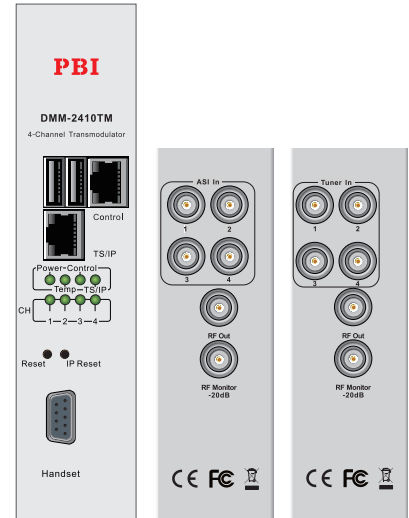


DMM-2410TM Series 4-Channel Transmodulator module

DMM-2410TM is a high density 4-Way modulator and trans-modulator module. It can receive up to 4 independent TS streams from Tuners, ASI or TS/IP inputs, modulates them to 4 adjacent DVB-C RF carries. Different types of inputs are available as factory options, such as DVB-S/S2, DVB-C/T and ASI. With its built-in remux function, DMM-2410TM can accept TS from Tuners, ASI or TS/IP inputs, and then filtering, re-multiplexing, building 4 new TS for modulation. DMM-2410TM could be used either as a 4-way IP QAM modulator or a 4-way trans-modulator.

Main features

- 4 independent TS inputs from DVB-S2/C/T tuners or TS/IP or ASI
- Built-in remux for TS from Tuner, ASI and TS/IP
- TS/IP GbE input supports RTP/UDP, IGMP V2/V3, Multicast/Unicast
- Service and PID filtering and re-multiplexing
- PSI/SI re-generation, NIT and LCN Insertion
- 4 adjacent DVB-C QAM or DTMB (factory option) carriers over 48 ~ 996MHz
- Web remote control and SNMP supervision
- Software update via Ethernet or USB port



Order Information

Interface	Model	DMM-2410TM				DMM-2410TM			
		30S2C	30T2C	30AC	30IC	30S2D	30T2D	30AD	30ID
Tuner input	DVB-S/S2	x4				x4			
	DVB-T/C		x4				x4		
ASI-In				x4				x4	
Built-in Remux		•	•	•	•	•	•	•	•
TS/IP In		x4	x4	x4	x4	x4	x4	x4	x4
RF-Out		x4	x4	x4	x4	x4	x4	x4	x4
Modulation		DVB-C	DVB-C	DVB-C	DVB-C	DTMB	DTMB	DTMB	DTMB

Specification

DVB-S/S2 Tuner Input (factory option)		LNB Band Selection Tone	0/22KHz selectable
Connector Type	4×F type female 75Ω	DVB-C Tuner Input (factory option)	
Standard	EN 300 421(DVB-S), EN 302 307 (DVB-S2)	Connector Type	4×F type female 75Ω
Frequency Range	950~2150MHz	Standard	EN 300 429
Input Level	-25~-65dBm	Input Frequency Range	51~862MHz
Symbol Rate	2~45MBaud	Input Level	45~95dBμV @ 256QAM, 6.875MBauds
Roll-off Factor	DVB-S QPSK: 0.35 DVB-S2 8PSK: 0.35, 0.25, 0.2	Symbol Rate	1~7MBauds
FEC Code Rate	DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10	Constellation	16/32/64/128/256QAM
LNB Polarity Selection Voltage	13V for Vertical, 18V for Horizontal, 13V for Vertical, 18V for Horizontal, 500mA Max	Bandwidth	6MHz/7MHz/8MHz
		Return Loss	7dB (typ.)
		DVB-T Tuner Input (factory option)	
		Connector Type	4×F type female 75Ω
		Standard	EN 300 744(DVB-T)
		Input Frequency	104~862MHz (VHF/UHF)

Input Level	-20~-70dBm
Constellation	QPSK, 16QAM, 64QAM
Bandwidth	6MHz/7MHz/8MHz
FFT Mode	2K/8K
Guard Interval	1/4, 1/8, 1/16, 1/32
FEC Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Return Loss	7dB
ASI Input (factory option)	
Connector Type	4×BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Input Bit Rate	≤216Mb/s
TS over IP Input (software option)	
Connector Type	1×RJ-45, 100/1000 Base-T
Protocol	RTP/UDP, IGMP V2/V3, Multicast/Unicast
Max. Bit Rate	320Mb/s (total bit rate of 4 TS streams)
TS Processing of Built-in Re-Multiplexer	
Max. Input Bit Rate	4×216Mb/s
Max. Output Bit Rate	4×108Mb/s
Package Length	188/204
Re-multiplexing functions	PSI auto generation Service and PID remux, filtering and re-mapping NIT insertion and LCN edition EIT Processing
DVB-C Modulation	
Standard	J.83 Annex A, (Annex C available upon request)
Constellation	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
Symbol Rate	2.5~6.99MS/s
BER	≤10E-9

MER	40dB (typical) (with Tester Equalizer enabled)
DTMB Modulation	
Constellation	4QAM, 16QAM, 64QAM
Bandwidth	8MHz
Sub Carriers	1 or 3780
Guard Interval	1/4, 1/7, 1/9
FEC BCH LDPC	0.4, 0.6, 0.8
Time Inter-leaver Depth	240
MER	30 dB typ. (with Tester Equalizer enabled)
RF output	
Connector Type	2×F type female (1 for -20dB Monitoring), 75Ω
Frequency Range	48~996MHz with a step of 1kHz adjustable
Total Output Level	92~109dBμV/1ch or 83~100dBμV/4ch with a step of 1dB adjustable
Spurious Rejection	55dB (typical)
Return Loss	-10dB (typical)
Control & Monitoring	
Connector Type	1×RJ-45, 10/100 Base-T
Remote Control	HTTP Web Interface and SNMP
Software Upgrade	FTP and Telnet through IP
Physical	
Power Supply	DC 3.3V/5V/12V, supplied by DMM-1100MF chassis
Power Consumption	25W Max.
Operating Temperature	0 ~ 45°C
Storage Temperature	-10 ~ 55°C
Operating Humidity	10 ~ 90% Non-condensed

Block Diagram

DMM-2410TM Functional Block Diagram

