

DVB-S/S2 Modulator Platform

SMD 989



The SENCORE SMD 989 DVB-S/S2 platform is capable of single or multi-stream modulation of MPEG Transport Streams. With an optional L-Band upconverter, the SMD 989 can provide an IF or L-band output. This eliminates the need for multiple pieces of equipment.

The chassis has two bays allowing the SMD 989 to house one or two independent modulators. The platform provides state-of-the-art modulation quality while saving rack space and cost.

The support of multistream with Variable Coding and Modulation (VCM) allows each Transport Stream in the single RF carrier to have its own modulation parameters. Multistream reduces overall equipment needed and increases the efficiency of transponder use while guaranteeing the integrity of the content.

KEY FEATURES

- Chassis supports two independent modules
- Configure with one or two DVB-S/S2 modulators
- Ability to modulate 1 to 6 multistream transport streams on a single carrier (no separate products needed to support multistream)
- L-band and IF outputs
- ASI and IP inputs
- Front panel and web GUI for easy configuration
- L-band monitoring output

APPLICATIONS

- **Contribution and Delivery**
This DVB-S/S2 modulator uses state-of-the-art technology for cost-saving satellite delivery
- **News Gathering**
Easy-to-use, robust platform is ideal for news gathering applications
- **VCM Transmission**
The SMD 989 can modulate single or multistream satellite transmissions

SPECIFICATIONS

DVB-S/S2 Modulator Platform SMD 989

INPUTS

ASI

Connector:	4x BNC
Impedance:	75Ω
Packet format:	Auto detect 188/204 byte
Syntax:	SPTS or MPTS
TS Bitrate:	0.5 Mbps - 160 Mbps

IP

Inputs:	Receives up to 6 TS streams
Connector Type:	(1) RJ 45 10/100/1000
Addressing:	Unicast and Multicast
IP Encapsulations:	1 to 7 TS/IP UDP or RTP
TS Bitrate:	0.5 Mbps - 160 Mbps

REFERENCE

External Reference:	10 Mhz Frequency/50Ω BNC
Return Loss:	>15 dB
Input Level:	-3dBm to 7dBm
Internal Reference:	internal reference also present

DVB-S/DSNG

Modulation format & FEC rate:	QPSK, FEC rates 1/2, 2/3, 3/4, 5/6, 7/8
	8PSK, FEC rates 2/3, 5/6, 8/9
	16QAM, FEC rates 3/4, 7/8

Baud rate range:	0.5 - 45 Mbaud
Roll-off Factor:	0.20, 0.25, 0.30
Spectral Inversion:	on / off

DVB-S2

Signal Format:	CCM / VCM
Modulation format & FEC rate:	QPSK, FEC rates 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10**
	8-PSK, FEC rates 3/5, 2/3, 3/4, 5/6, 8/9, 9/10**
	16APSK, FEC rates 2/3, 3/4, 4/5, 5/6, 8/9, 9/10**
	32APSK, FEC rates 3/4, 4/5, 5/6, 8/9, 9/10**

Baud rate range:	0.5 - 45 Mbaud
Roll-off Factor:	0.20, 0.25, 0.30
Number of multi stream support:	1-6 TS
Spectral Inversion:	on / off
FEC Frames:	Normal Short

**Rate 9/10 not applicable for short frames

OUTPUTS

IF

Frequency:	70 MHz/140 MHz
Level:	-30 dBm to -5 dBm (adjustable in 1dB steps)
Connector:	75Ω BNC
Return Loss:	>20 dB
Spurious Signal Level:	-50dBc with -10dBm output
Phase Noise:	-60 dBc/Hz at 100 Hz -70 dBc/Hz at 1k Hz -80 dBc/Hz at 10 kHz -90 dBc/Hz at 100 kHz -90 dBc/Hz at 1 MHz

L-BAND

Frequency:	950-2150 MHz (adjustable in 1 KHz steps)
Level:	-30 dBm to 5 dBm (adjustable in 0.1dB steps)
Connector:	SMA 50Ω
Return Loss:	>15 dB
Monitoring Output:	-20 dBc @ main frequency

MANAGEMENT

Connector:	RJ-45 10/100 - Auto Negotiate
Protocols:	HTTP and SNMP
User Interface:	HTML web client & front panel

ALARM INTERFACE

Type:	Electrical dual contact closure alarm contacts
Connector:	9-pin sub-D female
Alarms supported:	User configurable to any alarm(s)

DIMENSION

Height:	1RU, 1.75" (5cm)
Width:	17.4" (44.2 cm)
Depth:	23" (58 cm)
Power:	100-240 AC 50/60 Hz @ 3 Amps

POWER

Operating Voltage:	95-135 VAC 480-265 VAC
Power:	200 Watts
Frequency:	47-63Hz

ENVIRONMENTAL CONDITIONS

Operating Temp:	0° to 45°C
Storage Temp:	-40°C to 65°C
Relative Operating Humidity:	<95% (non-condensing)