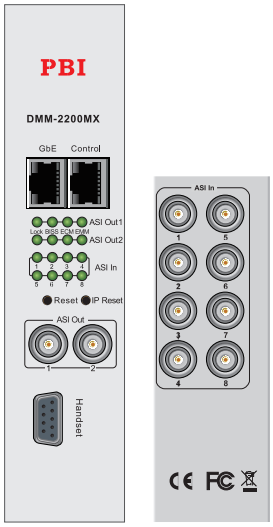
DMM-2200MX / DMM-2200DX Series
Re-Multiplexer and Scrambler Module



DMM-2000MX/DX is a series of high density advanced DVB transport stream re-multiplexer and scrambler modules. It can receive SPTS and MPTS from both GbE and ASI input ports. By using the user friendly web control interface, the input TS is demuxed to SPTS, then routed to the ASI and GbE output ports to build new SPTS and MPTS with PSI/SI regeneration or pass through. It can support up to maximum 256 PID or 32 TV services per TS with re-mapping, bypass, filtering functions. PCR jitter is improved by PCR correction and re-stamping features.

As an advanced option, DMM-2200MX/DX can provide with DVB scrambling functions. It can support BISS-1, BISS-E and Simulcrypt modes by using the DVB common scrambling algorithm and built-in CW generator.

With its multiple TS over ASI and IP input and output ports, flexible configuration and powerful TS processing ability, DMM-2000MX/DX is a key routing equipment that links the TV sources from professional IRDs and encoders to DVB modulators in the headend system.

Features

- MPEG2 and MPEG4/H.264 TS Re-Multiplexing
- BISS 1/E, Simulcrypt mode Scrambling in advanced mode
- TS Input and Output from both ASI and IP
- ASI Input or Output up to 160Mbps
- TS/IP through GbE port up to 860Mbps input/output
- TS/IP in UDP/TCP/RTP, Multicast and Unicast modes
- Null packet insertion for TS/IP transmission
- Maximum processing of 32 services or 256 PIDs per TS
- Service, component, data de-multiplexing, filtering and re-multiplexing
- PCR re-generation and correction function
- PID and service remapping, bypass, filtering, conflict detection
- PSI/SI re-generation, insertion, NIT and SDT edition
- EIT bypass or re-generation
- TS Analyzer with TS, service bit rate and alarm supervision
- Web remote control and SNMP supervision

Order Information

Model / Interface	DMM-2200MX	DMM-2200MX-TP	DMM-2200DX	DMM-2200DX-TP
ASI In	×8	×8	×2	×2
ASI Out	×2	×2	×8	×8
Remultiplexer	•	•	•	•
DVB Scrambling		•		•
TS/IP (GbE)	×1	×1	×1	×1
Ethernet Management	×1	×1	×1	×1
RS-232	×1	×1	×1	×1
TS/IP In	32	32	32	32
TS/IP Out	2	2	8	8

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Specification

ASI Ports	
Number	10
Input bit rate	≤ 213Mb/s
Output bit rate	≤ 160Mb/s
Data mode	BYTE or BURST auto-detection
Packet Length	188 /204 bytes, auto-detection
Signal Level	200-800mVpp±10%
Connector type	BNC Female, 75Ω
TS over IP	
Transmission mode	Multicast or Unicast , IGMP V2/V3
Number of streams	64, 128 or 256
Input and output Bit Rate	Maximum 420Mb/s, future extension to 860Mb/s
Encapsulation	UDP or UDP/RTP 1-7 TS packets in each IP packet
FEC(option)	Pro MPEG COP#3 (SMPTE 2022) future evolution
PCR clock reference	PCR regeneration
Connector type	1000M Ethernet RJ-45 electrical
TS Processing	
Maximum throughput	21Gb/s
Maximum TS	64 TS from IP and 8 TS from 8 ASI
Maximum service	64 services from each of 8 ASI port, 32 services if PCR regeneration 64 services from each of 64 TS over IP
Service management	Local service building Live service input pass through, stop, filtering, sharing and redundancy Service proprieties' edition and modification
Component management	Local component building Live component input pass through, stop, filtering, sharing, redundancy

EMM, ECM and private data	Crossing and filtering
Bandwidth management (option)	Transport stream and service bit rate view Quality of service definition, service policing, Overflow prevention
PSI/SI and Data	
PSI/SI	Regeneration and edition tables and descriptors through on line editor Tree structure view in XML format
EIT	Pass through, regrouping, automatic remapping of TS ID, ON_ID and Service ID in the EITs from different ASI and IP inputs
Data(option)	Opportunist data insertion to replace null packets
DVB Scrambling	
Scrambling mode	Simulcrypt, BISS-1, BISS-E
Simulcrypt number per TS	Maximum 4
Processing capability	<54Mb/s per TS
EMM	Maximum number 64; Protocol TCP or UDP; Maximum bandwidth 8Mb/s
ECM	Maximum number 64; Protocol TCP; Maximum bandwidth 3.8Mb/s
Control & Monitoring	
Connector Type	RJ-45, 10/100 Base-T
Local Control	16 LED, Support external key pad with LCD display and 6-key
Remote Control	HTTP Web, SNMP future extension
Equipment Upgrade	HTTP web page
Physicals	
Power Supply	DC 5V, 5A
Power Consumption	25W
Temperature	Operating 0~45℃; Storage -10~60℃
Operating Humidity	10~90%, non-condensed

Block Diagram