

GN-1848

High-Density MPEG-4 AVC SD/HD/FHD Encoder



Product Overview

Gospell's GN-1848 is the latest high-density modular broadcast encoder. It incorporates the state-of-the-art hardware compression technologies to deliver multi-standard, multi-profile and multi-channel capabilities for cable, satellite, terrestrial broadcast applications.

The GN-1848 features high density, flexible and superior performance, it provides three encoding module slots, each module with four SD, HD and FHD encoding channels, and with a maximum twelve channels of MPEG-4 AVC encoding. It supports SDI and (or) HDMI input options, dual DVB-ASI transport stream inputs and outputs, PSI/SI processing, multiplexing and re-multiplexing outputs over DVB-ASI and IP.

GN-1848 supports Web browser and SNMP management for local and remote management and maintenance, which can greatly reduce the management time, as well as enabling lower operating expenditure (OPEX) for operators.

Main Features

- 1RU modular design, supporting up to three pluggable encoding modules
- Supports up to 12 MPEG-4 AVC SD, HD and FHD encoding channel in 1RU
- Supports 3G-SDI or HDMI input options
- MPEG-1 Layer II and AAC(license option) audio encoding
- Embedded Dolby Digital[®](AC-3) audio passthrough
- MPEG TS multiplexing, re-multiplexing, PCR and PSI/SI processing
- Dual DVB-ASI independent inputs and dual DVB-ASI mirrored outputs
- MPEG TS-over-UDP/RTP output, supporting MPTS/SPTS mode
- Supports VBR/CBR video encoding
- Up to 20Mbps of video encoding rate for each channel
- Supported video encoding resolutions: 1080P, 1080i, 720P, 480i, 576i
- Web and SNMP management for remote management and maintenance

Technical Specifications

Chassis

Expansion Slot	3 x Pluggable Encoding Module Slot
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Encoding Module

Digital Video & Audio Input Option

HDMI*	4 x HDMI 1.3
	Type A receptacle
	S/PDIF(IEC90658)
SDI(option)*	4 x 3G-SDI
	BNC female, 75Ω
	Comply with : SMPTE 259M(SD-SDI) SMPTE 292M(HD-SDI) SMPTE 424M(3G-SDI)

Notes:

- 1) The uncompressed digital audio can be embedded in SDI interface;
- 2) The HDMI or SDI is alternative option.

ASI Input

Number of ASI Input	2 x ASI Input
Operation Mode	Independent input
Connector	BNC female, 75Ω
TS Packet Length	188 or 204 Bytes

ASI Output

Number of ASI Output	2 x ASI Output
Operation Mode	Mirrored outputs
Connector	BNC female, 75Ω
Output Level	800mV±10%
TS Packet Length	188 Bytes
Effective Output Rate	2 to 60Mbps

IP Output

Number of IP Output	1 x 100/1000 Base-T Ethernet(RJ-45)
MPEG TS Format	7 x 188Byte
IP Encapsulation	MPEG TS-over-UDP/RTP
MPEG TS Mode	SPTS/MPTS
Addressing	Unicast, Multicast (IGMPv1, v2, v3)

Video Encoding

Encoding Formats	MPEG-4 AVC SD: MP@L3.0
	MPEG-4 AVC HD: HP@L4.0
	MPEG-4 AVC FHD: HP@L4.2
Resolution and Frame Rate	SD: 720 x 576i@25fps
	720 x 480i@29.97fps
	HD: 1920 x 1080i@25/29.97fps
	1280 x 720p@50/59.94fps
Aspect Ratio	FHD: 1920 x 1080P@50/59.94fps
	4:3, 16:9
Encoding Rate Mode	CBR, VBR
Video Control	Brightness, Contrast, Chrominance and Hue
Video Encoding Rate	1 to 20Mbps per program

Audio Encoding

Encoding Standards	MPEG-1 Layer 2
	Optional: AAC-LC
Audio Passthrough	AC-3 (2.0 and 5.1)
Operation Mode	Stereo or Mono
Sample Rate	32 kHz, 44.1 kHz, 48 kHz
Audio Encoding Rate	MPEG-1 Layer II: 192/224/256/320/384 kbps
	AAC: 96/112/128/160/192/ 224/256/320 kbps

Network Management

Interface	1 x 10/100 Base-T Ethernet
Connector	RJ-45
Management	Web and SNMP management

Miscellaneous

Front Panel	3.5" LCD with 6 x Control Button for 2-lines information display and settings
	3 x Dual color LED, for status indications of power, working and Alarm
Rear Panel	1 x 3-Pin Receptacle(AC Input)
	1 x Power switch
	1 x Serial Console Port(RJ-45)

Power Supply

Input Voltage	110 - 240 VAC, 50/60Hz
Power Consumption	75W (Maximum)

Environmental

Operating Temperature	0°C to 45°C(32°F to 113°F)
Storage Temperature	-20 to 80°C(-4°F to 176°F)
Operating Humidity	90%, non-condensing

Mechanical

Product Dimensions (W x H x D)	483mm x 44.5mm x 450mm
	19" x 1.73" (1 RU) x 17.7"
Product Weight	Approx. 6Kg (13.2 lbs)

Rear Panel View (Sample Config.)



GN-1848-12H Rear Panel

Ordering Information

Hardware Options

Hardware Codes	Descriptions
GN-1848	1RU, GN-1848 modular chassis with 3 x Pluggable Encoding module slots, Single AC PSU
EM-1848-4H	MPEG-4 AVC SD/HD/FHD Encoding module with 4 x HDMI Input, 2 x ASI Input, 2 x ASI Output, 1 x 100/1000Base-T Output
EM-1848-4S	MPEG-4 AVC SD/HD/FHD Encoding module with 4 x 3G-SDI Input, 2 x ASI Input, 2 x ASI Output, 1 x 100/1000Base-T Output

Software License Options

License Codes	Descriptions
LC-1848-4AAC	Enable four channels of AAC-LC audio encoding

For More Information

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