iM50

Multi-Protocol IP to RF Modulator

DVB-C CABLE DVB-T TERRESTRIAL ISDB-T ATSC

UDP/RTP/RTSP/HLS/HTTP/SRT

iM50 Multi-protocol IP to RF Modulator supports IP stream inputs over **UDP/RTP/RTSP/HLS/HTTP/SRT**. It is an ideal solution for scenarios with a large number of displays covering nearly any distance, including small-to-medium scale digital TV broadcasting systems, hotels, stadiums, campuses, entertainment facilities and educational projects with limited budgets. Designed for high-channel-density video distribution engineering projects, it enables rapid deployment, wide IP compatibility and simultaneous multi-carrier RF outputs, supporting global standards such as **DVB-C**, **DVB-T**, **ISDB-T** (Brazil, Japan) and **ATSC**.

iM50 is a multi-functional DVB-C/DVB-T/ISDB-T/ATSC Modulator integrating multiple Gigabit Ethernet inputs, transport stream multiplexing and RF modulation channels within a 1U rack-mount chassis. Users can flexibly select different modulator modules to enable corresponding RF output standards.

Business Benefits

- Optimized modulated channel resource utilization to carry more TV services within limited spectrum
- Broad multi-protocol IP compatibility, easily accessing UDP/RTP/RTSP/HLS/HTTP/SRT streaming sources
- Standard built-in RJ45 interfaces with optional SFP modules, supporting flexible electrical and optical network access
- High availability architecture ensures continuous stable operation of all TV services
- Compact integrated design saves rack space and reduces overall front-end construction investment

Features

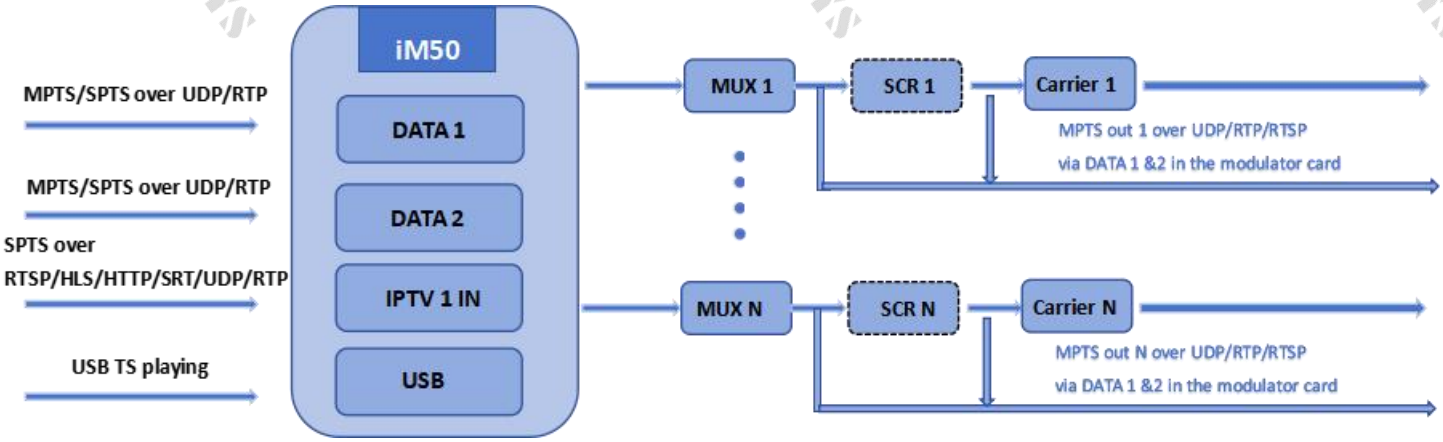
- Multi-protocol IP inputs over **UDP/RTP/RTSP/HLS/HTTP/SRT**
- SPTS input over UDP/RTP/RTSP/HLS/HTTP/SRT via the IPTV1 IN port in the front panel
- MPTS/SPTS input over UDP and RTP via the 2 DATA ports in the modulator board
- **Multi-type order options for modulator cards, DVB-C, DVB-T, ATSC and ISDB-T**
- Support about 100Mbps-300Mbps data processing (IPTV1IN port in the front panel, up to the actual protocols etc) and max 840Mbps data processing(2 DATA ports in the modulator card)
- MPTS output over UDP/RTP via 2 DATA ports in the modulator card as mirror of carriers output
- IPTV1 IN port in the front panel is an unidirectional IP-input port; 2 DATA ports in the modulator card are the bidirectional IP-input/output ports.
- IPTV1, RJ45 Port; DATA1 & DATA2, RJ45 Port, **Optiona**l SFP Port
- TS playing via USB Disk, USB 3.0
- Support the remote reboot in Web GUI
- Web management, Update via web

Main Application

- Hotel CATV System: Convert multi-protocol IP streams to RF for existing coaxial guest TV networks
- Campus, Hospital & Office Building Digital TV System
- Residential Community Cable TV Front-end
- Commercial Complex & Public Venue TV Broadcasting
- Private Enterprise Custom Live TV Broadcast System

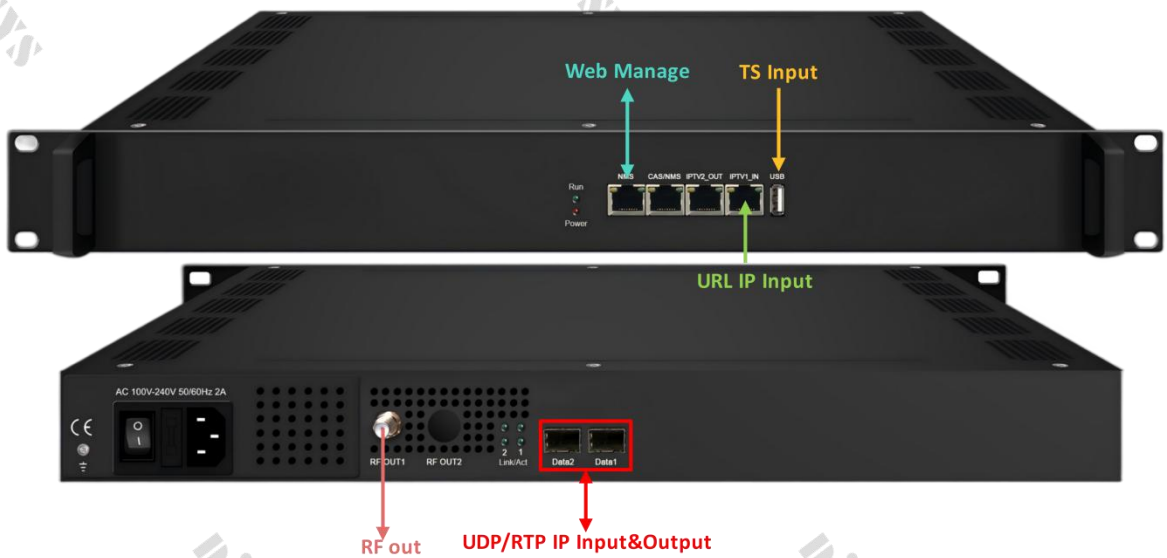
 ¦ www.dibvision.com ¦ sales@dibvision.com ¦ +86 571 8971 4580 ¦ Skype:dibdvb

Principle Chart



Modulation Mode	RF Output Carriers	Max UDP/RTP IP IN (DATA1 & DATA2)	Max URL IN (IPTV1)	Max IP OUT (DATA1 & DATA2)	Bandwidth	Scrambler
DVB-C	16	512*IP	64*IP	16*IP	192Mhz	√
	32	1024*IP	64*IP	32*IP	384Mhz	√
DVB-T	8	256*IP	64*IP	8*IP	192Mhz	×
	16	512*IP	64*IP	16*IP	384Mhz	×
ISDB-T	8	256*IP	64*IP	8*IP	192Mhz	×
	16	512*IP	64*IP	16*IP	384Mhz	×
ATSC	8	256*IP	64*IP	8*IP	192Mhz	×

Input/Output Interface



TECHNICAL SPECIFICATIONS

IP INPUT

Connector	DATA1, DATA2, IPTV1, 100/1000M Ethernet Ports
IP Protocols	DATA1&DATA2: MPTS/SPTS input over UDP and RTP IPTV1: SPTS input over UDP/RTP/RTSP/HLS/HTTP/SRT
TS Files	Support TS playing via USB Disk, USB 3.0

IP OUTPUT

Connector	DATA1, DATA2, 100/1000M Ethernet Ports
IP Output	Support MPTS output over UDP/RTP

Modulator OUTPUT

RF Frequency	50~960MHz, 1KHz step
MER	≥40dB
RF output level	-20~+10dBm (87~117 dBμV), 0.1dB step for all carriers
Multiplexing	PID remapping (automatically or manually) Accurate PCR adjusting Generate PSI/ SI table automatically

16/32 DVB-C Modulator

Connector	1 F type output ports for 16/32 non-adjacent carriers, 75Ω
Standard	EN300 429/ITU-T J.83A/B
Symbol Rate	J.83A: 3600~7200Ksps, 1ksps stepping J.83B: 5057Ksps (64QAM), 5361Ksps (256QAM)
Constellation / Bandwidth	J.83A: 16/32/64/128/256QAM, 8M J.83B: 64/256QAM, 6M
Scrambling	Maximum simulcrypt CA: 6 Standard: ETR289, ETSI 101 197, ETSI 103 197 Connection: Local/remote connection

8/16 DVB-T Modulator

Connector	1 F type output ports for 8/16 non-adjacent carriers, 75Ω
Standard	ETSI EN300 744
Constellation	QPSK/16QAM/64QAM
Bandwidth	6/7/8 MHz
Trans mode	2K/4K/8K
FEC	1/2, 2/3, 3/4, 5/6, 7/8

8/16 ISDB-T Modulator

Connector	1 F type output ports for 8/16 non-adjacent carriers, 75Ω
Standard	ARIB STD-B31
Constellation	QPSK, 16QAM, 64QAM
Bandwidth	6 MHz
Guard Interval	1/32, 1/16, 1/8, 1/4
Transmission Mode	2K, 4K, 8K
Code rate	1/2, 2/3, 3/4, 5/6, 7/8

8 ATSC Modulator

Connector	1 F type output ports for 8 non-adjacent carriers, 75Ω
Standard	ATSC A/53
Constellation	8VSB
Bandwidth	6 MHz
FEC	RS(208 188)+Trellis

Control

Remote Device Control	1x RJ45 (100Base-T FE) GUI-based menu via standard web browser

Environment

Power Supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz
Dimensions	368mm×482mm×44mm (WxLxH)
Operating Temp.	0~45℃
Storage Temp.	-20~80℃

