55 MHz
RBW (Resolution bandwidth)	30 Hz (for 2 MHz) to 210 kHz (for 55 MHz)
Noise Figure	< 8 dB
Phase Noise at 10 kHz	
1200 MHz	-91.3 dBc/Hz
3200 MHz	-85.2 dBc/Hz
5000 MHz	-82 dBc/Hz
Noise Floor / Sensitivity	-110 dBm
IF Band	
ADC resolution	12-bit
Sampling rate	61.44 Msps max
RF Input Characteristics	
Input Dynamic Range	-110 to 0 dBm
Input Level Resolution	1 dB
Max Peak power*	0 dBm
Max DC input*	± 15 V
*Absolute maximum ratings	
Gain Range (1dB step)	
800 MHz	0 to 74 dB
2300 MHz	0 to 73 dB
5500 MHz	0 to 65 dB
IIP3	
1200 MHz	7.2 dBm
3200 MHz	8.4 dBm
5000 MHz	15.2 dBm
Storage	
512 GB @ 12 Msps	170 min
512 GB @ 24 Msps	85 min
512 GB @ 40 Msps	50 min

TX MODE

Frequency	
Frequency band	70 MHz to 6.0 GHz
Frequency resolution	1 kHz
Real-time bandwidth	1 MHz to 55 MHz
Phase Noise at 10 kHz	
1200 MHz	-91.3 dBc/Hz
3200 MHz	-85.2 dBc/Hz
5000 MHz	-82 dBc/Hz
RF Output Characteristics	
Attenuation range	0 to 89 dB
Amplitude resolution	0.01 dB
Power output	5 dBm max
Max DC output	± 15 V

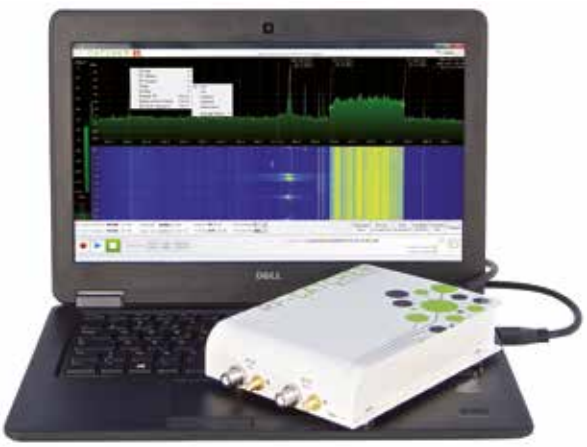
ORDERING CODE

RF-Catcher Platform	**RF Capture & Playback** Shipped bundled with HW device and software application for MS Windows 7/8/8.1/10 (x64)

APPLICATION SUITE
FOR RF-CATCHER PLATFORM

Extend the RF-Catcher Platform capacities with a wide range of software applications!

RF-CATCHER PLATFORM
HW DEVICE + DEDICATED SOFTWARE APPLICATION



APPLICATION SUITE
COMPATIBLE FOR RF-CATCHER PLATFORM

ATSC 3.0 LabMod Application
ATSC 3.0 modulator for Lab
Generate live ATSC 3.0 RF Signals (Refer to page 12 for details)

IQ Converter
IQ file format conversion: Lumantek, A74, Eiden, Adivic, Averna*

IQ Splitter
IQ file time cut : Optimize the IQ files network transfer by keeping only the most important part of an RF Capture!

Task Scheduler
Automatic capture/playback scheduled in time
For capture tasks: generate report files containing RF power measurements for different frequency markers

RF Records Trigger
Automatic RF Capture based on monitoring alarms (RF, TS, T2-MI, BTS)
Requires RF-Catcher to be connected to an EdgeProbe 24/7 monitoring device (Refer to page 40 for details)

Noise/Echo Generator*
Add noise (gaussian, impulsive) or echoes on the generated RF signal

DiviSuite IP
Complete analyzer software application for baseband TS/T2-MI/BTS streams (over IP or file-based) (Refer to page 30 for details)

EUROPEAN READERS' CHOICE AWARDS 2016 FINALIST

Including Advance Software Support:
- *Access to all software updates, including the provision of bug fixes and new features*
- *Guaranteed response time and answers to incoming requests*

**Contact us for availability*

ORDERING CODE

Application Suite for RF-Catcher Platform	**Software: ATSC 3.0 LabMod Application, IQ Converter, IQ Splitter, Task Scheduler, RF Records Trigger, Noise/Echo Generator, DiviSuite IP** Compatible MS Windows 7/8/8.1/10 (x64) Service Subscription for 1, 3 or 5 Years

NEW

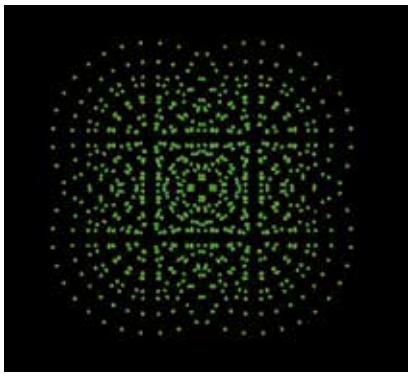
ATSC 3.0 LABMOD

The 1st ATSC 3.0 Modulator for Lab!

ATSC 3.0 Lab Modulator is the perfect modulator for discovering ATSC 3.0 standard: generate live ATSC 3.0 RF signals or IQ pattern files, record live ATSC 3.0 transmission in different places over the world and playback them to test your receiver.

LIGHTWEIGHT (600g)

USB SELF-POWERED & LOW POWER (3W)



TECHNICAL CHARACTERISTICS

Input interface	PRBS, IP STL, TS File 2x RF inputs (SMA-type female 50 Ω, F-type female 75 Ω) ATSC 3.0 live RF recording
Clock and synchronisation	
Input	10 MHz, 1 PPS, Built-in GNSS receiver
Output	10 MHz
Internal clock	10 MHz
GUI	MS Windows 7/8/8.1/10 (x64) application Easy to use, configuration validation engine Capability to save/load settings profiles
Output interface	2x RF outputs (SMA-type female 50 Ω, F-type female 75 Ω) ATSC 3.0 live RF playback and generate
Modulation	
ATSC 3.0 constellation (NUC)	QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM
L1	Compatible with all L1 modes
LDM (Layered Division Multiplex)	Yes
Channel bandwidth	6, 7 or 8 MHz
Guard Interval	192, 384, 512, 768, 1024, 1536, 2048, 2432, 3072, 3648, 4096, 4864
FFT mode	8k, 16k, 32k (all Cred_coeff modes)
Code rate	2/15 up to 13/15
FEC	Inner: LDPC 16k and 64k, mode A or B Outer: BCH, CRC or no outer
Pilot pattern	SP3_2, SP3_4, SP4_2, SP4_4, SP6_2, SP6_4, SP8_2, SP8_4, SP12_2, SP12_4, SP16_2, SP16_4, SP24_2, SP24_4, SP32_2, SP32_4
TI (Time Interleaving) mode	CTI up to 1448 depth, HTI
Subframes	Multiple subframes: single/multiple PLP
TxID*	Transmitter identification

**Contact us for availability*

APPLICATIONS

- **ATSC 3.0 RF record & playback**
- **ATSC 3.0 reception validation**
- **R&D or factory tests and measurements**
- **Chipset development**
- **TV / Set Top Box development**
- **Demonstrations and roadshows**

KEY BENEFITS

- **1st ATSC 3.0 modulator**
- **Compact (600g), USB self-powered**
- **3-in-1 product: RF Record + Playback + Generate**
- **ATSC 3.0 PlugFest proven**
- **Intuitive & easy to use GUI**
- **Easy to configure: real-time Frame configuration validation engine**

PHYSICAL

Dimensions	163 x 115 x 32 mm 6.4 x 4.5 x 1.2 in
Weight	600 g
Power supply	USB self-powered
Power consumption	3 W

ENVIRONMENT

Operating temperature	-20°C to +55°C
Storage temperature	-20°C to +70°C

PC MINIMUM REQUIREMENTS

Core i5/i7 processor
4 GB of RAM
USB 3.0 connectors
SSD for storage (Solid State Drive)

Easy to use & Responsive GUI

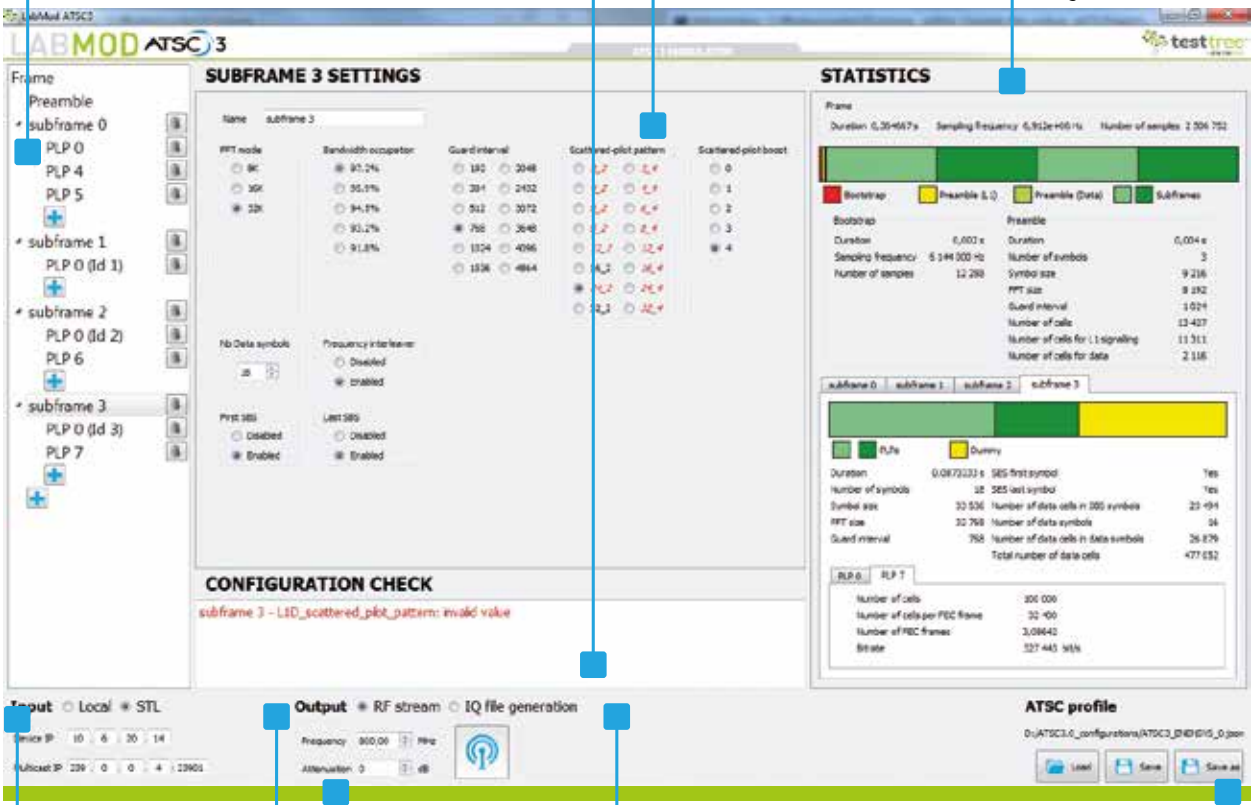
Real-time configuration validation engine

Frame structure section
Create Frame structure:
subframe, PLP

Real-time configuration validation engine
Detailed message indicating non valid parameters

Settings section
Configure all Frame elements

Monitoring section
Real-time overview of the Frame structure
Detailed characteristics depending on the current configuration



Controls:
play RF signal on TX output,
generate IQ pattern file

Input: Local (PRBS or TS File)
or IP STL

Frequency setting for TX
Range 70 MHz up to 6 GHz
1 kHz resolution
Configurable attenuation

IQ pattern file stored on PC:
1 min of ATSC 3.0 (6MHz)
record = 1.6 GB
Configurable duration
RF-Catcher file format

Save/Load configuration file
JSON editable format

ORDERING CODES

ATSC 3.0 LabMod	**ATSC 3.0 Modulator for Lab** Shipped bundled with RF-Catcher Platform and ATSC 3.0 LabMod Application for MS Windows 7/8/8.1/10 (x64)
ATSC 3.0 LabMod Application	**ATSC 3.0 Modulator Application for Lab** MS Windows 7/8/8.1/10 (x64) software application for RF-Catcher Platform


ISDB-T/Tb
VICATCH RF
testtree
S/S2
TCH RF
testtree
TCH RF-C
testtree
2/C2
TCH RF
testtree

ANALYZE RF & BASEBAND

LIGHTWEIGHT DEVICES
USB SELF-POWERED
DIVISUITE

	STANDARDS	CHARACTERISTICS: RF Input	ASI Input/Output	IP Input/Output	SPI Input/Output	1 PPS & 10 MHz Input	GPS Input	A/V Output	Recorder	Player	SOFTWARE OPTIONS: RF Scope	TS Analyzer	T2-MI Analyzer	Test Coverage
Measurement Receivers														
 REFEREE II	DVB-T DVB-T2 Lite DVB-C DVB-C2 ISDB-T/Tb*	•	•	•		•	•	•	•	•	•	•	•	•
Professional Receivers														
 DIVICATCH RF-S/S2	DVB-S DVB-S2	•	•	•(1)				•	•	•	•	•	•	
 DIVICATCH RF ISDB-T/TB	ISDB-T/Tb	•	•	•(1)				•	•	•	•	•		
 DIVICATCH RF-T/C T2/C2	DVB-T DVB-T2 Lite DVB-C DVB-C2 ITU-J83 Annexes A, C	•	•	•(1)				•	•	•	•	•	•	
 DIVICATCH RF-C	DVB-C ITU-J83 Annexes A, B, C	•	•	•(1)				•	•		•	•		
Baseband Adapters														
 DIVIDUAL ASI	Baseband DVB-T DVB-T2 Lite DVB-C DVB-C2 DVB-S DVB-S2 ISDB-T/Tb ATSC DTMB		•	•(1)				•	•	•		•	•	
 DIVIDUAL ASI+SPI LVDS OR TTL			•	•(1)	•			•	•	•		•	•	
 DIVIDUAL ETI	Baseband DAB, DAB+ T-DMB		•						•	•				

48H MAX SHIPMENT — In their «all options» package, our test devices can be shipped in max 48h

 DIVISUITE IP

Pure Software Application
(Fixed PC license, Floating server license)

(1) IP through the PC's Ethernet interface
A/V Output : H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...

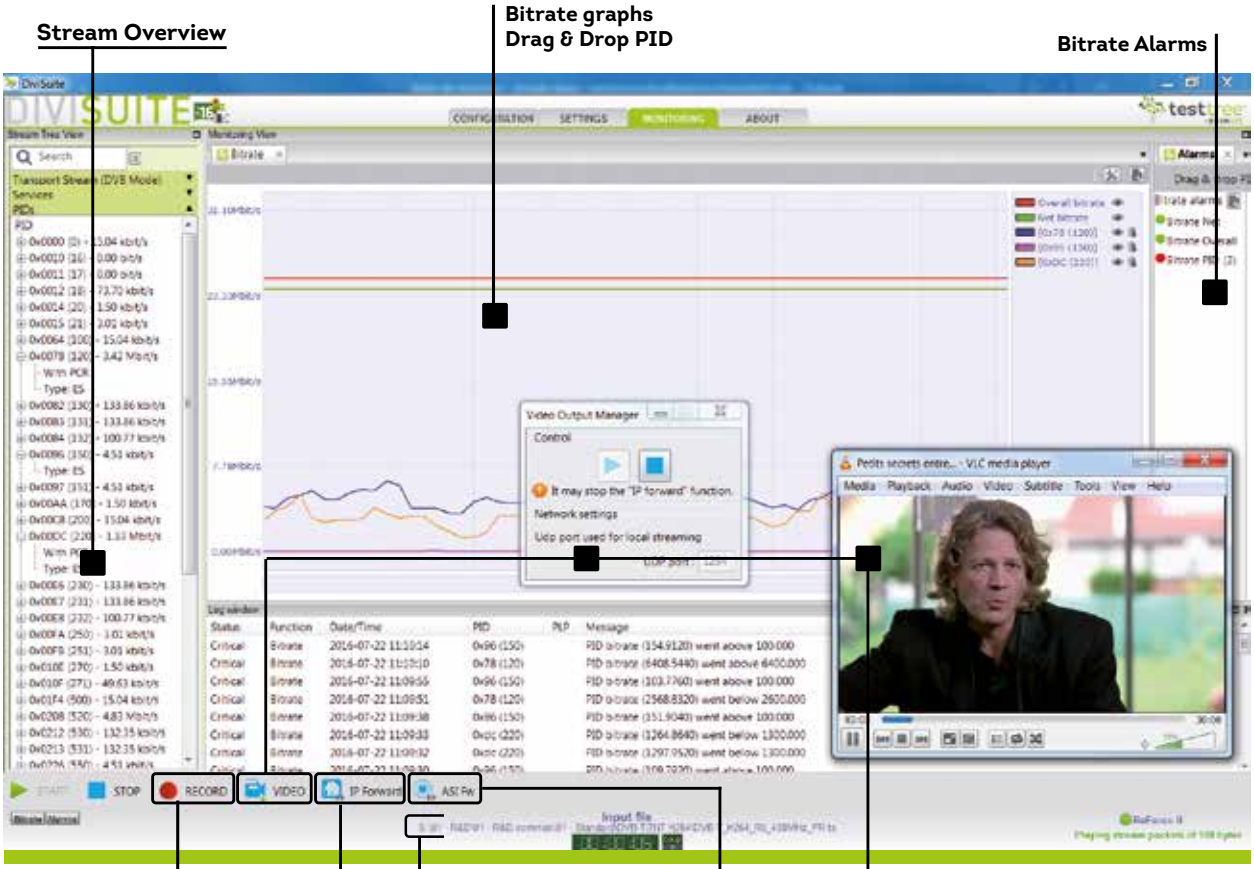
Contact us for availability

DIVISUITE BASE

DiviSuite Base

- TS Recorder
- TS Player over ASI
- TS Player over IP
- A/V Output
- Bitrate, Log Files
- H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...

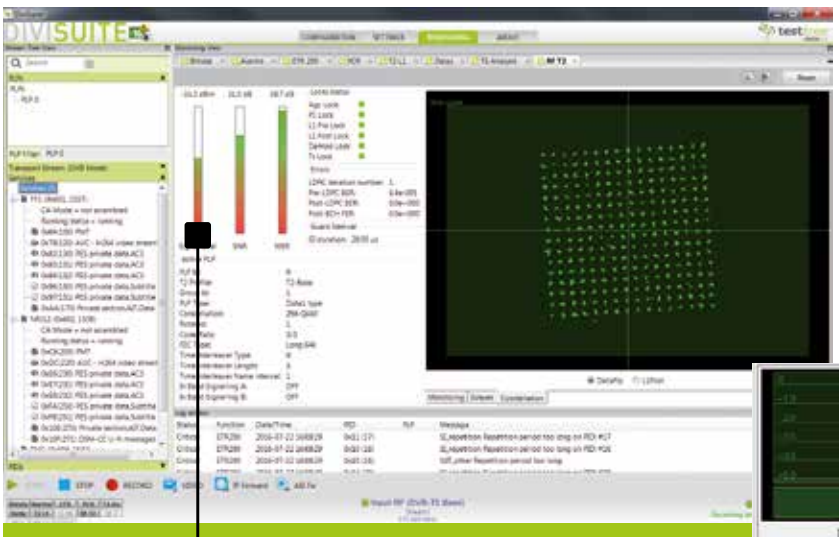
Common Features coming as a default package



DIVISUITE SOFTWARE OPTION

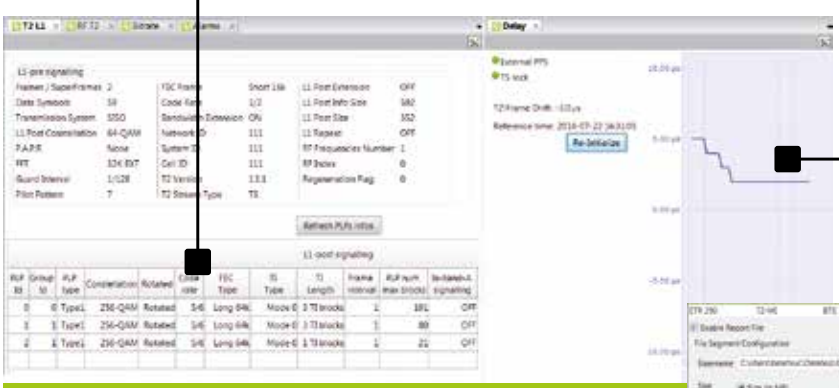
RF Scope

- Signal Quality: level, SNR, MER, BER
- Graphs, Report Files
- Modulation Parameters
- Constellation
- Channel Impulse Response
- SFN Synchronisation



Test the field RF Quality
TX Echoes diagram

Validate the Modulator/TX RF Quality
Signal Quality measurement: level, SNR, MER, BER
Modulation parameters
Constellation
DVB-T2 L1 signaling



Validate SFN synchronization
SFN Drift
1 PPS & 10 MHz inputs

Modulator/TX endurance tests
Log & Report files
Save events and trend measurements

DIVISUITE SOFTWARE OPTION

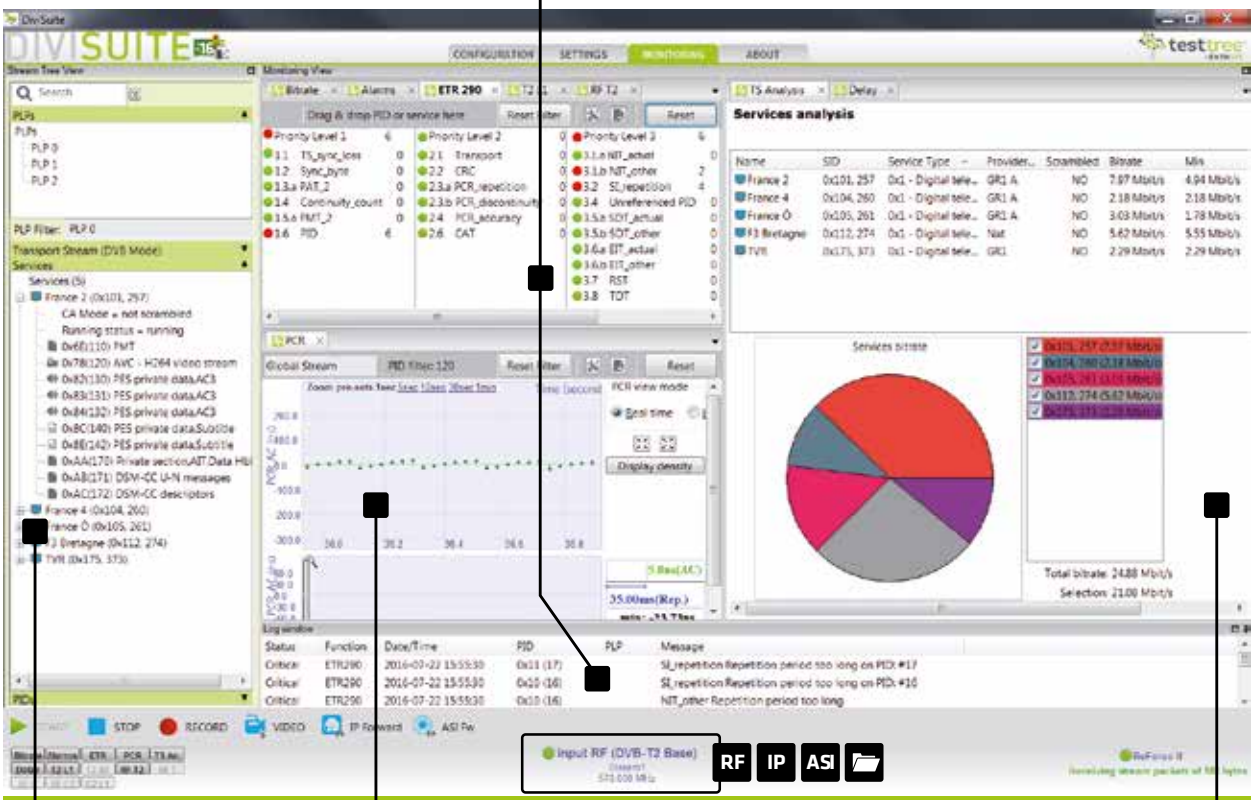
TS Analyzer

- TS Standard: MPEG, DVB, ATSC 1.0, ISDB-T/Tb (BTS)
- PSI/SI Tables Decoding
- PCR Graphs
- ETSI TR 101 290
- ASI Network Delay

Transport Stream complete Analysis!

Validate PSI/SI Tables
Supported TS: MPEG, DVB, ATSC 1.0, ISDB-T/Tb
Add your own table analysis specification

Validate ETSI TR 101 290 measurements
ETSI TR 101 290 Priority 1,2,3
Customized alarm thresholds
Log files



Check regionalization
Service Plan

Check PCR
Drag & Drop PID containing PCR
PCR accuracy graphs

Advanced Service Analysis
Component type & structure
Component bitrates

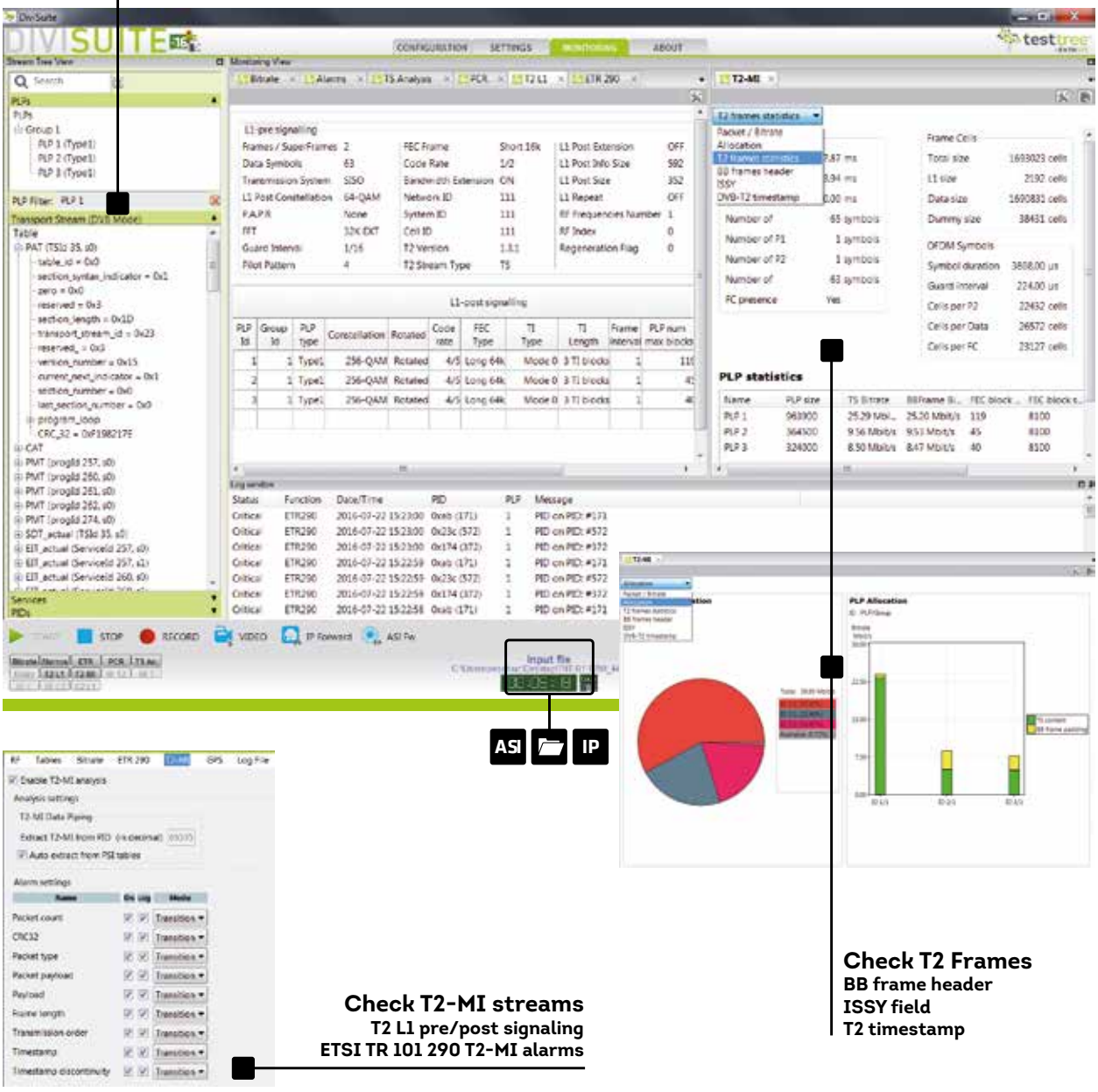
DIVISUITE SOFTWARE OPTION

T2-MI Analyzer

- T2 L1 pre/post signaling, PLP allocation (BB frame, TS, padding/overflow)
- T2 timestamp, BB frame header, ISSY field NEW
- Single & Multi-PLP, PLP extraction

Validate your DVB-T2 Gateway!

PLP extraction/filter



Check T2-MI streams
T2 L1 pre/post signaling
ETSI TR 101 290 T2-MI alarms

Check T2 Frames
BB frame header
ISSY field
T2 timestamp

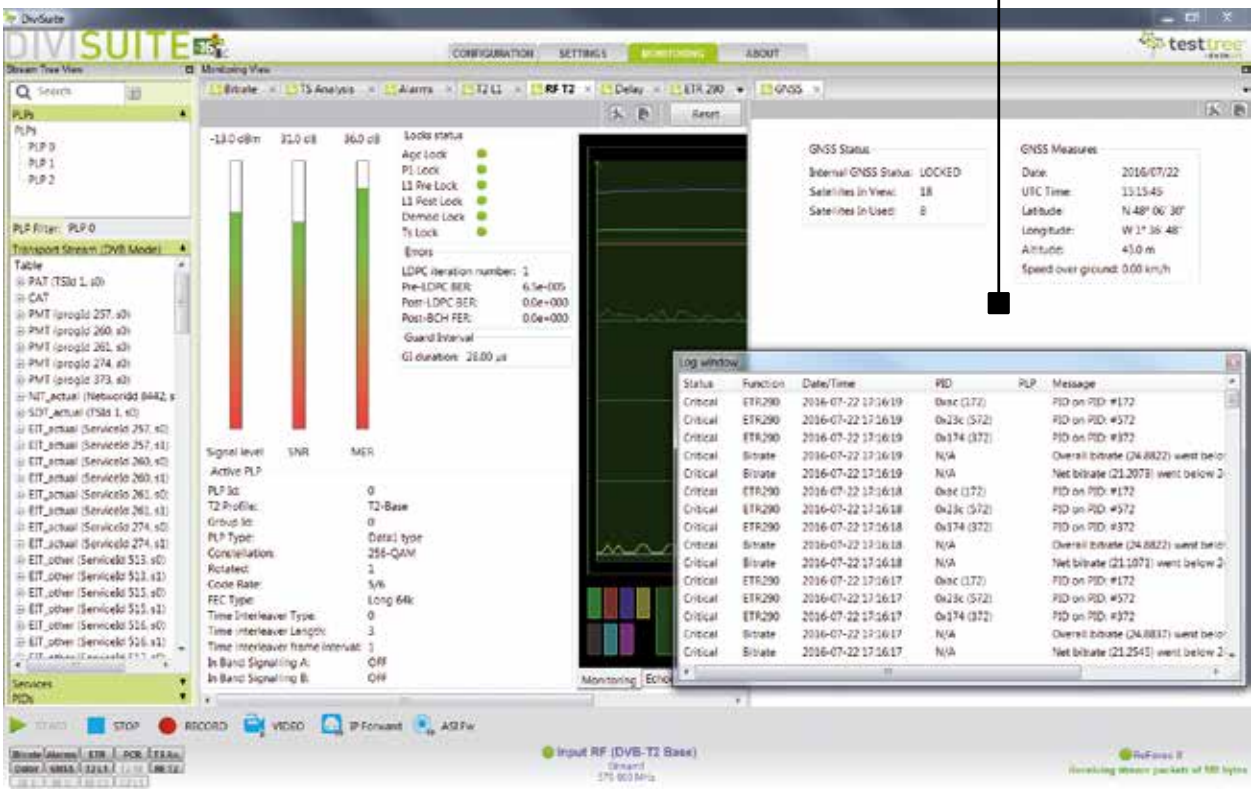
DIVISUITE SOFTWARE OPTION

Test Coverage

- GNSS Receiver (GPS/GLONASS)
- Test Reports (Google Earth compliant)

Test the field coverage!

GNSS receiver enabled
Real-time measurement



Display results in Google Earth or Google Fusion Tables applications

Generate Google Earth compliant files (KML)
Customize measured parameters

* Plugin delivered with a magnet mount GNSS L1 Antenna

REFEREE II

TERRESTRIAL TV
CABLE TV

DVB T/T2 DVB C/C2

ReFeree II is a high performance, compact and portable measurement receiver for Terrestrial and Cable TV, cumulating single and multi-PLP live reception with real-time MPEG-2 TS analysis and recording.

H.264 MPEG-4 AVC
H.265 HEVC

TECHNICAL CHARACTERISTICS

1x RF input for DVB-T/DVB-T2 (T2 Lite supported) & DVB-C/DVB-C2
ITU-J83 Annexes A, C (roll-off 0.15) supported
1x ASI input and 1x ASI output
1x IP Data input/output
1x 1PPS & 1x 10MHz inputs for SFN delay measurement
1x GPS/GLONASS connector for coverage tests
RF measurements: signal level, SNR, MER, BER, graphical constellation
SFN Drift, Network Delay, Channel Impulse Response display
Single and multi-PLP support
T2-MI analysis: L1 pre & post signaling, T2 frame statistics, BB frame header, ISSY field, T2 timestamp
DVB-C2 specific analysis: L1, C2 frame, BB frame, Data Slice...
PSI/SI and PIDs parsing, PCR graphs
ETSI TS 101 290 validation (priority 1, 2, 3)
Services decoding: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...
MPEG-2 TS record and playback
MPEG-2 TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 660 g

APPLICATIONS

- **R&D Test & Measurement**
- **Baseband Signal Generation**
- **RF Reception Quality Measurement**
- **Terrestrial & Cable Network Troubleshoot**
- **Head-End/TX site/off-air measurements**
- **Installation & Maintenance Test Tool**
- **Coverage & Drive Tests for DVB-T & DVB-T2**

KEY BENEFITS

- **Easy to use and configure**
- **Compact (660 g), USB self-powered**
- **Complete product: RF + baseband (ASI, IP, File) analysis, baseband record & playback**
- **All modulation schemes supported (from QPSK to 256QAM, Normal & Rotated for Terrestrial, from 16QAM to 4096 QAM for Cable)**

ORDERING CODES

ReFeree II	**DVB-T/T2/T2 Lite & DVB-C/C2 Measurement Receiver** Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/10		
Software Options	**RF Scope**	RF Analysis	RF + TS Bundle
	TS Analyzer	MPEG-2 TS Analysis	
	T2-MI Analyzer	T2-MI Analysis	
	Test Coverage	GPS/GLONASS localization information	

48HMAX **SHIPMENT** | All Options Bundle (RF + TS + T2-MI + Test Coverage)

DIVICATCH RF-S/S2

DVB S/S2

The DiviCatch RF-S/S2 is a pocket analyzer cumulating DVB-S/S2 live reception with MPEG-2 TS real-time analysis, recording and stream playing.

The DiviCatch RF-S/S2 can receive DTH streams and all modes of satellite distribution links.

H.264 MPEG-4 AVC | H.265 HEVC

TECHNICAL CHARACTERISTICS

1x RF input for DVB-S/S2
1x ASI input/output
IP source analysis (from PC)
RF measurements: signal level, SNR, BER, PER
Graphical constellation display
PIDs and PSI/SI parsing, PCR graphs
ETSI TS 101 290 validation (priority 1, 2, 3)
Audio/Video player (H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)
MPEG-2 TS record and playback
MPEG-2 TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 160 g

APPLICATIONS

- **R&D Streams or Signal Analysis**
- **DVB-S/S2 Broadcast Troubleshoot**
- **Installation & Maintenance Test Tool**
- **Portable Demonstration Setup**

KEY BENEFITS

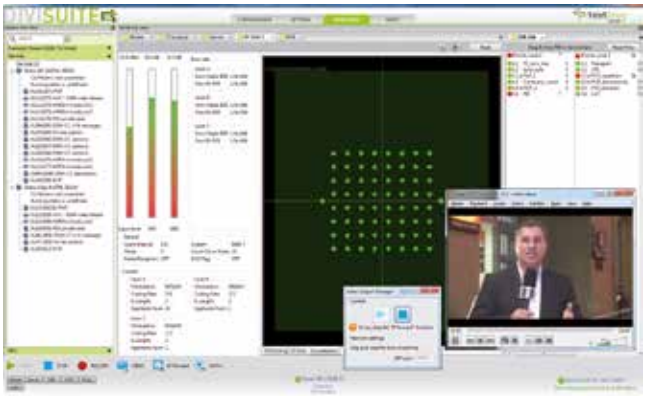
- **4-in-1 product: RF + Baseband + Recorder + Player**
- **Compact (pocket size, 160 g) and USB self-powered**
- **Allows antenna LNB powering & configuration**
- **All modulation schemes supported (from QPSK to 32APSK)**
- **CCM, VCM, ACM modes supported**
- **Analyze/Validate MPEG-2 TS/T2-MI Layer in real-time**
- **A must-have Lab Tool**

ORDERING CODES

DiviCatch RF-S/S2	**DVB-S/S2 Pocket Analyzer** Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/10		
Software Options	**RF Scope**	RF Analysis	RF + TS Bundle
	TS Analyzer	MPEG-2 TS Analysis	
	T2-MI Analyzer	T2-MI Analysis	

48HMAX **SHIPMENT** | All Options Bundle (RF + TS + T2-MI)

DIVICATCH RF ISDB-T/Tb



ISDB-T/Tb

The DiviCatch RF ISDB-T/Tb is a pocket analyzer cumulating ISDB-T/Tb live reception with Transport Stream real-time analysis, recording and stream playing.

H.264 MPEG-4 AVC | H.265 HEVC

TECHNICAL CHARACTERISTICS

1x RF input for ISDB-T/Tb
1x ASI input/output
IP source analysis (from PC)
RF measurements: signal level, SNR, MER, BER per Layer A/B/C
Graphical constellation, Channel Impulse Response display
PIDs and PSI/SI parsing, PCR graphs
BTS analysis: IIP packet parsing, TMCC alarms
ETSI TS 101 290 validation (priority 1, 2, 3)
Audio/Video player (H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)
TS record and playback
TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 160 g

APPLICATIONS

- **R&D Streams or Signal Analysis**
- **ISDB-T/Tb Broadcast Troubleshoot**
- **Installation & Maintenance Test Tool**
- **Portable Demonstration Setup**

KEY BENEFITS

- **4-in-1 product: RF + Baseband + Recorder + Player**
- **Compact (pocket size, 160 g) and USB self-powered**
- **All modulation schemes supported (DQPSK, from QPSK to 64QAM)**
- **Analyze/Validate TS Layer in real-time**

ORDERING CODES

DiviCatch RF ISDB-T/Tb	**ISDB-T/Tb Pocket Analyzer** Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/10	
Software Options	**RF Scope**	RF Analysis
	TS Analyzer	TS Analysis (includes BTS)

48HMAX SHIPMENT | All Options Bundle (RF + TS)

DIVICATCH RF-T/C T2/C2

DVB T/C DVB T2/C2

The DiviCatch RF-T/C T2/C2 is a pocket analyzer cumulating DVB-T/T2/T2LITE & DVB-C/C2 live reception with MPEG-2 TS real-time analysis, recording and stream playing.

H.264 MPEG-4 AVC H.265 HEVC

TECHNICAL CHARACTERISTICS

1x RF input for DVB-T/T2/T2 Lite & DVB-C/C2
ITU-J83 Annexes A, C (roll-off 0.15) supported
1x ASI input/output
IP source analysis (from PC)
RF measurements: signal level, SNR, MER, BER
Graphical constellation, Channel Impulse Response display (DVB-T/T2)
PIDs and PSI/SI parsing, PCR graphs
ETSI TS 101 290 validation (priority 1, 2, 3)
Audio/Video player (H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)
MPEG-2 TS record and playback
MPEG-2 TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 160 g

APPLICATIONS

- **R&D Streams or Signal Analysis**
- **DVB-T/T2 Broadcast Troubleshoot**
- **Digital Cable Troubleshoot**
- **Installation & Maintenance Test Tool**
- **Portable Demonstration Setup**

KEY BENEFITS

- **4-in-1 product: RF + Baseband + Recorder + Player**
- **Compact (pocket size, 160 g) and USB self-powered**
- **Receive live DVB-T/T2 & DVB-C/C2 signals**
- **All modulation schemes supported (from QPSK to 256QAM, 4096QAM for DVB-C2)**
- **Analyze/Validate MPEG-2 TS/T2-MI Layer in real-time**
- **A must-have Lab Tool**

ORDERING CODES

DiviCatch RF-T/C T2/C2	**DVB-T/T2/T2 Lite & DVB-C/C2 Pocket Analyzer** Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/10		
Software Options	**RF Scope**	RF Analysis	RF + TS Bundle
	TS Analyzer	MPEG-2 TS Analysis	
	T2-MI Analyzer	T2-MI Analysis	

48HMAX **SHIPMENT** | All Options Bundle (RF + TS + T2-MI)

DIVICATCH RF-C

The DiviCatch RF-C is a pocket analyzer cumulating digital cable RF live reception with MPEG-2 TS real-time analysis and recording.

TECHNICAL CHARACTERISTICS

1x RF input for Digital Cable
1x RF loop output
ITU-J83 Annexes A, B, C supported
1x ASI input
IP source analysis (from PC)
RF measurements: signal level, SNR, MER, BER, EVM
Graphical constellation, Channel Impulse Response display
PIDs and PSI/SI parsing, PCR graphs
ETSI TS 101 290 validation (priority 1, 2, 3)
Audio/Video player (H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)
MPEG-2 TS recording
MPEG-2 TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 160 g

APPLICATIONS

- **R&D Streams or Signal Analysis**
- **Digital Cable Troubleshoot**
- **Installation & Maintenance Test Tool**
- **Portable Demonstration Setup**

KEY BENEFITS

- **2-in-1 product: RF/Baseband Analyzer + Recorder**
- **Compact (pocket size, 160 g) and USB self-powered**
- **All modulation schemes supported (from QPSK to 256QAM)**
- **Analyze/Validate MPEG-2 TS Layer in real-time**

ORDERING CODES

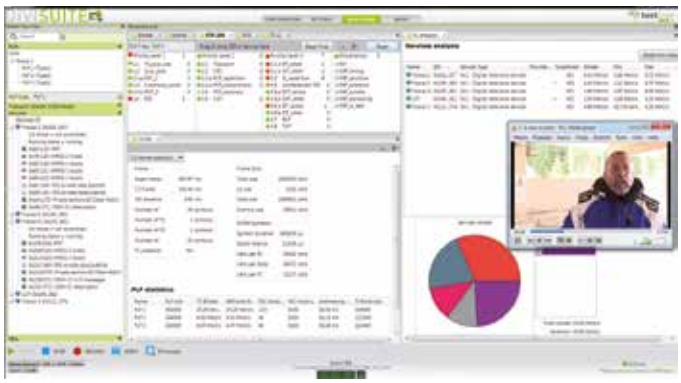
DiviCatch RF-C	**DVB-C Pocket Analyzer** Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/10	
Software Options	**RF Scope**	RF Analysis
	TS Analyzer	MPEG-2 TS Analysis

48HMAX **SHIPMENT** | All Options Bundle (RF + TS)

DIVIDUAL ASI

Baseband TS Analyzer

The DiviDual ASI is a pocket analyzer providing Transport Stream (MPEG-2 TS, T2-MI, BTS) real-time analysis, recording and stream playing.



H.264 MPEG-4 AVC | H.265 HEVC

TECHNICAL CHARACTERISTICS

1x ASI input and 1x ASI output
IP source analysis (from PC)
PIDs and PSI/SI parsing, PCR graphs
T2-MI analysis: L1 pre & post signaling, T2 frame statistics, BB frame header, ISSY field, T2 timestamp
BTS analysis: IIP Packet parsing, TMCC alarms
ETSI TS 101 290 validation (priority 1, 2, 3)
Audio/Video player (H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)
TS record and playback
TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 140 g

APPLICATIONS

- **R&D Streams Analysis and Generation**
- **Installation & Maintenance Test Tool**
- **Portable Demonstration Setup**

KEY BENEFITS

- **3-in-1 product: Baseband Analyzer + Recorder + Player**
- **Compact (pocket size, 140 g) and USB self-powered**
- **Analyze/Validate T2-MI, BTS and MPEG-2 TS Layer in real-time**
- **Add your own table and specifications Analysis (PSI/SI, PSIP...)**
- **A must-have Lab Tool**

ORDERING CODES

DiviDual ASI	**TS Analyzer, Recorder, Player** Shipped bundled with DiviSuite software for MS Windows XP/Vista/7/8/10	
Software Options	**TS Analyzer**	TS Analysis
	T2-MI Analyzer	T2-MI Analysis

48HMAX SHIPMENT | All Options Bundle (TS + T2-MI)

DIVIDUAL ASI+SPI (LVDS or TTL)

Baseband TS Analyzer

The DiviDual ASI + SPI is a pocket analyzer providing Transport Stream (MPEG-2 TS, T2-MI, BTS) real-time analysis, recording and stream playing, on both DVB-ASI and DVB-SPI (LVDS or TTL) connectors.

TECHNICAL CHARACTERISTICS

1x ASI input and 1x ASI output
1x SPI input/output (LVDS or TTL)
IP source analysis (from PC)
PIDs and PSI/SI parsing, PCR graphs
T2-MI analysis: L1 pre & post signaling, T2 frame statistics, BB frame header, ISSY field, T2 timestamp
BTS analysis: IIP Packet parsing, TMCC alarms
ETSI TR 101 290 validation (priority 1, 2, 3)
Audio/Video player (H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)
TS record and playback
TS over IP forward (PC's Ethernet interface selection)
Compatible MS Windows XP/Vista/7/8/10
USB self-powered, 140 g

APPLICATIONS

- **R&D Streams Analysis and Generation**
- **Laboratory Test Streams Analysis and Generation in DVB-SPI LVDS or TTL formats**
- **Installation & Maintenance Test Tool**
- **Portable Demonstration Setup**

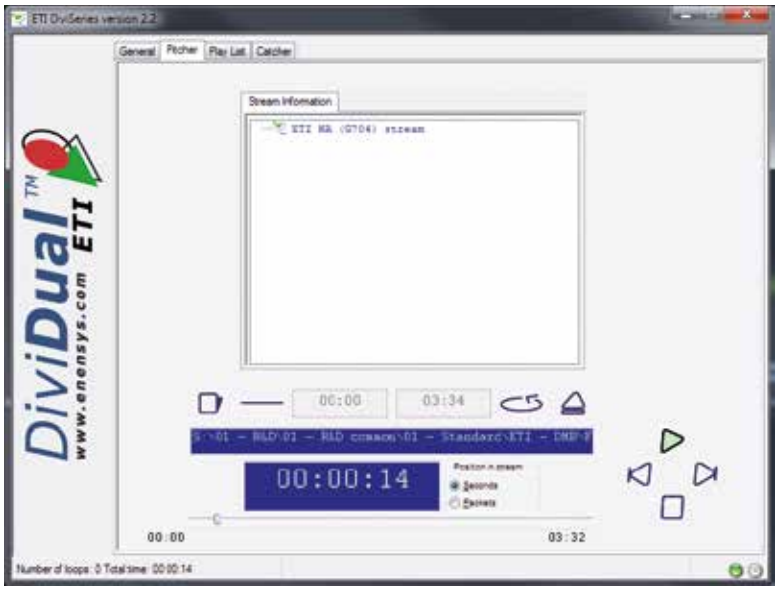
KEY BENEFITS

- **3-in-1 product: Baseband Analyzer + Recorder + Player**
- **Compact (pocket size, 140 g) and USB self-powered**
- **Work with TS in DVB-ASI and DVB-SPI LVDS or TTL formats**
- **Analyze/Validate T2-MI, BTS and TS Layer in real-time**
- **A must-have Lab Tool**

ORDERING CODES

DiviDual ASI + SPI	**TS over DVB-ASI and DVB-SPI (LVDS or TTL) Analyzer, Recorder, Player** Shipped bundled with DiviSuite software for MS Windows XP/Vista/7/8/10	
Software Options	**TS Analyzer**	TS Analysis
	T2-MI Analyzer	T2-MI Analysis

DIVIDUAL ETI



The DiviDual ETI is a real-time ETI Stream recorder and player in a pocket-sized and robust device.

TECHNICAL CHARACTERISTICS

1x ASI input and 1x ASI output for DAB/DAB+/T-DMB
ETI NI (G703) supported
ETI NA5592 & NA5376 (G704) supported
Playlist/segment/loop play mode
Scheduled recording
Player/Recorder command line software
Compatible MS Windows XP/Vista/7
USB self-powered, 140 g

APPLICATIONS

- **DAB, DAB+ or T-DMB Broadcast chain testing**
- **Portable Demonstration Setup**
- **R&D Streams Record and Playback**

KEY BENEFITS

- **2-in-1 product: Baseband Recorder + Player**
- **Compact (pocket size, 140 g) and USB self-powered**
- **Command line package for automated testing**
- **ETI-G703/G704 support**
- **Configurable play and record modes**

ORDERING CODE

DiviDual ETI	**DAB, DAB+, T-DMB Recorder, Player** Shipped bundled with DiviSuite ETI software for MS Windows XP/Vista/7

48HMAX SHIPMENT

DIVISUITE IP

EUROPEAN READERS' CHOICE AWARDS 2016
FINALIST
STREAMING MEDIA MAGAZINE EUROPEAN EDITION

Pure Software Application

The most complete analyzer software application for baseband TS/T2-MI/BTS streams.
Ho need to plug HW device (ReFeree, DiviDual, DiviCatch) to the PC: DiviSuite IP can analyze TS over IP or file-based input streams.
Two licensing models: Fixed PC License or Floating Server License.

DiviSuite Base

- TS Recorder
- TS IP Forward
- A/V Output

Bitrate, Log Files
H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...

TS Analyzer

TS Standard: MPEG, DVB, ATSC 1.0, ISDB-T/Tb (BTS)
PSI/SI Tables Decoding
ETSI TR 101 290
PCR Graphs
ASI Network Delay

T2-MI Analyzer

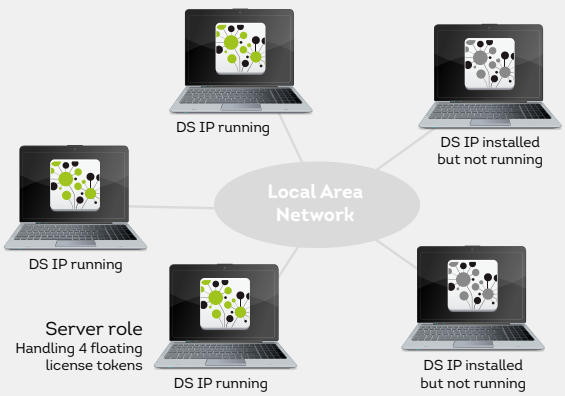
T2 L1 pre/post signaling, PLP allocation (BB frame, TS, padding/overflow)
T2 timestamp, BB frame, ISSY field
Single & Multi-PLP, PLP extraction

Fixed PC License Model

Install & use the DiviSuite IP on N independent PCs.
One license key attached to one physical machine.

Floating Server License Model

Enables N PCs (connected in the same LAN) to use the DiviSuite IP simultaneously.
The floating license token distribution is handled by one PC in the LAN, assigned with the Server role.



Detach license token for temporary use outside of the LAN

ORDERING CODES

DiviSuite IP	DiviSuite IP software for MS Windows XP/7/8/10
Included	DiviSuite Base, TS Analyzer
Software Option	T2-MI Analyzer
License	PC Fixed: Choose the number of PCs → one license key delivered per PC Floating Server: Choose the number of simultaneous use for the default package (DS Base + TS Analyzer) and for the software option (T2-MI Analyzer) → one unique license key delivered, to be activated on one PC in the LAN (Server role)

BROADCAST NETWORK MONITORING

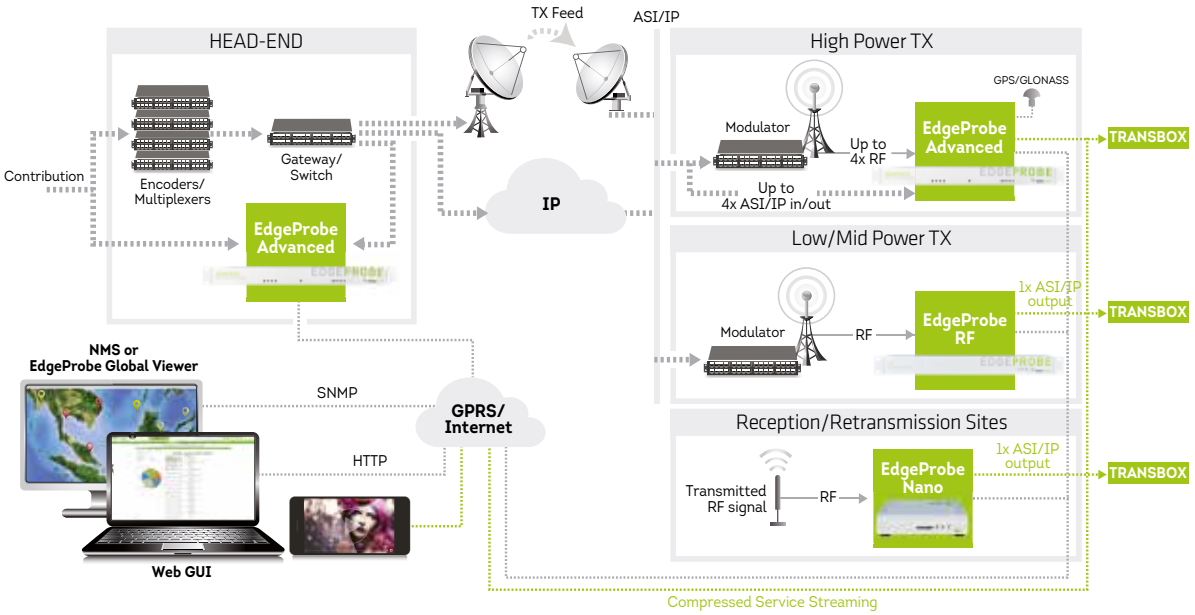
Cost-effective and high quality monitoring probes for terrestrial and cable DTV networks. Standalone, SNMP compatible, the probes provide real-time monitoring on RF, Transport Stream, DVB T2-MI and BTS level


24/7
MONITOR

EDGEPROBE INTEGRATION INTO DTV NETWORKS

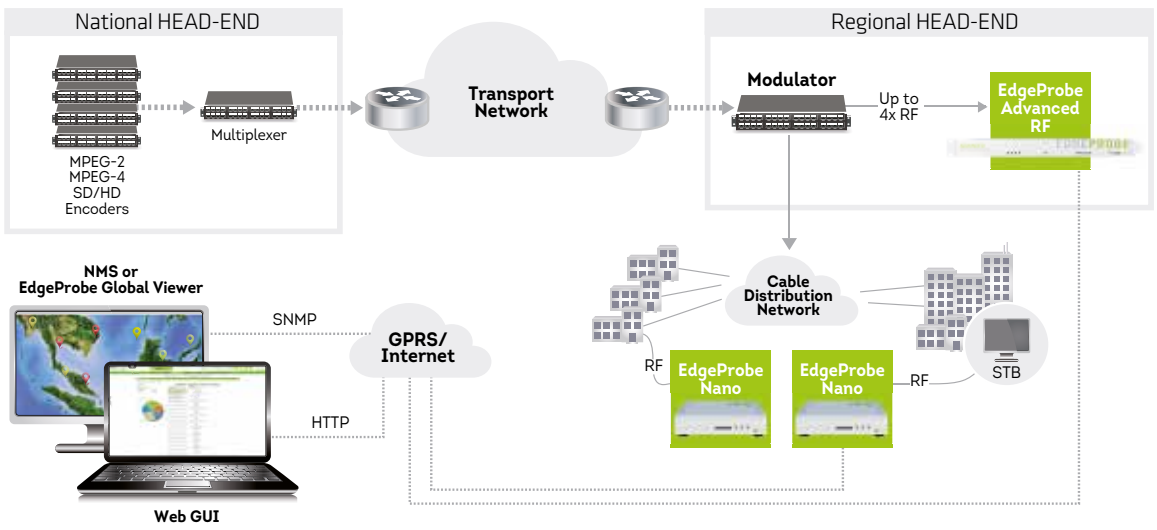
DIGITAL TERRESTRIAL TELEVISION

DVB T/T2 ISDB-T/Tb



DIGITAL CABLE NETWORKS

DVB C



EDGEPROBE FAMILY

EDGEPROBE ADVANCED

Standalone Unit:

- 1 RU 19''
- 1, 2 or 4x RF inputs: N-type 50 Ω
- 1, 2 or 4x ASI in/out
- 1, 2 or 4x IP Data in/out (VLAN support)
- 1x 1PPS, 1x 10MHz inputs
- 1x GNSS input for internal GNSS receiver (GPS, GLONASS)
- 1 or 2x IP Control
- 1, 2 or 4x 32 GB internal storage
- Dual Power Supply

DVB T/T2 Base Lite DVB C/C2 ISDB-T/Tb

RF Monitor: accurate RF measurement

TS-Monitor (Base + Advanced):
- MPEG-2 TS, BTS
- ETSI TR 101 290 Priority 1, 2 & 3 and QoS SAE/SDE

Service Plan & Multiplex description

Extended Storage: Logs, Trends up to 6 months, TS recording

Easy Integration for supervision:
- Low bitrate Web GUI (GPRS/3G/VSAT)
- SNMPv2 Support + NO TRAP LOSS

RF SFN-Drift Monitor

Frequency Offset Monitor

DVB-T2 T2-MI Monitor (over RF, ASI, IP)

T2-MI PLP extraction

OneBeam / Single Illumination

EDGEPROBE NANO
EDGEPROBE RF

Standalone Units:

- 1 RU 19'' (RF) / compact 144x137x30 mm (Nano)
- 1x RF input N-type 50 Ω (RF) / F-type 75 Ω (Nano)
- 1x IP Control & Data in/out (VLAN support)
- 1x ASI output
- 1x 32 GB internal storage

DVB T/T2 Base Lite DVB C/C2 ISDB-T/Tb

RF Monitor: accurate RF measurement

TS-Monitor (Base + Advanced):
- MPEG-2 TS, BTS
- ETSI TR 101 290 Priority 1, 2 & 3 and QoS SAE/SDE

Service Plan & Multiplex description

Extended Storage: Logs, Trends up to 6 months, TS recording

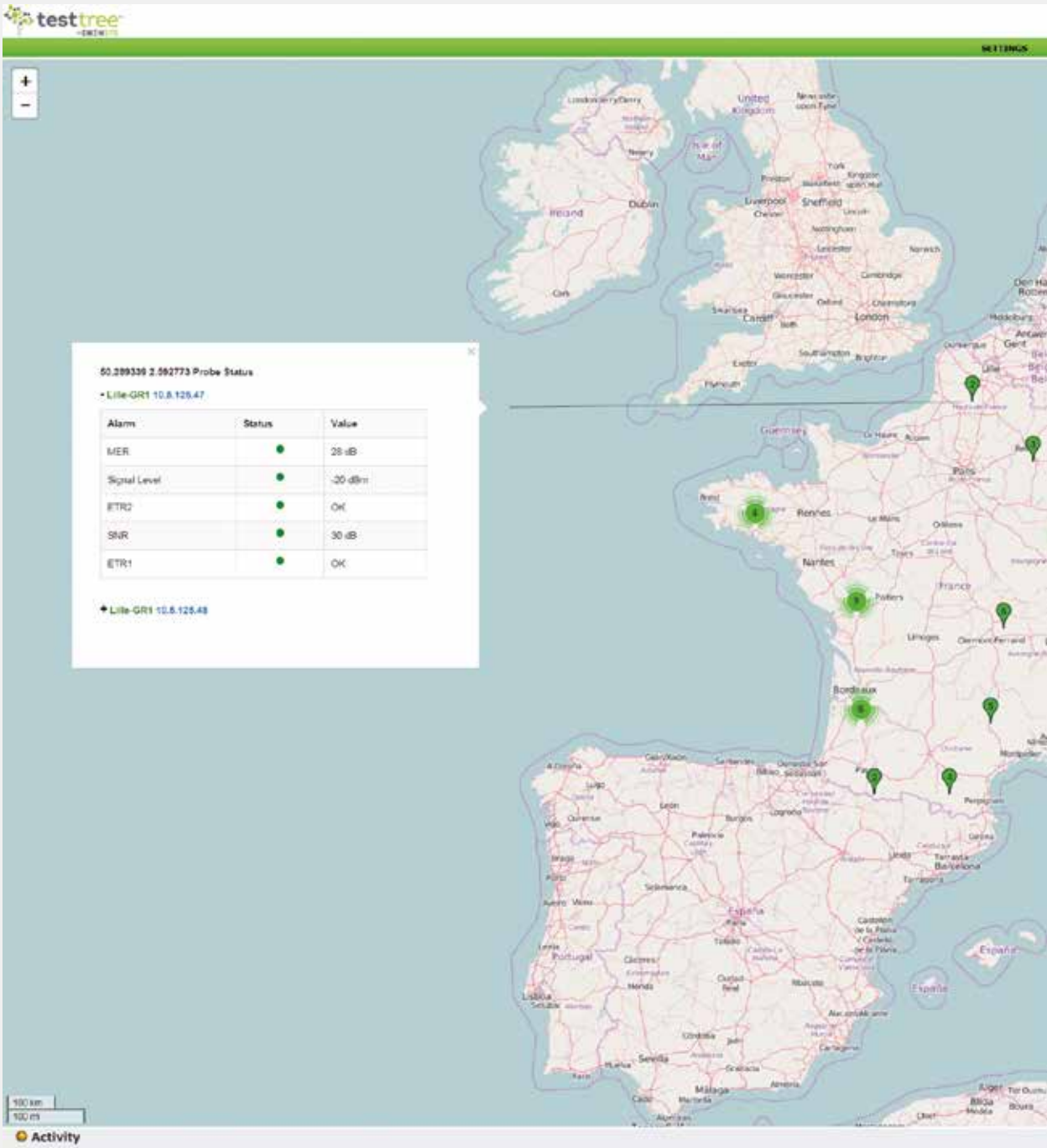
Easy Integration for supervision:
- Low bitrate Web GUI (GPRS/3G/VSAT)
- SNMPv2 Support + NO TRAP LOSS

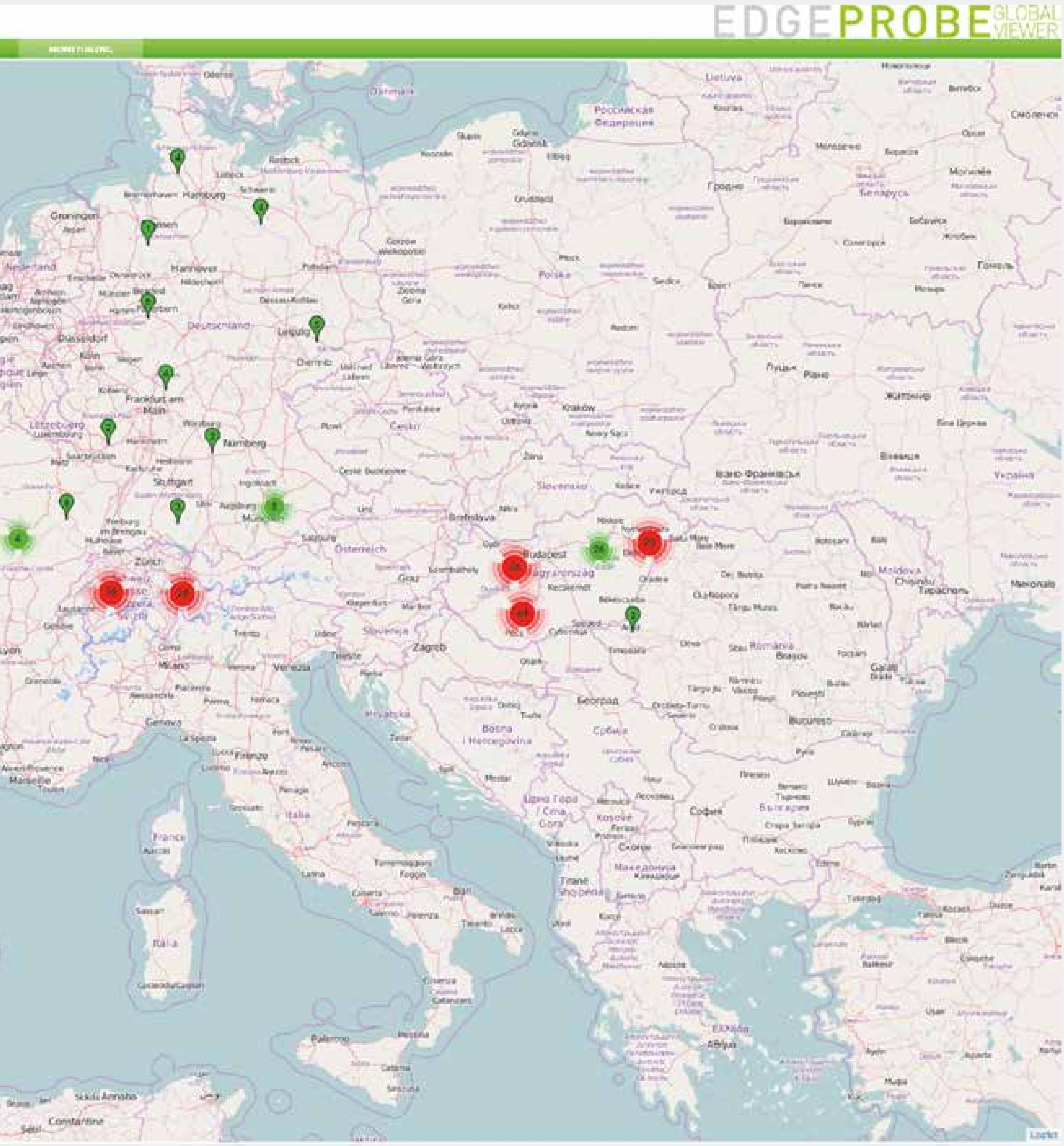
TRANSBOX

HW Option for EdgeProbe Confidence Monitoring
Streaming of 1 or 2 services(s) compressed down to 1 Mbps

NEW EDGEPROBE GLOBAL VIEWER

Centralize your Network Quality View!




EDGEPROBE GLOBAL VIEWER

REMOTE CONTROL WEB GUI

Synthetic alarm overview

Exhaustive alarm view: device and monitoring alarms

RF monitoring: Signal Level, SNR, MER, BER, modulation parameters

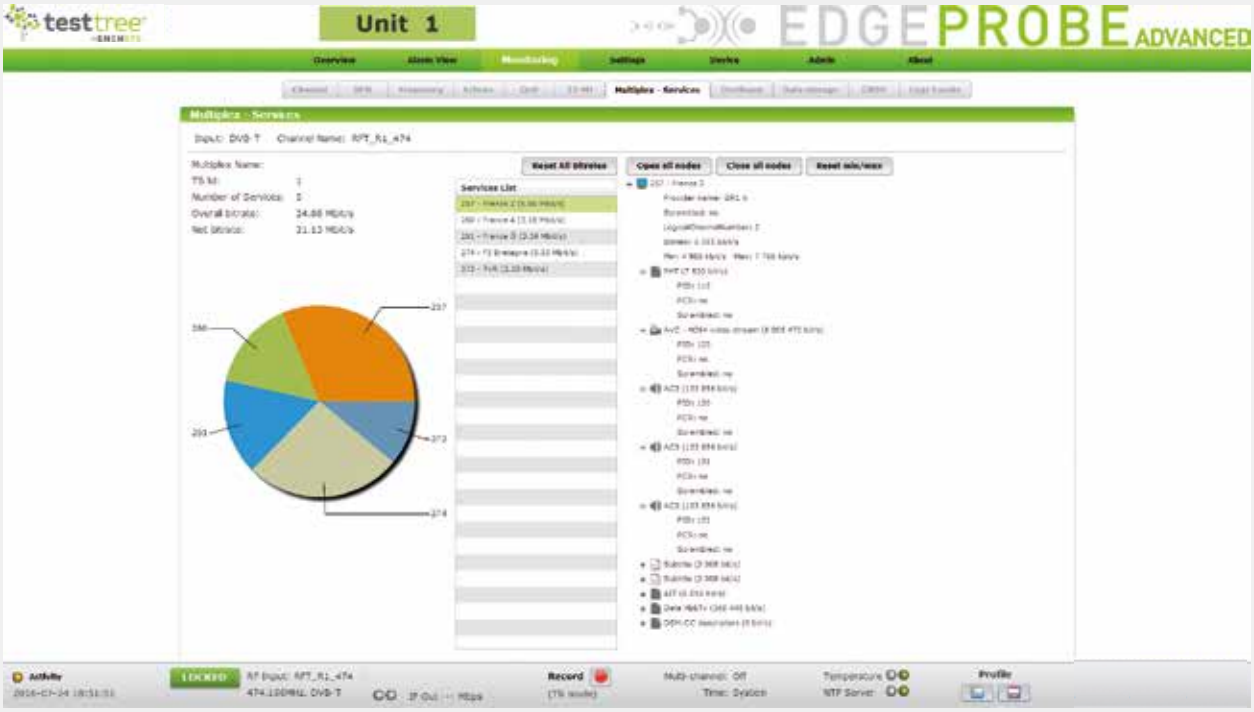
SFN monitoring: RF frame transmission time delay

REMOTE CONTROL WEB GUI

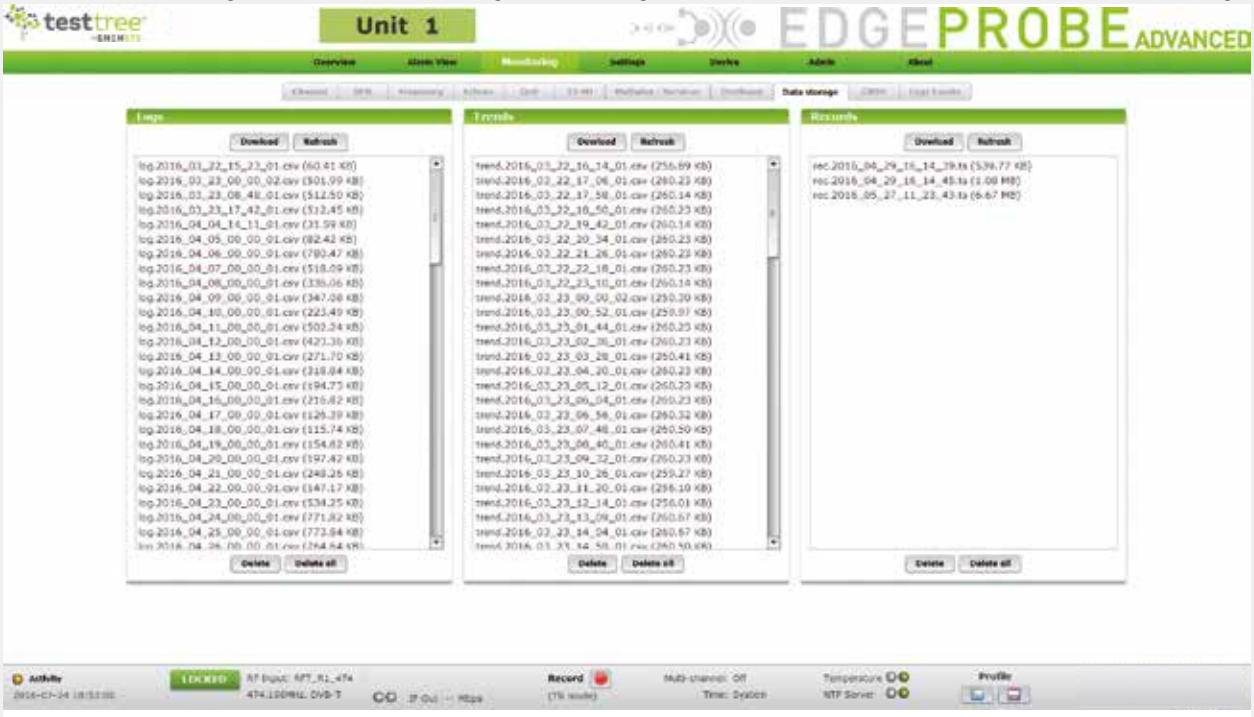
SFN monitoring: Carrier Frequency Drift

Channel Impulse Response Monitoring

Multiplex information (Provider, LCN) and Service list: components type, bitrate, composition



Internal Data Storage (32 GB per monitoring unit) for: logs, trends (RF measurement values) and TS recordings



EDGEPROBE RF

MFN TX Site

EdgeProbe RF is the ideal & most cost-effective high-quality solution for controling remotely the signal transmission of your low/mid power TX & relay sites that are sometimes difficult to reach.

APPLICATIONS

- **24/7 Monitoring and Maintenance of DTV live transmission**
- **Cost-effective Monitoring of transmitters and relay sites**
- **Generation of Service Availability reports for Service Level Agreements**
- **Rebroadcasting receiver: RF to ASI or IP (including MUTE feature)**
- **Live transmission recorder**

TECHNICAL CHARACTERISTICS

1x RF in, 1x ASI out, 1x IP Control/Data in/out (VLAN support) in 1 RU
EdgeProbe RF models: DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb
RF accurate measurements: signal level, SNR, MER, BER
Channel Impulse Response monitor
Multiplex & Service Plan check
Service Compression (Transcoding) and Streaming *(See Page 43)*
ETSI TS 101 290 validation: Priority 1, 2, 3 and optional QoS SAE/SDE
MPEG-2 TS, BTS Support
TS over ASI out or IP forward for video QoE monitoring
32GB storage for TS record and 6 months logs & trends
Automated & Secure Deployment for small to large networks

KEY 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 TX sites maintenance cost by anticipating and identifying issues**
- **Remotely accessible, compatible with low band width control networks (GPRS/3G)**
- **Low power consumption 8W**

ORDERING CODES

EdgeProbe RF	**DTV RF Monitoring Probe**	
Included	**RF to ASI, RF to IP, RF + CIR monitoring, VLAN, BTS for ISDB-T/Tb**	
Select your standard	**DVB-T/T2/T2 Lite** or **DVB-C/C2** or **ISDB-T/Tb**	
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
	QoS Monitor	SAE, SDE monitoring
	Service Plan	Multiplex Service/PID monitoring
	Extended Memory	32 GB storage: trends, logs, TS record
HW Options	**TRANSBOX**	Stream 1 or 2 compressed service(s) *(See Page 43)*
	Tropicalization	Preserve the ITW from corrosion

EDGEPROBE NANO

Reception Site

EdgeProbe Nano is the most tiny and compact RF probe with no compromise on quality!

TECHNICAL CHARACTERISTICS

1x RF in, 1x ASI out, 1x IP Control/Data in/out (VLAN support)
EdgeProbe Nano models: DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb
RF accurate measurements: signal level, SNR, MER, BER
Channel Impulse Response monitor
Multiplex & Service Plan check
Service Compression (Transcoding) and Streaming *(See Page 43)*
ETSI TS 101 290 validation: Priority 1, 2, 3 and optional QoS SAE/SDE
MPEG-2 TS, BTS Support
TS over ASI out or IP forward for video QoE monitoring
32 GB storage for TS record and 6 months logs & trends

APPLICATIONS

- **Network operators:**
  - **automate the tests of new transmitters**
  - **temporary monitoring/investigation tool**
  - **rebroadcasting receiver: RF to ASI or IP**
- **Broadcasters: off-air monitoring probe to validate the on-air content**
- **TV/STB producers: automated tests against a professional receiver**
- **Labs: easy & simple access to live DTV sources via RF**

KEY BENEFITS

- **Small, Silent & Magnetized: can be installed anywhere**
- **Easy to use and configure**
- **Standalone: no need for PC**
- **Remotely accessible**
- **Enables SNMP test automation**
- **Low power consumption 8W**

ORDERING CODES

EdgeProbe Nano	DTV Nano Monitoring Probe	
Included	**RF to ASI, RF to IP, RF + CIR monitoring, VLAN, BTS for ISDB-T/Tb**	
Select your standard	**DVB-T/T2/T2 Lite** or **DVB-C/C2** or **ISDB-T/Tb**	
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
	QoS Monitor	SAE, SDE monitoring
	Service Plan	Multiplex Service/PID monitoring
	Extended Memory	32 GB storage: trends, logs, TS record
HW Option	**TRANSBOX**	Stream 1 or 2 compressed service(s) *(See Page 43)*

EDGEPROBE ADVANCED

HE & SFN TX Site

EdgeProbe Advanced is the ideal tool to achieve accurate & cost-effective monitoring of the quality actually delivered to all points of a DTV network.

TECHNICAL 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, SNR, MER, BER
SFN Drift, Channel Impulse Response, Frequency Offset monitoring
Multiplex & Service Plan check
Service Compression (Transcoding) and Streaming *(See Page 43)*
ETSI TS 101 290 validation: Priority 1, 2, 3 and optional QoS SAE/SDE
MPEG-2 TS, BTS, T2-MI (PLP extraction) Support
OneBeam/Single Illumination T2-MI markers monitoring
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 (SFN/MFN, RF/Baseband)**
- **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**
- **Reduce TX sites maintenance cost by anticipating and identifying issues**
- **Increase customer satisfaction by detecting & preventing DTV network degradations before your customers do**
- **Remotely accessible, compatible with low bandwidth control networks (GPRS/3G)**
- **Low power consumption 20W**

ORDERING CODES

EdgeProbe Advanced	DTV Advanced Monitoring Probe	
Included	RF to ASI, RF/ASI to IP, RF + SFN + CIR + Frequency Offset monitoring, VLAN, BTS for ISDB-T/Tb	
Select your standard	DVB-T/T2/T2 Lite or DVB-C/C2 or ISDB-T/Tb	
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
	QoS Monitor	SAE, SDE monitoring
	Service Plan	Multiplex Service/PID monitoring
	T2MI Monitor	T2-MI 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
	OneBeam/Single Illumination	T2-MI markers monitoring
HW Option	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
	TRANSBOX	Stream 1 or 2 compressed service(s) *(See Page 43)*
	Tropicalization	Preserve the HW from corrosion

NEW TRANSBOX

TRANSBOX is the most cost-effective solution for confidence monitoring: service extraction and audio/video transcoding.
Controlled by one EdgeProbe unit (Advanced, RF, Nano), the TRANSBOX provides real-time:
- service extraction from the input MPEG-2 TS (SPTS or MPTS)
- Service compression (audio/video transcoding, including subtitles)
- transcoded MPEG-2 SPTS forward over IP Data

TECHNICAL CHARACTERISTICS

1 or 2 Transcoding Units (TU) in 1 RU (1 or 2 services transcoded simultaneously)
1 TU coupled with 1 EdgeProbe Unit: transcoding function controlled via the EdgeProbe, SNMP compatible
1x IP Data in/out (GbE) per TU
1x IP Control interface (100 Mbps) per TU
Unicast support for IP Data in/out
VLAN support over IP Data in/out
Service extraction and audio/video transcoding up to 10 min
40 Mbps maximum input bitrate
1 to 10 Mbps output bitrate
Audio/Video input/output formats *(Contat us for details)*
Output video resolution: CIF, DCIF, 2CIF, 4CIF
Output audio bitrate: 32 kbps to 192 kbps
HbbTV, subtitles, private data supported
Multiple audio track supported

APPLICATIONS

- **Service extraction and audio/video transcoding**
- **Live transmission check**
- **Validate regional service and/or add insertion**

KEY BENEFITS

- **Easy to use and configure: transcoding controlled via the master EdgeProbe unit, SNMP compatible**
- **Compatible with low bandwidth data networks: down to 1 Mbps transcoded streams**
- **Added value confidence monitoring for local insertion check**
- **Low power consumption 5W**

ORDERING CODE

TRANSBOX	**Transcoding Unit for EdgeProbe** MPEG-2 TS Service extraction and audio/video transcoding	
HW Option	**Dual**	Two transcoding units


EDGEPROBE
RF
Status
PSU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