



DVB-S2 Modulator

[illegible]

Outline

Catcast HPS3402E is a high-performance modulator developed according to DVB-S2 (EN302307) standard which is the standard of second generation of the European broadband satellite telecommunication. It is to convert the input satellite signal and/or ASI and IP streams into digital DVB-S/S2 RF output.

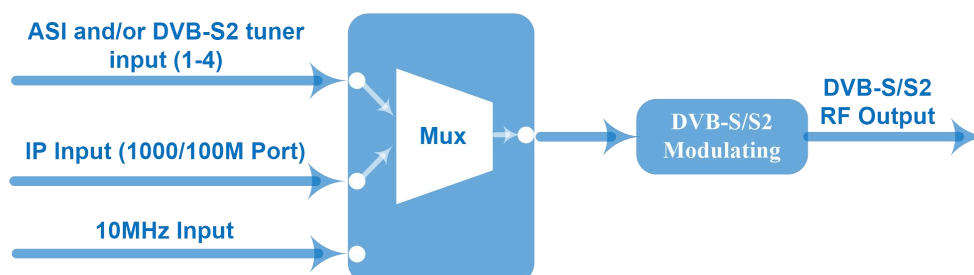
BISS scrambling mode is inserted to this DVB-S2 modulator, which helps to safely distribute your programs. It is easy to reach local and remote control with Web-server NMS software and LCD in the front panel.

With its high cost-effective design, Catcast HPS3402E DVB-S2 modulator is wildly used for broadcasting, interactive services, news gathering and other broadband satellite applications.

Features

- Fully complying with DVB-S2 (EN302307) and DVB-S (EN300421) standard
- ASI and/or DVB-S2 inputs for re-mux or pass through (4 ports for ASI and S2 tuner input combination)
- Support IP (1000/100M) signal input for re-mux or pass through
- Support Multiplexing and PSI/SI edit
- QPSK, 8PSK, 16APSK, 32APSK Constellations
- Support RF CID setting (Optional as per order)
- Constant temperature crystal oscillator, as high as 0.1ppm stability
- Support coupling 10Mhz clock output through RF output port
- Support 24V power output through RF output port
- Support BISS scrambling
- Support SFN TS transmission
- Output frequency range: 950~2150MHz, 10KHz stepping
- Support local and remote control with Web-server NMS

Principle Chart



Specifications

IP Input	1*IP Input (RJ45, 1000/100M TS Over UDP)
ASI Input	Supporting both 188/204 Byte Packet TS Input
	1-4 ASI Inputs (Connector: BNC, Impedance 75Ω)

Tuner Input (0-4 inputs optional)	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	≤160 Mbps	
	DVB-S2	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	≤160 Mbps	
	DVB-S2X	Input Frequency	950~2150MHz	
		Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 8APSK/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	≤160 Mbps	
Multiplexing	Maximum PID Remapping	128 input per channel		
	Function	PID remapping (automatically or manually)		
		Accurate PCR adjusting		
		Edit PSI/SI tables (PAT/PMT/SDT/CAT/NIT)		
10MHz Reference Clock	1*External 10MHz Input (BNC Interface); 1*Inner 10MHz Reference clock			
RF Output	RF Range: 950 ~ 2150 MHz, 10KHz stepping			
	Output Level Attenuation: -26 ~ 0 dBm, 0.5dBm Stepping			
	MER≥40dB			
	Connector: N type, Impedance 50Ω; N to F adapter			
Channel Coding and Modulation	Standard	DVB-S	DVB-S2	
	Outer coding	RS Coding	BCH Coding	
	Inner coding	Convolution	LDPC Coding	
	Constellation	QPSK	QPSK,8PSK, 16APSK,32APSK	

	FEC/ Convolution Rate	1/2, 2/3, 3/4, 5/6, 7/8	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
	Roll-off Factor	0.2, 0.25, 0.35	0.2, 0.25, 0.35
	Symbol Rate	0.05~45Msps	0.05~40Msps (32APSK); 0.05~45 Msps (16APSK/8PSK/QPSK)
BISS Scramble	Mode 0, mode 1, mode E		
System	Web-server NMS		
	Language: English		
	Ethernet software upgrade		
	24V power output through RF output port		
Miscellaneous	Dimension	482mm×410mm×44mm	
	Temperature	0~45°C(operation), -20~80°C (storage)	
	Power	100-240VAC±10%, 50Hz-60Hz	

Order Guide

	HPS3402E (New version)	HPS3402E (Old version)	HPS3402F	HPS3403	HPS3403F
Input	1 IP (100/1000M) input, ASI and/or DVB-S2 tuner inputs for re-mux or pass through	1 IP (100M) or 1 ASI pass through alternative			
DVB-S/S2 out	●	●	●	●	●
DVB- S2X out				●	●
QPSK, 8PSK	●	●	●	●	●
16APSK, 32APSK	●	●		●	●
8APSK-L,16APSK-L, 32APSK-L				●	●
RF output (950-2150MHz)	●	●		●	
IF output (50-960MHz)			●		●
Mux	●				