

TEST & MONITORING





TEST TOOLS FOR LAB & FIELD

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RF Capture/Playback & Generate

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

RF-Catcher Platform

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Application Suite for RF-Catcher Platform

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ATSC 3.0 LabMod NEW

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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

DiviSuite™

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DiviSuite Base

DiviSuite options: RF Scope, TS Analyzer, T2-MI Analyzer, Test Coverage

Hardware products used with the DiviSuite

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ReFeree II

DiviCatch RF-S/S2

DiviCatch RF-ISDB-T/Tb

DiviCatch RF-T/C T2/C2

DiviCatch RF-C

DiviDual ASI

DiviDual ASI + SPI (LVDS or TTL)

DiviDual ETI

Pure software application using the DiviSuite

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DiviSuite IP



BROADCAST NETWORK MONITORING

30

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

EdgeProbe Global Viewer NEW

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EdgeProbe RF

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EdgeProbe Nano

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EdgeProbe Advanced

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TRANSBOX NEW

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TestTree history

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



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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.

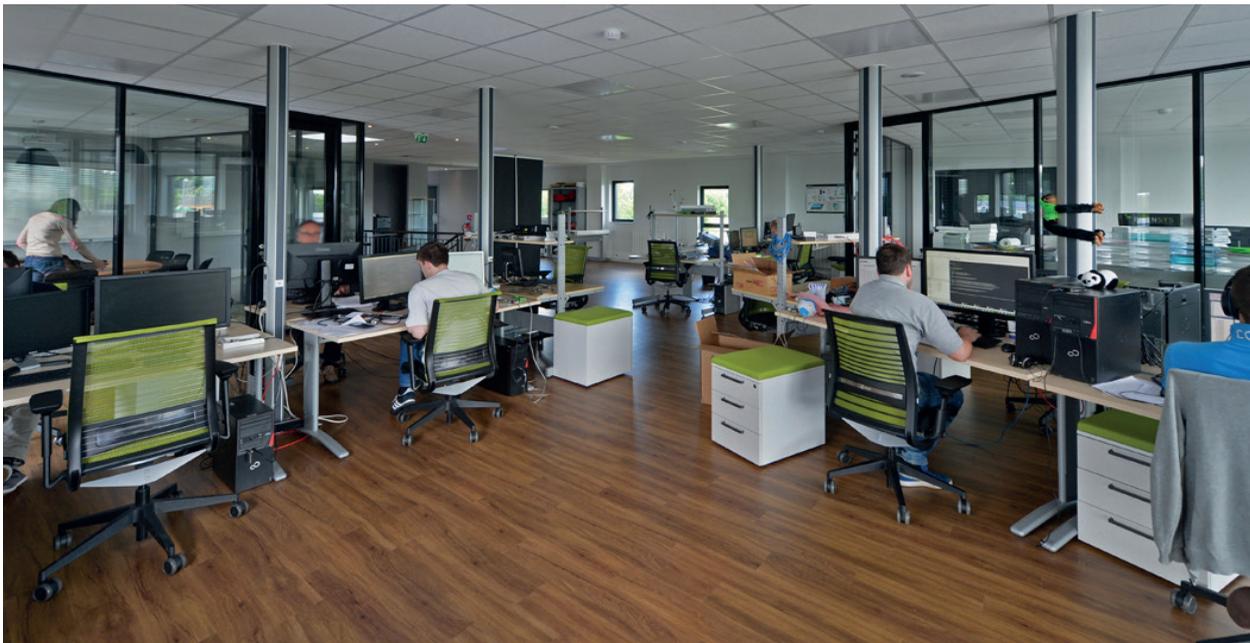
TestTree today

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.



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

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ATSC 3.0 LabMod The 1st ATSC 3.0 Modulator for Lab 	12

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

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ReFeree II	
DiviCatch RF-S/S2	
DiviCatch RF-ISDB-T/Tb	
DiviCatch RF-T/C T2/C2	
DiviCatch RF-C	
DiviDual ASI	
DiviDual ASI + SPI (LVDS or TTL)	
DiviDual ETI	
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DiviSuite IP	





LAB & FIELD

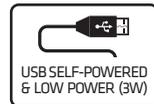
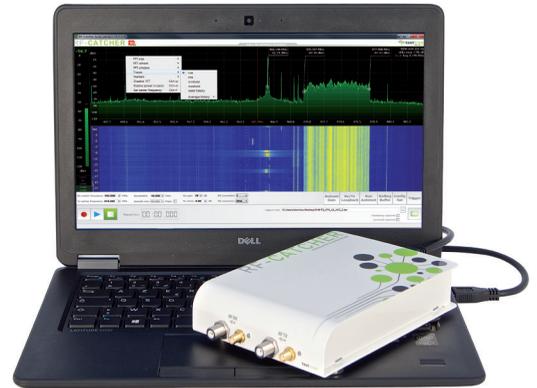


RF-CATCHER PLATFORM

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

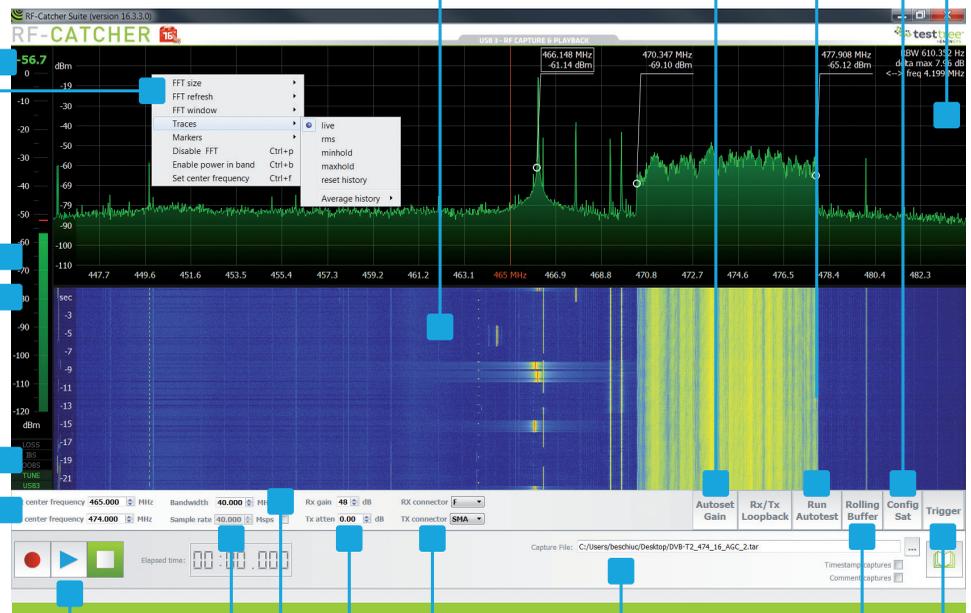
IQ average power

Status indicators

- USB: connection (USB2 or USB3)
- LOSS: IQ sample loss
- IBS: in band saturation (ADC)
- OOPS: 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

Rolling Buffer
mode for RF capture

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

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

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)
Ipps/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)

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)

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

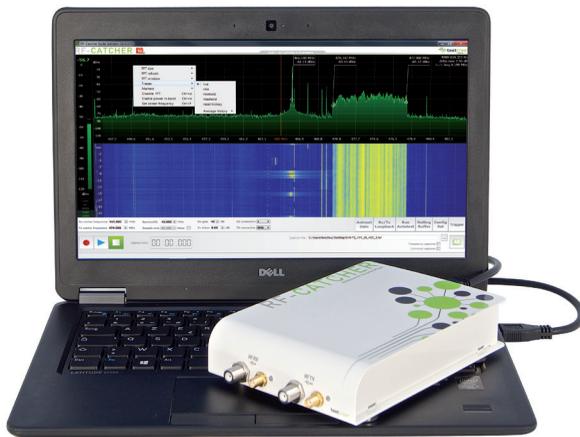
Attenuation range	0 to 89 dB
Amplitude resolution	0.01 dB
Power output	5 dBm max
Max DC output	± 15 V

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, Advic, Avena*

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)



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

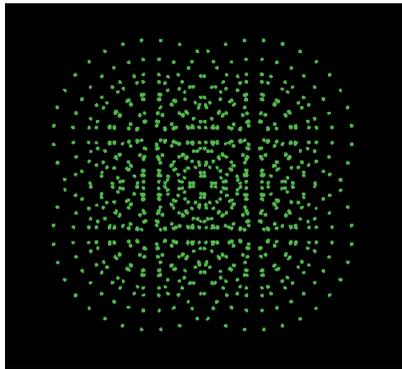
Software: ATSC 3.0 LabMod Application, IQ Converter, IQ Splitter, Task Scheduler, RF Records Trigger, Noise/Echo Generator, DiviSuite IP
Compatible MS Windows 7/8/8.1/10 (x64)
Service Subscription for 1, 3 or 5 Years

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.



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

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

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

Input Local STL
Device IP 10 . 6 . 20 . 14
Multicast IP 239 . 0 . 0 . 4 : 23901

Output RF stream IQ file generation
Frequency 800,00 MHz
Attenuation 0 dB

ATSC profile
D:\ATSC3.0_configurations\ATSC3_ENENSYS_0.json
Load Save Save as

Frame structure section
subframe 0
PLP 0
PLP 4
PLP 5
subframe 1
PLP 0 (Id 1)
subframe 2
PLP 0 (Id 2)
PLP 6
subframe 3
PLP 0 (Id 3)
PLP 7

SUBFRAME 3 SETTINGS
Name subframe 3
FFT mode: 8K, 16K, 32K
Bandwidth occupation: 97.2%, 95.9%, 94.5%, 93.2%, 91.8%
Guard interval: 192, 384, 512, 768, 1024, 1536
Scattered-pilot pattern: 2,2; 2,4; 2,2; 2,4; 2,2; 2,4; 2,2; 2,4
Scattered-pilot boost: 0, 1, 2, 3, 4
Nb Data symbols: 18
Frequency interleaver: Disabled, Enabled
First SBS: Disabled, Enabled
Last SBS: Disabled, Enabled

CONFIGURATION CHECK
subframe 3 - L1D_scattered_pilot_pattern: invalid value

STATISTICS
Frame
Duration 0,364667 s Sampling frequency 6,912e+06 Hz Number of samples 2 506 752
Bootstrap Preamble (L1) Preamble (Data) Subframes
Bootstrap: Duration 0,002 s, Sampling frequency 6 144 000 Hz, Number of samples 12 288
Preamble: Duration 0,004 s, Number of symbols 3, Symbol size 9 216, FFT size 8 192, Guard interval 1 024, Number of cells 13 427, Number of cells for L1 signalling 11 311, Number of cells for data 2 116
subframe 0 subframe 1 subframe 2 subframe 3
PLPs Dummy
Duration 0,0873333 s SBS first symbol Yes
Number of symbols 18 SBS last symbol Yes
Symbol size 33 536 Number of data cells in SBS symbols 23 494
FFT size 32 768 Number of data symbols 16
Guard interval 768 Number of data cells in data symbols 26 879
Total number of data cells 477 052
PLP 0 PLP 7
Number of cells 100 000
Number of cells per FEC frame 32 400
Number of FEC frames 3,08642
Bitrate 327 443 bit/s

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

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





ANALYZE RF & BASEBAND

	STANDARDS	CHARACTERISTICS						SOFTWARE OPTIONS			
		RF Input RF	ASI Input/Output ASI	IP Input/Output IP	SPI Input/Output SPI	I PPS & 10 MHz Input TTL	GPS Input GPS	A/V Output Recorder Player	RF Scope	TS Analyzer	T2-MI Analyzer
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	•	•	• ⁽¹⁾			•	•	•	•	•
 DIVIDUAL ASI+SPI LVDS OR TTL	ISDB-T/Tb ATSC DTMB	•	•	• ⁽¹⁾	•		•	•	•	•	•
 DIVIDUAL ETI	Baseband DAB, DAB+ T-DMB	•					•	•			



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



■ Bitrate, Log Files



■ H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...



■ H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...



■ H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...

Common Features coming as a default package

Stream Overview

Bitrate graphs Drag & Drop PID

Bitrate Alarms

Stream Tree View

Monitoring View

Log window

Status	Function	Date/Time	PID	PLP	Message
Critical	Bitrate	2016-07-22 11:10:14	0x96 (150)		PID bitrate (1549120) went above 100.000
Critical	Bitrate	2016-07-22 11:10:10	0x78 (120)		PID bitrate (6408.5440) went above 6400.000
Critical	Bitrate	2016-07-22 11:09:55	0x96 (150)		PID bitrate (103.7760) went above 100.000
Critical	Bitrate	2016-07-22 11:09:51	0x78 (120)		PID bitrate (2568.8320) went below 2600.000
Critical	Bitrate	2016-07-22 11:09:38	0x96 (150)		PID bitrate (151.9040) went above 100.000
Critical	Bitrate	2016-07-22 11:09:33	0xdc (220)		PID bitrate (1264.8640) went below 1300.000
Critical	Bitrate	2016-07-22 11:09:32	0xdc (220)		PID bitrate (1297.9520) went below 1300.000
Critical	Bitrate	2016-07-22 11:09:30	0x06 (150)		PID bitrate (100.7020) went above 100.000

Video Output Manager

Control

It may stop the "IP forward" function.

Network settings

Udp port used for local streaming

Udp port: 1234

Petits secrets entre... - VLC media player

Media Playback Audio Video Subtitle Tools View Help

ReFeree II

Playing stream packets of 188 bytes

Recording Manager

Status

00:00:16 - 49 MB

Control

Settings

Destination Base Filename

Scheduler

Record countdown

Record duration

Maximum file size (MB)

Number of records

Infinite looped recording

Record the analyzed TS to file format

Offline Analysis

IP Forwarding Manager

Status

IP forwarding the main stream

Control

It may stop the "Video output" function.

Network settings

The network adapter interface will be used to send TS packets over UDP

Interface: Ethernet Connection 1218-1M

192.168.1.4 - 44-344 - 1234

Forward the analyzed TS to the PC's IP interface

ASI Forwarding Manager

Status

ASI forwarding the main stream

Control

Settings

Asi Mode

Continuous

Burst

Framing

Auto

188

204

Remove Null Packets

Play the analyzed TS over the ASI output

Audio/Video decoding
H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...

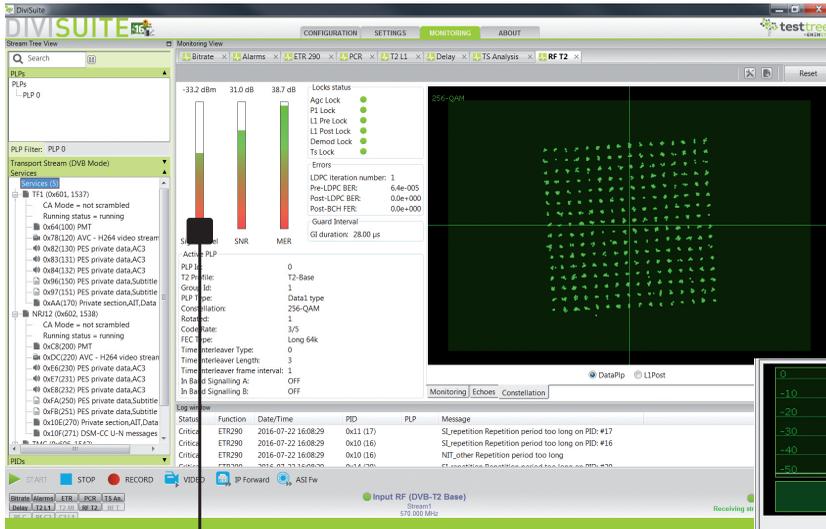




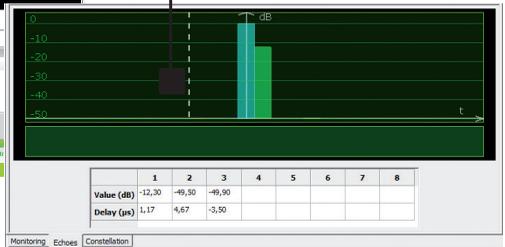
DIVISUITE SOFTWARE OPTION



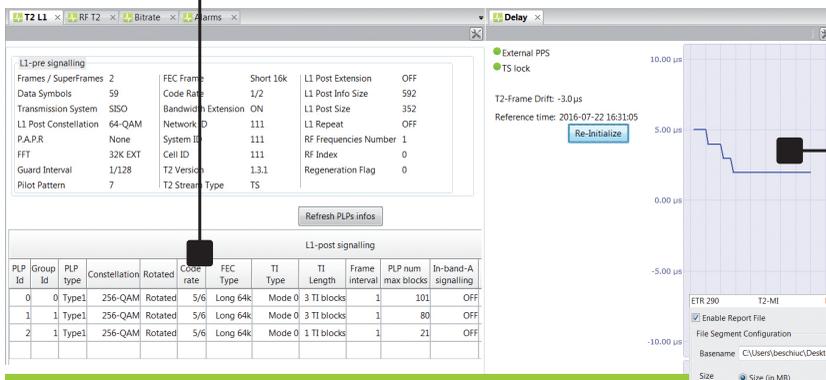
- Signal Quality: level, SNR, MER, BER
- Constellation
- Graphs, Report Files
- Channel Impulse Response
- Modulation Parameters
- SFN Synchronisation



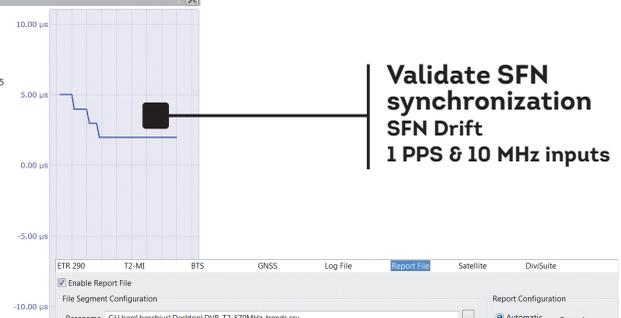
Test the field RF Quality TX Echoes diagram



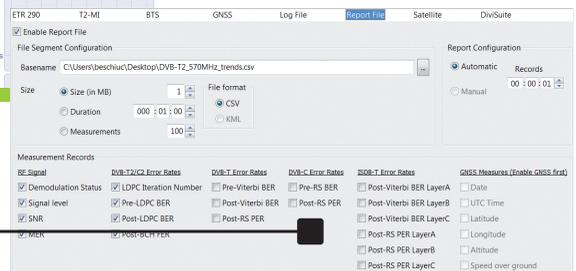
Validate the Modulator/TX RF Quality
Signal Quality measurement: level, SNR, MER, BER
Modulation parameters
Constellation
DVB-T2 L1 signaling



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

The main interface displays a 'Monitoring View' with a 'Services analysis' table. The table lists services with columns for Name, SID, Service Type, Provider, Scrambled, Bitrate, and Min. A pie chart titled 'Services bitrate' shows the distribution of bitrates for selected services. A 'PCR' graph shows PCR accuracy over time. A 'Log window' at the bottom shows system messages.

Name	SID	Service Type	Provider	Scrambled	Bitrate	Min
France 2	0x101, 257	0x1 - Digital tele...	GR1 A	NO	7.97 Mbit/s	4.94 Mbit/s
France 4	0x104, 260	0x1 - Digital tele...	GR1 A	NO	2.18 Mbit/s	2.18 Mbit/s
France Ó	0x105, 261	0x1 - Digital tele...	GR1 A	NO	3.03 Mbit/s	1.78 Mbit/s
F3 Bretagne	0x112, 274	0x1 - Digital tele...	Nat	NO	5.62 Mbit/s	5.55 Mbit/s
TVR	0x175, 373	0x1 - Digital tele...	GR1	NO	2.29 Mbit/s	2.29 Mbit/s

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)

■ Single & Multi-PLP, PLP extraction

■ T2 timestamp, BB frame header, ISSY field **NEW**

Validate your DVB-T2 Gateway!

PLP extraction/filter

L1-pre signaling

Frames / SuperFrames	2	FEC Frame	Short 16k	L1 Post Extension	OFF
Data Symbols	63	Code Rate	1/2	L1 Post Info Size	592
Transmission System	SISO	Bandwidth Extension	ON	L1 Post Size	352
L1 Post Constellation	64-QAM	Network ID	111	L1 Repeat	OFF
P.A.P.R	None	System ID	111	RF Frequencies Number	1
FFT	32K EXT	Cell ID	111	RF Index	0
Guard Interval	1/16	T2 Version	1.3.1	Regeneration Flag	0
Pilot Pattern	4	T2 Stream Type	TS		

L1-post signaling

PLP Id	Group Id	PLP type	Constellation	Rotated	Code rate	FEC Type	TI Type	TI Length	Frame interval	PLP num	max blocks
1	1	Type1	256-QAM	Rotated	4/5	Long 64k	Mode 0	3 TI blocks	1	115	
2	1	Type1	256-QAM	Rotated	4/5	Long 64k	Mode 0	3 TI blocks	1	45	
3	1	Type1	256-QAM	Rotated	4/5	Long 64k	Mode 0	3 TI blocks	1	40	

T2 frames statistics

Packet / Bitrate Allocation	7.87 ms
T2 frames statistics	3.94 ms
BB frames header	0.00 ms
ISSY	
DVB-T2 timestamp	

Frame Cells

Total size	1693023 cells
L1 size	2192 cells
Data size	1690831 cells
Dummy size	38431 cells

OFDM Symbols

Symbol duration	3808.00 μs
Guard interval	224.00 μs
Cells per P2	22432 cells
Cells per Data	26572 cells
Cells per FC	23127 cells

PLP statistics

Name	PLP size	TS Bitrate	BBframe Bl...	FEC block...	FEC block...
PLP 1	963900	25.29 Mbit/s	25.20 Mbit/s	119	8100
PLP 2	364500	9.56 Mbit/s	9.53 Mbit/s	45	8100
PLP 3	324000	8.50 Mbit/s	8.47 Mbit/s	40	8100

Log window

Status	Function	Date/Time	PID	PLP	Message
Critical	ETR290	2016-07-22 15:23:00	0xab (171)	1	PID on PID: #171
Critical	ETR290	2016-07-22 15:23:00	0x23c (572)	1	PID on PID: #572
Critical	ETR290	2016-07-22 15:23:00	0x174 (372)	1	PID on PID: #372
Critical	ETR290	2016-07-22 15:22:59	0xab (171)	1	PID on PID: #171
Critical	ETR290	2016-07-22 15:22:59	0x23c (572)	1	PID on PID: #572
Critical	ETR290	2016-07-22 15:22:59	0x174 (372)	1	PID on PID: #372
Critical	ETR290	2016-07-22 15:22:58	0xab (171)	1	PID on PID: #171

RF Tables Bitrate ETR 290 T2-MI GPS Log File

Enable T2-MI analysis

Analysis settings

T2-MI Data Piping

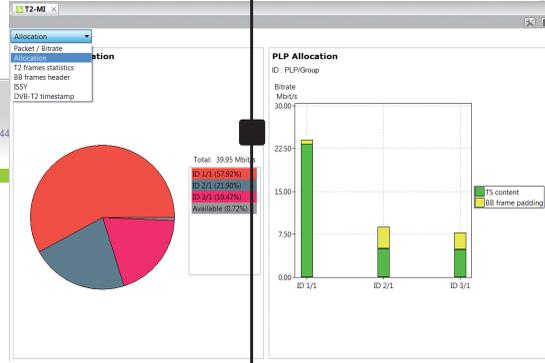
Extract T2-MI from PID (in decimal) 65535

Auto extract from PSI tables

Alarm settings

Name	On Log	Mode
Packet count	<input checked="" type="checkbox"/>	Transition
CRC32	<input checked="" type="checkbox"/>	Transition
Packet type	<input checked="" type="checkbox"/>	Transition
Packet payload	<input checked="" type="checkbox"/>	Transition
Payload	<input checked="" type="checkbox"/>	Transition
Frame length	<input checked="" type="checkbox"/>	Transition
Transmission order	<input checked="" type="checkbox"/>	Transition
Timestamp	<input checked="" type="checkbox"/>	Transition
Timestamp discontinuity	<input checked="" type="checkbox"/>	Transition

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



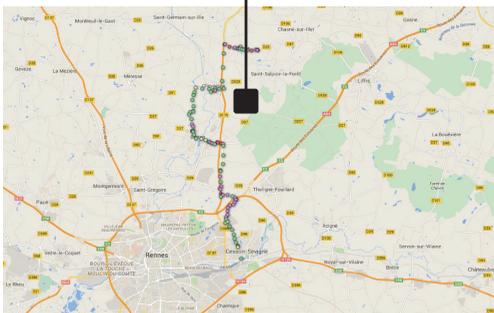
- GNSS Receiver (GPS/GLONASS)
- Test Reports (Google Earth compliant)

Test the field coverage!

GNSS receiver enabled
Real-time measurement

The screenshot shows the DiviSuite software interface. The main window is titled 'Monitoring View' and displays several signal quality metrics: Signal level (Active PLP), SNR, and MER. A 'Locks status' section shows indicators for Agc Lock, P1 Lock, L1 Pre Lock, L1 Post Lock, Demod Lock, and Ts Lock. Below this, there are error statistics including LDPC iteration number, Pre-LDPC BER, Post-LDPC BER, Post-BCH FER, and Guard Interval (GI) duration. A 'Log window' is open, displaying a table of log entries with columns for Status, Function, Date/Time, PID, PLP, and Message. The interface also includes a 'Stream Tree View' on the left and a 'Services' section at the bottom.

Display results in Google Earth or Google Fusion Tables applications



* Plugin delivered with a magnet mount GNSS L1 Antenna

The screenshot shows the 'Report File' configuration window. It includes sections for 'File Segment Configuration' (Basename, Size, Duration, Measurements), 'Report Configuration' (Automatic/Manual, Records), and 'Measurement Records'. The 'Measurement Records' section has several checkboxes for data to be included in the report, such as Demodulation Status, Signal level, SNR, MER, LDPC Iteration Number, Pre-LDPC BER, Post-LDPC BER, Post BCH FER, Pre-Viterbi BER, Post Viterbi BER, DVB-C Error Rates, DVB-T Error Rates, DVB-S Error Rates, ISDB-T Error Rates, and GPS Measures (Date, UTC Time, Latitude, Longitude, Altitude, Speed over ground).

Generate Google Earth compliant files (KML)
Customize measured parameters



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.



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 IPPS & 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)

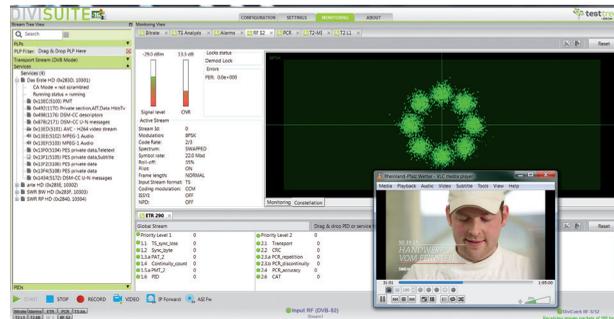
DIVICATCH RF-S/S2



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.



APPLICATIONS

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

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

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
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Software Options	RF Scope TS Analyzer T2-MI Analyzer	RF Analysis MPEG-2 TS Analysis T2-MI Analysis	RF + TS Bundle
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All Options Bundle (RF + TS + T2-MI)

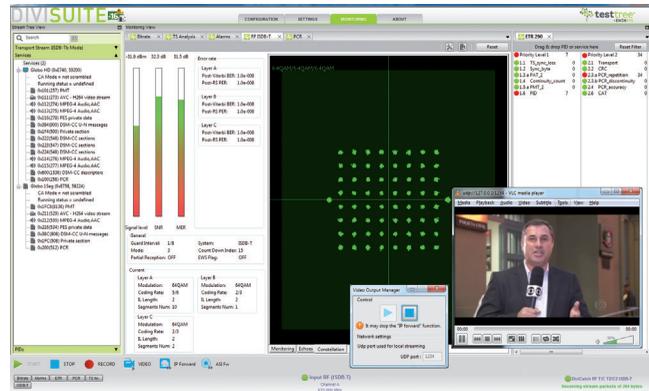


DIVICATCH RF ISDB-T/Tb



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.



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
TS Analyzer

RF Analysis
TS Analysis (includes BTS)

48HMAX SHIPMENT

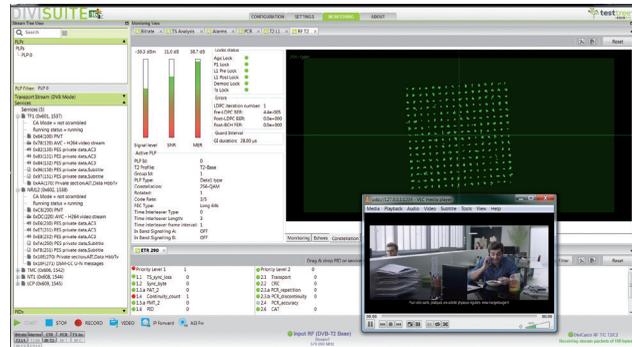
All Options Bundle (RF + TS)

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.



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

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

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 TS Analyzer T2-MI Analyzer	RF Analysis MPEG-2 TS Analysis T2-MI Analysis	RF + TS Bundle
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48HMAX SHIPMENT

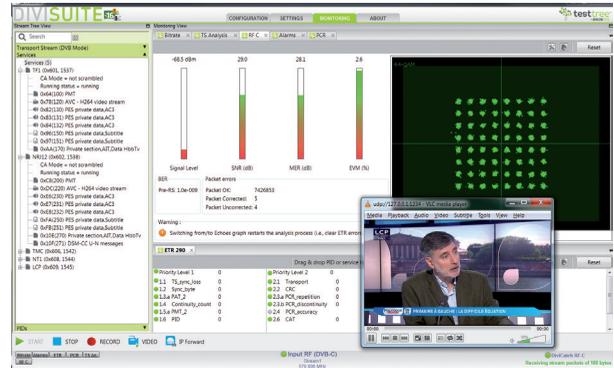
All Options Bundle (RF + TS + T2-MI)



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



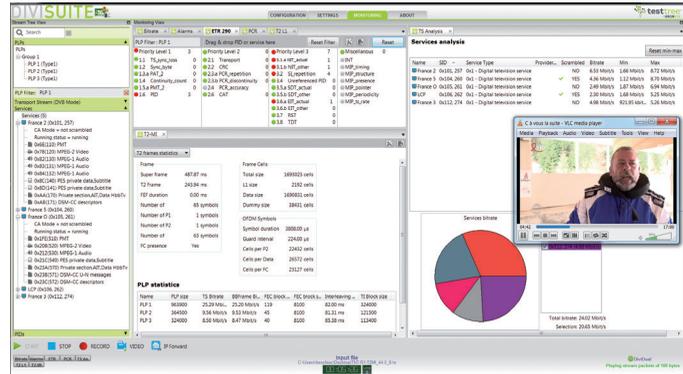
All Options Bundle (RF + TS)

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.



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	TS Analyzer TS Analysis
Options	T2-MI Analyzer T2-MI Analysis



All Options Bundle (TS + T2-MI)

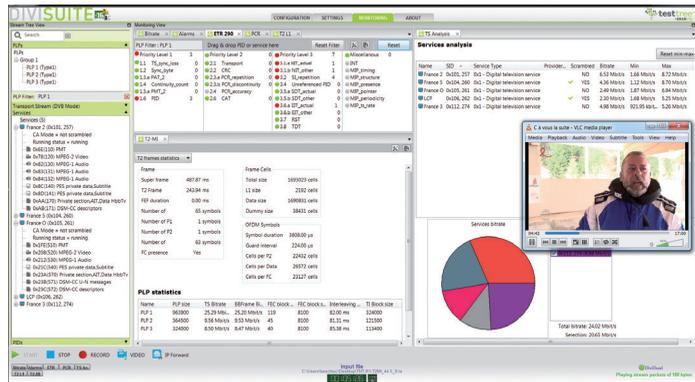


DIVIDUAL ASI+SPI (LVDS or TTL)

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

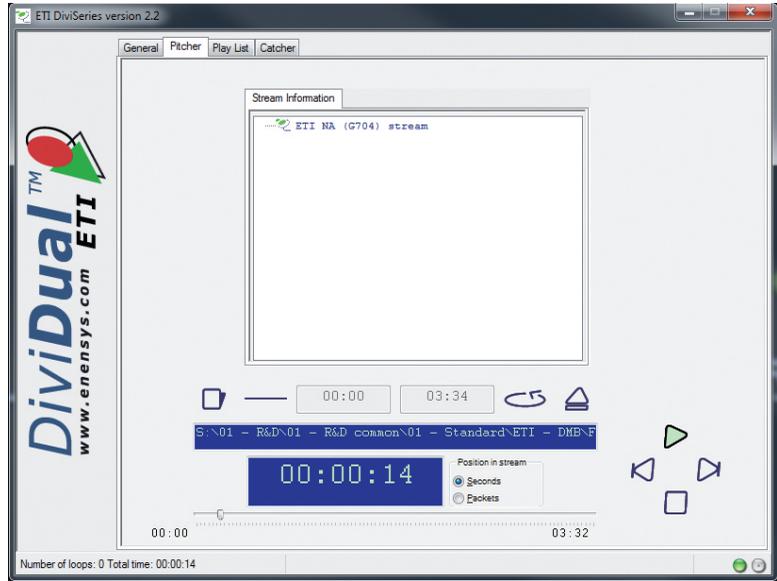
TS over DVB-ASI and DVB-SPI (LVDS or TTL) Analyzer, Recorder, Player
Shipped bundled with DiviSuite software for MS Windows XP/Vista/7/8/10

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. No 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

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



TS IP Forward



A/V Output



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

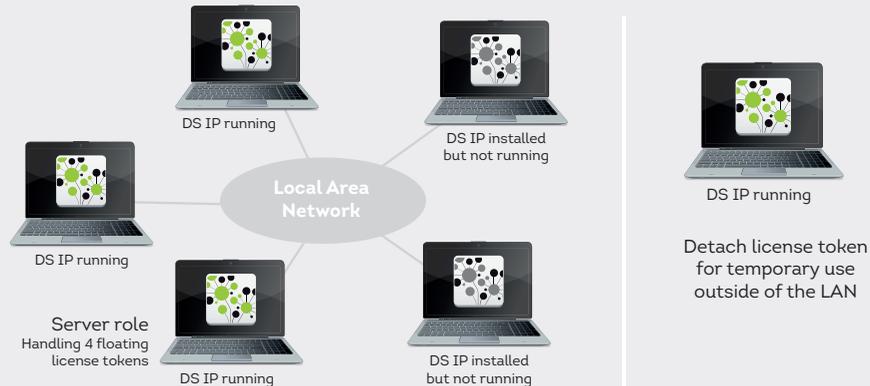
Fixed PC License Model

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.



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)

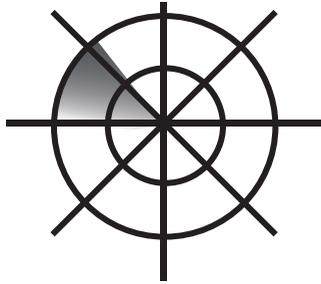
BROADCAST NETWORK MONITORING

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

EdgeProbe Global Viewer <small>NEW</small>	34
EdgeProbe RF	40
EdgeProbe Nano	41
EdgeProbe Advanced	42
TRANSBOX CONFIDENCE MONITORING <small>NEW</small>	43



24/7



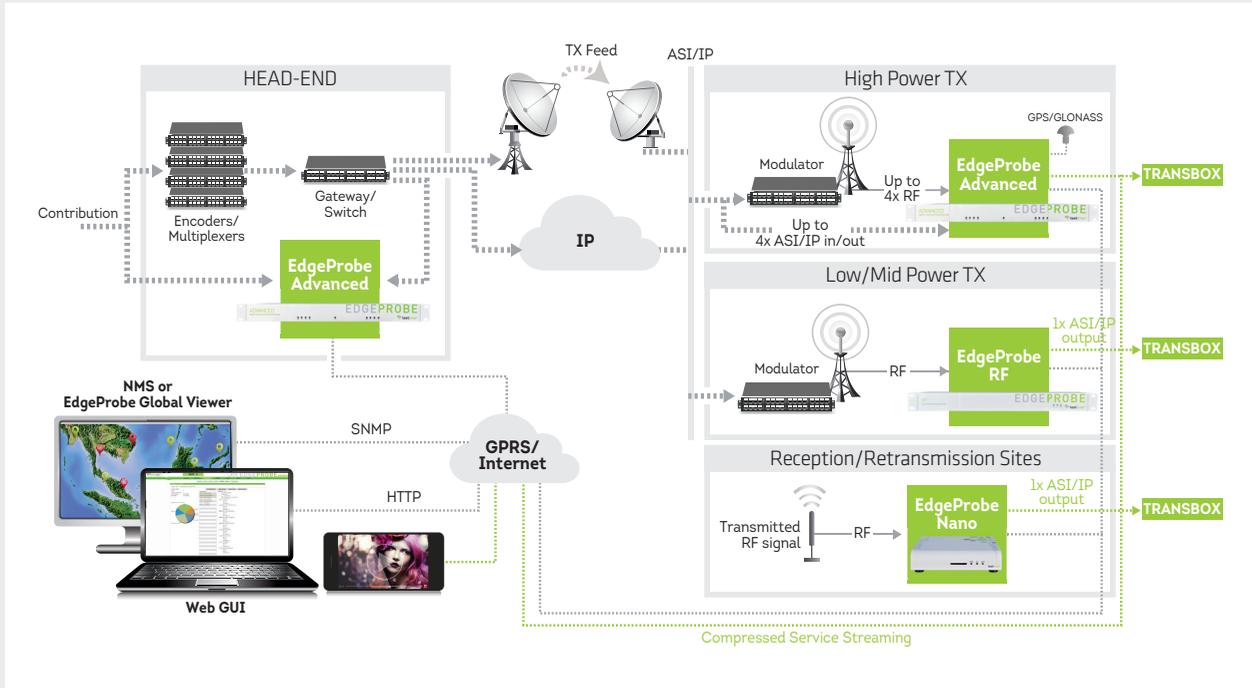
MONITOR



EDGEPROBE INTEGRATION INTO DTV NETWORKS

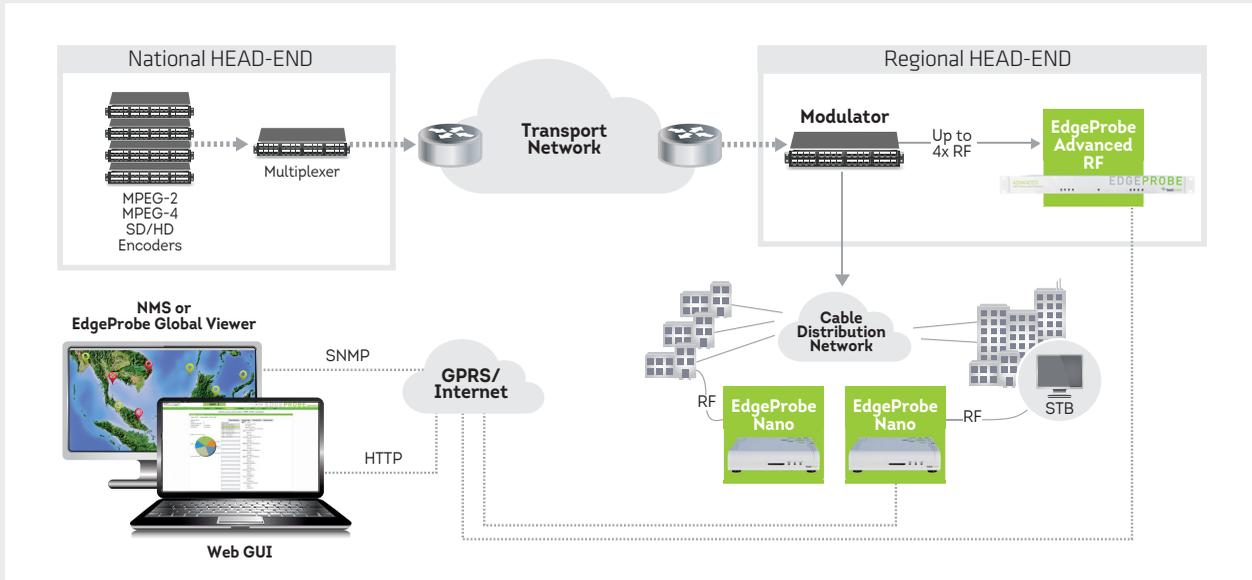
DIGITAL TERRESTRIAL TELEVISION

DVB-T/T2 ISDB-T/Tb



DIGITAL CABLE NETWORKS

DVBC



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



EDGEPROBE GLOBAL VIEWER

Centralize your Network Quality View!

The screenshot displays the testtree-ENESYS EdgeProbe Global Viewer interface. The main view is a map of Europe with several probe locations marked by green circles and numbered 1 through 9. A detailed window for probe 50.289339 2.592773 is open, showing the following data:

50.289339 2.592773 Probe Status

- Lille-GR1 10.5.125.47

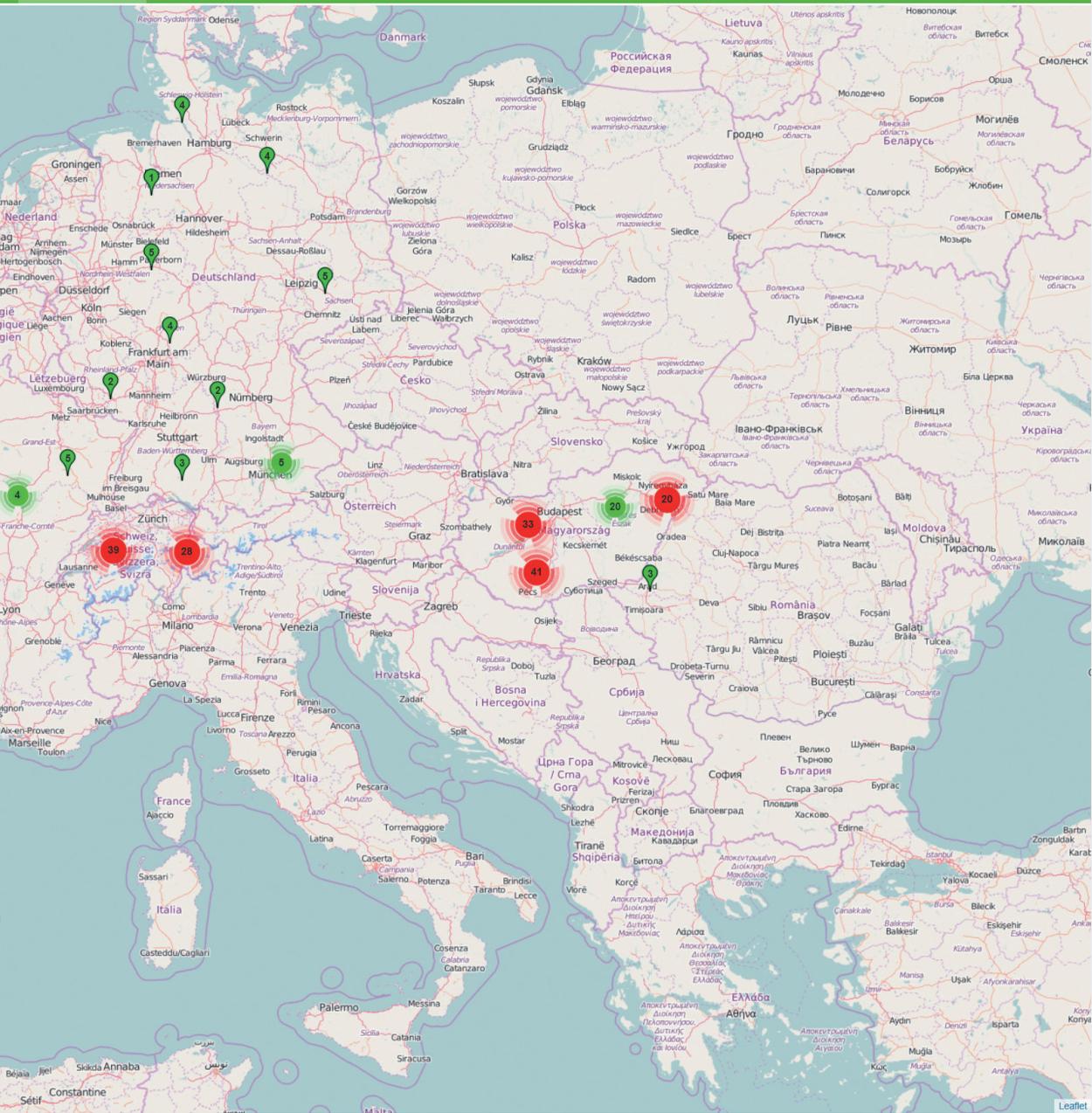
Alarm	Status	Value
MER	●	28 dB
Signal Level	●	-20 dBm
ETR2	●	OK
SNR	●	30 dB
ETR1	●	OK

Below the table, another probe is listed: + Lille-GR1 10.5.125.48

The interface includes a zoom control (+/-) in the top left, a 'SETTINGS' link in the top right, and a scale bar (100 km / 100 mi) in the bottom left. An 'Activity' indicator is shown at the bottom left.

EDGEPROBE GLOBAL VIEWER

MONITORING



REMOTE CONTROL WEB GUI

Synthetic alarm overview

Unit 1 | testtree ENENSYS | EDGEPROBE ADVANCED

Overview | Alarm View | Monitoring | Settings | Device | Admin | About

DVB-T2 - RFT2_650_Trial_Bus

Input: RF DVB-T2
 Frequency: 650.166 MHz
 PLP Count: 1
 PLP Id: 0
 Network Id: 0
 Services: 1
 Alarm profile: 4 | Profile_DVB_T2
 Last alarm: 2016-07-24 18:37:00
 Last Scan: 2016-07-24 18:36:36

Transmission	Transport Stream	Content
RF: 0	ETR1: 2	Advanced: 0
ASI: 0	ETR2: 0	Multiplex: 2
IP: 0	ETR3: 2	
SFN Drift: 0	T2-MI: 0	
Echoes: 0	OneBeam: 0	
	MIP: 0	

DVB-T - RFT_R6_498 - R6 France Television

Input: RF DVB-T
 Frequency: 498.166 MHz
 Network Id: 8442
 Services: 5
 Alarm profile: 1 | Default_R6
 Last alarm: 2016-07-24 18:37:39
 Scanning: 30 s

Transmission	Transport Stream	Content
RF: 1	ETR1: 0	Advanced: 0
ASI: 0	ETR2: 0	Multiplex: 0
IP: 0	ETR3: 2	
SFN Drift: 0	T2-MI: 0	
Echoes: 0	OneBeam: 0	
	MIP: 0	

Activity: 2016-07-24 18:37:40 | LOCKED | RF Input: RFT_R6_498 | Record (TS mode) | Multi-channel: On | Temperature | Profile

Exhaustive alarm view: device and monitoring alarms

Unit 1 | testtree ENENSYS | EDGEPROBE ADVANCED

Overview | Alarm View | Monitoring | Settings | Device | Admin | About

Alarms Selection

- Device
- DVB-T2 - RFT2_650_Trial_Bus
- DVB-T - RFT_R6_498

Alarms

Reset all counters

Transmission Alarms	Transport Stream Alarms	Content Alarms
RF Alarms Demod Locked: 0 Signal Level 1 (Gap): 1 Signal Level 2 (Gap): 1 SNR: 0 MER 1: 0 MER 2: 0 LDPC Iteration: 0 Pre-LDPC BER: 0 Post-LDPC BER: 0 Post-BCH FER: 0 Carrier Frequency Drift: 0	ETR 290 Level 1 Alarms 1.1 TS_sync_loss: 0 1.2 Sync_byte_error: 0 1.3 PAT_error_2: 0 1.4 Continuity_count_error: 0 1.5 PMT_error_2: 0 1.6 PID_error: 1	Advanced Alarms SAE_R: 0 SDE_R: 0 SAE_T: 0 SDE_T: 0
ASI Alarms ASI sync: 0	ETR 290 Level 2 Alarms 2.1 Transport_error: 0 2.2 CRC_error: 0 2.3a PCR_repetition_error: 0 2.3b PCR_disc_indicator_error: 0 2.4 PCR_accuracy_error: 0 2.6 CAT_error: 0	Multiplex TS Id Presence: 1 Services Missing: 0 Pids Missing: 0 Unscrambling: 0
IP Alarms IP Input Data: 0	ETR 290 Level 3 Alarms 3.1.a NIT_actual_error: 1 3.5.a SDT_actual_error: 0 3.6.a EIT_actual_error: 0	
SFN Drift Alarms SFN Drift: 0	T2-MI Alarms T2MI packet count: 0 T2MI CRC: 0 T2MI packet type: 0 T2MI packet payload: 0	
Echoes Echo values: 0		
Outputs IP Output: 0		

Activity: 2016-07-24 18:41:38 | LOCKED | RF Input: RFT_R6_498 | Record (TS mode) | Multi-channel: On | Temperature | Profile

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



Unit 1



Overview Alarm View Monitoring Settings Device Admin About

Channel SFN Frequency Echoes QoS T2-MI Multiplex - Services OneBeam Data storage GNSS Logs Events

RF Monitoring

Channel Name: RFT2_650_Trial_Bus Input: DVB-T2
 Frequency: 650.166 MHz PLP Id: 0
 Frequency Offset: 0.6 kHz T2 Profile: T2-Base
 Bandwidth: 8 MHz
 Spectrum Sense: Normal

Demod Locked

Signal level: -80.3 dBm Set as Reference

Current Reference: -80 dBm (2016-07-24 18:43:16)

Gap view 1: -0.3 dB Gap view 2: -0.3 dB

SNR: 23.8 dB

MER: 23.3 dB

LDPC iteration: 1
 Pre LDPC BER: 6.4e-4
 Post LDPC BER: 0
 Post BCH FER: 0

DVB-T2 Modulation

Network:		L1 Post:	
T2 version:	1.1.1	L1 Post Constellation:	QPSK
Network ID:	0	Code rate:	1/2
System ID:	0	FEC Frame:	Short
Cell ID:	0	L1 Post extension:	OFF
T2 Base Lite:	OFF	L1 Post scrambled:	OFF
		L1 Repeat:	OFF
T2 Frame:		Current PLP:	
FFT:	8K EXT	PLP Id:	0
Bandwidth extension:	ON	T2 Profile:	T2-Base
Guard interval:	1/8	Group Id:	1
P.A.P.R.:	OFF	PLP type:	Type 1
Transmission system:	SISO	Constellation:	16QAM
Pilot pattern:	2	Rotated:	Rotated
RF frequencies number:	1	Code rate:	1/2
Frames / super frames:	2	FEC type:	Short
Data symbols:	87	TI type:	Mode 0
PLP Count:	1	TI length:	86
		Frame interval:	1
		In-band signaling:	OFF

Activity LOCKED RF Input: RFT2_650_Trial_Bus Record (TS mode) Multi-channel: Off Temperature Profile

SFN monitoring: RF frame transmission time delay



Unit 1



Overview Alarm View Monitoring Settings Device Admin About

Channel SFN Frequency Echoes QoS T2-MI Multiplex - Services OneBeam Data storage GNSS Logs Events

SFN Drift

Channel Name: RFT2_650_Trial_Bus Input: DVB-T2
 Clock reference: Internal GNSS 1PPS

RF Drift: 0 μ s

Time Reference: 2016-07-23 18:09:00

Initialize RF Drift

Activity LOCKED RF Input: RFT2_650_Trial_Bus Record (TS mode) Multi-channel: Off Temperature Profile

REMOTE CONTROL WEB GUI

SFN monitoring: Carrier Frequency Drift



Unit 1



Overview
Alarm View
Monitoring
Settings
Device
Admin
About

Channel
SFN
Frequency
Echoes
QoS
T2-MI
Multiplex - Services
OneBeam
Data storage
GNSS
Logs Events

Carrier Frequency Drift

Channel Name: RFT2_650_Trial_Bus Input: DVB-T2
 Clock reference: Internal GPS 1PPS

Frequency drift:
-10
10
0
 -0.2 Hz

Reference Time: 2016-07-24 18:44:34

[Reset reference](#)

Activity

2016-07-24 18:47:10

LOCKED

RF Input: RFT2_650_Trial_Bus
650.166MHz, DVB-T2, PLPO

IP Out --- Mbps

Record ●

(TS mode)

Multi-channel: Off

Time: System

Temperature ●

NTP Server ●

Profile

[Print](#) [Refresh](#)

Channel Impulse Response Monitoring



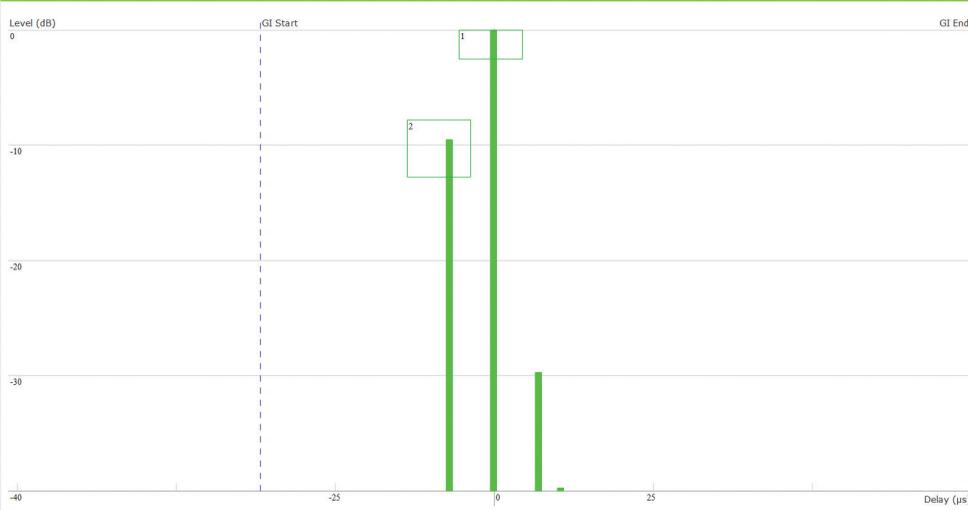
Unit 1



Overview
Alarm View
Monitoring
Settings
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About

Channel
SFN
Frequency
Echoes
QoS
T2-MI
Multiplex - Services
OneBeam
Data storage
GNSS
Logs Events

Echoes



Guard Interval: 112µs
 Call Identifier: 0

Echoes:

Delay (µs)	Level (dB)
-7	-9.5
0	0
7	-29.7
10.5	-39.7

Monitored echoes:

Index	Level (dB)	Delay (µs)	Name
1	0	0	Echo 3
2	-10.3	-8.166	Echo 2

Echoes monitoring parameters:
 Level: +/- 2.5dB (hyst:0.5)
 Delay: +/- 5µs (hyst:0.5)

Activity

2016-07-24 18:49:37

LOCKED

RF Input: RFT2_650_Trial_Bus
650.166MHz, DVB-T2, PLPO

IP Out --- Mbps

Record ●

(TS mode)

Multi-channel: Off

Time: System

Temperature ●

NTP Server ●

Profile

[Print](#) [Refresh](#)

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



Unit 1



Overview Alarm View Monitoring Settings Device Admin About

Channel SFN Frequency Echoes QoS T2-MI Multiplex - Services OneBeam Data storage GNSS Logs Events

Multiplex - Services

Input: DVB-T Channel Name: RFT_R1_474

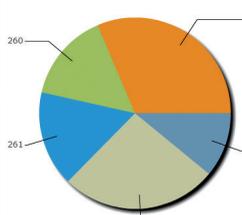
Multiplex Name: 1
 TS ID: 1
 Number of Services: 5
 Overall bitrate: 24.88 Mbit/s
 Net bitrate: 21.13 Mbit/s

Services List

- 257 - France 2 (5.60 Mbit/s)
- 260 - France 4 (3.18 Mbit/s)
- 261 - France Ô (3.39 Mbit/s)
- 274 - F3 Bretagne (5.55 Mbit/s)
- 373 - TVR (2.30 Mbit/s)

257 - France 2
 Provider name: GR1 A
 Scrambled: no
 LogicalChannelNumber: 2
 Bitrate: 6 595 kbit/s
 Min: 4 988 kbit/s Max: 7 766 kbit/s

- PMI (7 520 bit/s)
 PID: 110
 PCR: no
 Scrambled: no
- AVC - H264 video stream (6 005 472 bit/s)
 PID: 120
 PCR: no
 Scrambled: no
- AC3 (133 856 bit/s)
 PID: 130
 PCR: no
 Scrambled: no
- AC3 (133 856 bit/s)
 PID: 131
 PCR: no
 Scrambled: no
- AC3 (133 856 bit/s)
 PID: 132
 PCR: no
 Scrambled: no
- Subtitle (3 008 bit/s)
- Subtitle (3 008 bit/s)
- ATT (6 016 bit/s)
- Data hbbtv (168 448 bit/s)
- DSM-CC descriptors (0 bit/s)



Activity LOCKED RF Input: RFT_R1_474 474.166MHz, DVB-T Record (TS mode) Multi-channel: Off Temperature Profile

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



Unit 1



Overview Alarm View Monitoring Settings Device Admin About

Channel SFN Frequency Echoes QoS T2-MI Multiplex - Services OneBeam Data storage GNSS Logs Events

Logs

Download Refresh

- log.2016_03_22_15_23_01.csv (60.41 KB)
- log.2016_03_23_00_00_02.csv (501.99 KB)
- log.2016_03_23_08_48_01.csv (512.50 KB)
- log.2016_03_23_17_42_01.csv (512.45 KB)
- log.2016_04_04_14_11_01.csv (31.59 KB)
- log.2016_04_05_00_00_01.csv (82.42 KB)
- log.2016_04_06_00_00_01.csv (780.47 KB)
- log.2016_04_07_00_00_01.csv (518.09 KB)
- log.2016_04_08_00_00_01.csv (336.06 KB)
- log.2016_04_09_00_00_01.csv (347.08 KB)
- log.2016_04_10_00_00_01.csv (223.49 KB)
- log.2016_04_11_00_00_01.csv (502.24 KB)
- log.2016_04_12_00_00_01.csv (423.36 KB)
- log.2016_04_13_00_00_01.csv (271.70 KB)
- log.2016_04_14_00_00_01.csv (318.84 KB)
- log.2016_04_15_00_00_01.csv (194.73 KB)
- log.2016_04_16_00_00_01.csv (216.82 KB)
- log.2016_04_17_00_00_01.csv (126.39 KB)
- log.2016_04_18_00_00_01.csv (115.74 KB)
- log.2016_04_19_00_00_01.csv (154.82 KB)
- log.2016_04_20_00_00_01.csv (197.42 KB)
- log.2016_04_21_00_00_01.csv (248.26 KB)
- log.2016_04_22_00_00_01.csv (147.17 KB)
- log.2016_04_23_00_00_01.csv (534.25 KB)
- log.2016_04_24_00_00_01.csv (771.82 KB)
- log.2016_04_25_00_00_01.csv (773.84 KB)
- log.2016_04_26_00_00_01.csv (764.64 KB)

Delete Delete all

Trends

Download Refresh

- trend.2016_03_22_16_14_01.csv (256.89 KB)
- trend.2016_03_22_17_06_01.csv (260.23 KB)
- trend.2016_03_22_17_58_01.csv (260.14 KB)
- trend.2016_03_22_18_50_01.csv (260.23 KB)
- trend.2016_03_22_19_42_01.csv (260.14 KB)
- trend.2016_03_22_20_34_01.csv (260.23 KB)
- trend.2016_03_22_21_26_01.csv (260.23 KB)
- trend.2016_03_22_21_18_01.csv (260.23 KB)
- trend.2016_03_22_23_10_01.csv (260.14 KB)
- trend.2016_03_23_00_00_02.csv (250.30 KB)
- trend.2016_03_23_00_52_01.csv (259.97 KB)
- trend.2016_03_23_01_44_01.csv (260.23 KB)
- trend.2016_03_23_02_36_01.csv (260.23 KB)
- trend.2016_03_23_03_28_01.csv (260.41 KB)
- trend.2016_03_23_04_20_01.csv (260.23 KB)
- trend.2016_03_23_05_12_01.csv (260.23 KB)
- trend.2016_03_23_06_04_01.csv (260.23 KB)
- trend.2016_03_23_06_56_01.csv (260.32 KB)
- trend.2016_03_23_07_48_01.csv (260.50 KB)
- trend.2016_03_23_08_40_01.csv (260.41 KB)
- trend.2016_03_23_09_32_01.csv (260.23 KB)
- trend.2016_03_23_10_26_01.csv (259.27 KB)
- trend.2016_03_23_11_20_01.csv (256.10 KB)
- trend.2016_03_23_12_14_01.csv (256.01 KB)
- trend.2016_03_23_13_09_01.csv (260.67 KB)
- trend.2016_03_23_14_04_01.csv (260.67 KB)
- trend.2016_03_23_14_59_01.csv (260.50 KB)

Delete Delete all

Records

Download Refresh

- rec.2016_04_29_16_14_39.ts (539.77 KB)
- rec.2016_04_29_16_14_45.ts (1.08 MB)
- rec.2016_05_27_11_23_43.ts (6.67 MB)

Delete Delete all

Activity LOCKED RF Input: RFT_R1_474 474.166MHz, DVB-T Record (TS mode) Multi-channel: Off Temperature Profile

EDGEPROBE RF

MFN TX Site

EdgeProbe RF is the ideal & most cost-effective high-quality solution for controlling 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 TS Monitor Base TS Monitor Advanced QoS Monitor Service Plan Extended Memory	Multiple RF channels sequential monitoring over 1 RF input ETR290 Priority 1, 2 monitoring ETR290 Priority 3 SAE, SDE monitoring Multiplex Service/PID monitoring 32 GB storage: trends, logs, TS record
HW Options	TRANSBOX Tropicalization	Stream 1 or 2 compressed service(s) (See Page 43) Preserve the ITW from corrosion

EDGEPROBE NANO

Reception Site

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



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**

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

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 TS Monitor Base TS Monitor Advanced QoS Monitor Service Plan Extended Memory	Multiple RF channels sequential monitoring over 1 RF input ETR290 Priority 1, 2 monitoring ETR290 Priority 3 SAE, SDE monitoring Multiplex Service/PID monitoring 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 TS Monitor Base TS Monitor Advanced QoS Monitor Service Plan T2MI Monitor Extended Memory Dual ADV OneBeam/Single Illumination	Multiple RF channels sequential monitoring over 1 RF input ETR290 Priority 1, 2 monitoring ETR290 Priority 3 SAE, SDE monitoring Multiplex Service/PID monitoring T2-MI monitoring Up to 4x 32 GB storage: trends, logs, TS record Two units: 2x (RF + ASI + IP Data) in 1 RU T2-MI markers monitoring
HW Option	Quad ADV Dual Power Supply Internal GNSS TRANSBOX 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 Stream 1 or 2 compressed service(s) (See Page 43) 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 (Contact 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



37

Digital TV V

36

35

RF
Digital TV R

34

ADVA
Digital TV Ad

33

Status

PSU I

Video Streaming

TRANSBOX

UNIT1
POWER RUN DATA

UNIT2
POWER RUN DATA

testtree

Monitoring Probe

EDGEPROBE

POWER RUN DATA

testtree

ANCED

Advanced Monitoring Probe

EDGEPROBE

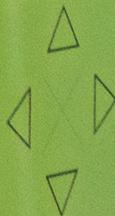
POWER RUN UNIT1 UNIT2

DIS

POWER RUN UNIT1 UNIT2

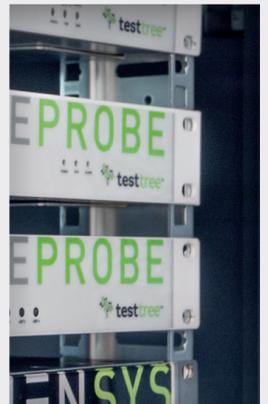
testtree

ENENSYS





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