



**NDS3343D**

**4 in 1 QAM Modulator**



**Version 1**



**Version 2**

## Outline

NDS3343D is a high performance and cost-effective mux-scrambling QAM modulator designed by Dexin. It has multiple input ports optional. After multiplexing, scrambling and QAM modulating process, then it gives 4 RF output. To meet customers' various requirements, this device is also equipped with IP port to output 4 MPTS over UDP. Its pluggable structure design greatly facilitates the change of modules (demodulator) as needed.

The four CAMs/CIs (Optional) accompanied and BISS modules can descramble the programs input from 4 Tuner inputs. Its pluggable structure design greatly facilitates the change of modules (demodulator) as needed. NDS3343D is also characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation CATV broadcasting system.



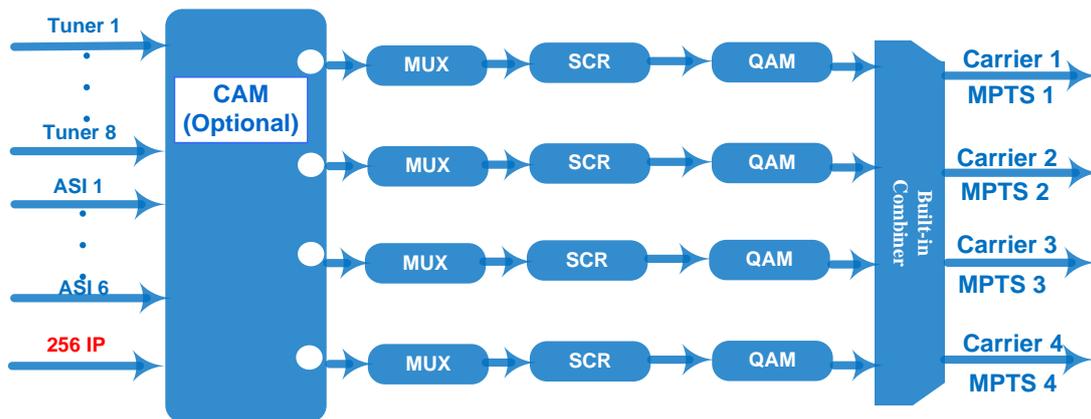
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## Key Features

- **Multiple Input ports optional:**
  - 8 DVB-C/T/(T)/ISDBT/S/S2/S2X/ATSC FTA Tuner + 6 ASI input ports+256 IP input (Version 1)
  - 4 DVB-C/S/S2/ATSC Tuner with CAM+6 ASI input ports (Version 2)
- Support 4 channels multiplexing+4 channels scrambling+4 channels QAM modulating
- Fully support DVB-C (EN300 429) and ITU-T J.83A/B/C
- Fully support DVB general scrambling system description ETR289, simulcrypt standard ETSI 101 197 and ETSI 103 197
- Support accurate PCR adjusting
- Support PSI/SI editing and inserting
- Excellent RF output performance index, MER≥40db
- Support 4\*MPTS output over UDP
- **4 CAM decrypt multiple programs from 4 Tuner input (Optional)**
- **Support BISS descrambling(only for Version 2)**
- Support LCD display and keyboard
- Support Web management, Updates via web and USB

## Working Principle



## Specifications



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<b>Input</b>	8 DVB-C/T/(T)/ISDBT/S/S2/S2X/ATSC FTA Tuner + 6 ASI input+256 IP input -----Version 1				
	4 DVB-C/S/S2/ATSC Tuner with CAM + 6 ASI -----Version 2				
<b>Tuner Section</b>	For Version 1: Multi-mode tuners switchable <b>(New Type)</b>	DVB-C	Input Frequency	60 ~890 MHz	
			Standard	J.83A, J.83C	J.83B
			Constellation	16/32/64/128/256 QAM	64/256 QAM
		DVB-T/(T)	Input Frequency	60 ~890 MHz	
			Bandwidth	5/6/7/8 M	
		ISDB-T	Input Frequency	60 ~890 MHz	
	For Version 1 <b>(New Type)</b>	DVB-S	Input Frequency	950~2150MHz	
			Symbol rate	0.5~45Msps	
			Signal Strength	- 65- -25dBm	
			FEC	1/2, 2/3, 3/4, 5/6, 7/8	
			Constellation	QPSK	
			Max input bitrate	≤120 Mbps	
		DVB-S2X	Input Frequency	950~2150MHz	
			Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 32APSK: 0.5~40Msps;	
			FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10	
			Constellation	QPSK, 8PSK, 16APSK, 32APSK	
			Max input bitrate	≤120 Mbps	
			DVB-S2X	Input Frequency	950~2150MHz
		Symbol rate		QPSK/8PSK /16APSK :0.5~45 Msps 8APSK: 0.5~40Msps 32APSK: 0.5~40Msps	
		FEC		QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36 , 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9	
Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK				
Max input bitrate	≤120 Mbps				
For Version 2	DVB-C	Standard		J.83A(DVB-C), J.83B, J.83C	
		Input Frequency	30~1000Mhz		
		Constellation	16/32/64/128/256 QAM		
	DVB-S	Input Frequency	950~2150MHz		
		Symbol rate	2-45Msps		

			FEC	1/2, 2/3, 3/4, 5/6, 7/8	
			Signal Strength	-65~-25dBm	
			Constellation	QPSK	
		DVB-S2	Input Frequency	950~2150MHz	
			Symbol rate	QPSK/8PSK 1~45 Msps	
			FEC	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10	
			Constellation	QPSK, 8PSK	
		ATSC	Input Frequency	54~858MHz	
			Bandwidth	6M	
			Constellation	8VSB	
<b>Multiplexing</b>	Maximum PID Remapping	128per input channel			
	Function	PID remapping (automatically or manually)			
		Accurate PCR adjusting			
		Generate PSI/SI table automatically			
<b>Scrambling</b>	Maximum simulcrypt CA	4			
	Standard	ETSI 101 197, ETSI 103 197			
	Connection	Local/remote connection			
<b>Modulation</b>	QAM Channel	4			
	Standard	EN300 429/ITU-T J.83A/B/C			
	MER	≥40db			
	RF frequency	30~999MHz, 1KHz step			
	RF output level	-10~0dbm,0.1db step -----Version 1			
		-20~0dbm,0.1db step -----Version 2			
	Symbol Rate	5.0Msps~9.0Msps, 1ksps stepping			
		J.83A	J.83B	J.83C	
	Constellation	16/32/64/128/256QAM	64/256 QAM	64/256 QAM	
Bandwidth	8M	6M	6M		
<b>System</b>	Local interface	LCD + control buttons			
	Remote management	Web NMS			
	Stream Out	4*MPTS over UDP out (RJ45, 1000M, Unicast/Multicast)			
	Language	English and Chinese			
	Software Upgrading	Web and USB			
<b>General</b>	Dimension (W*D*H)	482mm×300mm×44.5mm			
	Temperature	0~45℃(Operation) ; -20~80℃(Storage)			
	Power	AC 100V±1050/60Hz; AC 220V±10%, 50/60HZ			

Updated date: 28 May, 2019