MPEG-2 | 2 or 4 CVBS inputs | IP or ASI outputs | 4:3 16:9 ratio | PAL NTSC | FPGA based

CableWorld

MPEG-2 ENCODER

Digitizing and converting A/V signals to MPEG-2 compressed IP or ASI streams which can be simply added to the program selection of digital broadcast networks.

Until analogue systems completely disappear, there are numerous applications, where analogue PAL signals need to be converted to digital data streams. In order to avoid excessively high data rates, in the course of the conversion applying some kind of compression procedure (MPEG-2, MPEG-4 etc.) becomes necessary.

The device receives composite video signals at its BNC sockets, asymmetrical or symmetrical audio signals at its RCA or XLR sockets, and after digitizing and compressing them it delivers MPEG-2 single-program transport streams at its IP or ASI outputs.

Field of application:

- ✔ feeding composite video signals of analogue program sources (cameras, broadcasters, etc.) to digital broadcast networks

It is available in duo version (two independent encoder units in one frame) and in quad version (two independent encoder units in one frame).

The MPEG-2 compression can be performed to fixed data rate or to data rate varying with the picture content. The kind of compression and its parameters can be programmed by the user. In the practice data rates between 3 and 4 Mbit/s yield excellent picture quality. The sound channel input signal will be converted by a dual channel encoder performing MPEG-1 layer I/II compression. The sampling frequency is programmable, and the output data rate can be set between 32 and 448 kbit/s.

The device can be programmed and monitored with the SW-4888 and the SW-4901 controller software which are available for free download at www.cableworld.eu.

- ✔ CVBS (PAL/NTSC) inputs
- ✔ dual channel audio inputs (Stereo, joint stereo, dual and mono sound mode)
- ✔ Programmable output picture resolution: D1, 3/4 D1, 2/3 D1, 1/2 D1, SIF, QSIF
- ✔ IP or ASI outputs
- ✔ 2 or 4 independent encoder units in one frame
- ✔ 4:3, 16:9, or WSS-controlled aspect ratio
- ✔ PAT, PMT, SDT, and NIT insertion
- ✔ FPGA circuitry
- ✔ extremely low power consumption
- ✔ high reliability, long lifespan

MPEG-2 ENCODER

Technical data

Video input

Number of inputs	2 or 4
Input impedance	75 Ω (BNC socket)
Input signal	$1V_{pp}$ composite PAL or NTSC

Audio input

Number of inputs	4 × Left, Right
Input impedance	approx. 30 kΩ (RCA socket)
Input amplitude	max $3V_{pp}$

Video encoding characteristics

System	ISO 13818-2 (MPEG-2 video) MP@ML ISO 11172-2 (MPEG-1 video)
Picture resolution	max. 720 × 576
Bit rate	max. 15 Mbit/s
Aspect ratio	4:3 or 16:9 (fix or WSS controlled)

Audio encoding characteristics

System	ISO 11172-3 (MPEG-1 audio layer I/II)
Sampling frequency	33 kHz, 44.1 kHz, 48 kHz
Number of channels	2 (mono, stereo, dual, joint stereo)
Bit rate	max. 448 kbit/s

Multiplexer

System	ISO 13818-1 (MPEG-2 PS / TS) ISO 11172-3 (MPEG-1)
Output bit rate	max. 20 Mbit/s (CBR / VBR)
PSI tables	PAT, PMT, simple SDT and NIT table

ASI output

Number of outputs	4 (CW-4888), 2 (CW-4887)
Output connector	doubled (2 × BNC socket)
ASI signal	according to EN 50083-9 (DVB-TM 1449 Rec.1)
Output voltage	min. 800 mV_{pp}
Output impedance	75 Ω
Data rate	max. 20 Mbit/s per encoder

IP output

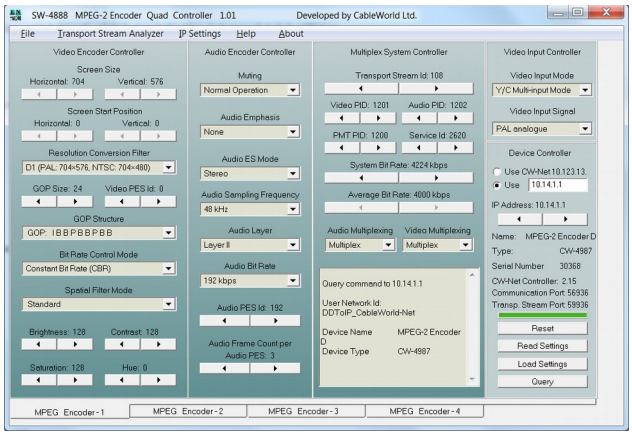
Number of outputs	1
Output	RJ-45, 100/1000Base-T
Operation mode	unicast, multicast

General data

Service	continuous
Power requirement	90 ~ 264 V / 47 ~ 440 Hz
Power consumption	max. 35 VA
Mass	approx. 3.8 kg
Physical dimensions	19” × 1 HU
Width × Height × Depth	483 × 43.6 × 473 mm
Operating temperature range	+5…+40°C
Relative humidity	max. 80 %
Storage temperature range	-25 … +45°C
Relative humidity	max. 95 %, non-condensing

Device programming

Programming	logically separated data and management port, Windows based softwares
Default IP address	10.123.13.101



Ordering data:

CW-4887 MPEG-2 Encoder Duo Two independent MPEG-2 encoder with CVBS video input and ASI output
CW-4888 MPEG-2 Encoder Quad Four independent MPEG-2 encoder with CVBS video input and ASI output
CW-4987 MPEG-2 Encoder Duo Two independent MPEG-2 encoder with CVBS video input and IP output
CW-4988 MPEG-2 Encoder Quad Four independent MPEG-2 encoder with CVBS video input and IP output

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