

## GN-1792

### Gospell HEVC/AVC Ultra Multi-channel UHD OTT/DVB Transcoder



Gospell HEVC/AVC/MPEG-2 ultra multi-channel UHD OTT/DVB transcoder can flexibly support DVB live broadcast and streaming media transcoding. It supports H.264/H.265 mutual transcoding and to transcode to MPEG-2, and can effectively reduce the video bit rate, and also supports traditional equipment. This device supports ultra multi-channel, which can greatly reduce the cost of single-channel usage and maintenance. It is suitable for traditional TV stream transcoding and Internet stream media, cloud game, AR/VR, video conferencing, home monitoring, social video call, network real-time live broadcast and other application scenarios.

#### Live & Steaming

Suitable for various application scenarios such as traditional TV live broadcast service and Internet streaming media. Supports 1:1 and 1:N transcoding.

#### HEVC & UHD

Converts H.265/H.264 input into H.265/H.264 output with UHD/HD/SD resolution and also support to transcode to MPEG-2.

#### High Density SD/FHD/4K transcoding

Supports 4 x 4K, 32 x FHD or 96 x SD programs transcoding in 1U chassis. Support 24-channel 1080I to 1080P.

#### Cost Effective

Effectively reduces the cost, the more number of channels with the lower cost per channel.

### Application Scenarios

Scenario	Source	Input Encoding	Input Resolution	Output Encoding	Output Resolution
DVB System	Satellite downlink	H.265	4K	H.264	4K
DVB System	Satellite downlink	H.265	4K	H.264	1080P
DVB System	IP	H.264	1080P	H.264	1080P with lower bitrate
DVB System	IP	H.264	1080P	MPEG-2	576/480
DVB System	IP	H.264	576/480	H.264	576/480 with lower bitrate
DVB System	IP	H.264	1080I25/I30	H.264	1080P25/P30
Steaming Media	IP	H.265	4K	H.265/H.264	4K/H.265: OTT STB 2K/H.265: Mobile 1080P/H.264: STB
Steaming Media	IP	H.264	4K	H.265/H.264/MPEG-2	4K/H.265: OTT STB 2K/H.265: Mobile 1080P/H.264: STB

## Highlights

- **Transcoding:** Converts H.265/H.264 inputs into H.265/H.265 outputs and transcode to MPEG-2
- **4KP60:** Up to 4K P60 transcoding (H265->H264 only, others up to 4KP30)
- **High-density:** 1U model can support 4-channels of 4K programs transcoding or 32-channels of full HD programs transcoding or 96-channels of SD programs (576P25) transcoding, and it supports to transcode 24 channel 1080I to 1080P30. The cost-effectiveness enables service delivery on any budget.
- **Flexibility:** Supports transcoding from 1 input to multiple outputs with different resolutions.
- Supports multiple IP protocols including UDP, RTP, HLS and RTMP.
- Supports logo and graphics insertion, subtitle processing, and translucent watermark insertion.
- Supports SPTS/MPTS
- Supports video scaling: video up-scaling and down-scaling within 4K resolution.
- Supports HDR10 and HDR10+.
- Supports audio passthrough of various audio formats including AC3.
- Supports audio transcoding including MPEG-1 Audio Layer II, MPEG-2 Audio, AAC-LC, HE-AAC v1/v2, MP3.
- Supports up to 96 input streams and 96 output streams.
- Low-power transcoding solution: 80% lower power consumption than graphics card solutions.
- Supports FEC
- Stable 7X24 hours work
- Web management

## Resolution Conversion Matrix

Video Resolu- tion Conversion Matrix		Video Output												
		4kp60	4kp30	1080p60	1080p50	1080p30	1080p25	1080p24	720p60	720p50	576p50	576p25	480p60	480p30
V i d e o  I n p u t	4Kp60	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	4Kp30		Y			Y	Y	Y				Y		Y
	1080p60	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	1080p50		Y		Y	Y	Y	Y		Y	Y	Y		Y
	1080p30		Y			Y	Y	Y				Y		Y
	1080p25						Y	Y				Y		
	1080p24							Y						
	720p60	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	720p50		Y		Y	Y	Y	Y		Y	Y	Y		Y
	576p50		Y		Y	Y	Y	Y		Y	Y	Y		Y
	576p25						Y	Y				Y		
	480p60	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	480p30		Y			Y	Y	Y				Y		Y

## Input & Output Capacity

- Support 1 input -> 1 output (TV mode) & 1 input -> multiple output (same or different resolution) (OTT mode);
- Different input will have different Max output;
- For multiple inputs, all of their outputs will share the output capacity;
- TV mode (based on 4:2:0, 8 bits):

■ HEVC->HEVC:

Max to 4 x 4K (P60/P30->P30), or 12 x 1080(P60->P60) , or 28 x 1080(P30->P30) , or 32 x 1080(P25->P25) , or 28 x 720(P60->P60) , or 60 x 720(P30->P30) , or 96 x 576(P25->P25) , or 96 x 480(P30->P30);

■ HEVC->AVC:

Max to 4 x 4K (P60->P60) , or 8 x 4K (P30->P30) , or 12 x 1080(P60->P60) , or 28 x 1080(P30->P30) , or 32 x 1080(P25->P25), or 28 x 720(P60->P60) , or 60 x 720(P30->P30) , or 96 x 576(P25->P25) , or 96 x 480(P30->P30);

■ AVC->AVC:

Max to 4 x 4K (P30->P30) , or 12 x 1080(P60->P60) , or 28 x 1080(P30->P30) , or 32 x 1080(P25->P25), or 28 x 720(P60->P60) , or 60 x 720(P30->P30) , or 96 x 576(P25->P25) , or 96 x 480(P30->P30);

■ AVC->HEVC:

Max to 4 x 4K (P30->P30), or 12 x 1080(P60->P60), or 28 x 1080(P30->P30) , or 32 x 1080(P25->P25), or 28 x 720(P60->P60) , or 60 x 720(P30->P30) , or 96 x 576(P25->P25) , or 96 x 480(P30->P30) ;

● OTT mode (based on 4:2:0, 8 bits):

■ During 1-input to multiple-output, support the following typical output profiles (also can be configured to support other output profiles, MPEG-2 related data will be provided later):

◆ HEVC->HEVC: 4 x [4KP60 -> (4KP30+1080P60+720P60+576/480P60)];

4 x [4KP30 -> (4KP30+1080P30+720P30+576/480P25)];

12 x [1080P60->(1080P60+720P60+576/480P60+576/480P25)];

24 x [1080P30->(1080P30+720P30+576/480P25)]

◆ HEVC->AVC: 4 x [4KP60 -> (4KP60+1080P60+720P60+576/480P60)];

8 x [4KP30 -> (4KP30+1080P30+720P30+576/480P25)];

12 x [1080P60->(1080P60+720P60+576/480P60+576/480P25)];

28 x [1080P30->(1080P30+720P30+576/480P25)]

◆ AVC->AVC: 4 x [4KP30 -> (4KP30+1080P30+720P30+576/480P25)];

12 x [1080P60->(1080P60+720P60+576/480P60+576/480P25)];

24 x [1080P30->(1080P30+720P30+576/480P25)]

◆ AVC->HEVC: 4 x [4KP30 -> (4KP30+1080P30+720P30+576/480P25)];

12 x [1080P60->(1080P60+720P60+576/480P60+576/480P25)];

24 x [1080P30->(1080P30+720P30+576/480P25)]

## Technical Parameters

IP Input/Output			
Interface	1 x 100/1000 Base-T Ethernet	Video Profile/Level	H.264 BP/CBP/MP/HP10 L6.2; H.265 Main/Main10 L6.2 Main-Tier
Physical Type	RJ-45	Bitrate	One module:64 kbps - 700 Mbps
Bitrate	Input: ≤800Mbps	HDR	HDR10 and HDR10+
	Output: ≤1000Mbps	Subtitle	EIA CEA-708 closed captioning support for H.264 and H.265 encoding and decoding
Protocol	IPv4/ARP/ICMP/IGMPv1/IGMPv2/IGMPv3 UDP, RTP, HLS, RTSP, RTMP	<b>Audio Processing</b>	
Stream Number	Input: ≤96 Output: ≤96, Support SPTS/MPTS	Audio Processing	Decode and encode Pass through
<b>Video Processing</b>		Encode	MPEG-1 Audio Layer II, MPEG-2 Audio, AAC-LC, HE-AAC v1/v2, MP3
Video Processing	Encode/Decode	Decode	MPEG-1 Audio Layer II, MPEG-2 Audio, AAC-LC, HE-AAC v1/v2, MP3
Transcoding Format	H.264/H.265->H.264/H.265 Transcode to MPEG-2		

Sample Rate	8kHz – 192 kHz	Factory settings View/Clear Alarm Set device management IP address	
Level Control	Support		
Delay Control	Support		
Sample Rate Conversion	Support	<b>Power</b>	
AC3 Bypass	Support		
<b>OEM</b>			
OEM Function	Support Gospell standard OEM function		
OEM Import	Support to import OEM file		
<b>Web Management</b>		AC 100 - 240V / 50-60 Hz	
Management	Standard web management		
Users	Super administrator, administrator, operator		
<b>Front Panel</b>		≤170W	
Panel Function	View device name/model/serial number	Backup	Hot backup power supply (Optional)
	Default parameters	<b>Environment</b>	
		Working Temperature	+5°C - 45°C
		Storage Temperature	-30 - 70°C
		Working Humidity	10% -90%
		<b>Physical</b>	
		Dimension (W/H/D)	450*430*44 mm
		Weight	7.2 Kg

## For More Information

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

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