

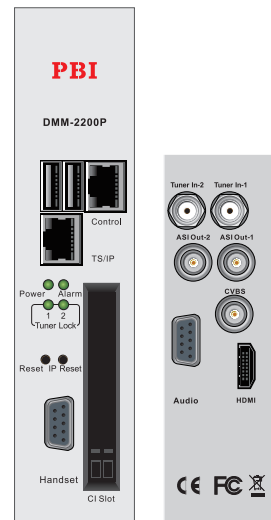
## DMM-2200P Series

### Twin Professional HD/SD IRD and Processor Module

DMM-2200P is a high-density, cost-effective modular receiver equipped with two independent tuners, which can be chosen respectively from DVB-T2/S2/S/C/T/T2 inputs. DMM-2200P supports a wide range of application by combining dual tuner processing capability with MPEG2, H.264, SD/HD 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-2200P one of the most competitive modules in DMM1000 series.

#### Main features

- SD/HD MPEG-2(MP@ML&MP@HL) and MPEG-4/H.264(AVC high profile level 4.1) digital Video decoding
- Twin-tuner design, wide tuner options from DVB-S2/S/C/T/T2
- 2x DVB-CI Slots, Multi Programs, BISS 1 and BISS E decryption
- Support services re-mux/filter and 204/188 transfer
- UDP/RTP & Unicast/Multicast SPTS and MPTS over IP I/O
- 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
- Quick upgraded via USB port
- Auto save settings when sudden power-off



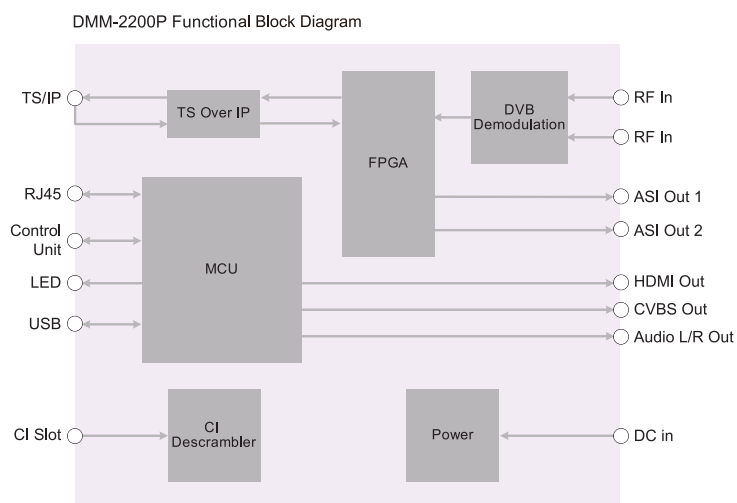
#### Specification

|                             |                                                                                                                                           |                      |                                                                                      |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------|
| <b>Tuner Input</b>          |                                                                                                                                           | Input frequency      | 104~862MHz (VHF/UHF)                                                                 |
| DVB-S/S2 Tuner Input        |                                                                                                                                           | Input level          | -20~-70dBm                                                                           |
| Connector Type              | 2×F type female 75Ω for input                                                                                                             | Constellation        | DVB-T: QPSK/16-QAM/64-QAM<br>DVB-T2: QPSK, 16QAM, 64QAM, 256QAM                      |
| Input Frequency Range       | 950~2150MHz                                                                                                                               | Bandwidth            | 6MHz/7MHz/8MHz                                                                       |
| Input Level                 | -25~-65dBm                                                                                                                                | FFT mode             | DVB-T: 2K/8K<br>DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K                                     |
| Symbol Rate                 | 2~45MS/s for QPSK and 8PSK                                                                                                                | Guard interval       | DVB-T: 1/4, 1/8, 1/16, 1/32<br>DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64, 1/128 |
| Rolling-off Factor          | DVB-S QPSK: 0.35<br>DVB-S2 8PSK: 0.35, 0.25, 0.2                                                                                          | FEC code rate        | DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8<br>DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6               |
| Punctured Rates             | DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8<br>DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10<br>DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 | Input return loss    | 7dB (typ.)                                                                           |
| LNB Polarization            | 0, 13V, 18V selectable                                                                                                                    | <b>TS over IP</b>    |                                                                                      |
| LNB Band Switching Tone     | 0/22KHz selectable                                                                                                                        | Connector Type       | 1×RJ45, 10/100M for TS/IP                                                            |
| DiSEqC                      | DiSEqC 1.0                                                                                                                                | Useful bit rate      | 70Mb/s for 10/100M                                                                   |
| <b>DVB-C Tuner Input</b>    |                                                                                                                                           | Protocol             | UDP / RTP, Multicast / Unicast, IGMPv2, ARP                                          |
| Connector Type              | 2×F type female 75Ω for input                                                                                                             | Uni/Multicast        | support maximum 32 channel uni/multicast output                                      |
| Input frequency             | 51~862MHz                                                                                                                                 | <b>TS Processing</b> |                                                                                      |
| Input level                 | 45~75dBuV                                                                                                                                 | TS input             | Tuner1, Tuner2 or TS/IP input                                                        |
| Symbol rate                 | 1~7MS/s (ITU J.83 Annex A)                                                                                                                | TS output            | 2 independent ASI outputs                                                            |
| Constellation               | 16/32/64/128/256QAM                                                                                                                       | Re-mux               | Re-mux services, edit PSI/SI                                                         |
| Bandwidth                   | 6/7/8MHz                                                                                                                                  | BISS descramble      | BISS-1, BISS-E                                                                       |
| Input return loss           | 7dB (typ.)                                                                                                                                |                      |                                                                                      |
| <b>DVB-T/T2 Tuner Input</b> |                                                                                                                                           |                      |                                                                                      |
| Connector Type              | 2×F type female 75Ω for input                                                                                                             |                      |                                                                                      |

|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
| CI slots                              | 2×PCMCIA Slots, comply with most major CAMs in market                                                |
| <b>ASI Output</b>                     |                                                                                                      |
| Connector Type                        | 2×BNC Female, 75Ω                                                                                    |
| Standard                              | DVB-ASI, EN50083-9                                                                                   |
| Output bit rate                       | ≤160Mb/s                                                                                             |
| <b>HDMI Output</b>                    |                                                                                                      |
| Standard HDMI                         | 1×HDMI 1.3 interface (partial)                                                                       |
| Video Resolution                      | 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 Loop Through                                                                             |
| <b>Digital Video/Audio Processing</b> |                                                                                                      |
| Video Standard                        | MPEG-2(MP@ ML for SD, MP@HL for HD), MPEG 4/H.264 AVC high profile level 4.1                         |
| Audio Standard                        | MPEG-1 Layer-I/II, MPEG-2 Layer-II                                                                   |
|                                       | LC-AAC, HE-AAC                                                                                       |
| <b>Analog Video Output</b>            |                                                                                                      |
| Connector Type                        | 1×BNC female                                                                                         |
| Video Standard                        | NTSC, PAL, and SECAM                                                                                 |
| Video bit rate                        | ≤50Mb/s                                                                                              |

|                                 |                                           |
|---------------------------------|-------------------------------------------|
| <b>Analog Audio Output</b>      |                                           |
| Connector Type                  | 1×DB9, 600Ω, has a DB-9 to XLR converter  |
| Output type                     | Left, Right, Dual Mono, Stereo            |
| <b>Baseband Data Output</b>     |                                           |
| Subtitle                        | DVB/EBU                                   |
| VBI                             | Teletext, WSS                             |
| Closed Caption                  | EIA 608, EIA 708, EIA 608-to-708          |
| <b>A/V monitor</b>              |                                           |
| Monitor Port                    | HDMI, CVBS                                |
| Monitor Condition               | User define                               |
| <b>Control &amp; Monitoring</b> |                                           |
| 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                  |
| <b>General</b>                  |                                           |
| Power supply                    | DC 3.3V/5V/12V                            |
| Power consumption               | 20W                                       |
| Operating temperature           | 0~45°C                                    |
| Storage temperature             | -10~60°C                                  |
| Operating Humidity              | 10~90%, non-condensed                     |

## Block Diagram



## Order Information

| Interface |                | Model | DMM-2200P-S2 | DMM-2200P-T2 |
|-----------|----------------|-------|--------------|--------------|
| Input     | DVB-S2/S       |       | ×2           |              |
|           | DVB-T2/T/C     |       |              | ×2           |
|           | CI             |       | ×2           | ×2           |
|           | TS/IP          |       | •            | •            |
| Output    | HDMI           |       | •            | •            |
|           | CVBS&Audio L/R |       | •            | •            |
|           | ASI            |       | ×2           | ×2           |
|           | TS/IP          |       | •            | •            |