4T2 Rack

the versatile digital broadcast monitoring probe

Advanced Broadcast Components
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4T2 Rack

Company introduction

- Advanced Broadcast Components Ltd. is located in Bad Segeberg, Germany and operates since June 2005

- The privately owned company started-off as a portable digital-terrestrial test equipment manufacturer through the acquisition of all intellectual property to build the AdCoCom 4T2 DVB-T Portable Test Set under the ABC brand name

- Following it's mission of “building the best digital-terrestrial broadcast measurement receivers available in the marketplace”, the company expanded the product lines from terrestrial DVB towards other terrestrial standards, as well as satellite and IPTV reception

Product introduction

- By 2009, the company introduced the 4T2 Content Analyser, a comprehensive software application, designed from ground-up for monitoring

- This application provides software interfaces that are available for all in-house designed hardware devices

- The 4T2 Rack is a compact and affordable 19" 1U integrated monitoring system, based on the latest technologies available

- Through focusing on standardised processing hardware, the ABC product achieves very high reliability and huge economy-of-scale advantages

4T2 Rack

4T2 Rack multiple interface monitoring

- dual Gbit LAN
  - UDP/RTP transport stream input
  - SNMP remote
- ASI transport stream input
  - Content Analysis
- DVB-T/T2
  - RF interface measurements & Content Analysis
- DVB-S/S2
  - RF interface measurements & Content Analysis
- DVB-C (available on request)

4T2 Rack superior functionality

- monitor wall feature
- industry standard software codec support
- simultaneous monitoring of multiple physical inputs
- DVB T2-MI analysis
- multi monitor output for visualisation
- source scanner and automated report generation

4T2 Rack latest generation built

- Windows™10 64bit system platform
- compact 19“ x 1U x 250mm
- multi-standard digital reception
- six-core Coffee-Lake i7 CPU
- m.2e solid state drive
- 4k dual HDMI output

4T2 Rack multiple interface monitoring

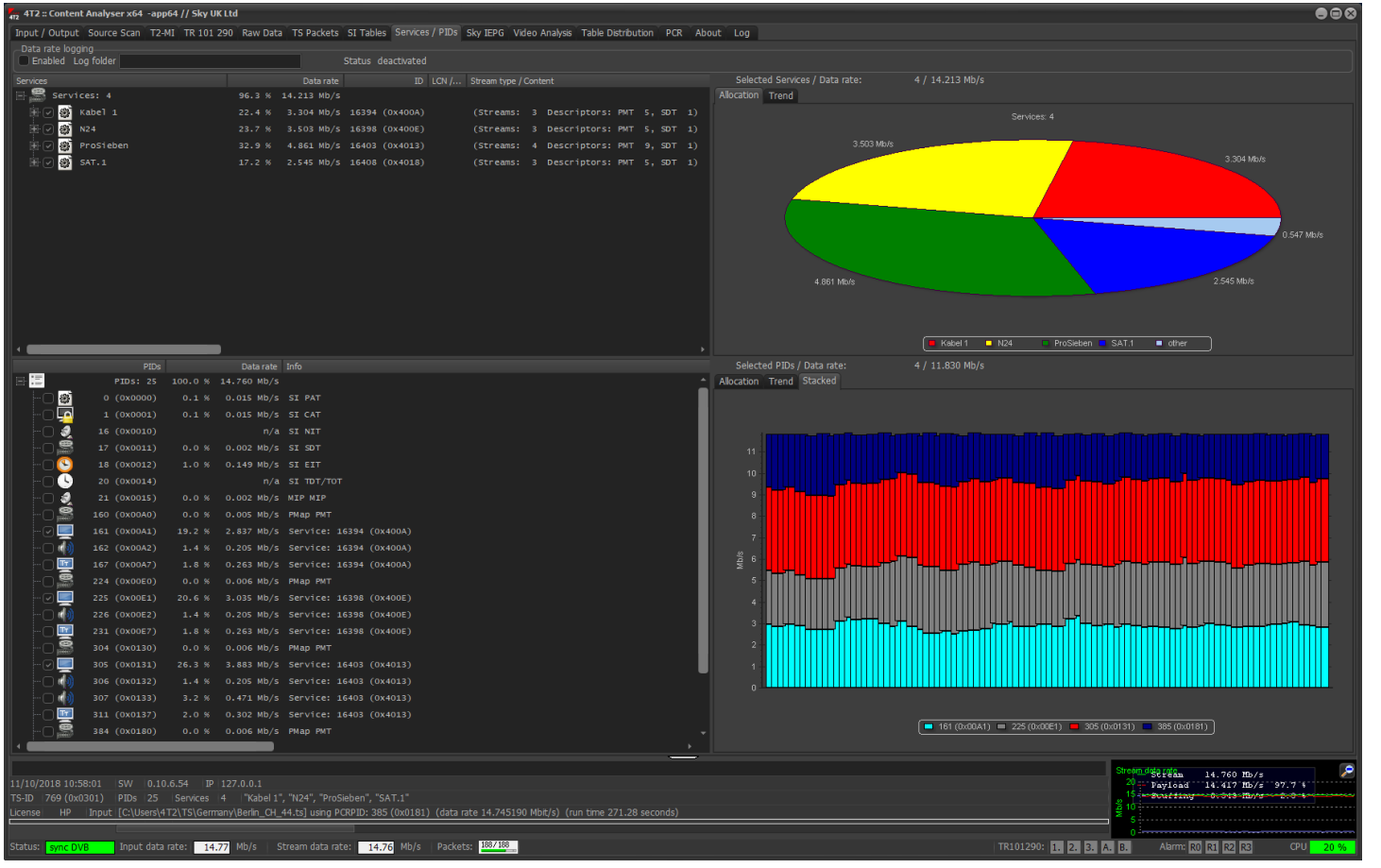
- DVB-T2 MI analyser
    - on ASI and on IP input
- Transport Stream analyser with Multi-Viewer
    - SI-Tree, SI-table repetition, TR.101.290 1st, 2nd, 3rd priorities, Services & PIDs display, Data-rates display & graph, PCR-rate & Jitter, Black/Freeze detector, Audio mute, triggered capture, log-file
- H.262 SD/HD, H.264 SD/HD, and H.265 Ultra HD decoder with 4k hdmi output
- DVB-T/T2 RF analyser with
    - Level, MER, EVM, bit errors
    - Constellation display, Impulse Response display, Spectrum display

SERVICES PIDs (all inputs)

Data-rate displays with virtual and logical channel numbers sorted by services and PIDs

Pie-chart and trend-line displays with relative and absolute data-rates

All components of service displayed



MultiViewer (all inputs)

Video/Audio of all services in transport stream

Black/Freeze detection

Audio bargraphs with history

DVB-Subtitles

DVB-Teletext

GOP-Structure

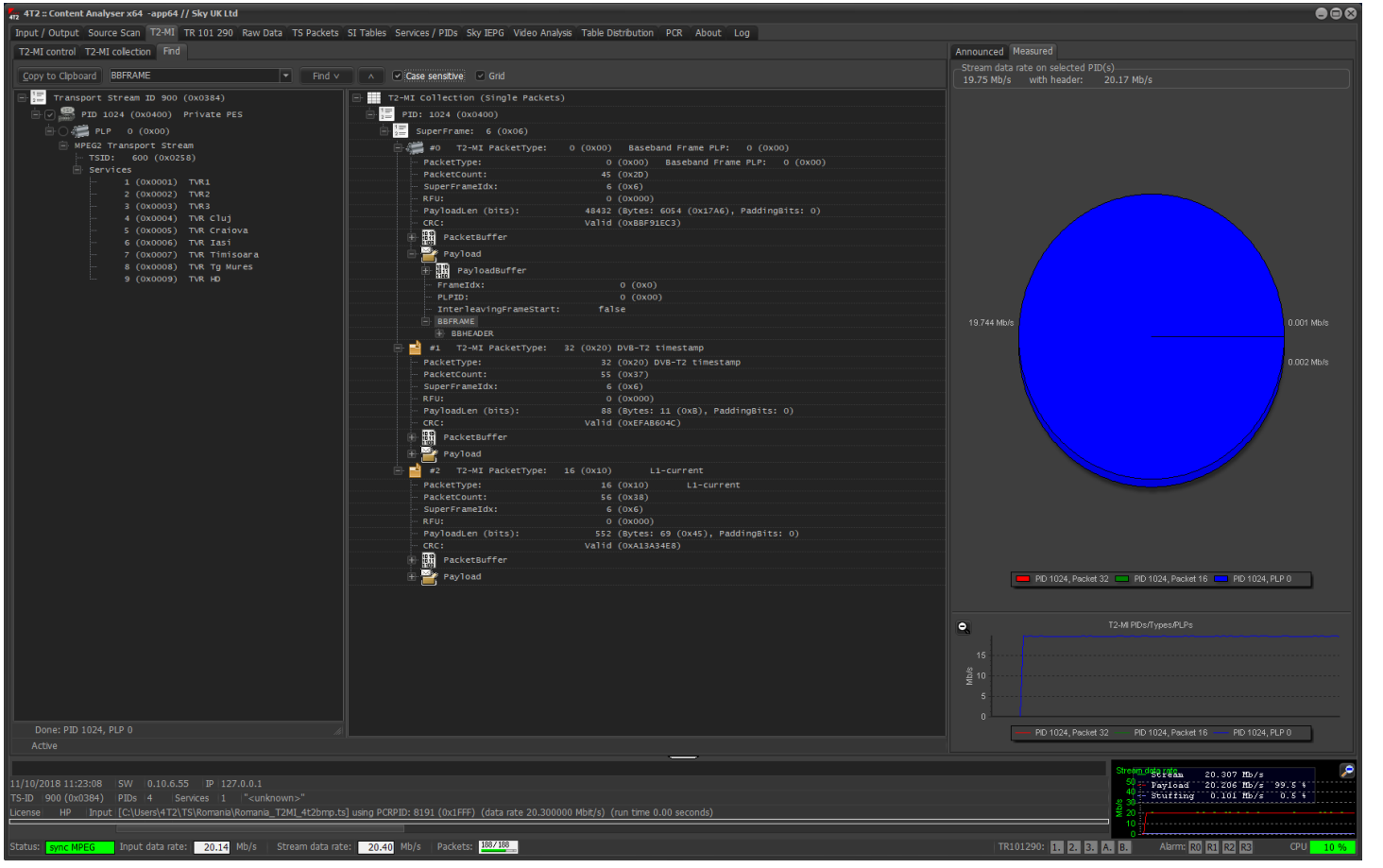
SMPTE-35 Ad-Insert

T2-MI (ASI, IP inputs)

T2-Modulator interface real-time analyser

De-capsulation of embedded single-, or multi-program transport streams

Re-routing into Content-Analyser for full visualisation and analysis



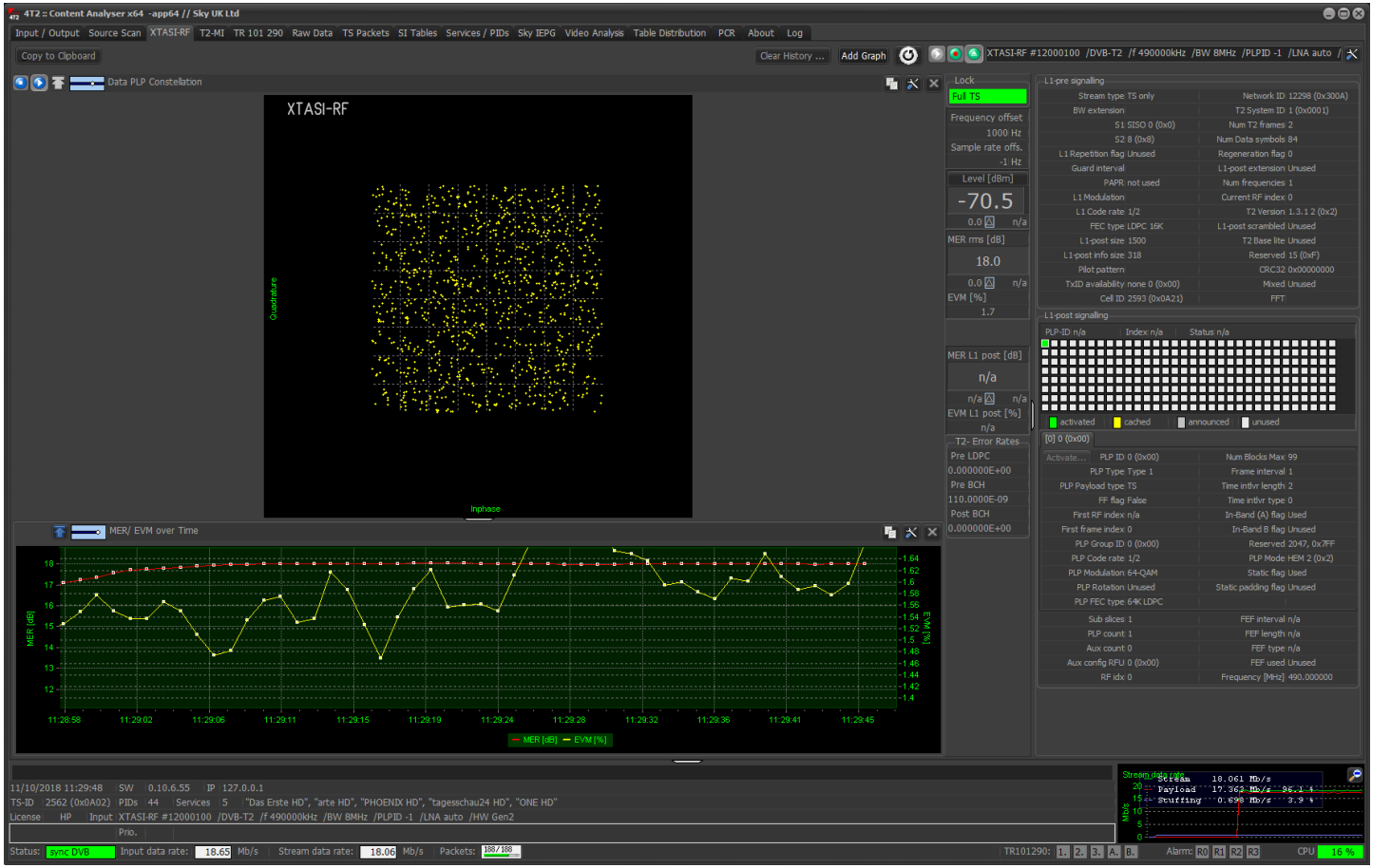
DVB-T/T2 RF (terrestrial inputs)

Constellation, Impulse-Response, Spectrum displays

Calibrated level, MER, EVM, BER

Decoded TPS information, L1pre, L1post

>42dB MER performance



DVB-S/S2x RF measurements

Constellation

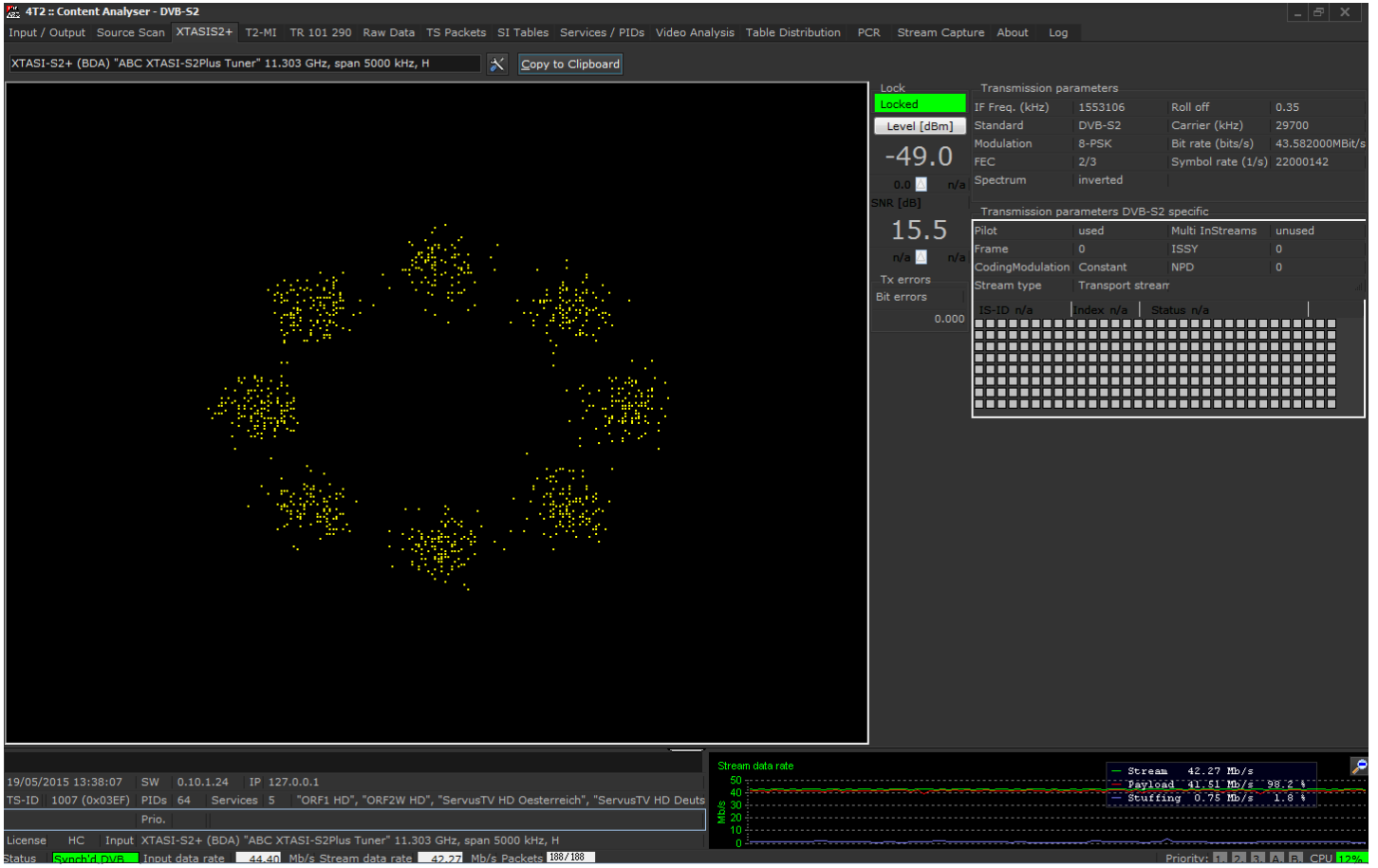
QPSK+,
8 APSK+,
16 APSK+,
32 APSK+,

LDCP and BCH short and normal mode

Level measurement

SNR measurement

0.2, 0.25, 0.35 Filter Rolloff support



TR 101 290 (all inputs)

Evaluation of TS following TR101290 1st, 2nd, 3rd priority (including T2-MI extensions)

Groups, or individual error measurements

All errors are logged with date and time of occurence

Selection can be used as trigger for Stream Capture

Pre and post trigger capture

Adjustable quota for current file and overall storage

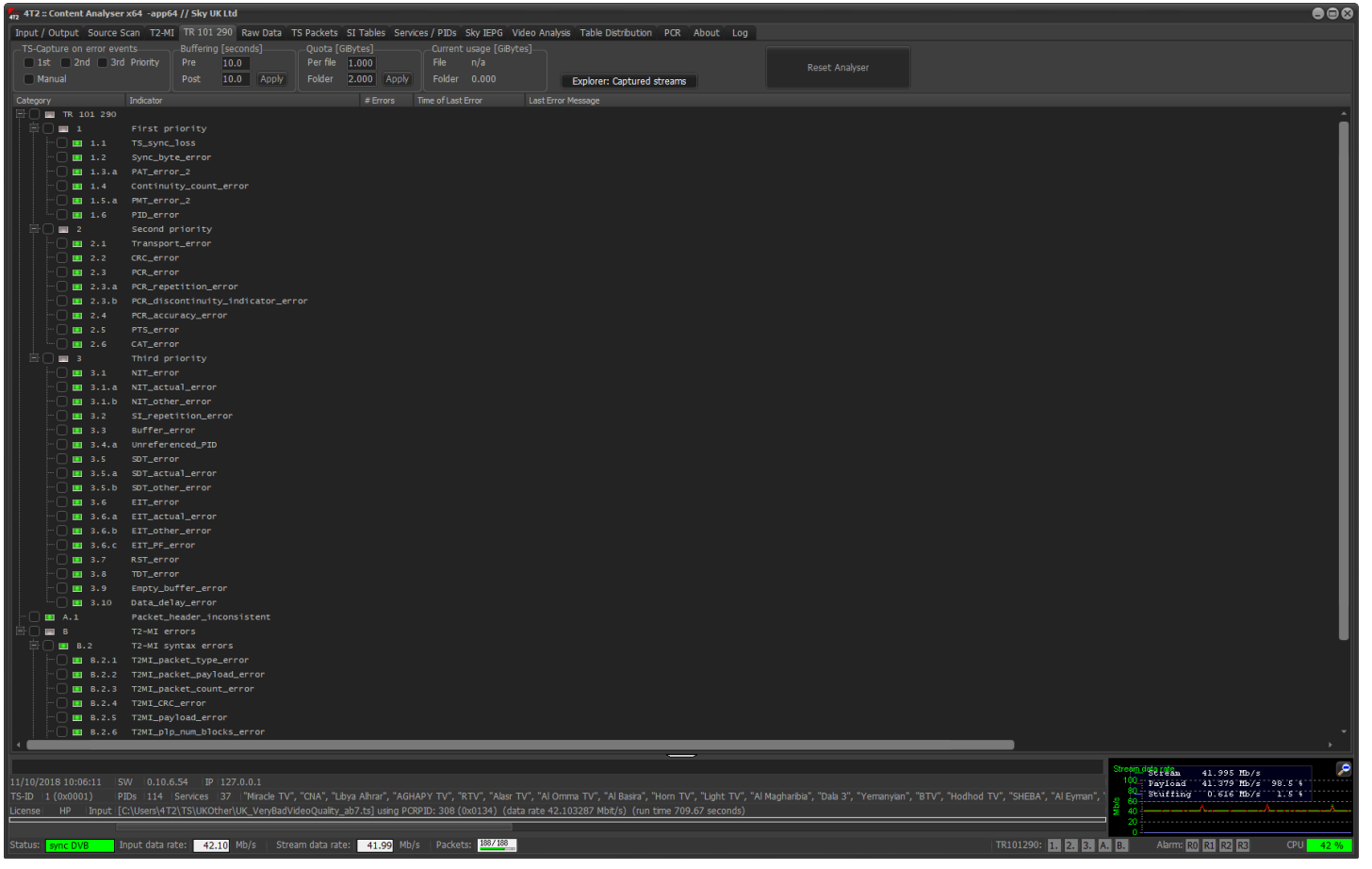


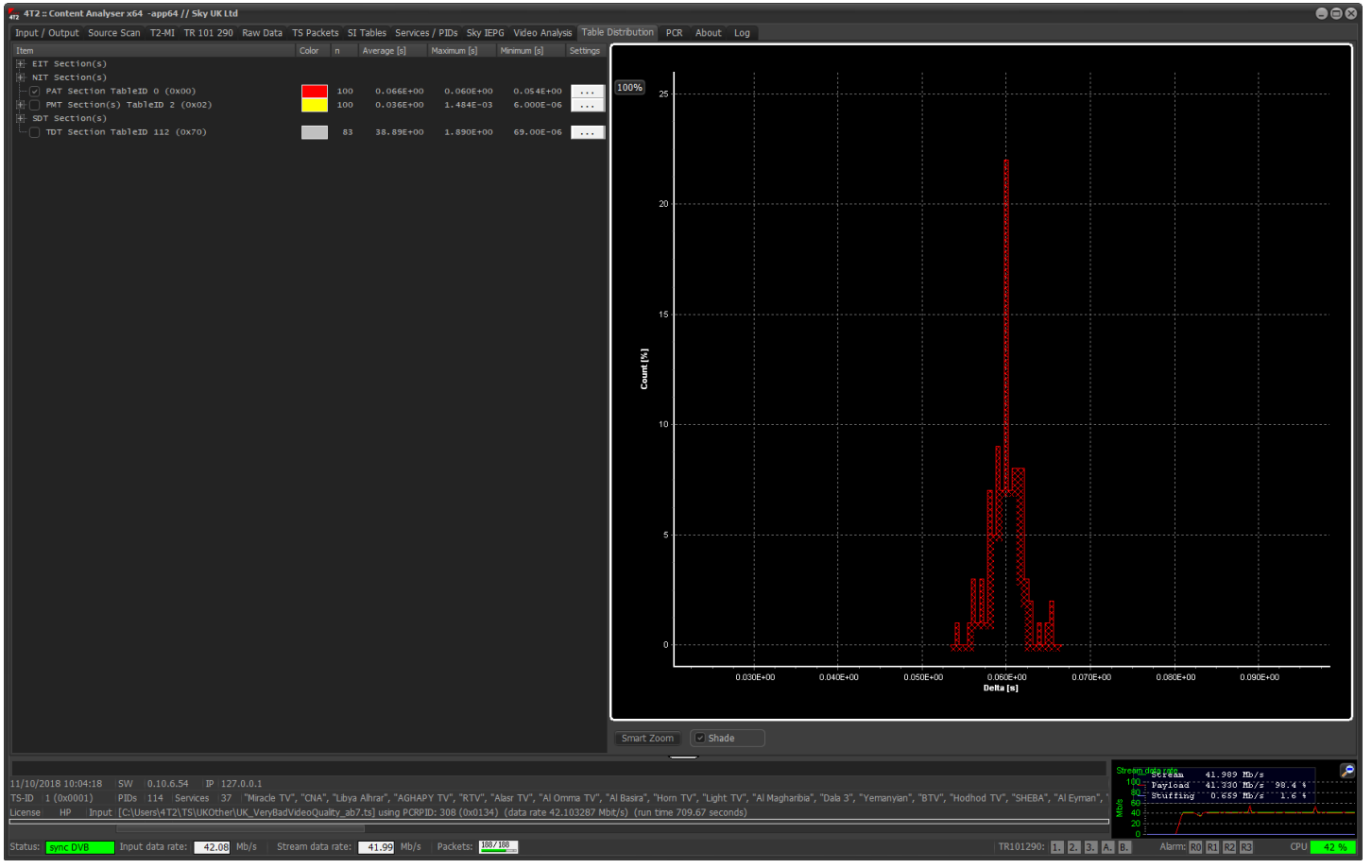
Table and PCR Distribution/Jitter (all inputs)

Distribution of SI-tables in the Transport Stream

Individual tables can be selected and the repetition rates are displayed in form of a histogram

Smart-zoom assists on positioning the histograms

PCR Distribution and Jitter allows for most detailed measurements

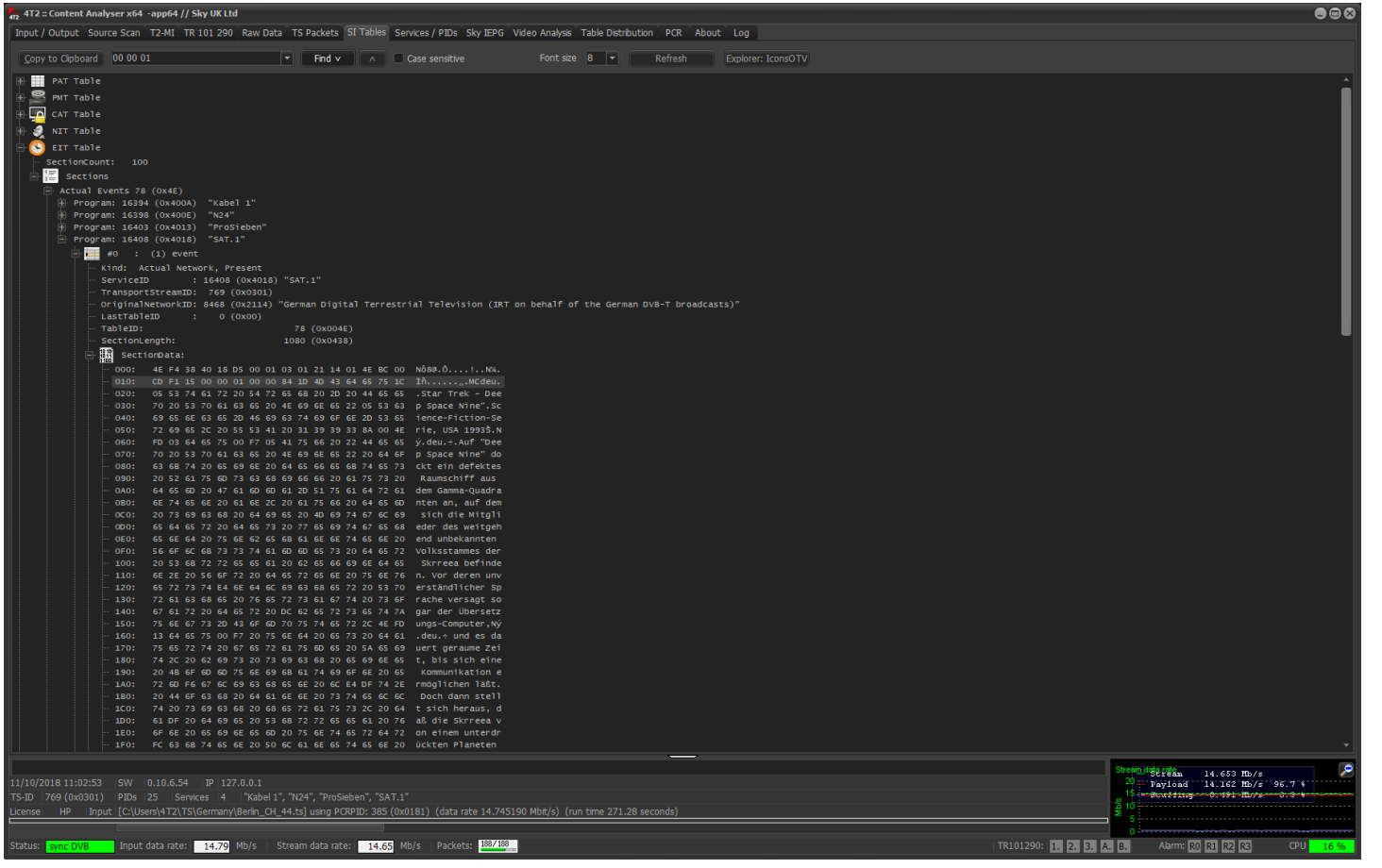


SI tables (all inputs)

Display of the service information tables (SI) with:

- find function
- comprehensive tree exporting options
  - all SI-tree
  - sub-tree
  - individual entries

SI of DVB, ATSC, and ISDB supported

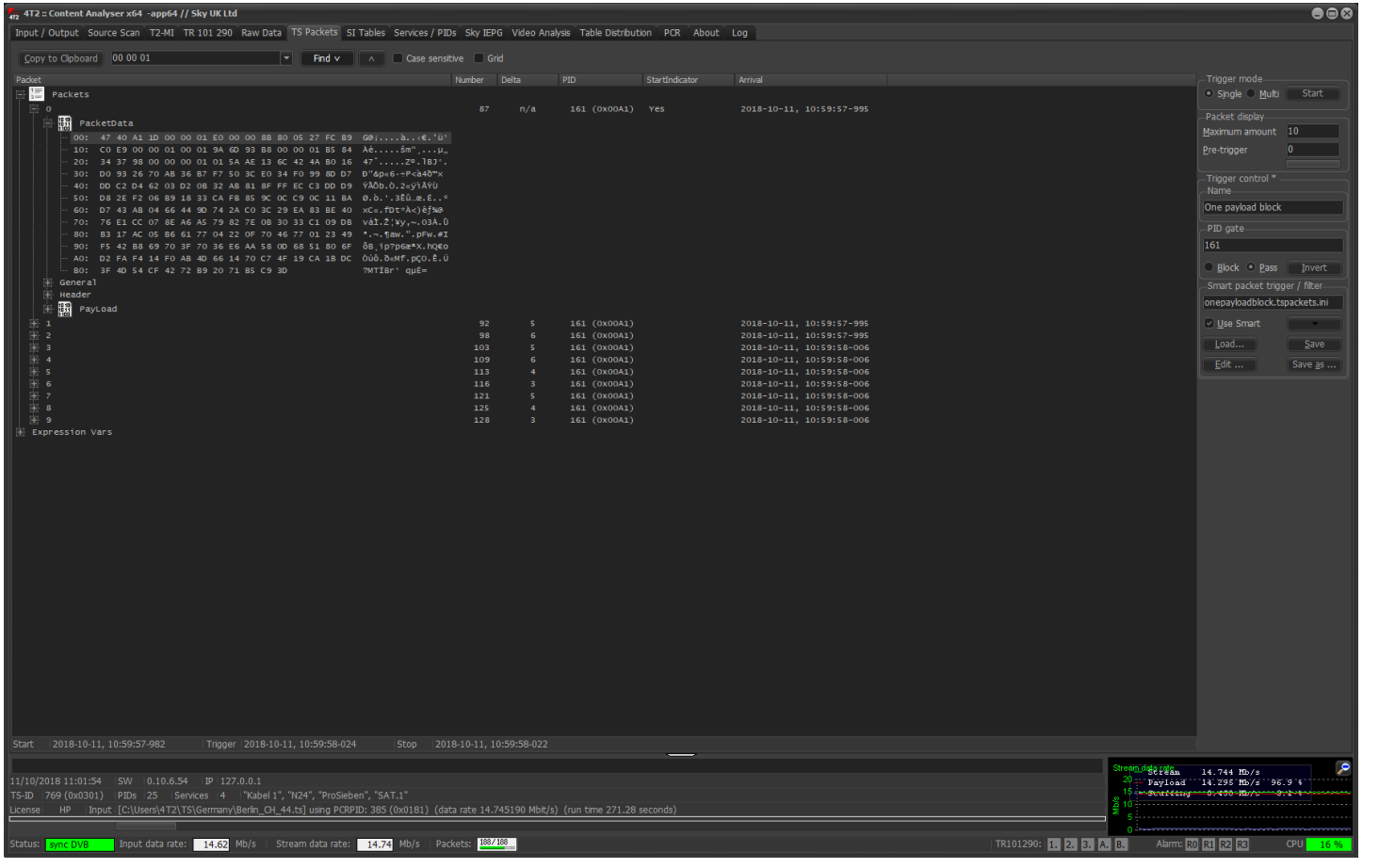


TS Packets (all inputs)

3rd generation expert function

Sophisticated packet filtering with multiple triggers and filter expression editor

Unique and powerful tool for finding problems in transmission chains and multiplexers

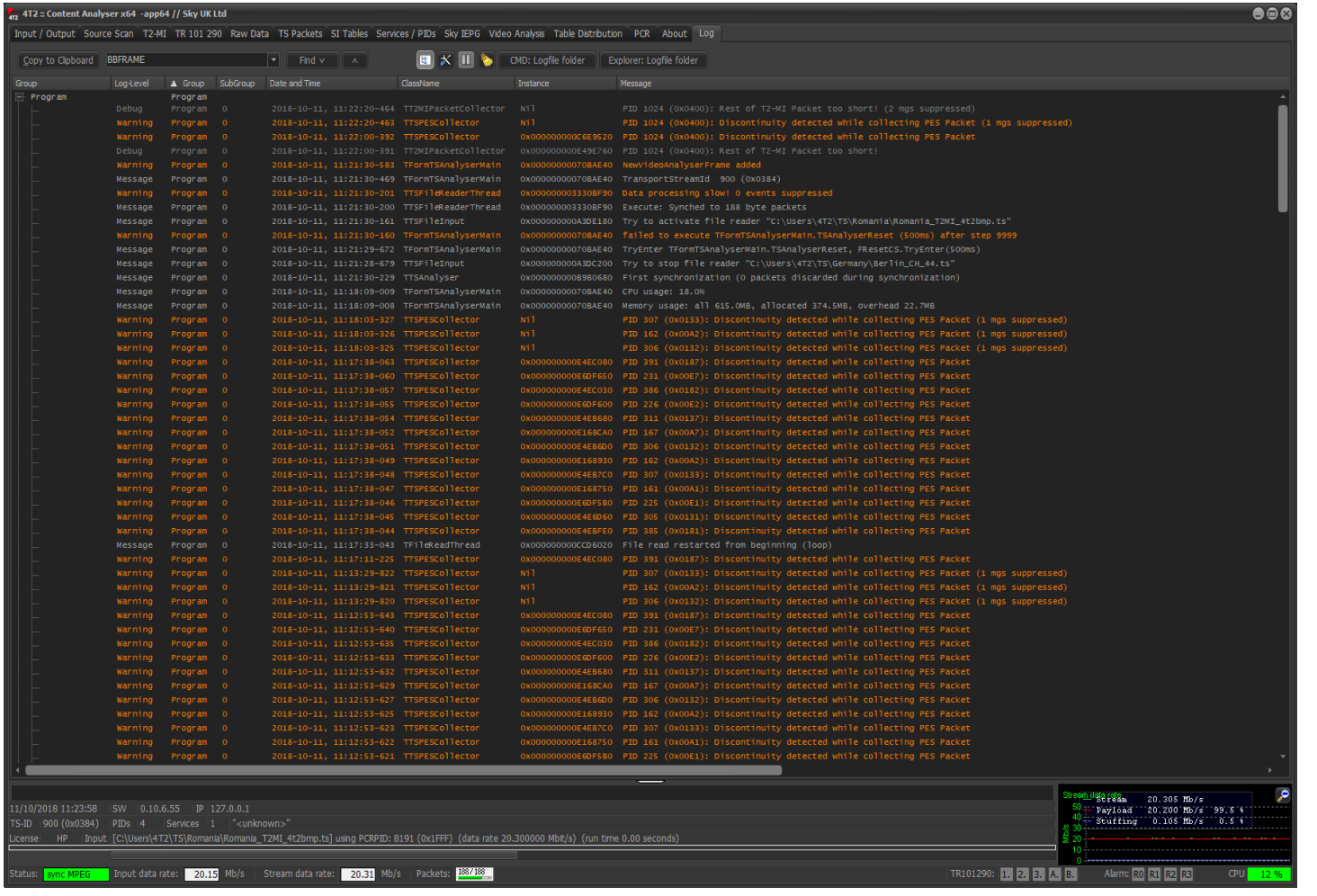


Log (all inputs)

Most comprehensive logging system with integrated find and sorting features

Automated logfile storage with integrated garbage collection

Easy logfile post-processing available on-the-fly using Windows tools



further benefits

- based on industry-standard hardware: Mini-itx, ATX, m.2e or SATA-III, USB3, hdmi
- Windows™ system, supporting any standard application software
- all measurements performed simultaneously
- unlimited storage of measurement reports on either SSD, or USB memory stick
- hardware and software from one supplier

These were just a few features of our product.

Further information is available at
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