

PERSONAL STREAM TOOL

Universal tool for specialists who have been working in the field of DVB

CableWorld

ANALYZER - GENERATOR - CONVERTER

2020

Versions

The Personal Stream Tool is the essential gadget of specialists who have been working in the field of digital television broadcasting. This small device in spite of its reasonable price provides its owner with all the functions and services which are extremely useful during troubleshooting and the everyday work.

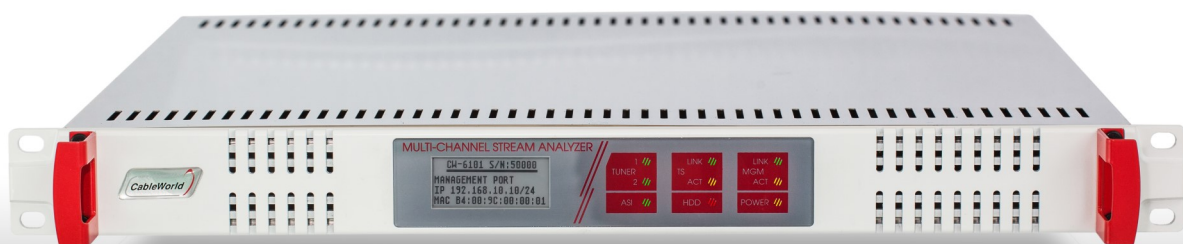
The Personal Stream Tool is not just a single device, it is a complete product family. There are four portable and two rack-mounted versions. The significant difference between the versions is the interface.

The rack-version was made for the continuous service period, its power supply can be switched easily, it is not necessary to unmount the device from the rack cabinet.

There is an E-ink display on the front of the device that shows the IP address of the management port and other data. The specialty of the display is that it shows the settings in case of the unplugged device so the users always know the IP address of the management port.

Handlers are located on the devices' front and they make the unmount from the cabinet very easy.

CableWorld's Stream Monitoring System is an affordable solution to the supervision of digital head-ends and transmission chains. The measurement data are provided by many PSTs used as network probes in different locations. They are periodically gathered and evaluated by a central data processing unit. For supporting a later troubleshooting or debugging, the central unit logs measurement data and the error events and sends alerts E-mail and SNMP) in case of any failure.



Interfaces

The Personal Stream Tool's management port is Fast Ethernet, the transport stream port is Gigabit Ethernet, in which a copper cable or, through an SFP module, an optical cable can be connected (CW-6000 has only copper TS connector). The device's management is based on HTML5 web interface. It is important to note that - thanks to the use of FPGA circuits - you can use the 64 TS IP input/output at real gigabit data process speed.

We use loop-through F connectors at the RF inputs, the number of tuners varies (DVB-T/T2/C and/or DVB-S/S2X) depending on the version. The ASI input and ASI output are separated interfaces, but they can be configured on the user interface as looped input as well.

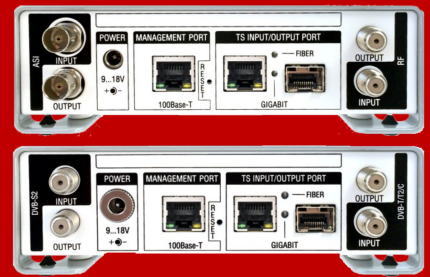
The device can be operated from a 12 V power supply. The device - including a satellite tuner - is capable of being fed LNB, so it can be used with a universal LNB head. The maximum power intake of the LNB head can be 1 amper.

Functions

The functions of the PST can be listed in three groups: measurements, conversions and generating different data streams.

Converter

You can convert the data streams between the interfaces of the device in any direction. You can even set different conversions at the same time (e.g. from DVB-C to IP, meanwhile from ASI to IP). Beside the conversions, you also have the opportunity to modify the streams. You can optionally filter the PIDs or **split an MPTS** (Multiple Program Transport Stream) **into SPTSs** (Single Program Transport Streams). On the 64 IP input, you can filter according to source/destination IP/Port addresses, receive VLAN tagged streams, or remove **VLAN tag** or Null packets from the stream. The device supports **IGMPv2 and v3** protocols. On the 64 IP output, you can set how many TS packets you want in one IP packet (1...7). **UDP and RTP** protocol also supported. The device can execute all these operations at **real gigabit speed**. The signal - arrived at any input of the device - can be streamed to even four different destinations with the **Multiple Streaming** function. The ASI input can receive a burst or continuous signal and can handle up to up to 200 Mbit/s streams.



The back of the portable PSTs as different versions



Video Mosaic analyzer function in PST.

We expand the functions of the PST continuously, thanks to this, we publish new firmwares every few month. The updates can be downloaded freely from the www.cableworld.hu website.

TIME TO
UPGRADE

Subscribe to our newsletter, where we inform you about our novelties.

Choose CW-6000 PST-IP when you need only IP interfaces.



We put effort into details such as the packaging during the development of the Personal Stream Tool.



The device is placed in a practical bag with its accessories. The bag is in a cardboard box to be protected from harm when transporting. The accessories are: one 12 V 1 VA adapter (in case of satellite tuner, 2 VA adapter) and a UTP cable.

The rack version is packed into the well-known pizza delivery box, and its accessories are: power supply cable and UPT cable.

Analyzer

RF measurement

The built-in tuner tunes automatically, you only have to set the receiving frequency. After tuning, you will have the most significant parameters, such as the signal level, the signal quality, the CNE, BER and MER values.

IP measurement

The most important function, when analyzing IP networks, is measuring the IP jitter, which can show the change in the arrival time of the packets, and calculates the necessary size of the temporary buffer on the receiver side to avoid packet loss coming from overflow. The device can measure jitter on up to 64 arriving IP streams, and make documentation of the measurement.

Transport Stream measurement

The device can analyze streams arriving from RF, ASI and IP sources, or samples from files. You can measure **data speed** (PID, Service, TS, Total), the number of **TEI errors**, **continuity errors**, the number of **encrypted streams** by Inputs or by PIDs. The device is capable to measure 64 streams at the same time. **PSI** (Program Specific Information) tables can be analyzed as well. Documentation can be generated from the measurement results.

Generator

You can generate different measuring signals with the usage of the PST's Transport Stream Generator function. The High-Speed TS Generator has been developed in order to generate a 900 Mbps transport stream.

The built-in **EPG generator** allows anyone to generate their own EPG for one TV program (e.g. local TV channel).

The **HbbTV** (Hybrid broadcast broadband TV) is a new service of digital television systems. Its application joins the traditional broadcasting with the contents available via the internet. To achieve this, besides creating the content, an **AIT** table needs to be inserted into the transport stream and the PMT table needs to be modified. These tasks can be easily done by PST.

Technical Data

DVB-S/S2 (S2X optional) SP2246T (FTS-3166)

Input frequency range 925 ... 2150 MHz

RF input impedance/connector 75 Ω , F socket (female), loop-through

Input Level min. -65 dBm ... max. -25 dBm

Symbol Rate 1..45 MSps (<40 MSymbol/s in 32APSK)

Modulation QPSK/8PSK (8/16/32APSK)

Code ratio 1/2 to 9/10, with automatic recognition

DVB-T/T2/C MxL603 Silicon Tuner

Input frequency range (Bandwidth) 44 ... 1002 MHz (6, 7, 8 MHz)

RF input impedance/connector 75 Ω , F socket (female), loop-through

Return loss typically 10 dB (max. 8 dB)

TS input/output

Link speed 10-, 100- and 1000Base-T

Number of inputs 64 UDP/RTP stream (MPTS, SPTS)

Number of outputs 64 UDP/RTP stream (MPTS, SPTS)

VLAN tagging for all in/outputs

Connector type RJ-45 / SFP (Mini GBIC) module

ASI input/output

Standard according to EN 50083-9

Impedance/connector 75 Ω , BNC socket

Input /output data rate max. 200 Mbit/s

Packet format 188 or 204 Bytes/packet

Null packet inserter (output only) Adjustable

TS clock source selector (output only) from input, user defined, max. 27 MHz

Management port

Link speed 10-, 100Base-T

Connector type RJ-45

User interface Web based (HTML5, JavaScript)

Protocols SNMP, ICMP, IGMPv2, IGMPv3

General data (PST)

Mass about 0,6 kg

Physical dimensions W x H x D 154 x 50 x 138 mm

Power requirement, consumption 12 V DC (17 W)

General data (PST-Rack)

Mass about 4,2 kg

Physical dimensions W x H x D 19" x 1 RU, 483 x 43,6 x 473 mm

Power requirement, consumption 90 ... 264 V, 47 ... 440 Hz (70 VA)

Portable versions

CW-6000

IP in/out, portable TS analyzer, converter, generator, and inserter

CW-6101

DVB-T2/C tuner, ASI in/out, IP in/out, portable TS analyzer, converter, generator, and inserter

CW-6201

DVB-S2 tuner, ASI in/out, IP in/out, portable TS analyzer, converter, generator, and inserter

CW-6300

DVB-T2/C tuner, DVB-S2 tuner, IP in/out, portable TS analyzer, converter, generator, and inserter

Rack versions

CW-6301

DVB-T2/C tuner, DVB-S2 tuner, IP in/out, rack-mountable DVB analyzer

CW-6321

DVB-T2/C tuner, DVB-S2 tuner, ASI in/out, IP in/out, rack-mountable DVB analyzer with built-in PC