TEST TOOLS FOR LAB & FIELD

RF Capture/Playback & Generate
70 MHz – 6 GHz frequency range with down conversion for Ku/C band

- RF-Catcher Starter Kit
- Application Suite for RF-Catcher Starter Kit
- ATSC 3.0 LabMod
- RF-LiveSim

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™
- DiviSuite Base
- Hardware products used with the DiviSuite
- ReFeree II
- DiviCatch RF-S/S2
- DiviCatch RF-ISDB-T/Tb
- DiviCatch RF-T/C T2/C2
- DiviCatch RF-C
- DiviDual ASI + SPI (LVDS or TTL)
- DiviDual ETI
- Pure software application using the DiviSuite

BROADCAST NETWORK MONITORING

Digital TV (DVB-S2/SX, DVB-T/D2, ISDB-T/Tb, ATSC 3.0)
Cost-effective and high quality monitoring probes for terrestrial, cable and satellite DTV networks. Standalone, SNMP compatible, the probes provide real-time monitoring on RF and Transport Stream level: ETR 101 290, DVB T2-MI, OneBeam/SingleIllumination, BTS.

- EdgeProbe Global Viewer
- EdgeProbe Nano & RF
- EdgeProbe Advanced
- EdgeProbe Advanced for High Density chassis

Digital Radio (DAB+ & DAB+)

- EdgeProbe Advanced
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

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
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.

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

RF-Catcher Starter Kit RF record and playback 8
Application Suite for RF-Catcher Starter Kit 10
ATSC 3.0 LabMod STL Gateway approved Modulator for Labs 12
RF-LiveSim Real-time RF Channel Simulator 14

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™ 16
DiviSuite Base
DiviSuite options: RF Scope, TS Analyzer, T2-MI Analyzer, Drive Test Coverage

Hardware products used with the DiviSuite 21
ReFeree II
DiviCatch RF-S/S2
DiviCatch RF-ISDB-T/Tb
DiviCatch RF-T/C T2/C2
DiviCatch RF-C
DiviDual ASI + SPI (LVDS or TTL)
DiviDual ETI

Pure software application using the DiviSuite 28
DiviSuite-IP
RF-CATCHER STARTER KIT

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.

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 spectrum)
- Power in band measurement

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 Msp 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 headquarter 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

Dedicated side panel for in-app options:
Event Trigger and RF TroubleMaker

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, ...)

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

NONPROPRIETARY IQ FILE FORMAT

Gain setting for capture
Attenuation setting for playback

Variable acquisition: bandwidth from 1 up to 55 MHz

Sample rate up to 61.44 Msps

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

RSSI (Received Signal Strength Indication)

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

NONPROPRIETARY IQ FILE FORMAT

ORDERING CODE
RF-Catcher Starter Kit
RF Capture & Playback
Shipped bundled with HW device, software application for MS Windows 7/8/8.1/10 (x64)
APPLICATION SUITE FOR RF-CATCHER

One Global Launcher for all applications
Quickly access the application without missing any information

SUBSCRIPTION
• Complete Suite and future applications
• Software updates & privileged support
• Licenses for the subscription duration

PURCHASE
• Choose the applications from the Suite
• Optional software updates & support
• Permanent licenses

ORDERING CODE

Application Suite for RF-Catcher Starter Kit
Software: IQ Converter, IQ Splitter, TaskScheduler, Event Trigger, RF TroubleMaker, ATSC 3.0 LabMod, DiviSuite-IP
Compatible MS Windows 7/8/8.1/10 (x64)

Licenses
Subscription: All applications including Advance Software Support for the subscription period
Life-time licenses: One or several of the above applications with optional Advance Software Support
# APPLICATION SUITE COMPATIBLE FOR RF-CATCHER STARTER KIT

## Capture & Playback Application
Capture, playback and analyze real-time RF spectrums from 70 MHz to 6 GHz with a bandwidth up to 55 MHz. Refer to Page 8 for details.

## IQ Converter
IQ file conversion from/to RF-Catcher non-proprietary IQ file format. Supported formats: Eiden, Lumantek, IZT, Adivic, A74, ARB...

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

## TaskScheduler
Autonomous capture and playback scheduling. Generate report files containing RF power measurements for several frequency markers, and visualize the results in real-time.

## Event Trigger
IN-APP OPTION
Automatic RF Capture triggering based on monitoring alarms, RF signal level, frequency markers or HW trigger. Compatible with EdgeProbe 24/7 monitoring device. Refer to Page 40 for details.

## RF TroubleMaker
IN-APP OPTION
A must-have laboratory tool! Noise generator (gaussian, impulsive...) and Channel Simulator (add up to 10 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 28 for details.
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 use, configuration validation engine
- Capability to save/load settings profiles
- All modulation schemes supported (from QPSK to 4096 QAM, LDM support)

**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 | Yes |
| LDM (Layered Division Multiplex) | Compatible with all L1 modes |
| Channel bandwidth | 6, 7 or 8 MHz 192, 384, 512, 768, 1024, 2048, 2432, 3072, 3648, 4096, 4864 |
| Guard Interval | 2/15 up to 13/15 |
| FFT mode | 8k, 16k, 32k (all Cred_coeff modes) |
| Code rate | Inner: LDPC 16k and 64k, mode A or B |
| FEC | 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, CTP up to 1448 depth, HTI |
| TI (Time Interleaving) mode | Multiple subframes: single/multiple PLP |
| Subframes | TxID* |

*Contact us for availability

**Physical**

| Dimensions | 163 x 115 x 32 mm |
| Weight | 600 g |
| Power supply | USB self-powered |
| Power consumption | 3 W |

**Environmental**

| 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

Settings section
Configure all Frame elements

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

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

ORDERING CODES

<table>
<thead>
<tr>
<th>ATSC 3.0 LabMod</th>
<th>ATSC 3.0 Modulator for Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipped bundled with HW device and ATSC 3.0 LabMod Application for MS Windows 7/8/8.1/10 (x64)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ATSC 3.0 LabMod Application</th>
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</tr>
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<tbody>
<tr>
<td>MS Windows 7/8/8.1/10 (x64) software application for RF-Catcher Starter Kit</td>
<td></td>
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</tbody>
</table>

Software Option | RF Capture & Playback |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Application for RF transmission captures, playbacks and spectrum analysis</td>
<td></td>
</tr>
</tbody>
</table>
Covering a frequency range from 50 to 900 MHz, RF Live Simulator can emulate RF channels propagation modes for a signal bandwidth from 20 kHz to 20 MHz (gaussian noise, multipath, Doppler and frequency drift tools).

RF-LiveSim is a cost effective solution for intense automatic non regression tests at the physical layer level.

**APPLICATIONS**

- **Chipset designers**: complete modulator/demodulator testing
- **Receivers manufacturers**: operating limit testing and robustness
- **R&D Laboratories**: intensive non-regression testing, design/product verification

**KEY BENEFITS**

- **Real-time** channel profile simulations
- **Up to 20** adjustable independent terrestrial paths
- **Several** preset configurations available
- **Remotely** accessible
- **Easy to use and configure**
- **Test automation** (SCPI compliant)

**TECHNICAL CHARACTERISTICS**

- Standalone unit with PS/2 & VGA interfaces for screen-keyboard-mouse control
- 1x RF in, 1x RF out (isofrequency)
- 1x Ethernet port for remote control
- Full remote control via SCPI (Standard Commands for Programmable Instruments) protocol
- Signal level: output from -110 to -20 dBm without any interruption
- Frequency range from 50 to 900 MHz, resolution 1 Hz
- Variable bandwidth from 20 kHz to 20 MHz, resolution 1 kHz
- Channel Propagation Profile: 20 independent paths adjustable (amplitude, delay, phase, Doppler)
- Doppler profiles: -70 000 to +70 000 Hz (step 1 Hz), Amplitude distributions (Pure, Flat, Gaussian, Rayleigh, Rice)
- Frequency drift & hopping without loosing receiver synchronization
- Preset configurations: terrestrial broadcast profiles such as TU6, rural, indoor/outdoor for fixed/portable devices as well as profiles for physical layers for WiMAX / LTE
- AWGN Generator: Signal+Noise, Burst noise, Impulsive noise, Noise only
- 1x TRIG, 1x 10MHz in & 1x 10MHz out
- 1U rack form (450x500x44)

**ORDERING CODE**

| RF-LiveSim | RF Live Channel Simulator - 50-900 MHz input/output - 1U rack |

14
# ANALYZE RF & BASEBAND

## LIGHTWEIGHT DEVICES
- USB
- SELF-POWERED

**DIVISUITE**

## CHARACTERISTICS

<table>
<thead>
<tr>
<th>Standards</th>
<th>RF Input</th>
<th>ASI Input/Output</th>
<th>SPI Input/Output</th>
<th>1 PPS &amp; 10 MHz Input</th>
<th>GNSS input</th>
<th>A/V Output</th>
<th>Recorder Player</th>
</tr>
</thead>
</table>

## SOFTWARE OPTIONS
- RF Scope
- TS Analyzer
- T2 Mi Analyzer
- Drive Test Coverage

## Measurement Receivers

**REFEREE II**
- DS-SE
- DS-SE
- DS-SE
- ISDB-T/Tb
- DAB+*

## Professional Receivers

**DIVICATCH RF-S/S2**
- DS-SE
- DS-SE

**DIVICATCH RF-ISDB-T/TB**
- ISDB-T/Tb

**DIVICATCH RF-T/C T2/C2**
- DS-SE
- DVB+* Lite
- DVB+*
- ITU-J83 Annexes A, C

**DIVICATCH RF-C**
- ITU-J83
- Annexes A, B, C

## Baseband Adapters

**DIVIDUAL ASI**
- Baseband
- DVB+* Lite
- DVB+*
- ISDB-T/Tb

**DIVIDUAL ASI+SPI**
- LVDS OR TTL
- ATSC
- DTMB

**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)*
Common Features coming as a default package!

Stream Overview
- Bitrate graphs
- Drag & Drop PID

Bitrate Alarms

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

Stream Overview
- Schedule the analyzed TS recording to file format
- Forward the analyzed TS over the PC’s IP interface to unicast/multicast
- Offline Analysis
- Report & Log files
- Live Audio/Video decoding H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...
- Counters management at file analysis loop: no false alarm (CC, PCR, PTS, DTS)

RF Scan
- Scan for available frequencies and import them for analysis (DVB-T/T2, DVB-C/C2)
- Command Live Mode
- Automate your tests
DIVISUITE SOFTWARE OPTION

RF Scope

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

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

Test the field RF Quality
TX Echoes diagram

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

Validate SFN synchronization
SFN Drift
1 PPS & 10 MHz inputs
DIVISUITE SOFTWARE OPTION

Transport Stream complete Analysis!

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

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

Validate your DVB-T2 Gateway!
DIVISUITE SOFTWARE OPTION

Drive Test Coverage

- GNSS Receiver (GPS/GLONASS)
- Test Reports (Google Earth compliant)
- Internal 1PPS source

Test the field coverage!

Display results in Google Earth or Google Fusion Tables applications

* Option delivered with a magnet mount GNSS L1 Antenna

Generate Google Earth compliant files (KML)
Customize measured parameters
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 1PPS & 1x 10MHz inputs for SFN delay measurement
1x GPS/GLONASS connector for coverage tests
RF Scanning (DVB-T2, DVB-C/C2)
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 TR 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 scheduling (PLP extraction)
MPEG-2 TS playback over ASI (loop counters management: CC, PCR, PTS/DTS)
MPEG-2 TS over IP forward (PC’s Ethernet interface selection)
Command Line mode
Compatible MS Windows XP/Vista/7/8/8.1/10
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
• Test automation (command line mode)
• 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 256 QAM, Normal & Rotated for Terrestrial, from 16 QAM to 4096 QAM for Cable)
• Lock on 256 QAM at 120 km/h

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/7/8/8.1/10

Software Options
RF Scope
TS Analyzer
T2-MI Analyzer
Drive Test Coverage
RF Analysis
MPEG-2 TS Analysis
T2-MI Analysis
GPS/GLONASS localization information
RF + TS Bundle

* Contact us for availability
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.

**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, CNR, Eb/N0, link margin
- Graphical constellation display
- PIDs and PSI/SI parsing, PCR graphs
- 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...)
- MPEG-2 TS record scheduling (PLP extraction)
- MPEG-2 TS playback over ASI (loop counters management: CC, PCR, PTS/DTS)
- MPEG-2 TS over IP forward (PC’s Ethernet interface selection)
- Command Line mode
- Compatible MS Windows XP/Vista/7/8/8.1/10
- USB self-powered. 660 g
- LNB powering & configuration

**APPLICATIONS**

- 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
- Stream ID selection
- Analyze/Validate MPEG-2 TS/T2-MI Layer in real-time
- A must-have Lab Tool

**KEY BENEFITS**

- R&D Streams or Signal Analysis
- DVB-S/S2 Broadcast Troubleshoot
- Installation & Maintenance Test Tool
- Test automation (command line mode)
- Portable Demonstration Setup

**ORDERING CODES**

<table>
<thead>
<tr>
<th>DiviCatch RF-S/S2</th>
<th>DVB-S/S2 Pocket Analyzer</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Scope</td>
<td>RF Analysis</td>
</tr>
<tr>
<td>TS Analyzer</td>
<td>MPEG-2 TS Analysis</td>
</tr>
<tr>
<td>T2-MI Analyzer</td>
<td>T2-MI Analysis</td>
</tr>
</tbody>
</table>

- RF + TS Bundle
- RF + TS + T2-MI Bundle

**48H MAX 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.

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, TMCC next information
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 scheduling
TS playback over ASI (loop counters management: CC, PCR, PTS/DTS)
TS over IP forward (PC’s Ethernet interface selection)
Command Line mode
Compatible MS Windows XP/Vista/7/8/8.1/10
USB self-powered, 160 g

APPLICATIONS

• R&D Streams or Signal Analysis
• ISDB-T/Tb Broadcast Troubleshoot
• Installation & Maintenance Test Tool
• Test automation (command line mode)
• 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
• A must-have Lab Tool

ORDERING CODES

<table>
<thead>
<tr>
<th>DiviCatch RF-ISDB-T/Tb</th>
<th>ISDB-T/Tb Pocket Analyzer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/8.1/10</td>
<td></td>
</tr>
</tbody>
</table>

Software Options

<table>
<thead>
<tr>
<th>Options</th>
<th>RF Scope</th>
<th>TS Analyzer</th>
<th>RF Analysis</th>
<th>TS Analysis (includes BTS)</th>
</tr>
</thead>
</table>

48HMAX SHIPMENT

All Options Bundle (RF + TS)
DIVICATCH RF-T/C T2/C2

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

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 Scanning (DVB-T/T2, DVB-C/C2)
RF measurements: signal level, SNR, MER, BER
Graphical constellation, Channel Impulse Response display (DVB-T/T2)
PIDs and PSI/SI parsing, PCR graphs
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…)
MPEG-2 TS record scheduling (PLP extraction)
MPEG-2 TS playback over ASI (loop counters management : CC, PCR, PTS/DTS)
Command Line mode
Compatible MS Windows XP/Vista/7/8/8.1/10
USB self-powered, 160 g

APPLICATIONS
- R&D Streams or Signal Analysis
- DVB-T/T2 Broadcast Troubleshoot
- Digital Cable Troubleshoot
- Installation & Maintenance Test Tool
- Test automation (command line mode)
- 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

<table>
<thead>
<tr>
<th>DiviCatch RF-T/C T2/C2</th>
<th>DVB-T/T2/T2 Lite &amp; DVB-C/C2 Pocket Analyzer</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Scope</td>
<td>RF Analysis</td>
</tr>
<tr>
<td>TS Analyzer</td>
<td>MPEG-2 TS Analysis</td>
</tr>
<tr>
<td>T2-MI Analyzer</td>
<td>T2-MI Analysis</td>
</tr>
<tr>
<td>Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/8.1/10</td>
<td>RF + TS Bundle</td>
</tr>
</tbody>
</table>

All Options Bundle (RF + TS + T2-MI)
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 TR 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 scheduling
MPEG-2 TS over IP forward (PC’s Ethernet interface selection)
Command Line mode
Compatible MS Windows XP/Vista/7/8/8.1/10
USB self-powered, 160 g

**APPLICATIONS**

- R&D Streams or Signal Analysis
- Digital Cable Troubleshoot
- Installation & Maintenance Test Tool
- Test automation (command line mode)
- 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
- A must-have Lab Tool

**ORDERING CODES**

<table>
<thead>
<tr>
<th>DiviCatch RF-C</th>
<th>DVB-C Pocket Analyzer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/8.1/10</td>
<td></td>
</tr>
</tbody>
</table>

**Software Options**

- RF Scope
- RF Analysis
- TS Analyzer
- MPEG-2 TS Analysis

**48H MAX SHIPMENT**

All Options Bundle (RF + TS)
DiviDual ASI+SPI (LVDS or TTL)

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**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>1x ASI input and 1x ASI output</td>
</tr>
<tr>
<td>Output</td>
<td>1x SPI input/output (LVDS or TTL)</td>
</tr>
<tr>
<td>IP Source Analysis</td>
<td>(from PC)</td>
</tr>
<tr>
<td>PIDs and PSI/SI parsing, PCR graphs</td>
<td></td>
</tr>
<tr>
<td>T2-MI Analysis</td>
<td>L1 pre &amp; post signaling, T2 frame statistics, BB frame header, ISSY field, T2 timestamp</td>
</tr>
<tr>
<td>BTS Analysis</td>
<td>IIP Packet parsing, TMCC alarms, TMCC next information</td>
</tr>
<tr>
<td>ETSI TR 101 290 validation (priority 1, 2, 3)</td>
<td></td>
</tr>
<tr>
<td>Audio/Video Player</td>
<td>(H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...)</td>
</tr>
<tr>
<td>TS Record Scheduling</td>
<td>(PLP extraction)</td>
</tr>
<tr>
<td>TS Playback over ASI</td>
<td>(loop counters management: CC, PCR, PTS/DTS) &amp; Raw player</td>
</tr>
<tr>
<td>TS over IP Forward</td>
<td>(PC’s Ethernet interface selection)</td>
</tr>
<tr>
<td>Command Line Mode</td>
<td></td>
</tr>
<tr>
<td>Compatible MS Windows XP/Vista/7/8/8.1/10</td>
<td></td>
</tr>
<tr>
<td>USB self-powered</td>
<td>140 g</td>
</tr>
</tbody>
</table>

**Applications**

- R&D Streams Analysis and Generation
- Laboratory Test Streams Analysis and Generation in DVB-SPI LVDS or TTL formats
- Installation & Maintenance Test Tool
- Test automation (command line mode)
- 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**

<table>
<thead>
<tr>
<th>DiviDual ASI + SPI</th>
<th>TS over DVB-ASI and DVB-SPI (LVDS or TTL) Analyzer, Recorder, Player</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Options</td>
<td>TS Analyzer</td>
</tr>
<tr>
<td></td>
<td>T2-MI Analyzer</td>
</tr>
</tbody>
</table>

Shipped bundled with DiviSuite software for MS Windows XP/Vista/7/8/8.1/10
DIVIDUAL ETI

DAB  DAB+

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

48H MAX SHIPMENT
DIVI SUITE-IP

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.

**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**

<table>
<thead>
<tr>
<th>DiviSuite-IP</th>
<th>DiviSuite-IP software for MS Windows XP/Vista/7/8/8.1/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Included</td>
<td>DiviSuite Base, TS Analyzer</td>
</tr>
<tr>
<td>Software Option</td>
<td>T2-MI Analyzer</td>
</tr>
</tbody>
</table>
| 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, cable and satellite DTV networks. Standalone, SNMP compatible, the probes provide real-time monitoring on RF and Transport Stream level: ETR 101 290, DVB T2-MI, OneBeam/SingleIllumination, BTS.

DIGITAL TV

EdgeProbe Global Viewer
EdgeProbe Nano & RF
TRANSBOX CONFIDENCE MONITORING
EdgeProbe Advanced
EdgeProbe Advanced for High Density chassis

DIGITAL RADIO

EdgeProbe Advanced

4500+ PROBES DEPLOYED
24/7 MONITOR
EDGEPROBE FOR DIGITAL TV NETWORKS

DIGITAL TERRESTRIAL TELEVISION

DIGITAL CABLE NETWORKS
EDGEPROBE ADVANCED

STANDALONE UNIT:
1 RU 19” format: multi-standard support in 1 RU
Up to 4x RF inputs: N-type 50 Ω or F-type 75 Ω
Up to 4x ASI in/out
Up to 4x IP Data in/out (VLAN support)
Up to 2x IP Control
Up to 4x 32 GB internal storage
1x 1PPS, 1x 10MHz inputs
1x GNSS input (GPS, GLONASS)
1x ETH in/out (alarm dry contact)*
2x DVB-CI slots (decrypt up to two CA systems in parallel)*
Up to 4x HDMI outputs*
Dual Power Supply

EDGEPROBE NANO

STANDALONE UNIT:
1 RU 19’’ format: EdgeProbe RF
Compact 144x137x30 mm format: EdgeProbe 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

EDGEPROBE RF

STANDALONE UNIT:
1 RU 19” format: multi-standard support in 1 RU
Up to 4x RF inputs: N-type 50 Ω or F-type 75 Ω
Up to 4x ASI in/out
Up to 4x IP Data in/out (VLAN support)
Up to 2x IP Control
Up to 4x 32 GB internal storage
1x 1PPS, 1x 10MHz inputs
1x GNSS input (GPS, GLONASS)
1x ETH in/out (alarm dry contact)*
2x DVB-CI slots (decrypt up to two CA systems in parallel)*
Up to 4x HDMI outputs*
Dual Power Supply

GLOBALVIEWER

· Server Application for a Centralized view of the Network Quality
· EdgeProbe monitoring status, measurement data storage for customizable reports

TRANSBOX

· HW Option for EdgeProbe Confidence Monitoring
· Streaming of 1 or 2 services(s) over low bandwidth networks (compression down to 500 Kbps)

* HW ready, contact us for SW availability
EDGEPROBE

Synthetic monitoring overview – channel information, alarming profile, alarm status per category: transmission (RF, ASI, IP), transport stream (ETR 101 290), content (multiplex service(s), T2-MI, BTS, OneBeam)

Exhaustive alarm view – device and monitoring alarms complete status: state, counter, SNMP trap
REMOTE CONTROL WEB GUI

RF monitoring – signal level, SNR, MER, BER, modulation parameters

Channel Impulse Response monitoring – reception area echoes display and detection of echo delay/level variations
**EDGEPROBE**

TX SFN synchronization monitoring – check the RF signal SFN: RF frame transmission time delay, Carrier Frequency drift; and the T2-MI baseband distribution Network Delay

IP monitoring – IP jitter (Inter-Packet Arrival Time jitter), packets recovered/lost (FEC support)
REMOTE CONTROL WEB GUI

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 GLOBALVIEWER
Centralize your Network Quality View!
**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.

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

**Applications RF**
- 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

**Applications Nano**
- 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**
- 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/4G)
- Low power consumption 8W
- Enables SNMP test automation

**Technical Characteristics**
- **EdgeProbe RF & Nano models**: DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb
- 1x RF in, 1x ASI out, 1x IP Control/Data in/out (VLAN support)
- 32 GB storage for TS record and 6 months logs & trends
- RF accurate measurements: signal level, SNR, MER, BER
- Channel Impulse Response monitor
- Multiplex & Service Plan check
- Service Compression (Transcoding) and Streaming (See Page 41)
- ETSI TR 101 290 validation: Priority 1, 2, 3 and optional QoS SAE/SDE
- MPEG-2 TS, BTS (IIP, TMCC packets) support
- Demodulated TS over ASI out or IP forward for video QoE monitoring
- Smart Retransmission Receiver (DVB-T/T2): mute the TS retransmission over ASI out upon RF input signal dégradation
- Automated & Secure Deployment for small to large networks (SNMPv2 support)
- Trigger RF signal capture on RF-Catcher (See Page 11)
TRANSBOX

Confidence monitoring: live service compression and streaming over low bandwidth networks!

Controlled by one EdgeProbe unit (Advanced, RF, Nano), the TRANSBOX provides real-time:
• Service extraction from the input MPEG-2 TS (SPTS or MPTS received from the EdgeProbe)
• Service compression (audio/video transcoding, including subtitles): down to 500 Kbps
• Streaming the compressed SPTS over low bandwidth IP Data to third party systems

APPLICATIONS
• Service extraction and audio/video compression
• Live transmission check
• Validate regional service and/or ad 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 500 Kbps compressed streams
• Added value confidence monitoring for local insertion check
• Low power consumption 5W

TECHNICAL CHARACTERISTICS
1 or 2 Transcoding Units (TU) in 1 RU (1 or 2 services transcoded simultaneously; up to 10 min)
1 TU is controlled by with 1 EdgeProbe Unit
1x IP Data in/out (GbE) and 1x IP Control (100 Mbps) per TU
Unicast, VLAN support for IP Data in/out
40 Mbps maximum input bitrate
500 Kbps 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

ORDERING CODES

<table>
<thead>
<tr>
<th>TRANSBOX</th>
<th>Transcoding Unit for EdgeProbe</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW Option</td>
<td>Dual</td>
</tr>
</tbody>
</table>
EDGE ProBE Advanced

TECHNICAL CHARACTERISTICS

EdgeProbe Advanced models: DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb, DVB-S/S2/S2X, DAB+ or any combination of two of these standards in 1RU
(See Page 45 for DAB+)

Up to 4x [RF in, ASI in/out, IP Data in/out (VLAN support)] in 1RU

1 or 2x IP Control for low bandwidth remote Web GUI

Up to 4x 32 GB storage for TS record and 6 months logs & trends

1PPS: external or internal from GNSS receiver (GPS, GLONASS), 10MHz

2x DVB-CI slots (decrypt up to two CA systems in parallel)¹

Up to 4x HDMI outputs¹ / 1x ETH in/out (alarm dry contact)¹ / Dual Power Supply

DTT & CATV RF accurate measurements: signal level, SNR, MER, BER

DTT SFN synchronization monitoring:
- RF SFN Drift, Frequency Drift, Channel Impulse Response
- DVB-T/T2-MI Network Delay over ASI/IP input

NEW Satellite RF accurate measurements:
- Signal level, CNR, link margin, Eb/N0, BER
- Multi-stream support, PLS support (root/gold)
- LNB power and control

NEW Baseband MPEG-2 TS over IP input monitoring:
- FEC support (packets recovered/lost), IP jitter (Inter-Packet Arrival Time jitter)²

MPEG-2 TS ETSI TR 101 290 validation: Priority 1, 2, 3
- Optional QoS SAE (Service Availability Error), SDE (Service Degradation Error)

Service Plan monitoring: check multiplex structure and regionalization

BTS monitoring: IIP, TMCC packets

T2-MI monitoring: L1 pre/post signaling, ETSI TR 101 290 T2-MI alarms, PLP TS extraction

OneBeam/Single Illumination monitoring: T2-MI marker, In-Band PIDs

Demodulated TS over ASI/IP/HDMI¹ out for video QoE monitoring

Smart Retransmission Receiver (DVB-T/T2): mute the TS retransmission over ASI out upon RF signal degradation (BER criteria)

Service streaming over low bandwidth network connections
(See Page 41 transcoding compression)

Trigger RF signal capture on RF-Catcher (See Page 11)

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

APPLICATIONS

- 24/7 Monitoring and Maintenance of both Head-End and TX sites:
  - DTV/CATV RF transmission (SFN/MFN), Satellite RF distribution, ASI/IP Baseband distribution
  - 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/4G)
- Low power consumption 25W
EdgeProbe Advanced CHASSIS is composed of 2 BOARDS, each board supporting 2 parallel MONITORING UNITS

Select your standard BOARD 1
- DVB-T/T2/Lite or DVB-C/C2 or ISDB-T/Tb or DVB-S/S2/S2X or DAB

Select your standard BOARD 2
- DVB-T/T2/Lite or DVB-C/C2 or ISDB-T/Tb or DVB-S/S2/S2X or DAB

CHASSIS HW Options
- Dual Power Supply: 100-240 VAC redundant power supply
- Internal GNSS: Internal GNSS receiver (GPS, GLONASS) for internal 1PPS generation
- TRANSBBOX: Stream 1 or 2 compressed service(s)

Select your options per DTV BOARD (See Page 45 for DAB+ EdgeProbe Advanced model)

Included
- RF + SFN + CIR + Frequency Drift monitoring, TS over ASI/IP input support, VLAN, RF to ASI/IP TS retransmission

SW Options
- Dual ADV: Activate 2nd Monitoring Unit: total of 2x (RF + ASI + IP Data)
- TS Monitor Base: ETR290 Priority 1, 2 monitoring
- TS Monitor Advanced: ETR290 Priority 3 monitoring
- QoS Monitor: SAE, SDE monitoring
- Service Plan: Multiplex Service/PID monitoring
- T2-MI Monitor: T2-MI monitoring
- BTS Monitor: IIP & TMCC packets monitoring
- One Beam/Single Illumination: T2-MI marker & In-Band PIDs monitoring
- IP Monitor3: Jitter, RTP/FEC, Packet Loss/Recovery monitoring
- Scanning: Multiple channels (RF, ASI, IP) sequential round-robin monitoring

HW Options
- Extended Memory: 32 GB internal storage: trends, logs, TS record
- DVB-CI1: Dual CAM slot
- HDMI1: HDMI output

ORDERING CODES

EdgeProbe Advanced DTV Advanced Monitoring Probe

<table>
<thead>
<tr>
<th>CHASSIS HW options</th>
<th>DVB-T/T2 model of EdgeProbe Advanced comes in the form of an independent module (HDmE), for High Density chassis (HDC) 19” 1RU, which provides:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDc-Multi-220V</td>
<td>High Density chassis with 220V input</td>
</tr>
<tr>
<td>HDc-Multi-48V</td>
<td>High Density chassis with 48V input</td>
</tr>
</tbody>
</table>

HDmE SW Options
- HDmE: High Density module EdgeProbe Advanced for DVB-T/T2
- See Page 42 for DVB-T/T2 EdgeProbe Advanced SW options
NEW

EDGEPROBE FOR DIGITAL RADIO NETWORKS

DIGITAL RADIO

HEAD-END

Service Encoders

Ensemble Multiplexer/Gateways/Modulator Sat

NMS or EdgeProbe GlobalViewer

Web GUI

HEAD-END

Transmitter site

ETI/EDI

Gateway/Modulator

Up to 4x ETI/EDI

EdgeProbe Advanced

Reception site

ETI/EDI

Gateway/Modulator

Up to 4x RF

EdgeProbe Advanced

TX Feed

On air

RF

NEW
TECHNICAL CHARACTERISTICS

EdgeProbe Advanced models: DAB+, DVB-S/S2/S2X, DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb, or any combination of two of these standards (See Page 42 for DVB-T/T2/T2 Lite, DVB-C/C2, ISDB-T/Tb, DVB-S/S2/S2X)

- Up to 4x [RF in, ETI in/out (NL NA), IP Data in/out (VLAN support)] in 1 RU
- Up to 2x IP Control for low bandwidth remote Web GUI
- Up to 4x 32 GB storage for 6 months logs & trends
- 1PPS: external or internal from GNSS receiver (GPS, GLONASS), 10MHz
- Up to 4 analog audio output TRS 3.5mm
- 1x ETH in/out (alarm dry contact)
- Dual Power Supply
- DAB/DAB+ support, compatible Band III VHF (168 to 240 MHz)
- Mode I, II support: automatic detection
- RF accurate measurements: signal level, SNR, MER, FIB BER
- Channel Impulse Response monitor (TII decoding)
- SFN Drift, RF constellation, spectrum
- DAB transport monitoring: FIC, CU occupation, sub-channel structure, MSC BER
- Ensemble Service Plan: check ensemble structure
- Service information (SI), PAD (DLS, MOT/SLS)
- Audio processing: silence detection, audio recording and streaming
- ETI, EDI input analysis
- RF to ETI (NI G703, NA G704), EDI IP retransmission

APPLICATIONS

- 24/7 Monitoring and Maintenance of both Head-End and TX sites: RF transmission (SFN/MFN), Satellite RF distribution, ETI/EDI Baseband distribution
- Generation of Service Availability reports for Service Level Agreements
- Rebroadcasting receiver: RF to ETI or EDI
- 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 network degradations before your customers do
- Remotely accessible, compatible with low bandwidth control networks (GPRS/3G/4G)
- Low power consumption 25W

ORDERING CODES

EdgeProbe Advanced CHASSIS is composed of 2 BOARDS, each board supporting 2 parallel MONITORING UNITS

Select your standard BOARD 1
Select your standard BOARD 2
CHASSIS HW Options

Dual Power Supply
Internal GNSS

Included
Dual Monitoring Units 2x (RF + ETI + IP Data), 32 GB internal storage per Unit, sequential round-robin monitoring, analog audio output

SW Options
- RF DAB Monitor
- Transport Ensemble Service
- ETI/EDI Monitor

HW Options
- RF N-type connector

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