



NDS3544HA

Encoder Modulator

24 CVBS → 16* DVB-C/8*DVB-T/8*ATSC/6*ISDB-T Digital RF



Product Overview

NDS3544HA SD encoder modulator is a professional high integration device which includes encoding, multiplexing, scrambling and modulation. It supports 24 CVBS inputs with MPEG-2 video encoding and MPEG-1 Layer 2, DD AC3 (2.0) audio encoding and one DVB-C (ATSC optional) tuner input and maximum 512 IP input through Data1 (GE) port. It also supports DVB-C RF out with 16 non-adjacent carriers or DVB-T/ATSC RF out with 8 non-adjacent carriers or ISDB-T RF out with 6 non-adjacent carriers and supports 16/8/6 MPTS as mirror of 16/8/6 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...



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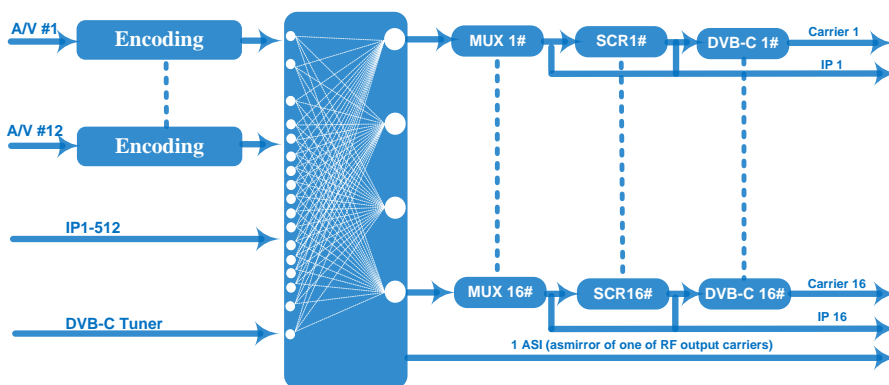
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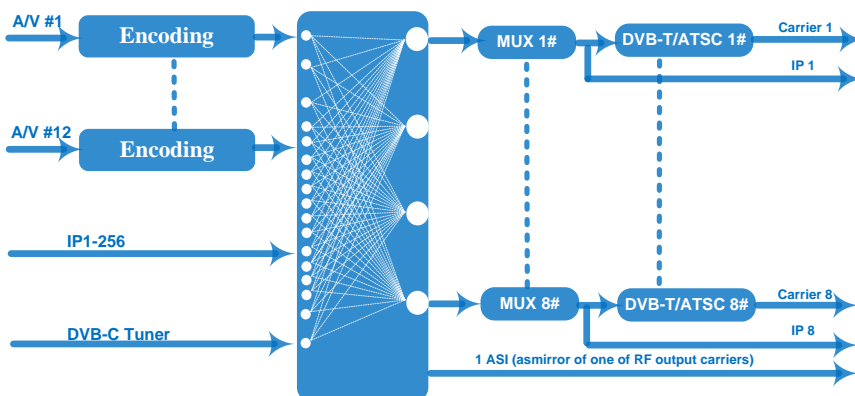
Key Features

- 24 CVBS inputs with MPEG-2 Encoding
- 1DVB-C(ATSC optional) tuner input for re-mux
- **Each carrier out channel process maximum 32 IP from DATA1 input port (UDP&RTP protocol)**
- Support MPEG-1 Layer 2, DD AC3 (2.0) audio encoding
- Support CC (closed caption)
- Support 16 groups multiplexing/Scrambling/DVB-C modulating
- **Support 8 groups multiplexing/DVB-T/ATSC modulating---Optional**
- **Support 6 groups multiplexing/ISDB-T modulating---Optional**
- Support 16 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP
- **Support 8 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP-- DVB-T/ATSC RF out**
- **Support 6 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP-- ISDB-T RF out**
- **1 ASI out as mirror of one of RF output carriers---Optional**
- **Support Logo, Caption, QR Code insertion**
- 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

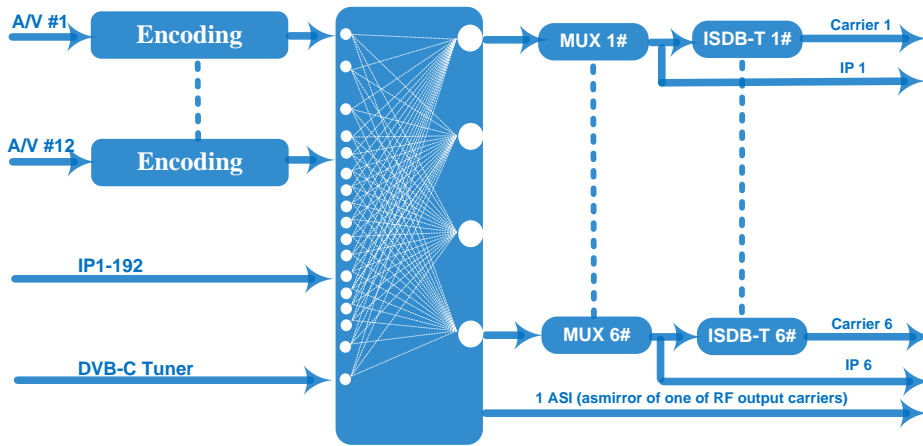
Principle Chart



DVB-C Principle Chart



DVB-T/ATSC Principle Chart



ISDB-T Principle Chart

Technical specification

Input	24 CVBS inputs		
	1 DVB-C(ATSC optional) Tuner for re-mux, F type interface		
	512 IP input over UDP and RTP, DATA1, RJ45—DVB-C RF out		
	256 IP input over UDP and RTP, DATA1, RJ45—DVB-T/ATSC RF out		
		192 IP input over UDP and RTP, DATA1, RJ45—ISDB RF out	
Video	Resolution	720×480_60i, 544×480_60i, 352×480_60i	
		352×240_60i, 320×240_60i, 176×240_60i, 176×120_60i	
		720×576_50i, 704×576_50i, 640×576_50i, 352×288_50i	
		320×288_50i, 176×288_50i, 176×144_50i	
	Encoding	MPEG-2	
	Bit-rate	0.5Mbps~8Mbps per channel	
	Rate Control	CBR/VBR	
	GOP Structure	IP, IBP, IBBP, IBBBP	
	Advanced Pretreatment	De-interlacing, noise reduction	
Audio	Encoding	MPEG-1 Layer 2, DD AC3 (2.0)	
	Sampling rate	48KHz	
	Resolution	24-bit	
	Bit-rate	64Kbps, 128Kbps, 192kbps, 256kbps, 320kbps, 384kbps 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	ETR289, ETSI 101 197, ETSI 103 197	
	Connection	Local/remote connection	
Modulation	DVB-C	QAM Channel	16 non-adjacent carriers output (maximum bandwidth)
		Standard	EN300 429/ITU-T J.83A/B
		MER	≥40db
		RF frequency	50~960MHz, 1KHz step

		RF output level	-20~+10dbm (87~107 dbμV), 0.1db step	
		Symbol Rate	5.0Msps~7.0Msps, 1ksps stepping	
			J.83A	J.83B
		Constellation	16/32/64/128/256QAM	64/256 QAM
		Bandwidth	8M	6M
	DVB-T	Standard	EN300744	
		FFT mode	2K,4K, 8K	
		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 non-adjacent carriers DVB-T out (maximum bandwidth 192MHz)	
		RF output level	-20~ +10 dBm (77~97 dbμV), 0.1db step	
	ATSC	Standard	ATSC A/53	
		Bandwidth	6M	
		Constellation	8VSB	
		FEC	RS(208 188)+Trellis	
		MER	≥40dB	
		ACL	-55 dBc	
		RF frequency	50~960MHz, 1KHz step	
		RF out	8 non-adjacent carriers output (maximum bandwidth 192MHz)	
	RF output level	-20~+10dbm (for all carriers), 0.5db stepping		
	ISDB-T	Standard	ARIB STD-B31	
		Bandwidth	6M	
		Constellation	QPSK, 16QAM, 64QAM	
		Guard Interval	1/32, 1/16, 1/8, 1/4	
		Transmission Mode	2K, 4K, 8K	
		Code rate	1/2, 2/3, 3/4, 5/6, 7/8	
		MER	≥40dB	
		RF frequency	50~960MHz, 1KHz step	
		RF out	6 non-adjacent carriers output (maximum bandwidth 192MHz)	
RF output level		-20dBm~+10dBm, 0.1dB stepping		
Stream output	1 ASI output as mirror of one of RF output carriers- Optional 16 MPTS output over UDP and RTP/RTSP as mirror of 16 DVB-C carriers, 8 MPTS output over UDP and RTP/RTSP as mirror of 8 DVB-T/ATSC carriers(Optional) 6 MPTS output over UDP and RTP/RTSP as mirror of 6 ISDB-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×440mm×44mm
	Environment	0~45℃(work); -20~80℃ (Storage)
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz

Ordering Information

	IP input	IP output	RF carriers	Scrambling
DVB-C	512	16	16	√
DVB-T	256	8	8	×
ATSC	256	8	8	×
ISDB-T	192	6	6	×