

SATELLITE DIGITAL RF MODULATOR

MC-HY9200MD-8RF

Professional DVB-S/S2 Satellite Digital Modulator with IP and RF Output



Professional Product Overview

The MC-HY9200MD-8RF is a professional DVB-S/S2 satellite digital modulator designed to receive satellite tuner sources and IP streams, process selected services, and deliver stable multi-standard RF output for hotel, healthcare, residential and commercial TV distribution networks.

8 DVB-S/S2 Tuners

Satellite input reception

256 IP Streams

SPTS/MPTS processing

8 RF Frequencies

Digital modulation output

Multi-Standard RF

DVB-C, DVB-T/T2, DTMB, ISDB-T, ATSC

Satellite and IP source modulation for professional RF distribution systems

Description & Key Features

DESCRIPTION

The MC-HY9200MD-8RF is a high-performance DVB-S/S2 satellite digital modulator developed for professional RF headend installations. It receives satellite services through 8 DVB-S/S2 tuner inputs and can also process IP streams over a Gigabit network interface, enabling flexible channel aggregation for multi-room TV distribution systems. The platform supports SPTS/MPTS stream processing, up to 256 IP stream addresses, service selection, CA PID filtering, PID remapping and PSI/SI information editing. With digital modulation output across 8 RF frequencies and compatibility with major international standards, including DVB-C, DVB-T/T2, DTMB, ISDB-T and optional ATSC, it is suitable for hotels, hospitals, residential buildings and commercial broadcast distribution applications.

01 Satellite and IP Input Architecture Receives 8 DVB-S/S2 tuner inputs while also supporting IP stream input through a Gigabit RJ45 interface.	02 Multi-Standard RF Output Delivers digital RF output on 4 or 8 frequencies with support for DVB-C, DVB-T/T2, DTMB, ISDB-T and optional ATSC.
03 Advanced Stream Processing Supports UDP/RTP input, SPTS/MPTS processing and up to 256 IP stream addresses for flexible source management.	04 Professional Service Control Provides CA PID filtering, PID remapping, PSI/SI editing and service selection for accurate channel distribution.
05 Flexible Installation Designed for 1U rack, wall-mounted or desktop deployment in professional headend environments.	06 Web-Based Management Supports PC web interface operation, cloud services and remote configuration for simplified system control.

Application Note

A professional satellite-to-RF headend solution for facilities requiring DVB-S/S2 reception, IP stream processing and multi-standard RF modulation over existing coaxial distribution infrastructure.

Technical Specifications

BASE UNIT PARAMETER

Size	318(L) x 260(W) x 44(H) mm
Installation	1U 19-inch rack, wall-mounted, desktop
Working Temperature / Humidity	-10°C to +45°C, 40% to 70%
Storage Temperature / Humidity	-40°C to +70°C, 40% to 95%
Supply Voltage	DC 12V
Maximum Current	7000mA
Module Input Port - Cards	2
Module for Each Card	4 tuner input card

IP INPUT

IP Input Port	1 Gigabit RJ45 network port
Input Format	Supports UDP/RTP protocol input, SPTS/MPTS stream processing and 256 IP addresses

RF OUTPUT

Output Port	F female connector, 1 RF output and 1 -20dB test port output
Output Standard	DVB-C (J.83 A/B/C), DVB-T/T2, DTMB, ISDB-T, ATSC optional
RF Frequency Range	50-870MHz, minimum step 1MHz
Output Level	≥105dBμV, 0-20dB adjust range, step 0.5dB
Out Band Rejection	≥60dB
Output Impedance	75Ω
Output Frequencies	8 frequencies optional

Modulation Parameters

J.83A/C

Standard	Annex A/C
Frequencies	8
Constellation	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
MER	≥36dB
Symbol Rate	3.600-6.960Mpsps
Output Frequency Range (Adjustable)	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
Out Band Rejection	≥60dB
Output Impedance	75Ω

DTMB

Standard	GB20600-2006
Frequencies	8
Constellation	QPSK, QAM16, QAM64, QAM4_NR, QAM32
FFT	Single carrier, multi-carrier
Sync Frame	420, 595 and 945
Code Rate	0.4, 0.6, 0.8
Interweaving Depth	None, 240, 720
MER	≥36dB
Output Frequency	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
With Out Band Rejection	≥60dB
Output Impedance	75Ω

Modulation Parameters

ISDB-T	
Standard	ANSI/SCTE 2001-B004
Frequency	8
Constellation	QAM4, QAM16, QAM64
FFT	2K, 4K, 8K
Guard Interval	1/4, 1/8, 1/16, 1/32
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Interweaving Depth	None, 2K, 4K, 8K
Bandwidth	6MHz
MER	≥36dB
Output Frequency	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
With Out Band Rejection	≥60dB
Output Impedance	75Ω

DVB-T	
Standard	ETS 300 744
Frequency	8
Constellation	QAM4, QAM16, QAM64
FFT	2K, 4K, 8K
Guard Interval	1/4, 1/8, 1/16, 1/32
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Interweaving Depth	None, 2K, 4K, 8K
Bandwidth	6MHz, 7MHz, 8MHz
MER	≥36dB
Output Frequency	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
With Out Band Rejection	≥60dB
Output Impedance	75Ω

Modulation Parameters

DVB-T2	
Standard	EN 302 755
Frequencies	8
Constellation	QAM4, QAM16, QAM64, QAM256
FFT	2K, 2K, 4K, 8K, 16K
Guard Interval	1/4, 1/8, 1/16, 1/32
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Interweaving Depth	Supports all 3 Time Interleave options without sub-slicing and no frame jump
Bandwidth	1.7MHz, 6MHz, 7MHz, 8MHz, 10MHz
MER	≥36dB
Output Frequency	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
With Out Band Rejection	≥60dB
Output Impedance	75Ω

ATSC	
Standard	8VSB
Frequencies	8
Bandwidth	6MHz
MER	≥36dB
Output Frequency	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
With Out Band Rejection	≥60dB
Output Impedance	75Ω

Modulation Parameters

J.83B	
Standard	Annex B
Frequencies	8
Constellation	64QAM, 256QAM
Symbol Rate	5.05641 MS/s (64QAM), 5.360537 MS/s (256QAM)
MER	≥36dB
Output Frequency Adjustment Range	50-999.999MHz, minimum step 0.001MHz
Output Level	110dBμV ±3dB
Output Level Adjustment Range	0 to -20dB
With Out Band Rejection	≥60dB
Output Impedance	75Ω