



NDS3544M

Encoder Modulator

12 HDMI → **16* DVB-C/8*DVB-T Digital RF**



Product Overview

NDS3544M HD encoder modulator is a professional high integration device which includes encoding, multiplexing, scrambling and modulation. It supports 12 HDMI and 12 CC inputs, one DVB-C tuner input and 256 IP input through Data1 (GE) port. It also supports DVB-C RF out with 16 adjacent carriers or DVB-T RF out with 8 adjacent carriers and supports 1 MPTS as mirror of one of 16 carriers or 8 MPTS as mirror of 8 carriers through Data2 (GE) output port. This full function device makes it ideal for small CATV head end system, and it's a smart choice for hotel TV system, entertainment system in sports bar, hospital, apartment...

Key features

- **12 HDMI inputs with MPEG2 & MPEG4 AVC/H.264 Encoding**
- **12 CC(Closed Caption) input port**
- **1DVB-C tuner input for re-mux**

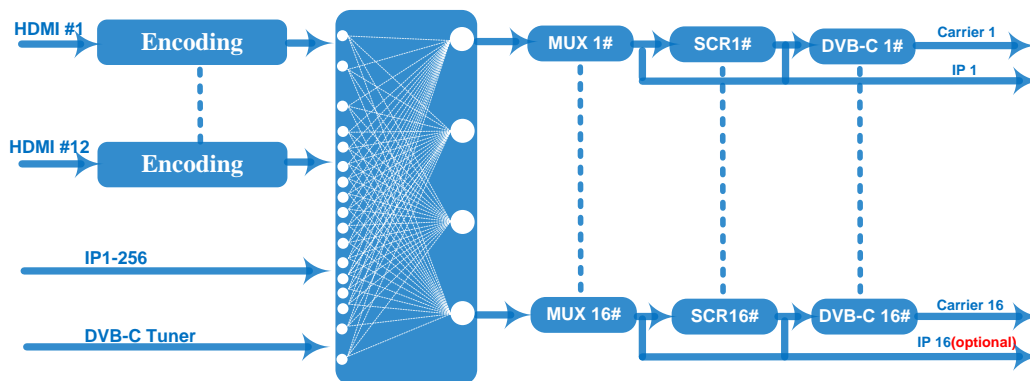


All the specifications are subject to change without any further notice. All rights reserved.

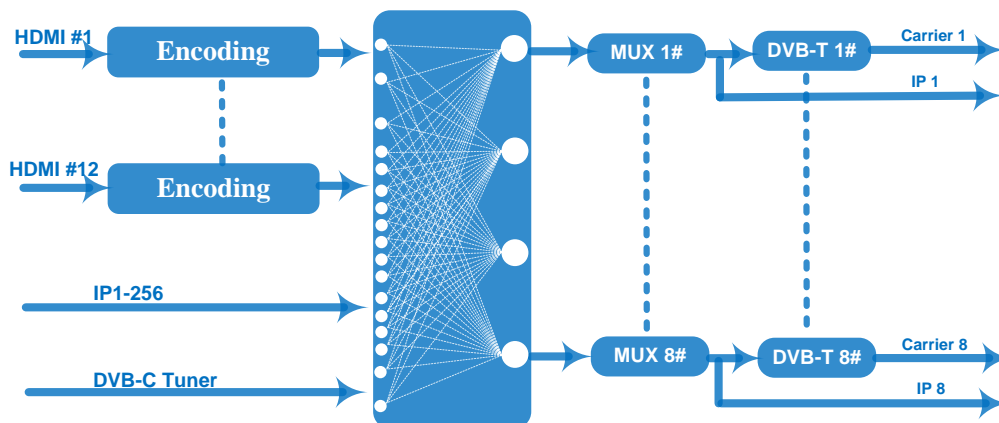
Add: No. 10 & No. 12, Wuxing Fourth Road, Wuhou District, Chengdu 610045, Sichuan, P.R. China
www.dsdtv.com/English Tel: +86-028-85558928 Fax: +86-028-85585255 Email: sunyu@dsdtv.com

- 256 IP input over UDP and RTP protocol
- MPEG1 Layer II, MPEG2-AAC, MPEG4-AAC, Dolby Digital AC3 (2.0) encoding (Optional), AC3 (2.0/5.1) passthrough
- Support 16 groups multiplexing /Scrambling/DVB-C modulating
- **Support 8 groups multiplexing / DVB-T modulating---Optional**
- Support 1 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP
- **Support 8 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP--only for DVB-T RF out**
- Video Trans-coding: MPEG-2 SD/HD and H.264 SD/HD any-to-any
- Audio Trans-coding: MPEG-1 Layer 2, AAC and AC3 any-to-any
- Support PID remapping/ accurate PCR adjusting/PSI/SI editing and inserting
- Control via web management, and easy updates via web
- Lowest cost per channel, breakthrough price

Principle Chart

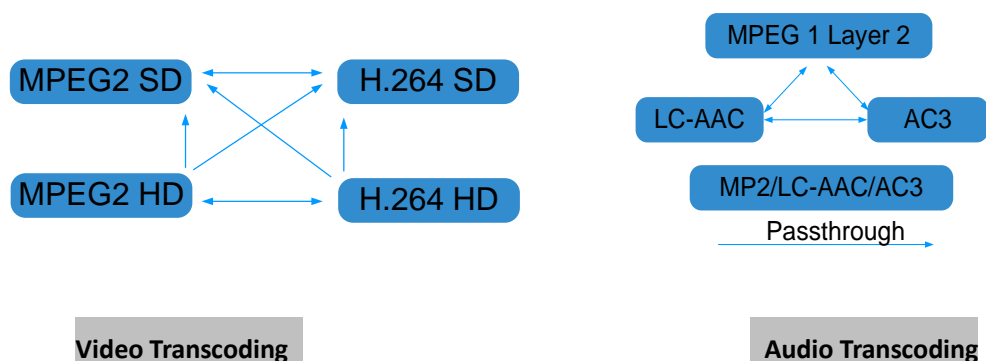


DVB-C Principle Chart



DVB-T Principle Chart

Transcoding Mode Example



Technical specification

Input	12 HDMI inputs 12 CC(closed caption) input, BNC interface 1 DVB-C Tuner for re-mux, F type interface 128 IP input over UDP and RTP, DATA1, RJ45		
Video	Resolution	Input	1920*1080_60p, 1920*1080_50p, 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P, 720*480_60i, 720*576_50i
		Output	1920*1080_60p, 1920*1080_50p, 1920*1080_60i, 1920*1080_50i, 1440*1080_60i, 1440*1080_50i, 1280*720_60p, 1280*720_50P, 720*576_50p, 720*576_50i, 720*576_30p, 720*576_25p, 720*480_60p, 720*480_60i, 720*480_30p, 720*480_25p, 320*240_60p, 320*240_50p, 320*240_30p, 320*240_25p, 320*180_60p, 320*180_50p, 320*180_30p, 320*180_25p, 960*540_50i, 704*576_50i, 704*480_60i, 640*576_50i, 640*480_60i, 544*576_50i, 544*480_60i,
	Trans-coding	2*MPEG2 HD → 2*MPEG2/H.264 HD;	
		2*MPEG2 HD → 2*MPEG2/H.264 SD;	
		4 *MPEG2 SD → 4 *MPEG2/H.264 SD;	
		2* H.264 HD → 2*MPEG2/H.264 HD;	
	2* H.264 HD → 2*MPEG2/H.264 SD;		
	4* H.264 SD → 4 *MPEG2/H.264 SD		
Encoding	MPEG2 & MPEG4 AVC/H.264		
Bit-rate	0.8~19Mbps for H.264 encoding 1~19.5Mbps for MPEG-2 encoding		
Rate Control	CBR/VBR		
GOP Structure	GOP B Frame: 0-3, GOP P Frame: 0-6		
Advanced Pretreatment	De-interlacing, noise reduction		
Audio	Encoding	MPEG1 Layer II, MPEG2-AAC, MPEG4-AAC, Dolby Digital AC3 (2.0) encoding (Optional), AC3 (2.0/5.1) passthrough	

	Trans-coding	MPEG-1 Layer 2, LC-AAC and AC3 any-to-any or pass through		
	Sampling rate	48KHz		
	Resolution	24-bit		
	Bit-rate	64Kbps-320kbps each channel		
Multiplexing	Maximum PID Remapping	180 input per channel		
	Function	PID remapping (automatically or manually)		
		Accurate PCR adjusting		
Generate PSI/ SI table automatically				
Scrambling	Maximum simulcrypt CA	4		
	Standard	EN300 429/ITU-T J.83A/B		
	Connection	Local/remote connection		
Modulation	DVB-C	QAM Channel: 16		
		Standard: EN300 429/ITU-T J.83A/B		
		MER: ≥ 40 db		
		RF frequency: 50~960MHz, 1KHz step		
	RF output level: -20~+10dbm (87~107 db μ V), 0.1db step			
	Symbol Rate: 5.0Msps~7.0Msps, 1ksps stepping			
	Constellation: 16/32/64/128/256QAM			
			J.83A	J.83B
		Constellation	16/32/64/128/256QAM	64/256 QAM
		Bandwidth	8M	6M
	DVB-T	Standard	EN300744	
		FFT mode	2K,	
		Bandwidth	6M, 7M, 8M	
Constellation		QPSK, 16QAM, 64QAM		
Guard Interval		1/4, 1/8, 1/16, 1/32		
FEC		1/2, 2/3, 3/4, 5/6, 7/8		
MER		≥ 42 dB		
RF frequency		50~960MHz, 1KHz step		
RF out		8*RF COFDM DVB-T out (8 carriers combined output)		
RF output level	-28~ -3 dBm (77~97 db μ V), 0.1db step			
Stream output	RF output (F type interface)			
	1 MPTS output over UDP and RTP/RTSP as mirror of one of 16 DVB-C carriers, 8 MPTS output over UDP and RTP/RTSP as mirror of 8 DVB-T carriers(Optional)			
	1*1000M Base-T Ethernet interface			
System function	Network management (WEB)			
	Chinese and English language			
	Ethernet software upgrade			
Miscellaneous	Dimension (W×L×H)	482mm×410mm×44mm		
	Approx weight	8kg		
	Environment	0~45°C(work); -20~80°C (Storage)		
	Power requirements	AC 110V \pm 10%, 50/60Hz, AC 220 \pm 10%, 50/60Hz		
	Power consumption	20W		