



Multiple Encoding interface optional

Product Overview

NDS3543B DVB-S/S2 products are DEXIN’s all-in-one devices which integrate encoding, multiplexing and modulation to convert V/A signals into DVB-S/S2 RF output. It adopts inner drawer-type structural design which greatly facilitates the change of encoding modules (HDMI/CVBS/SDI/YPbPr/...) as needed and it also can be used as modulator without any encoding module. To meet customers’ various requirements, NDS3543B is also equipped with 1 ASI input for re-mux, and output with 2 ASI ports and 1 IP port.

The signals source could be from satellite receivers, closed-circuit television cameras, Blue-ray players, and antenna etc. With its various inputs available and special modulation index, Dexin NDS3543B series encoder modulators are especially adequate for inserting DVB-S/S2 signal in the cable system to add programs in the DVB-S/S2 TVs or STBs.

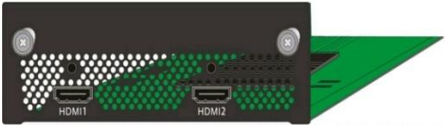
With its various inputs available, our NDS3543B series products are wildly used in public places such as metro, market hall, theatre, hotels, resorts, and etc for advertising, monitoring, training and

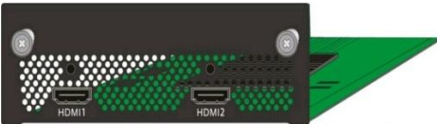
educating in company, schools, campuses, hospital... It's a good choice to offer additional info channels.


Key Features

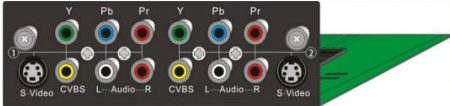
- HDMI/CVBS/SDI/YPbPr... inputs, 1*ASI in for re-mux; 1*RF in for RF mix
- MPEG2 HD/SD & MPEG4 AVC H.264 HD/SD video encoding
- MPEG4-AAC; MPEG2-AAC; MPEG1 Layer II and Dolby Digital AC3 2.0(Optional) audio encoding
- Dolby Digital AC3 passthrough (for HDMI of HDMI/YPbPr/CVBS 3-in-1)
- Dialog Normalization(Optional)
- Support CC (closed caption) for SDI and CVBS interface (Optional)
- Support low delay encoding mode
- Support VBR/CBR rate control mode
- Support PSI/SI editing
- Support PCR accurate adjusting
- Support PID re-mapping and passthrough
- DVB-S/S2 RF out and ASI out; IP out
- Modular design, pluggable encoding modules
- LCD display, Remote control and firmware
- Web-based NMS management; Updates via web

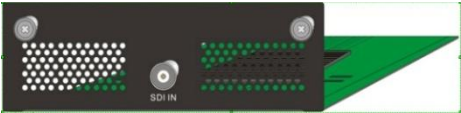
Technical Specifications


HDMI Encoding Input (Option I) 	Video	Input	HDMI*1(1 for backup)
		Encoding	MPEG2; MPEG4 AVC/H.264
		Bitrate	1-19.5Mbps
		Resolution	1920*1080_60P, 1920*1080_50P, (-for MPEG4 AVC/H.264 only) 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P 720*480_60i, 720*576_50i
		Low Delay	Normal, Mode 1, Mode 2
		Rate Control	VBR/CBR
		Chroma	4:2:0
		Aspect Ratio	16:9,4:3
	Audio	Encoding	MPEG1 Layer II; LC-AAC; HE-AAC and Dolby Digital AC3 2.0 (Optional)
		Sample rate	48KHz
Bitrate		64/96/128/ 192/256/320kbps	

<h2>HDMI Encoding Input (Option II)</h2> 	Video	Input	HDMI*1 (1 for backup)
		Encoding	MPEG4 AVC/H.264
		Bitrate	1-19.5Mbps
		Resolution	1920*1080_60P, 1920*1080_50P, 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P 720*480_60i, 720*576_50i
		Chroma	4:2:0
	Audio	Encoding	MPEG1 Layer II
		Sample rate	48KHz
		Bitrate	64/96/128/ 192/256/320kbps

<h2>HDMI/YPbPr/CVBS 3-in-1 Encoding Input</h2> 	Video (HDMI)	Encoding	MPEG2; MPEG4 AVC/H.264
		Input	HDMI*1
		Bitrate	1-19.5Mbps
		Resolution	1920*1080_60P, 1920*1080_50P, -for MPEG4 AVC/H.264 only) 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P 720*480_60i, 720*576_50i
		Low Delay	Normal, Mode 1, Mode 2
		Rate Control	VBR/CBR
		Chroma	4:2:0
		Aspect Ratio	16:9,4:3
	Audio (HDMI)	Encoding	MPEG1 Layer II ,MPEG2-AAC, MPEG4-AAC and Dolby Digital AC3 2.0(Optional)
		Input	HDMI*1
		Sample rate	48KHz
		Bitrate	64/96/128/ 192/256/320kbps
	Video (YpbPr/ CVBS)	Encoding	MPEG2; MPEG4 AVC/H.264
		Input	YpbPr*1 / CVBS *1
		Bitrate	1-19.5Mbps
		Resolution	CVBS: 720x576_50i (PAL); 720x480_60i (NTSC) YpbPr: 1920*1080_60i, 1920*1080_50i; 1920*1080_60p, 1920*1080_50p; 1280*720_60p, 1280*720_50P
		Low Delay	Normal, Mode 1, Mode 2
		Rate Control	VBR/CBR
		Chroma	4:2:0
	Audio (YpbPr/ CVBS)	Encoding	MPEG1 Layer II; MPEG2-AAC; MPEG4-AAC and Dolby Digital AC3 2.0(Optional)
Interface		1*Stereo/2*mono	
Sample rate		48KHz	
Bit rate		64/96/128/ 192/256/320kbps	

<h2>2*(S-Video/YPbPr/CVBS)</h2> <h3>3-in-1 Encoding Input</h3> 	Video	Encoding	MPEG-2 & MPEG-4 AVC/H.264
		Input	S-Video/YPbPr/CVBS*2
		Bitrate	1-19.5Mbps
		Resolution	720*480_60i, 720*576_50i
		Low Delay	Normal, Mode 1, Mode 2(For option 1)
		Rate Control	VBR/CBR
		Chroma	4:2:0
	Aspect Ratio	16:9,4:3	
	Audio	Encoding	MPEG1 Layer II; LC-AAC; HE-AAC and Dolby Digital AC3 2.0(Optional)
		Sample rate	48KHz
Bitrate		64/96/128/ 192/256/320kbps	

<h2>SDI Encoding Input</h2> 	Video	Encoding	MPEG2; MPEG4 AVC/H.264
		Input	SDI*1
		Bitrate	1-19.5Mbps
		Resolution	1920*1080_60P, 1920*1080_50P, (-for MPEG4 AVC/H.264 only) 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P 720*480_60i, 720*576_50i
		Low Delay	Normal, Mode 1, Mode 2
		Rate Control	VBR/CBR
		Chroma	4:2:0
	Aspect Ratio	16:9,4:3	
	Audio	Encoding	MPEG1 Layer II ,MPEG2-AAC, MPEG4-AAC and Dolby Digital AC3 2.0(Optional)
		Sample rate	48KHz
Bitrate		64/96/128/ 192/256/320kbps	

<h2>VGA/HDMI</h2> <h3>Encoding Input</h3> 	Video (HDMI)	Encoding	MPEG2; MPEG4 AVC/H.264
		Input	HDMI*1
		Bitrate	1-19.5Mbps
		Resolution	1920*1080_60P, 1920*1080_50P, (-for MPEG4 AVC/H.264 only) 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P 720*576-50i, 720*480-60i
		Low Delay	Normal, Mode 1, Mode 2
		Rate Control	VBR/CBR
		Chroma	4:2:0
	Aspect Ratio	16:9,4:3	
	Audio (HDMI)	Encoding	MPEG1 Layer II; MPEG2-AAC; MPEG4-AAC, and Dolby Digital AC3 2.0(Optional)
		Sample rate	48KHz
		Bitrate	64/96/128/ 192/256/320kbps
		Encoding	MPEG2; MPEG4 AVC/H.264

	Video (VGA)	Input	VGA(SVGA/XGA/UXGA/SXGA)		
		Bitrate	1-19.5Mbps		
		Resolution	1920*1080_60P, 1280*720_60p		
		Low Delay	Normal, Mode 1, Mode 2		
		Rate Control	VBR/CBR		
		Chroma	4:2:0		
		Aspect Ratio	16:9,4:3		
	Audio (VGA)	Encoding	MPEG1 Layer II; MPEG2-AAC; MPEG4-AAC, and Dolby Digital AC3 2.0(Optional)		
		Sample rate	48KHz		
		Bit rate	64/96/128/ 192/256/320kbps		

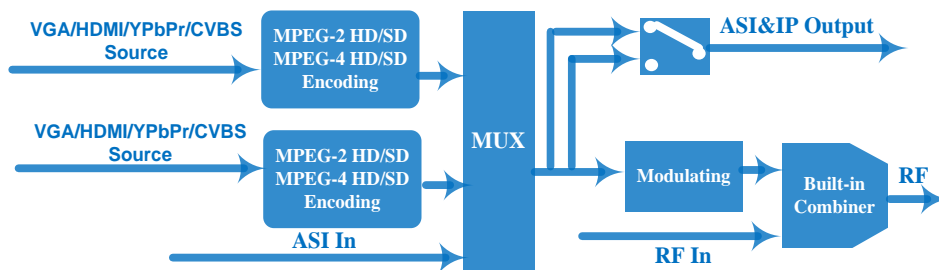
Modulator Section	DVB-S/S2	Constellation	DVB-S: QPSK DVB-S2: QPSK, 8PSK
		FEC	1/2,2/3,3/4,5/6,7/8 (DVB-S QPSK)
			1/2,3/5,2/3,3/4,4/5,5/6,8/9,9/10 (DVB-S2 QPSK)
			3/5,2/3,3/4,5/6,8/9,9/10 (DVB-S2 8PSK)
		RF output	950.00-1050.00 MHz, 1Khz step
		Output Level	-30dBm~-10.0dBm
		Symbol rate	0.05-40.0Msps (DVB-S and DVB-S2 QPSK)
			0.05-26.0Msps(DVB-S2 8PSK)
		Roll Off	0.35(DVB-S)
0.35, 0.25, 0.2(DVB-S2)			

General	System	Local interface	LCD + control buttons
		Remote management	Web NMS
		Stream Out	2 ASI out (BNC type); IP (MPTS/SPTS) out (RJ45, 100M)
		NMS interface	RJ45, 100M
		Language	English
	Physical Specification	Power supply	AC 100V~240V
		Dimensions	482*300*44mm (19" rack)
		Weight	4.5 kg
		Operation temperature	0~45℃

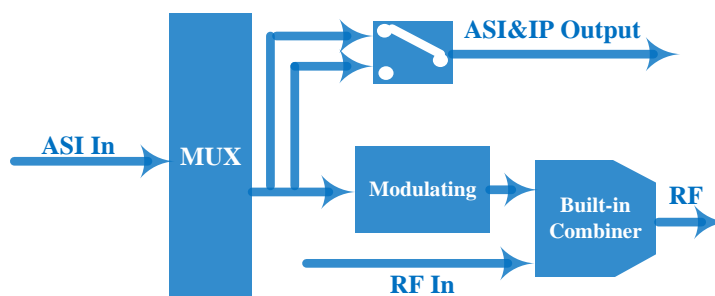
Technical comparison

	NDS3543B	NDS3543C	NDS3402E
Encode In	2 encoding slots with different encoding boards available	1 encoding slot with different encoding boards available	N/A
ASI In	1 ASI input for re-mux	1 ASI input for pass-through	4 ASI inputs with 3 for backup
IP In	N/A	N/A	1 IP Input over UDP (100M)
RF Range	950 – 1050 MHz	950 -2150 MHz	950 -2150 MHz
Symbol Rate	QPSK: 0.05-40.0Msps 8PSK: 0.05-26.0Msps	0.05-20.0Msps	32APSK: 0.5~40Msps 16APSK/8PSK/QPSK: 0.5~45 Msps
Constellation	QPSK, 8PSK	QPSK, 8PSK	QPSK, 8PSK, 16APSK, 32APSK
Output Level	-30 dBm ~-10.0 dBm	-10.0 dBm ~-41.5 dBm	-10.0 dBm~-41.5 dBm
BISS Scramble	N/A	Support	Support
IP output	1 IP over UDP (100M)	N/A	N/A
10MHz Ref Clock	N/A	Support	Support
24V RF Out	N/A	Support	Support
RF In for Mix	Support	N/A	N/A
SFN TS Transmission	N/A	N/A	Support

Principle Chart (Encoder Modulator)

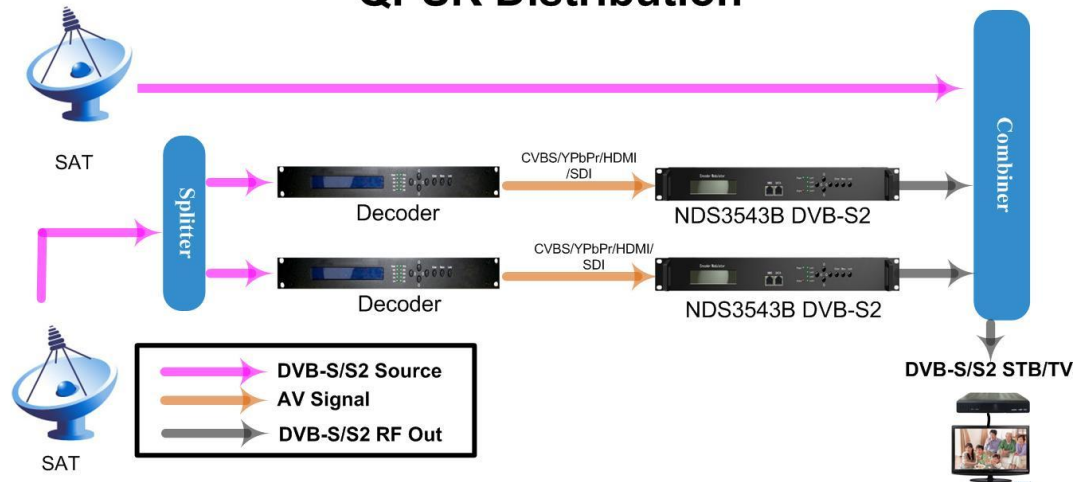


Principle Chart (Modulator)



Application Case

QPSK Distribution



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