

HD-SDI	1080i	4:2:0	H.264	VLAN	IP	SNMP
HDMI	720p	8 bit	MPEG-4	tag	ASI	trap

MPEG-4 (H.264) ENCODER

For encoding digital (SDI, HD-SDI, HDMI) and analogue (CVBS, S-Video, YPbPr) base-band video signals according to H.264/MPEG-4 AVC.



Baseband analogue video signals (CVBS/S-Video, YPbPr) and uncompressed digital video signals (SDI, HD-SDI, HDMI) have to be digitalized and compressed in order to make them appropriate for digital video broadcasting.

The device processes both analogue and digital video sources, encodes them according to the standard H.264/MPEG-4 AVC, and forwards the 188-byte transport stream packets embedded in UDP/IP or RTP/IP packets through IP network as single-program transport streams. These single-program transport streams are available at the ASI (Asynchronous Serial Interface) outputs, too.

The supported video formats are 1080i, 720p, 576i and 480i with 50, 59.94, and 60 Hz refresh rates. High-resolution sources can be downscaled to standard-resolution ones in order to reduce the output data rate. Additionally, standard-resolution sources can be converted to 96×96 or 128×96 pixel thumbnails for picture-in-picture (PiP) applications.

The device processes and encodes one stereo audio signal per encoder unit according to MPEG-1 Layer II by default but also AAC-LC is available as an option.

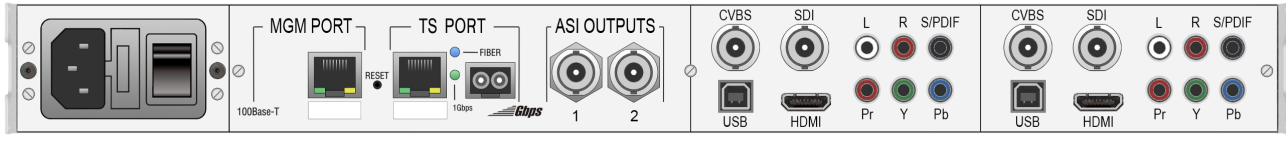
PAT, PMT, and SDT packets are always inserted in the output transport stream. Additionally, the NIT (Network Information Table) insertion can be enabled, too. It allows to use the encoder in some cases even without a multiplexer.

Fields of application:

- ✓ processing and forwarding the output signal of TV studios in a format which is appropriate for digital video broadcasting
- ✓ generating IPTV channels (SPTS, multicast) from HDMI sources (camera, computer)

- ✓ single-channel and dual-channel versions
- ✓ SDI, HD-SDI, and HDMI digital inputs
- ✓ CVBS/S-Video and YPbPr analogue inputs
- ✓ teletext and WSS processing and insertion
- ✓ 4:2:0 chroma subsampling
- ✓ 8-bit quantization
- ✓ constant or variable video bitrate
- ✓ MPEG-1 Layer II or AAC-LC audio coding
- ✓ PAT, PMT, SDT, NIT insertion
- ✓ SFP (Mini GBIC), RJ45, and ASI sockets
- ✓ UDP/IP or RTP/IP protocol
- ✓ multiple streaming
- ✓ VLAN tagging
- ✓ separated management interface
- ✓ user-friendly HTML5 WebGUI
- ✓ SNMP traps
- ✓ firmware upgrade over WebGUI
- ✓ extremely low power consumption

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Technical data

Video input

Analogue inputs	CVBS (PAL, SECAM, NTSC) or S-Video YPbPr 1 Vpp / 75 Ω
Digital inputs	HDMI 1.3 SDI (SMPTE 259M) HD-SDI (SMPTE 292M)

Audio input

Analogue input	L, R asymmetrical, 2 Vpp / >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
Data 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)
Data rate	max. 384 kbit/s (MPEG-1 layer II)

Multiplexer

System	ISO 13818-1 (MPEG-2 TS)
Output data 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 Ω
Connectors	BNC sockets (for each encoder)

IP output

Transport streams	10-, 100- and 1000Base-T
Protocol	Ipv4, ARP, UDP
Multiple streaming	4 pcs UDP/RTP stream per encoder unit configurable for all outputs
VLAN tagging	
Connector type	RJ-45, SFP (Mini GBIC) socket

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
Temperature at operation	+5...+40°C, relative humidity max. 80%

Device control

Programming and control	over a separate management port in web environment with a HTML5 GUI which is optimized to the latest Firefox browser
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Management IP address **192.168.10.10/24**

ordering data:

CW-4411.10	1×SDI/HDMI/CVBS/YPrPb+RCA inputs, 1×ASI/IP (SPTS) output
CW-4411.11	1×SDI/HDMI/CVBS/YPrPb+XLR inputs, 1×ASI/IP (SPTS) output
CW-4411.20	1×SDI/HDMI/S-Video/YPrPb+RCA inputs, 1×ASI/IP (SPTS) output
CW-4411.21	1×SDI/HDMI/S-Video/YPrPb+XLR inputs, 1×ASI/IP (SPTS) output
CW-4412.10	2×SDI/HDMI/CVBS/YPrPb+RCA inputs, 2×ASI/IP (SPTS) output
CW-4412.20	2×SDI/HDMI/S-Video/YPrPb+RCA inputs, 2×ASI/IP (SPTS) output
PIP OPTION	Picture in Picture option for MPEG-4 encoders
AAC AUDIO OPTION	AAC audio for MPEG-4 encoders (price per channel)

Your partner:



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