

# DIVICATCH RF-T/C T2/C2

Your own world's finest Analyzer

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.

The DiviCatch RF-T/C T2/C2 provides **real-time analysis** at different levels:

- **RF**: measures key RF signal parameters (Level, MER, SNR, BER) and indicates the modulation parameters, the constellation as well as the Channel Impulse Response.
- **MPEG-2 TS**: the 3 priority levels of ETSI TR 101 290 are implemented. Bitrate can be analyzed globally, by service, by PID. Alarm thresholds are customizable.
- **T2-MI**: complete multi-PLP analysis: T2 L1 pre/post signaling, PLP allocation (BB frame, TS, padding/overflow), T2 timestamp, BB frame, ISSY field, PLP extraction; specific **DVB-C2** analysis: L1 specific screen, C2 frame composition, data slice parameters.

Baseband streams can be captured using the **ASI input** or the PC's **IP input**. File-based **offline analysis** is also available.

The alarm events and RF measurements (trends) can be stored into **report files**.

In addition, the DiviCatch RF-T/C T2/C2 can be used as a **gateway** which retransmits **over ASI or IP** the baseband stream coming from the RF input. The TS file **player** functionality allows to have an **ASI output** on the same device, which represents a real added value.

TestTree proposes a real-time analysis application, **DiviSuite**, running on **MS Windows**, connected to the DiviCatch RF-T/C T2/C2 via **USB connectivity**, with customizable monitoring screens. The application integrates a video decoder enabling **real-time decoding** of all unencrypted services (**H.265/HEVC, H.264/MPEG-4 AVC, MPEG-1/2, AAC, MP3...**). It also features live stream capture capabilities for baseband multiplex **recording** into a TS file.

The DiviCatch RF-T/C T2/C2, a 4-in-1 product featuring both **RF** and **baseband** analysis, and both **TS recording** and **player** capabilities, offers a cost-effective test solution for field, lab or head-end applications.



- TO TEST APPLICATIONS
- TO VALIDATE BOTH RF & BASEBAND
- TO ACHIEVE COST-EFFICIENCY ON BROADCAST NETWORKS

## CHARACTERISTICS

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

## APPLICATIONS

- R&D Streams or Signal Analysis
- DVB-T/T2 Broadcast Troubleshoot
- Digital Cable Troubleshoot
- Installation & Maintenance Test Tool
- Head-End/TX site/off-air analysis
- 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
- Add your own table and specifications Analysis (PSI/SI, PSIP...)
- A must-have Lab Tool



## TECHNICAL CHARACTERISTICS

<b>RF</b>	
Connector In	1x F-type female - 75 Ω
<b>DVB-T/T2</b>	
Sensitivity	-80 to -5 dBm / 28 to 104 dBμV
Frequency range	40 to 1000 Mhz
Channel bandwidth	1.7, 5, 6, 7 & 8 MHz
Modulation	QPSK, 16QAM, 64QAM, 256QAM
FFT mode	1k, 2k, 4k, 8k, 8k extended, 16k, 16k extended, 32k, 32k extended
<b>DVB-C/C2</b>	
Sensitivity	-80 to -5 dBm / 28 to 104 dBμV
Frequency range	40 to 1000 Mhz (125 kHz resolution)
Channel bandwidth	6 & 8 MHz
Modulation	16QAM, 64QAM, 128QAM, 256QAM, 1024QAM, 4096QAM
Symbol rate	1.8 to 7.2 Msymbols/s
<b>DVB-ASI</b>	
Connector In/Out	1x BNC female - 75 Ω
Max bitrate	140 Mbps
<b>USB Data connector</b>	1x USB2 B-Type
<b>Power supply</b>	USB self-powered
<b>Environment</b>	
Operating temperature	-20 to +55 °C / -4 to 131 °F
<b>Physical</b>	
Dimensions	135 x 62 x 27 mm / 5.3 x 2.4 x 1 in
Weight	<b>160 g</b>

## RF MEASUREMENTS

<b>All measurements are made in real-time</b>	
Graphical display	Constellation, Channel Impulse Response (DVB-T/T2)
Signal level	-90 to -5 dBm / 18 to 104 dBμV (0.1 dBm resolution)
SNR	0 to 40 dB (0.1dB resolution)
MER	0 to 40 dB
BER (DVB-T/T2)	Pre-Viterbi, Post-Viterbi, LDPC, BCH
BER (DVB-C/C2)	Pre-RS, Post-Viterbi, LDPC, BCH

## ORDERING CODES

<b>DiviCatch RF T/C T2/C2</b>	<b>DVB-T/T2/T2 Lite &amp; DVB-C/C2 Pocket Analyzer</b> Shipped bundled with DiviSuite Base software for MS Windows XP/Vista/7/8/10
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Software options

**RF Scope** RF Analysis  
**TS Analyzer** MPEG-2 TS Analysis | RF + TS Bundle  
**T2-MI Analyzer** T2-MI Analysis

## T2/C2 SPECIFIC ANALYSIS

- Single & Multi-PLP, PLP extraction  
 DVB-C2: C2 frame, L1, BB frame, data slice, notch parameter  
 DVB-T2/T2-MI:
- T2 L1 pre/post signaling: frame, cells, OFDM symbols, # FEC, interleaving, TI block size
  - PLP allocation: BB frame padding, TS padding, TS overflow
  - BB frame, ISSY field, T2 timestamp

## BASEBAND TRANSPORT MONITORING

### MPEG-2 TS features analyzed in real-time from either source:

- RF or DVB-ASI through USB from the DiviCatch
- IP from the PC's Ethernet interface

### Or analyzed offline from TS file source

**ETSI TR 101 290:** priorities 1, 2, 3

### Service information

- PSI/SI table display for MPEG, DVB; including private tables
- Service components type and structure
- PID summary

### Bitrate monitoring

- Overall, by Service (Program), by PID

### PCR Accuracy graphs

## BASEBAND TRANSPORT PROCESSING

### Audio/video decoding (unencrypted programs): stream display

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

### Recording of the entire multiplex (MPTS/SPTS) into a TS file

### Real-time forward of the entire multiplex to ASI or IP (unicast or multicast over UDP streaming)

### TS files playback:

- Loop/segment play modes
- Stream playlist handling, bitrate auto-detection with PCRs
- Null packet removal

**48HMAX SHIPMENT**

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

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