

7880DM Series

Professional ATSC/DVB-T/T2/DVB-C/C2/ISDB-Tb/DVB-S/S2 Demodulators



The 7880DM Series is a complete hardware-based solution for demodulating digital terrestrial ATSC/8VSB/ISDB-Tb, QAM/DVBC/DVB-C2 cable signals DTV signals or digital DVB-S/S2 satellite signals. With a modular form factor, the 7880DM represents one of the highest density and most flexible solutions in the industry.

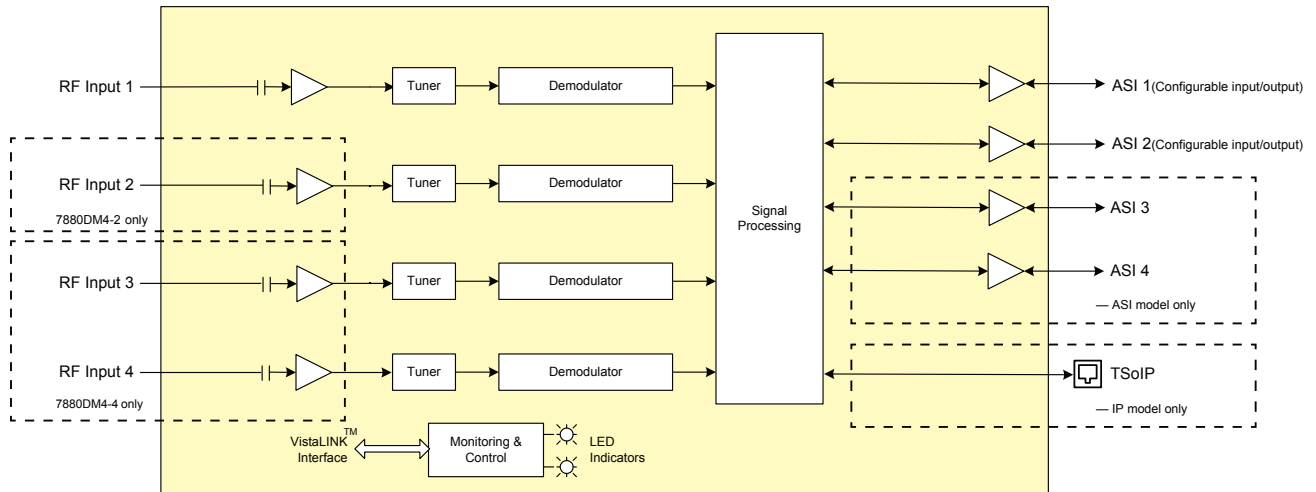
Applications include signal reception for satellite, cable, DTH and IPTV providers, or any other small to large head-end operators who need to receive and distribute local content. The 7880DM can provide ASI and IP output, ideal for turnaround, transcoding, transporting, monitoring or other applications where the received signal remains in the compressed domain. For baseband

output, the demodulator may be coupled with an Evertz decoder module, providing a full receiver solution (for more info, check CRP-9000 platform for SDI decoding).

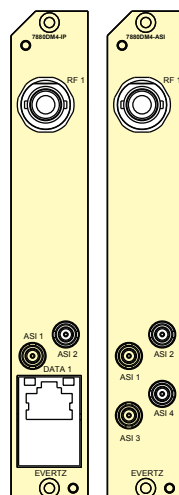
Monitoring parameters such as EsNo, RF Power, MER, BER and packet errors present a convenient solution for broadcasters and cable companies who wish to not only receive but also to remotely monitor signal quality. These parameters as well as full control of the demodulator are relayed over SNMP, for convenient remote access using Evertz' own VistaLINK® PRO SNMP monitoring and control package.

► Features & Benefits

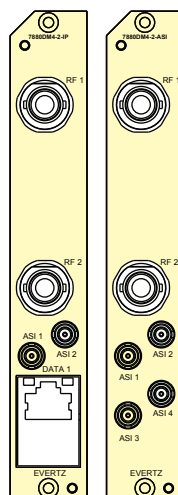
- Modular design, allowing flexible configurations along with easy system reconfiguration and service
- Up to four units may be mounted in the 7801FR 1RU chassis, capable of receiving 16x signals in 1RU
- Up to fourteen units may be mounted in the 7800FR 3RU chassis, capable of receiving 56x signals in 3RU
- Local control panel option available in 1RU frame
- Remote control panel option available in 3RU frame
- Futureproof with upgrade paths to support future modulation technologies
- Standard support for advanced modulation schemes, including DVB-S2 with 16APSK and 32APSK (7880DM-LB version)
- Available two DVB-CI slots for conditional access modules (7880DM2-LB2 and 7880DM2-DVBC2 versions)
- Quad 8VSB tuners with tuning capabilities of pre-stored physical channels (7880DM-VSBQAM version)
- Quad DVB-T/T2 off-air or DVB-C/C2 cable signals (7880DM-DVBT/T2 version)
- Quad ISDBTb off-air signals (7880DM-ISDBT version)
- SMPTE ST 2022-1 and -2 compliant multiple TSolP outputs per tuner
- Signal quality monitoring, including MER, BER and TR101-P1 errors
- Standard support for advanced transport stream processing including service filtering and output bit rate control
- Control through web browser or SNMP using third-party application or Evertz' SNMP control and monitoring software
- Supports onboard input auto-failover between various inputs including RF, ASI or IP inputs
- Optional IP FEC encoding in output streams (for -IP models)
- Optional BISS and BISS-E decryption (7880DM-LB version)
- Supports low symbol rate from 1 Msps



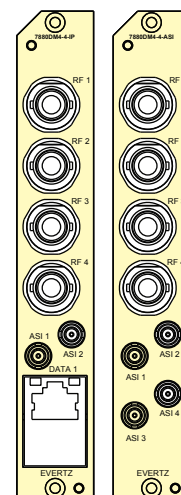
Single RF Input



Dual RF Input



Quad RF Input



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Specifications

RF Input:		For –ATSC version:	Conditional Access Support for DVB Common Interface De-Scrambling (7880DM2-LB2 and 7880DM2-DVBC2 versions):
Connector:	F-Type BNC per IEC 61169–8 Annex A (with –B75 option)	8VSB Demodulation Standard: ATSC per A53	Number of DVB-CI Slots: 2
Frequency:	LB: 950–2150 MHz ATSC/DVBT/DVBC/ISDBT: 50–860 MHz	QAM Demodulation Standard: ITU–T J.83 Annex B, QAM 64, 256	Connector: PCMCIA dual slots Standard: DVB–CI EN50221 CA module: PC–Card type II Hot Plug
Input Power:	LB: –20 to –60dBm ATSC/DVBT/DVBC/ISDBT: 40 to –40dBmV per carrier	For –DVBC2/DVBT2/ISDBT2 version: Channel Bandwidth: 6MHz, 7MHz, 8MHz Sub Format: QAM16 – QAM256, QPSK Standard: DVB–T/T2, DVB–C/C2, ISDBTb (ITU–T J.83 Annex A and C)	Control: • SNMP over Ethernet via frame controller • Web browser via frame controller
Channel Bandwidth (ATSC/DVBT/ISDBTb):	6MHz, 7MHz, 8MHz	ASI Inputs/Outputs: 2/4 Connector: Mini DIN 1.0/2.3 ASI ports are individually configurable to be either input or output	Monitored Parameters (for ATSC/DVBT2/ISDBT version): • Demodulator lock • MER/BER • Packet Errors • TR101–P1 Errors
Modulation Support:		TSolP Input/Output (–IP version only): Connector: RJ–45, 10/100/1000Mbps Type: SMPTE ST 2022–1, –2 FEC: per SMPTE ST 2022 (output only)	Monitored Parameters (for LB version): • Demodulator lock • RF power • Es/N0 ratio • FEC activity
For –LB version:		Optional SMPTE ST 2022–1 FEC Encoding with L&D following the following range (+FEC option): • L*D ≤100 • 1 ≤L ≤20 • 4 ≤D ≤20 • if L < 4, then D = 4 always	
Symbol Rate:	8PSK: 1–67 Msps 16APSK: 1–50 Msps 32APSK: 1–40 Msps		
Coding Rates:			
DVB–S QPSK:	1/2, 2/3, 3/4, 5/6, 7/8		
DVB–S2 QPSK:	1/4, 1/3, 2/5, 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		
DVB–S2 16APSK:	2/3, 3/4, 4/5, 5/6, 8/9, 9/10		
DVB–S2 32APSK:	3/4, 4/5, 5/6, 8/9, 9/10		
			Electrical: Voltage: +12VDC Power: <24W EMI/RFI: Complies with FCC Part 15, Class A EU EMC Directive

Signal Type	Part Number	Inputs		Outputs		ASI*	RJ-45	Frame Slots	DVB-CI Slot
		Number of RF	TSolP	Tuner/ Demodulator	TSolP				
DVBS/S2	7880DM2-LB2-CA2-IP	2	1	2	2	2 DIN	1	1	2
	7880DM2-LB2-CA2-ASI	2	—	2	—	4 DIN	1	1	2
	7880DM4-LB-IP	1	1	4	4	2 DIN	1	1	—
	7880DM4-LB-ASI	1	—	4	—	4 DIN	1	1	—
	7880DM4-LB2-IP	2	1	4	4	2 DIN	1	1	—
	7880DM4-LB2-ASI	2	—	4	—	4 DIN	1	1	—
	7880DM4-LB4-IP	4	1	4	4	2 DIN	1	1	—
	7880DM4-LB4-ASI	4	—	4	—	4 DIN	1	1	—
8VSB/QAM	7880DM4-VSBQAM-IP	1	1	4	4	2 DIN	1	1	—
	7880DM4-VSBQAM-ASI	1	—	4	—	4 DIN	1	1	—
	7880DM4-VSBQAM2-IP	2	1	4	4	2 DIN	1	1	—
	7880DM4-VSBQAM2-ASI	2	—	4	—	4 DIN	1	1	—
	7880DM4-VSBQAM4-IP	4	1	4	4	2 DIN	1	1	—
	7880DM4-VSBQAM4-ASI	4	—	4	—	4 DIN	1	1	—
DVBT/T2	7880DM-DVBT/T2-ASI	2	—	1	—	4 DIN	—	—	—
	7880DM4-DVBT/T2-IP	4	1	4	4	2 DIN	1	1	—
	7880DM4-DVBT/T2-ASI	4	—	4	—	4 DIN	1	1	—
DVBC/C2	7880DM4-DVBC-IP	1	1	4	4	2 DIN	1	1	2
	7880DM2-DVBC2-CA2-IP	2	1	2	2	2 DIN	1	1	2
ISDBTb	7880DM4-ISDBT-IP	1	1	4	4	2 DIN	1	1	—
	7880DM4-ISDBT4-IP	4	1	4	4	2 DIN	1	1	—
	7880DM4-ISDBT4-ASI	4	—	4	—	4 DIN	1	1	—

* ASI ports are individually configurable to be either input or output.

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► Ordering Information

DVBS-S2 Version:

7880DM2-LB2-CA2-IP

DVB-S2/DVB-S Dual Demodulator with dual RF, single RJ-45 IP port and dual DVB-CI slot, single slot

7880DM2-LB2-CA2-ASI

DVB-S2/DVB-S Dual Demodulator with dual RF, quad DIN ASI and dual DVB-CI slot, single slot

7880DM4-LB-IP

DVB-S2/DVB-S Quad Demodulator with single RF, single RJ-45 IP port, single slot

7880DM4-LB-ASI

DVB-S2/DVB-S Quad Demodulator with single RF, quad DIN ASI, single slot

7880DM4-LB2-IP

DVB-S2/DVB-S Quad Demodulator with dual RF, single RJ-45 IP port, single slot

7880DM4-LB2-ASI

DVB-S2/DVB-S Quad Demodulator with single RF, quad DIN ASI, single slot

7880DM4-LB4-IP

DVB-S2/DVB-S Quad Demodulator with quad RF, single RJ-45 IP port, single slot

7880DM4-LB4-ASI

DVB-S2/DVB-S Quad Demodulator with single RF, quad DIN ASI, single slot

8VSB/ATCI Version:

7880DM4-VSBQAM-IP

8VSB/ATSC Quad Demodulator, single RF input, single RJ-45 IP port, single slot

7880DM4-VSBQAM-ASI

8VSB/ATSC Quad Demodulator, single RF input, quad DIN ASI, single slot

7880DM4-VSBQAM2-IP

8VSB/ATSC Quad Demodulator, dual RF input, single RJ-45 IP port, single slot

7880DM4-VSBQAM2-ASI

8VSB/ATSC Quad Demodulator, dual RF input, quad DIN ASI, single slot

7880DM4-VSBQAM4-IP

8VSB/ATSC Quad Demodulator, quad RF input, single RJ-45 IP port, single slot

7880DM4-VSBQAM4-ASI

8VSB/ATSC Quad Demodulator, quad RF input, quad ASI, single slot

DVBT/T2 Version:

7880DM-DVBT/T2-ASI

Single DVB-T/T2 Demodulator with dual RF inputs and ASI ports

7880DM4-DVBT/T2-IP

DVBT/T2 Quad Demodulator, quad RF input, single RJ-45 IP port, single slot

7880DM4-DVBT/T2-ASI

DVBT/T2 Quad Demodulator, quad RF input, quad DIN ASI, single slot

QAM & DVBC/C2 Version:

7880DM4-DVBC-IP DVBC/C2/QAM Quad Demodulator, single RF input, single RJ-45 IP port, single slot

7880DM2-DVBC2-CA2-IP

DVBC/C2 Dual Demodulator, dual RF input, dual DVB-CI slot, single RJ-45 IP port, single slot

ISDBTb Version:

7880DM4-ISDBT-IP ISDBTb Quad Demodulator, single RF input, single RJ-45 IP port, single slot

7880DM4-ISDBT4-IP

ISDBTb Quad Demodulator, quad RF input, single RJ-45 IP port, single slot

7880DM4-ISDBT4-ASI

ISDBTb Quad Demodulator, quad RF input, quad DIN ASI, single slot

Ordering Options:

+B75

rear plate must be specified at time of order (eg. model +3RU)
75Ω BNC connector for RF input

+DBISS

Software option to enable BISS and BISS-E decryption

+FEC

Software option to enable Forward Error Correction capability for IP output (for -IP and -IPASI models)

+SPTS

Software option to create multiple SPTS of a transport stream

+NORP

No individual rear panel

Rear Plate Suffix:

+3RU

3RU rear plate for use with 350FR, 7700FR-C, 7800FR, 7800FR-QT or 7801FR multiframe

Enclosures:

350FR

3RU portable multiframe, holds up to 7x single-slot modules

7800FR

3RU multiframe, holds up to 15x single-slot modules

7800FR-QT

3RU multiframe, holds up to 15x single-slot module

7801FR

1RU multiframe, holds up to 4x single- or 2x dual-slot modules

7801FR+IRDCP

1RU multiframe with front control panel installed

Accessories:

+781PS

Redundant power supply (optional)

7801FC

Frame controller module for use with 7801FR