

7882DM-SAT Series

DVB-S/S2/S2X Satellite Demodulators



Evertz' 7882DM-SAT series is a complete hardware-based solution for demodulating digital DVB-S/S2/S2X satellite signals. Applications include signal reception for broadcasters, cable/DTH/IPTV providers and other operators who need to receive and utilize or re-distribute satellite content. Flexible RF/ASI/IP inputs and ASI/IP outputs provide a future-proof solution, also ideal for turnaround, transcoding, monitoring and other applications where the received signal remains in the compressed domain.

The base model has a single-channel demodulator enabled by default, software upgradeable up to four channels. The quad RF input version (7882DM-SAT4) provides independent RF inputs per demodulator, whereas the single (7882DM-SAT1) and dual (7882DM-SAT2) RF input versions provide internal RF distribution to multiple demodulators for a convenient solution, eliminating the need for external RF distribution.

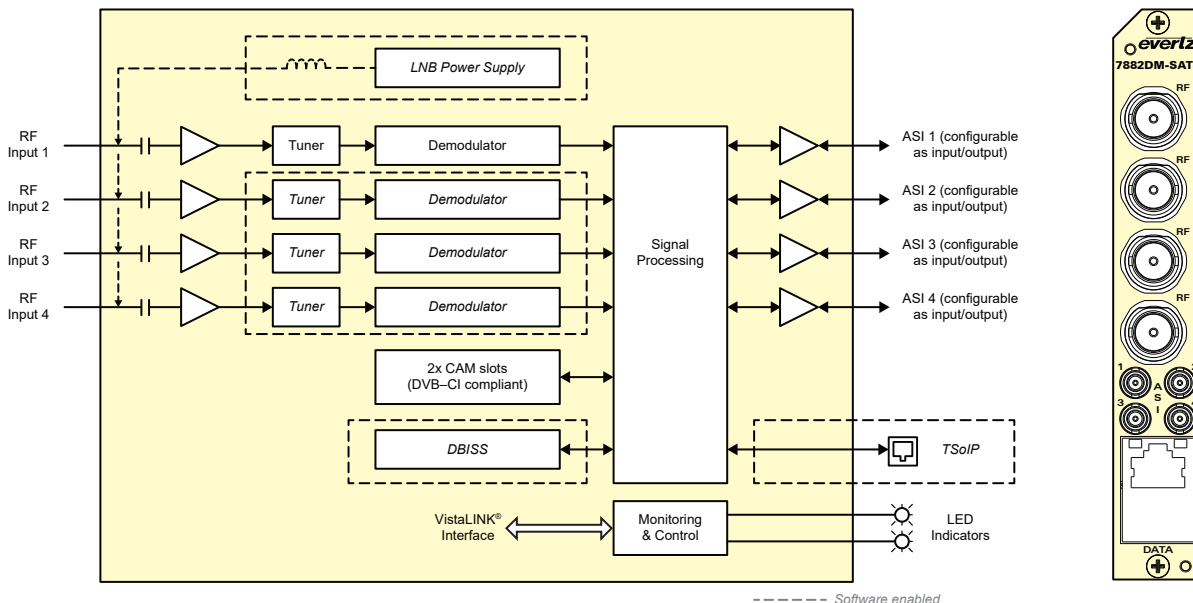
Additional features include a modular hot-swappable form-factor, 13/18V LNB powering +22kHz tone, two conditional access module (CAM) slots for customer supplied DVB-CI compliant modules, BISS and BISS-E decryption and more.

The 7882DM-SAT series also provides monitoring of critical parameters such as RF power, lock status, EsNo ratio/margin, L-Band frequency, MER, BER, packet errors, constellations diagrams and more; this presents an ideal solution for operators who wish to not only receive, but also remotely monitor signal quality. These parameters, as well as full monitoring and control of the module are available through the web-browser and relayed over SNMP for use with third-party or Evertz' own VistaLINK® PRO network management system (NMS).

Features & Benefits

- Automatic changeover between various RF, ASI or IP inputs
- Support for advanced transport stream processing, including straight pass through or service PID filtering/remapping of compressed stream outputs with bitrate control
- Automatic detection of modulation type, filter roll-off, symbol rate, pilot presence (on/off) and frame length, resulting in effortless configuration
- Signal quality monitoring, including Es/N0, demodulator locking, RF power and FEC activity

Figure: 7882DM-SAT4 block and rear panel diagrams (below)



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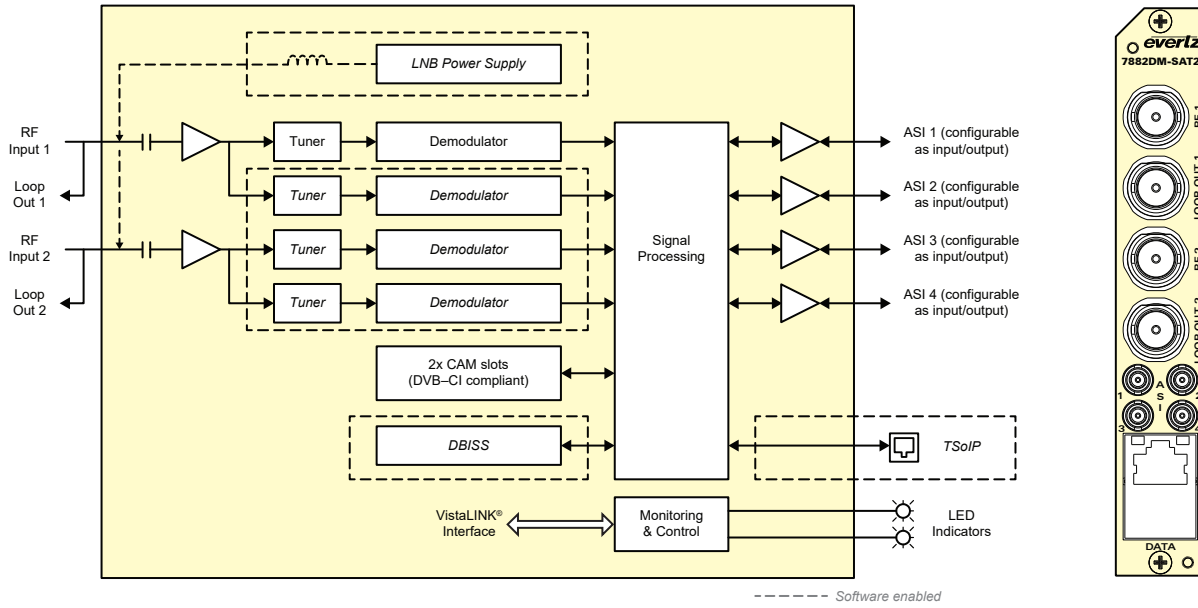


Figure: 7882DM-SAT2 block and rear panel diagrams

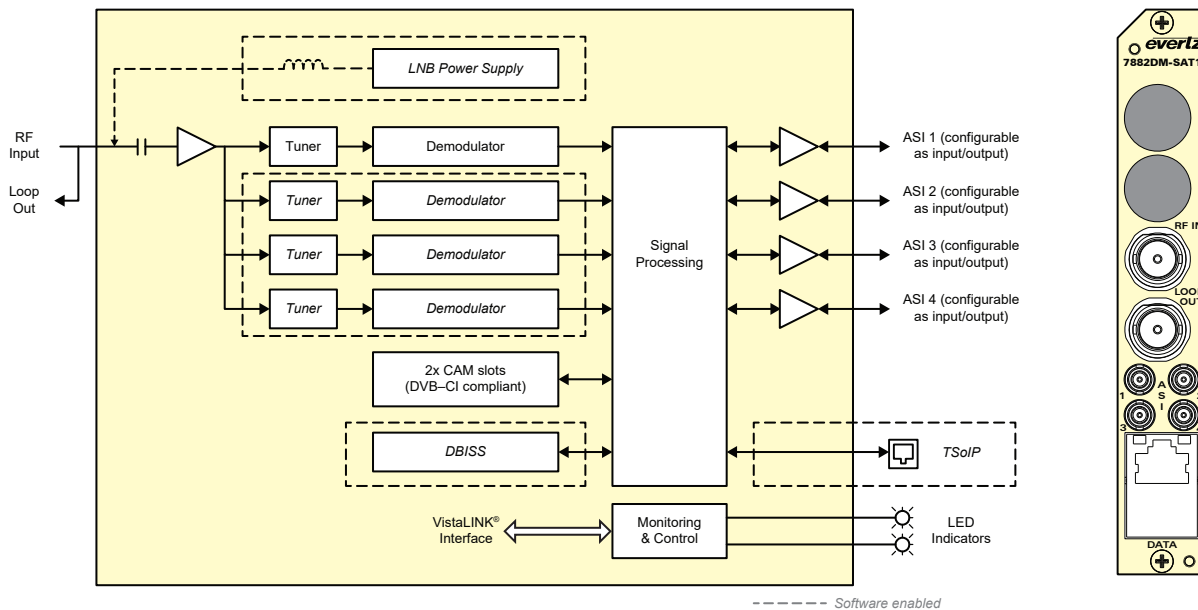


Figure: 7882DM-SAT1 block and rear panel diagrams

Modulation Support

Symbol Rate:	QPSK, 8PSK, 16APSK	32APSK	64APSK	Roll-Off Factor
Up to:	1-64 Msps	1-51 Msps	1-43 Msps	5-35%

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Coding Rates

	FECFRAME	DVB-S	DVB-S2	DVB-S2X
QPSK	Normal (64800 bits)	1/2, 2/3, 3/4, 5/6, 7/8	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20
QPSK	Short (16200 bits)	—	—	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 11/45, 4/15, 14/45, 7/15, 8/15, 32/45
8PSK	Normal (64800 bits)	—	3/5, 2/3, 3/4, 5/6, 8/9, 9/10	3/5, 2/3, 3/4, 5/6, 8/9, 9/10, 23/36, 25/36, 13/18
8PSK	Short (16200 bits)	—	—	3/5, 2/3, 3/4, 5/6, 8/9, 7/15, 8/15, 26/45, 32/45
8APSK-L	Normal (64800 bits)	—	—	5/9, 26/45
16APSK	Normal (64800 bits)	—	2/3, 3/4, 4/5, 5/6, 8/9, 9/10	2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 26/45, 3/5, 28/45, 23/36
16APSK	Short (16200 bits)	—	—	2/3, 3/4, 4/5, 5/6, 8/9, 7/15, 8/15, 26/45, 3/5, 32/45
16APSK-L	Normal (64800 bits)	—	—	5/9, 8/15, 1/2, 3/5, 2/3
32APSK	Normal (64800 bits)	—	3/4, 4/5, 5/6, 8/9, 9/10	3/4, 4/5, 5/6, 8/9, 9/10, 32/45, 11/15, 7/9
32APSK-L	Normal (64800 bits)	—	—	2/3
32APSK-L	Short (16200 bits)	—	—	2/3, 32/45
64APSK	Normal (64800 bits)	—	—	11/15, 7/9, 4/5, 5/6
64APSK-L	Normal (64800 bits)	—	—	32/45

Specifications

RF Input:

Number of Ports:
7882DM-SAT4: 4
7882DM-SAT2: 2
7882DM-SAT1: 1
 Connectors: F-Type, optional BNC per IEC 61169-8 Annex A

Frequency Range: 950-2150 MHz
 Input Power Range: -20 to -60 dBm
 SCPC/MCPC Support:

Yes
 CCM, VCM and ACM support:
 Yes

LNB Power Supply and

LO Control (optional):
 LNB Voltage: 13/18V DC, off (selectable)
 LO Control: 22kHz on/off (selectable)
 Max. LNB Current: 400mA
 Protection: Short circuit, overload

RF Monitor Output:

Number of Ports:
7882DM-SAT4: 0
7882DM-SAT2: 2
7882DM-SAT1: 1
 Connectors: F-Type, optional BNC per IEC 61169-8 Annex A
 Output Level: Within -2.0dB of input signal

Ordering Information

7882DM-SAT4

Single Channel DVBS/S2 demodulator with four RF inputs, ASI outputs (Optional IP).
 Software options for S2X capability and up to four demod channels.

7882DM-SAT2

Single Channel DVBS/S2 demodulator with two RF inputs, ASI outputs (Optional IP).
 Software options for S2X capability and up to four demod channels.

7882DM-SAT1

Single Channel DVBS/S2 demodulator with one RF input, ASI outputs (Optional IP).
 Software options for S2X capability and up to four demod channels.

Ordering Options:

+B75

75Ω BNC connector option for the rear panel

7882DM-CK-SAT

7882DM-SAT channel key to enable one demod channel. Up to three licenses can be added to one 7882DM-SAT board

7882DM-FK-IP

License to enable IP input/output streams on 7882DM series

7882DM-FK-S2X

License to enable DVB-S2X (broadcast and DSNG profiles) demodulation standards, license is enabled per demod channel

788xDM-FK-LNB

Software feature key to enable LNB power feature in all input channels for the 7880DM-LB/7882DM series

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Specifications (continued)

ASI Inputs/Outputs:

Number of Ports: 4
Connector: Mini DIN 1.0/2.3
ASI ports are individually configurable to be either input or output

TSoIP Input/Output (optional):

Connector: RJ-45, 10/100/1000Mbps
Type: SMPTE ST 2022-1, -2
FEC: Per SMPTE ST 2022 (output only)

SMPTE ST 2022-1 FEC Encoding with L&D Following the Range Below (optional):

- $L * D \leq 100$
- $1 \leq L \leq 20$
- $4 \leq D \leq 20$
- If $L < 4$, then $D = 4$ always

Conditional Access Support for DVB Common Interface De-Scrambling:

Number of Slots: 2
Connector: PCMCIA dual slots
Standard: DVB_CI EN50221
CA Module: PC-card type II hot plug

Control:

- SNMP over Ethernet via frame controller
- Web browser via frame controller

Monitored Parameters:

- RF:
- Demodulator lock status
 - RF power
 - Standard
 - Modulation and FEC
 - Roll-off
 - BER
 - MER
 - EsNo ratio and margin
 - Frequency offset
 - Constellations

TS:

- CC error
- Bit rate
- Sync loss errors
- Sync byte errors
- PID count
- Services
- TS uptime
- TS tree view

Electrical:

Voltage: 12VDC
Power: < 24W (excluding LNB powering)
EMI/RFI: Complies with FCC part 15, Class A EU EMC directive

Physical:

Number of Slots: 1

Ordering Information (continued)

7880DM-FK-FEC	Enables FEC per SMPTE 2022 for IP Output for any 788xDM-IP series
7882DM-FK-DBISS	License to enable decryption of BISS and BISSE on the 7882DM-SAT. License is enabled per demod channel/Incoming Stream
+SPTS	License to enable multiple SPTS of a transport stream
Rear Plate Suffix:	
+3RU	3RU rear plate for use with 350FR, 7700FR-C, 7800FR, 7800FR-QT or 7801FR multiframe
Enclosures:	
350FR	3RU Portable Multiframe Which Holds Up to 7 Single Slot Modules with AC Power Supply
7800FR	3RU Multiframe Which Holds up to 15 Single Slot Modules with AC Power Supply
7800FR-QT	Quiet Multiframe with Intelligent Front Fan Cooling
7800FC	7700FR and 7800FR VistaLINK Frame Controller (Includes VLPRO-C VistaLINK® PRO S/W Configuration Tool)
7801FR	1RU Multiframe Which Holds up to 4 Single Slot or 2 Dual Slot Modules, Requires Rear Plate Option for Modules
7801FC	Frame controller for 7801FR
7801FC-IRD	Frame controller for 7801FR-CP, for use with 7881IRD modules
Front Control Panel:	
+IRDPC	Front control panel for 7801FR for use on 7881IRD modules <i>Note: front control panel is only compatible with the 7801FR frame and requires the 7801FC-IRD</i>
Remote Control Panel:	
CP-9000	Remote control panel, 1RU, for supported 77xx/78xx series products
Port Aggregator:	
7800PA-10GE2	Up to 6 Slot 7800 Port Aggregator Switch that supports Integrated Rear Plate Options with 2x 1G/10GE Trunk Interfaces <i>Click this link for additional port aggregator information and ordering options:</i> https://evertz.com/products/catalogue/7800PA-10GE2.pdf