

Chameleon Quad HD/SD Encoder for HD/SD-SDI or A/V to IP/ASI

14MM-GNHWENC2S

The WISI Chameleon GNHWENC2S is a quad HD SDI encoder for professional headend solutions, encoding HD SDI or SDI to IP in either MPEG2 or MPEG4 formats. The encoder can be used in different base units depending on the scale of the system, GN20 can house up to 2 cards, or the larger GN40 and GN50 can accommodate up to 10 cards.



Features and Benefits

- » HD/SD MPEG-4 (AVC, H.264) and HD/SD MPEG-2 video encoding
- » Up to 4 HD/SD-SDI or A/V analogue inputs per module
- » Professional multiplexer integrated
- » SPTS and MPTS streaming (CBR or VBR)
- » Integrated into the CHAMELEON System management
- » Control and management via web-UI



14MM-GNHWENC2S Specifications

HD-SDI Input	
Number of ports	4 pcs. (3x BNC, 1x F-connector)
Video input	HD-SDI, Audio embedded
Audio input	Stereo
Input format HD-SDI	1080i50/60/59.94, 720p50/60/59.94
Impedance	75 Ω
Compliance	HD-SDI SMPTE 292M, SMPTE 299M
SD-SDI input	
Number of ports	4 pcs. (3x BNC, 1x F-connector)
Video input	SD-SDI, Audio embedded
Audio input	Stereo
Input format SD-SDI	576i50, 480i59.94
Impedance	75 Ω
Compliance	SD-SDI SMPTE 259M-C, SMPTE 291M
Analog video input	
Input format	Composite FBAS-signal (PAL/NTSC/SECAM)
Impedance	75 Ω
Input level	1 V _{ss} (±0,4 V)
Input frequency range	20 Hz...5 MHz
Frequency response	≤ ±2 dB (20 Hz...4 MHz)
Analog input audio	
Analog audio input	4 pcs. 3,5mm jack socket
Input format	Left, Right asymmetrical
Impedance	600 Ω/15 kΩ (switchable)
Input level	-4 dBm / 500 mV _{eff}
Input level range	-18...+18 dB
Input frequency range	40 Hz...15 kHz

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For the Best

Video Encoding	
Encoding capacity	4x HD/SD MPEG-2/MPEG-4
Video system	MPEG-2 HD/SD and MPEG-4 HD/ SD (H.264/AVC)
Picture size	1080i50/60/59.94, 720p50/60/59.94, 576p50, 480p60/59.94, 576i50, 480i60/59.94
Profile MPEG-4	Baseline, Main, High
Bit rate	MPEG-2 10-19Mbps, MPEG-4 6-13Mbps @ 1080i50/60/59.94, 720p50/60/59.94; MPEG-2 4-12Mbps, MPEG-4 2-6Mbps @ 576p50, 480p60/59.94; MPEG-2 2-8Mbps, MPEG-4 1-4Mbps @ 576i50, 480i60/59.94
Chroma sample	4:2:0
Aspect ratio	16:9 for HD; 4:3 for SD
Subtitle DVB Support	No
Subtitle OP47 Support	No
Picture size conversion	Downscaling yes, Upscaling no
Frame rate conversion	No
Test pattern	No
Audio Encoding	
Audio-system	ISO 11173-3 (MPEG-1 L2), MPEG-2 AAC (LC)
Number of audio channels	1 per video input @ 4x HD/SD MPEG-2/MPEG-4; 2 per video input @ 2x HD/SD MPEG-2/MPEG-4
Sampling frequency	48 kHz
Bit rate	64...288 Kbps (max. MPEG1 L2/AAC)
Audio modes	Stereo
Sampling rate conversion	No
Streaming-In-/Output	
IP-Inputs	0 or 32 pcs. (32 with GNSTR software option)
IP-Outputs	4 or 32 pcs. (32 with GNSTR software option)
IP-Compliance	ISO/IEC 13818
IP-Input bitrate	Max. 425 Mbit/s per IPTS, Max. 850 Mbit/s total
IP-Output bitrate	Max. 425 Mbit/s per IPTS, Max. 850 Mbit/s total
IP-Input protocol	UDP/RTP/RTP+FEC Unicast and Multicast, IGMP v2 and v3

IP-Output protocol	UDP/RTP/RTP+FEC Unicast and Multicast, IGMP v2 and v3
IP-TS-Input format	SPTS CBR/VBR, MPTS CBR
IP-TS-Output format	SPTS CBR/VBR, MPTS CBR
IP-FEC inputs	0 or 32 pcs. (with GNSTREC software option)
IP-FEC Outputs	4 or 32 pcs. (with GNSTREC software option)
IP-FEC compliance	SMPTE 2022-1, SMPTE 2022-2
IP-Packet format	MPEG over UDP/IP and RTP/IP
IP-Packet size	188 Byte
IP-PCR restamping	Yes
Processing	
Service remultiplexing	Yes (GNSYMUX is included)
PID Itering and remapping	Yes
PCR correction and de-jitter	Yes
Advanced PSI/SI regeneration	Yes
NIT generation	No
Compliance	ETSI EN 300 468
Processing bitrate	Max. 1200 Mbps total
Number of PIDs	Max. 2000 PIDs total
Connectors	
RJ45	2 pcs. (1x Management, 1x Streaming)
Analog audio input	4 pcs. 3,5 mm jack socket
Video input	4 pcs. (3x BNC, 1x F-connector)
GigE/Control/Power supply	CompactPCI Type C (SGMII)
General data	
Power consumption	max. ≤18 W
Operating temperature range	-5°C...+45°C, 23°F...113°F, (ETSI EN 300 019-1-3 Class 3.1)
Max. humidity, non condensing	95%
Electro Magnetic Compatibility (EMC)	DIN EN 55022:2008-05
Safety compliance	-
Hardware revision	2000
Software version	3.1