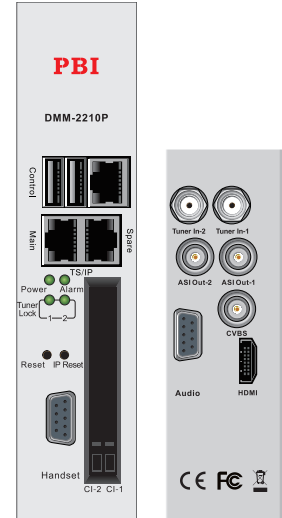# DMM-2210P
Twin Professional HD/SD IRD and Processor Module

DMM-2210P is a high-density, modular professional decoder receiver equipped with two independent tuners, which can be either of DVB-T, DVB-S/S2/S2X, DVB-C, DTMB, ISDB-T and ATSC types. It supports a wide range of application by combining dual tuner processing capability with MPEG2, H.264, SD/HD, AVS+ and H.265 video decoding and industry standard outputs including ASI, CVBS, HDMI, TS/IP. It has 2 DVB common interface slots capable of working with most of well-known CAS in the market to de-crypt multiple pay TV services. The compact dual-tuner design and the powerful decoding ability make DMM-2210P one of the most competitive modules in DMM-1100 series.

Main features

- Twin-tuner supporting DVB-S/S2/S2X/C/T, DTMB and ATSC demodulations
- Single channel decoder from 2 TS of twin tuners
- SD/HD MPEG-2(MP@ML&MP@HL) and MPEG-4/H.264(AVC high profile level 4.1)
- AVS+ and H.265 digital Video decoding
- 2x DVB-CI Slots, Multi Programs, BISS 1 and BISS E decryption
- Support services re-mux/filtering and 204/188 packet length
- UDP/RTP & Unicast/Multicast SPTS and MPTS over IP Input/Output
- Support VBI TELETEXT, EBU/ DVB Subtitle, Closed Caption
- Dynamic PMT detection and automatic updating
- Multiple Analog and Digital Outputs, ASI, CVBS, HDMI, TS/IP
- Support NTP (Network Time Protocol)
- Remote Control and Supervision by SNMP and HTTP WEB
- RSSI, received Eb/No & BER monitoring
- Easy firmware upgrade via USB port
- Automatic configuration backup when power-off

Specification

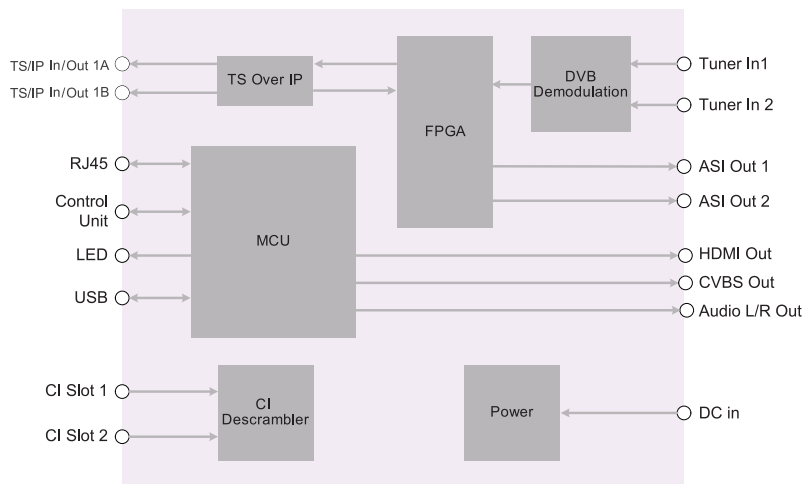| Tuner Input	
DVB-S/S2/S2X Tuner Input	
Connector Type	2×F type female 75Ω for input
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rate	2~45MS/s for QPSK and 8PSK
Rolling-off Factor	DVB-S QPSK: 0.35 DVB-S2 8PSK: 0.35, 0.25, 0.2 DVB-S2X: 0.35, 0.25, 0.2, 0.15, 0.1, 0.05
Punctured Rates	DVB-S2 8PSK: 2/3, 3/4, 3/5, 5/6, 8/9, 9/10 DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 6/7, 7/8 DVB-S2X: 64800 bits FECFRAME VCM and ACM
LNB Polarization	0, 13V, 18V selectable
LNB Band Switching Tone	0/22KHz selectable
DiSEqC	DiSEqC 1.0
DVB-C Tuner Input	
Connector Type	2×F type female 75Ω for input
Input frequency	51~862MHz
Input level	45~75dBuV
Symbol rate	1~7MS/s (ITU J.83 Annex A)
Constellation	16/32/64/128/256QAM
Bandwidth	6/7/8MHz
Input return loss	7dB (typ.)

DVB-T Tuner Input	
Connector Type	2×F type female 75Ω for input
Input frequency	104~862MHz (VHF/UHF)
Input level	-20~-70dBm
Constellation	QPSK/16-QAM/64-QAM
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
Input return loss	7dB (typ.)
TS over IP	
Connector Type	2×RJ45, 10/1000M
Effective bit rate	300Mb/s for 2 channel IP in and 64 channels IP out
Protocol	UDP/RTP, Multicast/Unicast, IGMPv2, ARP
Uni/Multicast	support maximum 32 channel uni/multicast output
TS Processing	
TS input	Tuner1, Tuner2 or TS/IP input
TS output	2 independent ASI outputs
Re-mux	Re-mux services, edit PSI/SI
BISS descramble	BISS-1, BISS-E
CI slots	2×PCMCIA Slots, comply with major CAMs in market

ASI Output

Connector Type	2×BNC Female, 75Ω
Standard	DVB-ASI, EN50083-9
Output bit rate	≤160Mb/s

HDMI Output

Standard HDMI	1×HDMI 1.4 interface
Video Resolution	1080i×60, 1080i×59.97, 1080i×30, 1080i×29.97, 1080i×25, 720p×60, 720p×59.94, 720p×50, 480p×60, 576p×50, 576i×25, 480i×29.97
Audio Embedded	1×Stereo or AC3 Loop Through

Digital Video/Audio Processing

Video Standard	MPEG-2(MP@ ML for SD, MP@HL for HD), MPEG 4/H.264, AVS+ and H.265, AVC high profile level 4.1
Audio Standard	MPEG-1 Layer-I/II, MPEG-2 Layer-II LC-AAC, HE-AAC AC3, AC3+

Analog Video Output

Connector Type	1×BNC female
Video Standard	NTSC, PAL, and SECAM
Video bit rate	≤50Mb/s

Analog Audio Output

Connector Type	1×DB9, 600Ω, has a DB-9 to XLR converter
Output type	Left, Right, Dual Mono, Stereo

Baseband Data Output

Subtitle	DVB/EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608- to-708

A/V monitor

Monitor Port	HDMI, CVBS
Monitor Condition	User define

Control & Monitoring

Connector Type	1×RJ45, 10/100M, for equipment IP Control
Remote Control	SNMP, HTTP Web
Local Control	Handheld Programmer Unit
Software Upgrade	1×USB Port or FTP loader

General

Power supply	DC 3.3V/5V/12V
Power consumption	20W
Operating temperature	0~45℃
Storage temperature	-10~60℃
Operating Humidity	10~90%, non-condensed

Block Diagram

DMM-2210P Functional Block Diagram

Order Information

Interface	Model	DMM-2210P-S2	DMM-2210P-T
Input	DVB-S2/S	×2	
	DVB-T/C		×2
	CI	×2	×2
	TS/IP	●	●
Output	HDMI	●	●
	CVBS&Audio L/R	●	●
	ASI	×2	×2
	TS/IP	●	●

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59