

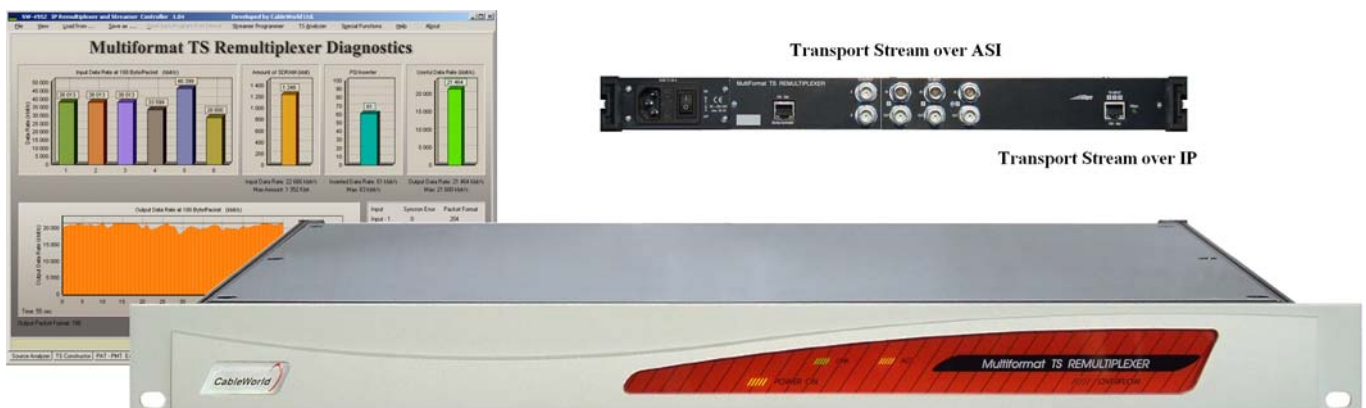
CW-4856 Multiformat TS Remultiplexer

TS Remultiplexer with 3 ASI + 3 IP inputs and ASI + IP output

In the present period of the development of digital television the transport stream will often be transmitted in mixed way, over both ASI lines and IP networks. Earlier purchased devices work with ASI signals and the new ones are designed for IP signals. It often makes also difficulties that the data streams of certain services (EPG, TXT etc.) are available in IP format only, thus older devices cannot receive them. For this transition period CableWorld offers its CW-4856 Multiformat TS Remultiplexer, which is equipped with three ASI and three IP inputs and delivers the output signal at both ASI and IP output.

The CW-4856 belongs to the latest generation of the CableWorld remultiplexers; it is equipped with integrated transport stream analyzer and a complete diagnostic module. The PID values coming from the 3+3 inputs of the device can be filtered and remapped without any limitation. The compiled packets are filled in a 128 Mbit SDRAM prior to being led to the PSI Inserters. The device comprises 12 PSI Inserters with a total of 32 MBytes flash memory, which can be used to store beyond the tables to be inserted also the data of set-top box upgrade software and various other services. The statistical PCR corrector at the output is capable of performing full error correction at all PID values.

The device control software of the Multiformat TS Remultiplexer, the SW-4951 v1.04 is available at www.cableworld.eu for free download and use. Its advantageous feature is that it can be used with all earlier CableWorld ASI and IP remultiplexers. The device control and the 3 IP inputs are separated both physically and logically, but they can be merged using a switch. Beyond utilizing the remultiplexer functions the CW-4856 can advantageously be used as receiver in IPTV systems and as IP to ASI Converter in telecommunication networks.



- 3 × ASI and 3 × IP inputs with multicast and unicast connection, in 10-, 100-, and 1000Base-T mode
- One remultiplexer with double ASI output
- 128 Mbit SDRAM and 12 PSI Inserters with a total of 32 MBytes storage
- Statistical PCR corrector for all PID values
- Automatic and manual Service Identifier and PID handling (PID Remapping)
- Logically and physically separated IP inputs and device control connection
- SNMP remote control facility
- Low power consumption (typically 35 W), high reliability, long life time

The CW-4856 Multiformat TS Remultiplexer is a real novelty in the transport stream remultiplexer market, since beyond its favourable price and various features it permits ASI and IP mixed input and output connection. The device is capable of processing MPEG-2 and MPEG-4 compressed SD and HD programs, SPTS and MPTS streams alike. The three ASI and three IP inputs permit building transport stream from the streams coming from both ASI- and IP-output devices. Installing the device in the system is eased by the applied loop-through ASI inputs; the gigabit IP receivers support both unicast and multicast mode.

The multicast networks will be handled according to IGMPv2 protocol. 6x8,192 PID Filters and PID Remappers are available for forming the new data stream, which will be filled in a 128 megabit SDRAM transitional store, and then will be led through PSI Inserters to the output. The large size SDRAM removes the data rate peaks of VBR streams and the unevenness coming from the IP transmission. The 12 PSI Inserters with a total backing store of 32 megabytes permit inserting beyond the various tables also set-top box software upgrade data streams, pictures, ads and other services.

The PCR errors coming from the IP transmission and the remultiplexing procedure are corrected by PID using advanced statistical PCR correctors.

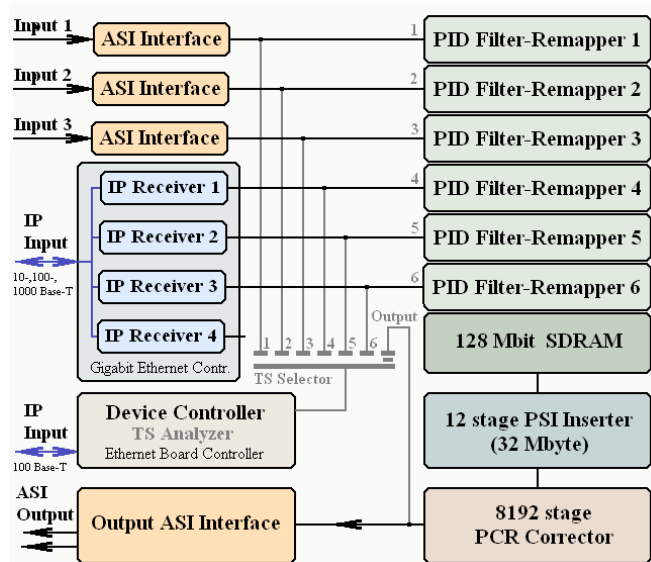
The double ASI output of the remultiplexer can drive two ASI lines simultaneously.

The integrated transport stream analyzer permits inspecting both the 6 input signals and the output signal. With the analyzer set to the output, the produced transport stream can be sent to IP network, too.

The device control software of the CW-4856 Multiformat TS Remultiplexer is the SW-4952 v1.04, which is available at www.cableworld.eu for free download and use, at present in Hungarian, English, Italian and Spanish language. Compiling the output transport stream needs a few minutes only, since the SW-4952 offers automated functions for the average user and in-depth setting possibility for the skilled users.

The three IP inputs of the Multiformat TS Remultiplexer can be configured with the SW-4901 Gigabit Ethernet Controller software independently of the remultiplexer functions. The operation of the three IP Receivers can be controlled from this software, too. These settings do not influence the remultiplexer functions, which permits performing special features e.g. switch-over between programs by control from software.

CableWorld would like to demonstrate that digital television is simple and easily learnable. Operating the digital devices the users can be entrusted with, likewise as analogue equipment. At developing the Multiformat TS Remultiplexer our design engineers strived to make the structure and operation of the device clear and lucid for all users. The block diagram of the CW-4856 is shown in the picture. We recommend the Multiformat TS Remultiplexer especially those who want to build their program choice by themselves and want to have a direct hold on the remultiplexing procedure.



Block diagram of the CW-4856 Multiformat TS Remultiplexer

Technical data

IP input

Transport stream IP input Protocol	1000Base-T / 100Base-T (auto negotiation) IPv4 (prepared for IPv6)
Number of inputs	3 unicast/multicast connections
Connector type	RJ-45 socket

ASI inputs and output

Type and protocol	according to TM 1449 Rec. 1
Impedance	75 Ω
Number of connectors	3 × 2 BNC sockets (loop-through inputs) 1 × 2 BNC sockets (double output)
Input and output data rate	max. 80 Mbit/s

Transmission characteristics

Number of PID Filters/Remappers	6 × 8,192
Size of the transitional store	128 Mbit SDRAM
Number of output inserters	12 output inserters with a total of 32 MB flash memory
PCR corrector	8,192-member statistical corrector for an accuracy within ± 500 ns
Programming and supervision	through the IP network

Programming of the device

Programming IP input Protocol	100Base-T / 10Base-T IPv4
Programming software	SW-4952 V1.04 – Remultiplexer functions SW-4901 – IP inputs
Connector type	RJ-45 socket

General data

Front panel LED displays	LINK, ACT (programming), Overflow
Rear panel LED displays	2 × LINK, ACT, Gigabit mode
Mass	approx. 3.5 kg
Physical dimensions	19" × 1 HU
Width × Height × Depth	483 × 43.6 × 473 mm
Service period	continuous
Power requirement	90 ... 264 V, 47 ... 440 Hz
Power consumption	max. 35 VA
Operation temperature range	+5 ... +40 °C
Relative humidity	max. 80 %



Budapest XI., Kondorfa u. 6/B
Hungary
Tel.: +36 1 204 7815
Fax: +36 1 204 7839

Internet: www.cableworld.eu
E-mail: cableworld@cableworld.hu