H264 MPEG-4 | SD HD | HD-SDI HDMI YPrPb&CVBS inputs | IP ASI outputs | WSS VLAN PIP | WEB GUI

CableWorld ELPAS

MPEG-4 ENCODER

Digitizing and converting A/V signals to MPEG-4 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. There are also devices delivering uncompressed digital data streams that need to be transmitted, too. 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 at its input the video signal and the accompanying audio signal, performs their compression according to the H.264 standard and outputs them in SPTS (Single Program Transport Stream) form over both ASI and IP output. The outgoing IP data streams can be transmitted towards 4 destinations with unicast or multicast addressing. Additionally, they can be VLAN tagged and therefore delivered to different providers' network.

The output transport stream includes the most important PSI/SI tables (PAT, PMT, SDT, NIT), thus in simpler systems the encoder can be applied even without using a remultiplexer. The device can receive multiple analogue and digital signal formats: CVBS or S-Video, YPrPb as well as HDMI and SDI.

Fields of application:

✔ Supplying the signals of analogue and digital program sources (video players, local studios etc.) in cable or IP networks in H.264 compressed form.

The compression can be CBR or VBR. The encoder is capable of processing programs with both standard definition (SD) and high definition (HD). For transmitting the audio channel the two-channel audio coder of the device can be ordered with MPEG-1 audio layer II or MPEG-4 AAC-LC compression system. External S/PDIF signal carrying compressed data can also be inputted.

Programming and inspecting all four device versions occur via separate management port from web interface.

- ✔ 1 or 2 encoder in one frame
- ✔ HDMI, SDI, HD-SDI digital inputs
- ✔ CVBS or S-Video and YprPb analogue inputs
- ✔ teletext, VPS, WSS etc. inserting
- ✔ IP and ASI output
- ✔ VLAN-Tagging
- ✔ Separated web interface
- ✔ receptacle for SFP (Mini GBIC) module

MPEG-4 ENCODER

Technical data

Video input

Analogue inputs	CVBS (PAL, SECAM, NTSC) or S-Video, YPrPb 1 V_{pp} / 75 Ω
Digital inputs	HDMI 1.3 SDI (SMPTE 259M) HD-SDI (SMPTE 292M)

Audio input

Analogue input	L, R asymmetrical, 2 V_{pp} / >2 kΩ or L, R symmetrical 0 dB / 600 Ω
Digital input	HDMI 1.3 SDI embedded audio S/PDIF compressed audio

Video encoding parameters

System	ISO / IEC 14496-10 (H.264 / AVC) High Profile, Level 4.0 4:2:0, 8-bit YCbCr pixels CBR/VBR stream selectable
Picture size	max. 1920 × 1080 50i, 60i
Bit rate	2 to 24 Mbit/s

Audio encoding parameters

System	ISO 11172-3 (MPEG-1 audio layer II) or MPEG-4 AAC-LC
Number of channels	2
Sampling frequency	48 kHz (16, 20, 24 bit L-R)
Bit rate	max. 384 kbit/s (MPEG-1 layer II)

Multiplexer

System	ISO 13818-1 (MPEG-2 TS)
Output bit rate	max. 50 Mbit/s (CBR / VBR)
PSI/SI tables	PAT, PMT, SDT, NIT
Private streams	TXT, VPS, WSS

ASI output

Standard	according to EN 50083-9 (for interconnection between devices)
Impedance	75 ohm
Connectors	BNC sockets (for each encoder)

IP output

Transport streams	10-, 100- and 1000Base-T
Protocol	Ipv4, ARP, UDP
Number of outputs	4 pcs UDP/RTP stream/encoder
VLAN tagging	configurable for all outputs
Connector type	RJ-45
Optical output	receptacle for SFP (Mini GBIC) module

Management port

IP input	10-, 100Base-T
Protocol	Ipv4, ARP, ICMP-ping, TCP, UDP
Connector type	RJ-45

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

Programming of the device

Programming and control	over separate management port, in web environment, optimized to the Firefox browser
Management IP address	192.168.10.10

Ordering data:

CW-4411 MPEG-4 Encoder HDMI, SDI, HD-SDI, CVBS, YPrPb, two audio input, ASI/IP output, web interface

CW-4412 MPEG-4 Encoder Duo HDMI, SDI, HD-SDI, CVBS, YPrPb, two audio input, ASI/IP output, web interface

PIP option: Picture in Picture option (only for CW-4412.xx)

AAC option: AAC audio for the MPEG-4 Encoders

Symmetrical option: Symmetrical audio input with XLR connector