

GN-1738

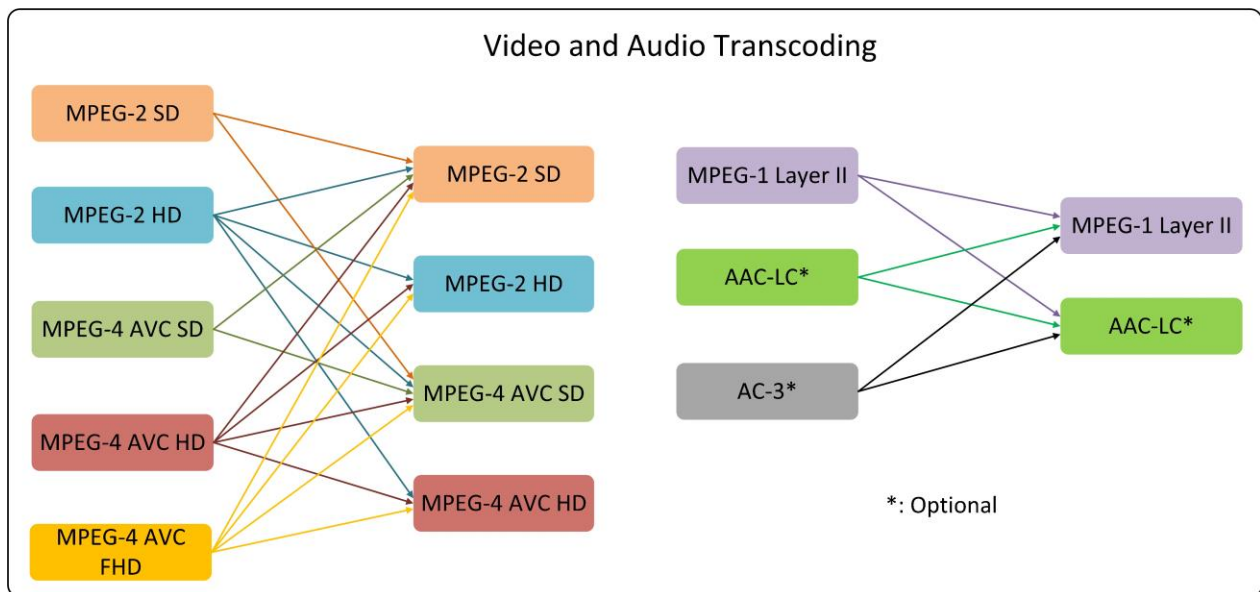
MPEG-2/MPEG-4 AVC SD/HD Transcoder



Product Overview

With the number of video formats increasing fast, DTV operators require the ability to have a transcoding solution to simplify their headend architecture and to reduce the amount of headend equipment needed. To achieve this, they need products able to deal with both MPEG-2 and MPEG-4 AVC video streams from different sources.

GOSPELL's GN-1738 transcoder is highly competitive SD/HD video and audio conversion unit with best-in-class video quality. It can transcode up to eight SD (or four HD) MPEG-2/MPEG-4 AVC live video and audio services for broadcast and Over-The-Top(OTT) applications.



GN-1738 provides a wide range of real-time transport streams input options, from satellite, DVB-ASI and TS-over-IP inputs. This allows it handles any real-time video and audio source, and transcoding outputs via both IP and DVB-ASI, enabling a highly reliable video service to be delivered. In addition, the GN-1738 supports Web and SNMP-based management for conveniently local and remote management as well as maintenance.

Main Features

- Supports up to 8 SD or 4 HD MPEG-2 and MPEG-4 AVC video and audio services
- MPEG-2 to MPEG-4 AVC or MPEG-4 AVC to MPEG-2 cross-conversion
- MPEG-2 to MPEG-2, MPEG-4 AVC to MPEG-AVC re-encoding
- HD to SD down-conversion
- One-to-one and one-to-many multi-screen transcoding
- Audio streams pass-through
- Supports optional AC-3, AAC-LC and MPEG-1 Layer II audio transcoding and down-mix
- Multiple input options: 4 x DVB-S/S2 RF or 4 x DVB-ASI + IP inputs
- Supports VBR/CBR video encoding
- Web and SNMP-based management for remote management and maintenance

Resolution Conversion Table

Video Resolution Conversion		Video Output																								
		320 x 288i@25fps	352 x 288i@25fps	352 x 576i@25fps	480 x 576i@25fps	544 x 576i@25fps	640 x 576i@25fps	704 x 576i@25fps	720 x 576i@25fps	320 x 240i@29.97fps	352 x 240i@29.97fps	352 x 480i@29.97fps	480 x 480i@29.97fps	544 x 480i@29.97fps	640 x 480i@29.97fps	704 x 480i@29.97fps	720 x 480i@29.97fps	1280 x 720P@50 fps	1280 x 720P@59.94 fps	1440 x 1080i@25 fps	1920 x 1080i@25 fps	1440 x 1080i@29.97 fps	1920 x 1080i@29.97 fps			
Video Input	320 x 288i@25fps	✓																								
	352 x 288i@25fps	✓	✓																							
	352 x 576i@25fps	✓	✓	✓																						
	480 x 576i@25fps	✓	✓	✓	✓																					
	544 x 576i@25fps	✓	✓	✓	✓	✓																				
	640 x 576i@25fps	✓	✓	✓	✓	✓	✓																			
	704 x 576i@25fps	✓	✓	✓	✓	✓	✓	✓																		
	720 x 576i@25fps	✓	✓	✓	✓	✓	✓	✓	✓																	
	320 x 240i@29.97fps									✓																
	352 x 240i@29.97fps									✓	✓															
	352 x 480i@29.97fps									✓	✓	✓														
	480 x 480i@29.97fps									✓	✓	✓	✓													
	544 x 480i@29.97fps									✓	✓	✓	✓	✓												
	640 x 480i@29.97fps									✓	✓	✓	✓	✓	✓											
	704 x 480i@29.97fps									✓	✓	✓	✓	✓	✓	✓										
	720 x 480i@29.97fps									✓	✓	✓	✓	✓	✓	✓	✓									
	1280 x 720P@50 fps	✓	✓	✓	✓	✓	✓	✓	✓									✓								
	1280 x 720P@59.94fps									✓	✓	✓	✓	✓	✓	✓	✓		✓							
	1440 x 1080i@25 fps	✓	✓	✓	✓	✓	✓	✓	✓												✓					
	1920 x 1080i@25 fps	✓	✓	✓	✓	✓	✓	✓	✓												✓	✓				
	1440 x 1080i@29.97fps									✓	✓	✓	✓	✓	✓	✓	✓							✓		
1920 x 1080i@29.9 fps									✓	✓	✓	✓	✓	✓	✓	✓							✓	✓		
1440 x 1080P@50 fps	✓	✓	✓	✓	✓	✓	✓	✓										✓								
1920 x 1080P@50 fps	✓	✓	✓	✓	✓	✓	✓	✓												✓	✓					
1440 x 1080P@59.94 fps									✓	✓	✓	✓	✓	✓	✓	✓							✓			
1920 x 1080P@59.94 fps									✓	✓	✓	✓	✓	✓	✓	✓							✓	✓		

Technical Specifications

RF Input Option

Number of Input	4 x RF Input, 4 x RF Loop Out
Operation Mode	Independent input
Connector Type	F-Type (Female, 75Ω)
Frequency Range	950MHz to 2150MHz
Standards	DVB-S: EN 300 421 DVB-S2: EN 302 307
Constellations	DVB-S: QPSK DVB-S2: QPSK/8PSK
Symbol Rate	QPSK: 2-45 Msym/s 8PSK: 10-31 Msym/s
Input Signal Level	-65 to -25dBm
LNB Power Output	0V/+DC 13V/18V LNB short circuit protection

TS Input Option

DVB-ASI Input

Number of ASI Input	4 x ASI
Operation Mode	Independent input
Connector	BNC female, 75Ω
Standards	DVB-ASI
TS Packet Length	188 or 204 Bytes

MPEG TS-over-IP Input

Number of IP Output	1 x 100/1000 Base-T Ethernet
TS Format	7 x 188Byte
IP Encapsulation	MPEG TS-over-UDP/RTP
MPEG TS	MPTS, SPTS
Addressing	Unicast or Multicast
Connector	RJ-45

ASI Transcoding Output

Number of ASI Output	2 x ASI
Operation Mode	Duplicate output
TS Packet Length	188 Bytes
TS Output Bit Rate	2 to 60Mbps
Connector	4 x BNC*, 75Ω

Notes: Only two BNC connectors are available for ASI outputs, the rest two are reserved.

MPEG TS Over IP Transcoding Output

Number of IP Output	1 x 10/100 Base-T Ethernet
TS Output Bit Rate	2 to 60Mbps
TS Format	7 x 188Byte
IP Encapsulation	MPEG TS-over-UDP/RTP*
TS Mode	MPTS, SPTS
Number of TS Output	8 TS
Addressing	Unicast or Multicast
Connector	2 x RJ-45*

Notes: 1) TS-over-RTP is not available for RF input option;
2) Only one RJ-45 is available, the rest one is reserved.

Video Transcoding

Video Processing	Decoding and Encoding
	Encoding Format: Cross-conversion
	Resolution: Down-conversion
Video Conversion	Bit Rate: Down-conversion
	Frame Rate: No conversion
	Aspect Ratio: No conversion
Processing Capability	Up to 8 SD video services Or 4 HD video services
Video Format, Profile & Level	MPEG-2 SD: MP@ML MPEG-2 HD: MP@HL AVC SD: MP@L3 AVC HD: HP@L4 AVC FHD: HP@L4.2 (For Input only)
	FHD (For Input only): 1920/1440 x 1080P@50 fps 1920/1440 x 1080P@59.94 fps
	HD: 1920/1440 x 1080i@25 fps 1920/1440 x 1080i@29.97 fps 1280 x 720P@50 fps 1280 x 720P@59.94 fps
Video Resolution and Frame Rate	SD(PAL): 720/704/640 x 576i@25fps 544/480/352 x 576i@25fps 352/320 x 288i@25fps SD(NTSC): 720/704/640 x 480i@29.97fps 544/480/352 x 480i@29.97fps 352/320 x 240i@29.97fps
Encoding Mode	CBR, VBR
Video Output Bit Rate	MPEG-2 SD: 0.5-7 Mbps MPEG-2 HD: 5-20 Mbps AVC SD: 0.25-7 Mbps AVC HD: 2-20 Mbps
Total Output Bit Rate	2 to 60Mbps

Audio Transcoding

Audio Processing	Decoding and Encoding Pass-through
Audio Conversion	Encoding Format: MPEG-1 Layer II to AAC-LC AAC-LC to MPEG-1 Layer II AC-3 to AAC-LC AC-3 to MPEG-1 Layer II Encoding Rate: No-conversion Audio Channel: 5.1 (surround) to 2.0(stereo) down-mix
Pass-through	MPEG-1 Layer II AAC-LC HE-AAC v1 HE-AAC v2 AC-3 E-AC-3
Processing Capability	Up to 8 audio services
Sample Rate	48KHz

Remultiplexing

PID	PID filtering, remapping
PSI/SI	PCR, PMT, SI ID modification

Network Management

Interface	1 x 10/100 Base-T Ethernet
Connector	RJ-45
Management	Web browser 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	100 - 240 VAC, 50/60Hz
Power Consumption	60W (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)	482mm x 44.5mm x 400mm 19" x 1.73" (1 RU) x 15.8"
Product Weight	5Kg (11 lbs)

Rear Panel View (For reference only)



GN-1738-A



GN-1738-B

Ordering Information

Ordering Options

Ordering Codes	Descriptions
GN-1738-A	8-Ch SD Transcoder, supports MPEG-2/MPEG-4 AVC video transcoding and audio pass-through, w/ 4 x DVB-S/S2 RF input, 4 x RF Loop Out, 2 x ASI output, 1 x 10/100Base-T output
GN-1738-B	4/8-Ch HD/SD Transcoder, supports MPEG-2/MPEG-4 AVC video transcoding and audio pass-through, w/ 4 x ASI input, 1 x 100/1000Base-T input, 2 x ASI output, 1 x 10/100Base-T output
GN-1738-B-AAC	4/8-Ch HD/SD Transcoder, supports MPEG-2/MPEG-4 AVC video transcoding and MPEG-1 Layer II/AAC-LC audio transcoding, w/ 4 x ASI input, 1 x 100/1000Base-T input, 2 x ASI output, 1 x 10/100Base-T output
GN-1738-B-AAC/Dolby	4/8-Ch HD/SD Transcoder, supports MPEG-2/MPEG-4 AVC video transcoding and MPEG-1 Layer II/AAC-LC/AC-3 audio transcoding, w/ 4 x ASI input, 1 x 100/1000Base-T input, 2 x ASI output, 1 x 10/100Base-T output

For More Information

Please visit our website: <http://www.gospell.com> or contact your local sales representative:

GOSPELL Shenzhen, China

Overseas Sales Center
Block F10-F13, F518 Idea Land, Baoyuan road, Bao'an
Central District, Shenzhen City 518102, Guangdong
Province, China
TEL: +86-755-26716172
FAX: +86-755-29114035
E_mail: sales.dtv@gospell.com

GOSPELL India (Office)

Office No.C-503, 5th Floor, L.B.S. Road,
Bhandup (West), Mumbai-400078
TEL: +91 9167995 705
E_mail: ashish@gospell.com

GOSPELL Mexico (Office)

Avenida Patria NO3489.EL Tapatio Tlaquepaque
Jal.Mexico C.P.45588
TEL: +52 (33) 3860-7059
E_mail: ventas@gospell.mx

GOSPELL Brazil (Joint Office)

Rua Engenheiro Prudente, 477/483, Sao Paulo, Brazil
TEL: +55 (11) 2274-1455
E_mail: zhouyong@gospell.com

GOSPELL Paraguay (Joint Office)

Tte. Garay 1795 esq. Campo Vía Barrio San
Vicente Asunción - Paraguay
TEL: +595 21 33 43 02

©2015 GOSPELL Digital Technology Co., Ltd. All rights reserved.

The GOSPELL logo is a trademark of GOSPELL Digital Technology Co., Ltd.,
All other trademarks mentioned in this document are the property of their respective owners.
Product pictures are for reference only, GOSPELL reserves the right to modify the specifications without prior notice.

