

CW-4887 MPEG-2 Encoder Duo

Two independent MPEG-2 encoders with ASI output

CW-4888 MPEG-2 Encoder Quad

Four independent MPEG-2 encoders with ASI output

CW-4987 MPEG-2 Encoder Duo

Two independent MPEG-2 encoders with IP output

CW-4988 MPEG-2 Encoder Quad

Four independent MPEG-2 encoders with IP output

USER'S GUIDE

Dear User!

As a heritage of the analog technology a number of program sources are still supplying composite PAL or NTSC video signals (video players, local studio cameras, etc.). The encoder series of CableWorld transmit these analog signals into cable or IP-based broadcasting networks in MPEG-2 packed format.

1. MECHANICAL CONSTRUCTION

The MPEG-2 Encoders are built in standard 19"x1 HU instrument frame. They are delivered along with the following accessories:

1. Power cord 1 ea.
2. Spare fuse T 1.25 A
(placed in the fuse holder mounting) 1 ea.
3. Crossover cable with RJ45 connectors 1 ea.

The power consumption of all types is very low therefore no special cooling or ventilation is needed.

2. ELECTRICAL CONSTRUCTION

The devices are equipped with own switching mode power supply. The supply voltage of the interface circuitry is +3.3 V, but the signal processing circuitry works with supply voltages of +1.2 V or +2.5 V. The real power consumption is low, the unit is suitable for continuous operation.

The device circuitry comprises high complexity FPGA circuits, which should be configured to the given task by the user. The device can be configured with the software, free available for downloading from the www.cableworld.eu web site. The devices and the software of CableWorld Ltd form a system, where one program can be used for many devices, and some devices need several

programs. The programs run in Windows XP or Vista environment, but the open system of CableWorld allows controlling the devices by anyone, from any environment with his own software via IP.

3. HARDWARE AND SOFTWARE SUPPORT

The software for programming the devices can be downloaded from the 'Software' page of the www.cableworld.eu web site. The downloaded installer exe file installs the software in the C:\Program Files\CableWorld directory. These items of software can be simply removed with the 'Uninstall' function from the PC any time, so they can be installed for preliminary test, too.

The user's guide of the software and the detailed user's guide for the device can be found in the 'Help' of the software. The 'Help' can be downloaded in pdf format from the 'Software' page separately, too.

Programming the MPEG-2 Encoder requires installing the SW-4888 basic software and the SW-4901 auxiliary software (only for the CW-498x IP-output versions). For examining the output stream we suggest installing the SW-4811B TS Analyzer software, but other manufacturers' software can be used, as well. It is useful, if the printed form of the software Help file is available, too. In our latest guides the important steps are emphasized with large letters and pictures, those interested in the details are informed with small letter descriptions.

After installing the software, the device and the PC can be interconnected with the attached crossover cable in 100Base-T mode for studying. But we suggest interconnecting the device and the PC via switch with straight cable.

In the first tests simple switches can be used, but we suggest using switches suitable for managing IGMP messages as soon as possible.

The factory setting for the MPEG-2 Encoder is IP address 10.123.13.101. When using several devices, set different IP addresses with the SW-4901 software to avoid IP address conflict. Users find help in descriptions CW-Net.pdf and Using_CW-Net.pdf, which can be downloaded from the 'Papers' page of the web site.

Probably, transmitting the transport stream over IP network holds surprises even for users having good networking knowledge. The most important knowledge is summarised in the publication 'Transport Stream Managing over IP' (TSMoIP.pdf).

Important note: The gigabit system of CableWorld is a very advanced, high performance system, where the transport streams and the device control commands are transmitted in a common network; decreasing your expenses and increasing the potential of remote control. The transport streams and the control commands are selected according to the Port numbers. The user's job is, assigning the Port number range to be used for transmitting the TS and programming it in the device. The device control must be performed outside the TS Port Interval. The device control can be totally disabled by the transport streams outside the TS Port Interval.

In the CableWorld's system the gigabit transmission is performed by FPGA circuitry, so the data rate is not limited by the performance of the internal processors, and the gigabit data rate can be utilized up to 100%.

4. PUTTING THE DEVICES IN OPERATION

After unpacking remove the protection foil from the stainless steel cover of the device. Connect the device to the specified mains voltage and switch on the power switch. Within a few seconds the device is ready to operation.

Programming the device and saving the settings is required only when putting the device in operation first or when modifying the settings.

5. TECHNICAL DATA

The technical data of the devices are published in their data sheets, which are available at the web site www.cableworld.hu.

Additional technical data:

All ASI inputs and outputs are insulated by transformers, which assure 2000 V separation. This design is very advantageous in applications, where arising of earth currents due to transmission of the ASI signal between different rooms or laboratories have to be prevented.

From the point of view of electromagnetic radiations and protection against disturbances, it is advantageous if the outer shielding of the ASI connecting cable is earthed at a proper point. This point has to be found individually in each application.

In the CW-4000 system of CableWorld the ASI inputs have metallic BNC connectors, the shielding of the coaxial cable is earthed here. The output connectors are insulated.

6. SUPPLEMENT

We appreciate if the users are going to integrate our products into their system and undertake writing own software for operating these products. CableWorld assure extra technical support for the creative users; in the CableWorld's system the instruction sets are free available for everyone, and major users can have the source codes of the software, too.

Beyond serial products, CableWorld is ready to deliver products for special demands and implement individual ideas.

We appreciate receiving all remarks, experiences, measuring results with our products and we pay respect to them at our further developments.

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