SMP270

12-channel H.264 HDMI HD encoder

WELLAV

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▶ Introduction

▸ SMP270 is a high density H.264 SD/HD encoder based on SMP100 modular platform. It helps pay-TV operators convert multiple HDMI signals into SPTS or MPTS streams for content delivery.

SMP270's encoding capacity is scalable from 2 to 12 programs, supporting closed caption/SI/EPG data insertion and output via either TSIP or ASI. Given its high density and low power consumption, SMP270 can help service providers save significant space, reduce overall power consumption and thus reduce long-term operating costs.

▶ Key Features

▸ Scalable H.264 HD encoding from 2 to up to 12 programs via HDMI inputs

▸ Supports down-conversion(HD-to-SD)

▸ Supports CBR/VBR encoding and GOP setting

▸ Full audio encoding: MPEG-1 Layer II, AAC(HE/LC) and AC3(optional), and audio volume adjusting

▸ Embedded ASI and IP I/O for SPTS/MPTS insertion and digital turn around

▸ Re-multiplexing and grooming

▸ Easy management via Web-UI or SNMP.

▸ Low power consumption and high reliability with MTBF(Mean Time Between Failure)≥100,000 Hours

| High density 12 in 1 | HDMI In IP/ASI Out | Scalable with Modular | Powerful Multiplexing | Web UI SNMP | Cost-effective |

SMP270
Specification

Chassis

Processing capacity	800TS (1000 programs)
Data processing	4 Gbps
Slot number	3 slots
Interface	2xASI Inputs (BNC, Female, 75 Ω ports)
	2xASI outputs (BNC, Female, 75 Ω ports)
	1xGbE TS/IP, TS/IP (RJ45)
	1xmanagement (RJ45)

IP

Interface	1 x RJ45, 1000 Mbps per port
Protocal	TS over UDP/RTP, unicast/multicast
MPEG TS	MPTS and SPTS
Channel	64 streams input and 12 streams output
Bit-rate per port	Maximum 780Mbps
De-jittering	PCR
Management	IGMP V1, IGMP V2, IGMP V3
FEC	ProMPEG, input and output

Multiplexing

Routing	Any input to any output
Table supported	PI/PSI/PSIP
PID processing	Remapping, filtering
EIT processing	Re-multiplexing(optional) and pass-through
External data	EPG and SI insertion

Encoding (per encoding module)

Interface	4×HDMI 1.4
Channel	Video: 4 HD or SD
	Audio: 4 pairs
Video encoding format	4:2:0 8bit
Video output profile	H.264/AVC High/Main(HD&SD)
	MPEG-2 MP@ML(SD)
Video resolution	1920 x 1080@25p,30p,50i,60i
	1280 x 720@50p,60p
	720 x 576@50i
	720 x 480@60i
Video output bit-rate	1 Mbps ~ 14 Mbps
Rate control	CBR/VBR
GOP control	Support
Aspect ration control	4:3 or 16:9
	Letterbox/cutting (future option)
Ancillary Data and VBI (future option)	PID pass-through (CC, Teletext, etc)
Audio format	MPEG1 Layer II, AAC(future option),
	Dolby Digital AC-3 (future option),
Audio output bit-rate	MPEG-1 Layer II: 64 - 384 Kbps
	AAC: 32 - 504 Kbps(future option)
	AC3: 32 - 504 Kbps(future option)
Volume leveling	0~8dB

ASI

Interface	BNC, 75Ω
	2 ASI IN, 2 ASI OUT
Bit-rate per port	1 MPTS/SPTS at max.100Mbps per port

Management

HW interface	1 x RJ45 (100Mbps)
User interfacce	LED indicators
	LCD screen
	Front panel control
	Web UI
	SNMP(Monitoring only)

Physical & Environment

Input Voltage	90~260 VAC
Power consumption	Max. 60W
Chassis dimension	480mm x 44mm x 440mm (WxHxD), 1RU
Operating Temperature	0℃~50℃
Storage Temperature	-10℃~70℃
Operating Humidity	<95%
MTBF	≥100,000 hours

Order Information

ADDING A CHASSIS

1
Every module must have a chassis
SMP   Chassis with embedded 2 ASI IN & 2 ASI OUT and 64 IP IN & 12 IP OUT.

ADDING OPTIONS TO BAY ONE (fixed)

2
Bay one must contain one HDMI encoder module.
EN4HDMI-xM2Axx   2 or 4 HDMI channels encoding.

ADDING OPTIONS TO BAY TWO (optional)

3
Bay two is able to contain one HDMI encoder module.
EN4HDMI-xM2Axx   2 or 4 HDMI channels encoding.

ADDING OPTIONS TO BAY THREE (optional)

4
Bay three is able to contain one HDMI encoder module.
EN4HDMI-xM2Axx   2 or 4 HDMI channels encoding.

ADDING AUDIO ENCODING License

5
The following licenses enable different audio encoding based on HDMI encoder modules different from EN4HDMI-4M2Axx.
AAC   AAC-LC、HE-AAV v1、HE-AAV v2 encoding license for EN4HDMI-4M2Axx
AC3   Dolby Digital audio encoding for EN4HDMI-4M2Axx
2 CH   2 channels HDMI encoding license for EN4HDMI-xM2Axx
4 CH   4 channels HDMI encoding license for EN4HDMI-xM2Axx