

CW-4812 ASI & QAM TS Analyzer



For digital TV transmission the signal of the TV program is converted into data, which are carried by the transport stream (TS). At generating or modifying (e. g. remultiplexing) transport streams, the most important step is the analysis of the transport stream, that is, checking up the structure, right arrangement and content of the carried data packets. For analysing, remultiplexing and scrambling the TS, CableWorld developed a device family, which permits these jobs to be performed effectively and efficiently.

The portable CW-4812 ASI & QAM TS Analyzer permits analyzing the transport stream from both DVB-C and ASI format. The device receives the input transport streams at its QAM or ASI input, and through its network board feeds them in the user's notebook, desktop, 19" or other type computer. The QAM input unit will be configured with the SW-4873 software, which at the same time allows also measuring the QAM parameters (BER, constellation etc.).

The device is portable, along with a notebook PC in can be used for completely analyzing the transport stream anywhere and any time. Investigating the data content occurs in the computer and the results are displayed on its screen. The software for operating the analyzer is available at our web site (www.cableworld.eu) for free download and use and can be studied even without the unit, prior to buying it. The CW-4812 is compatible also with other manufacturers' software since it has been designed for operation with all most widely used IP formats.

The measuring techniques made on the transport stream will widely develop in the next years since the value added services, the pay TV systems etc. will raise more and more demands on analysers. CableWorld will cope with this challenge by offering always the latest software version at its web site.

The SW-4811 operating software permits the elementary level in-depth analysis of the data stream thus it can excellently be used for checking up the data streams of remultiplexers, scramblers, pay TV systems and new services as well as for developing and training purposes.

The input selection will be made from the PC. The device's SW-4811 operating software has been designed to be used under Windows XP.



Main features:

- QAM demodulator with loop-through input for the 51 ... 858 MHz band
- Loop-through ASI input
- Symbol rate 1 MS/s ... 7 MS/s
- BER, constellation and other measuring functions
- Integrated transport stream analyzer, reproduction of picture and sound
- Ethernet output

CableWorld Ltd., that used to develop and manufacture analogue television equipment, today develops equipment for digital television with a fully new approach, and endeavours to make the very complex digital technology comprehensible and manageable for the technicians involved.

The CW-4812 ASI & QAM TS Analyzer consists of a simple hardware and a software package, which is being continuously developed and can be developed even by the user. The hardware is offered at a favourable price, the software is offered free of charge. For developing own software, the user can find all necessary information in the CW_Net_m.pdf file at www.cableworld.eu.

For operating the CW-4812 portable ASI & QAM TS Analyzer needed is also a computer, which can be the user's notebook PC, the central computer of the system or any other one. The requirements for the computer are given in the 'Software' page of the web site.

The first member of the software series, the SW-4811 was designed primarily for development, education and training purposes. We recommend its use for those, possessing already basic knowledge of digital television or going to acquire it.

The first version of the SW-4811 software consists of following modules:

- Input selector control and data format setting
- Data analyzer for 188, 204 and 256 Byte formats, completed with a PID tester
- PSI analyzer
- Program Map display
- Data rate analyzer, elementary stream analyzer
- Picture and sound reproducer
- PCR analyzer
- TS storing and loading

There are several pieces of free TS analyzer software on Internet. Most of them support analyzing UDP data streams, thus e.g. the CW-4812 can excellently be used with the „TSReader” software, too. This software supports also continuous „real time” analysis.

Technical data

Input data

QAM input

Input frequency band	51 ... 858 MHz
Input signal level	44 ... 84 dB μ V
RF input impedance	75 Ω
RF input connector	F type socket
RF output connector	IEC type socket (bridged input)
Insertion loss	\pm 5 dB, typically 0 dB

Input signal processing

Modulation	QPSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM (DVB-C)
Symbol rate	1 ... 7 Msps
IF frequency	36.166 MHz

ASI input

ASI	acc. to TM 1449 Rec.1
Input voltage	min. 200 mV _{pp} max. 880 mV _{pp}
Input impedance	75 Ω
Input connector	BNC socket (insulated)
Input data rate	max. 60 Mbit/sec (depending on the PC)

ASI output

Output voltage	min. 800 mV _{pp}
Output impedance	75 Ω
Output connector	BNC socket (insulated)
Number of outputs	(with bridged outputs)

Output data

<i>Data output:</i>	
CW-Net	100 Mbit/s
Connector	RJ-45 socket
MPTS	UDP format (CW-Net, 7 \times 188 Bytes or 7 \times 204 Bytes)

General data

Mass	approx. 0.75 kg
Physical dimensions	
Width	90 mm
Height	50 mm
Depth	160 mm
Service period	continuous
Power requirements	5 V DC
Power consumption	max. 4 VA
Operating temperature range	+5 ... +40 $^{\circ}$ C
Relative humidity	max. 80 %
Storage temperature range	-25 ... +45 $^{\circ}$ C
Relative humidity	max. 95 %, non condensing