

7882IRD-S2X-10GE

Professional DVBS/S/S2X MPEG-2/H.264 SD/HD Integrated Receiver Decoders with SMPTE ST 2110 Output

The 7882IRD Series is the basis of a professional platform for receiving, demodulating and decoding digital DVB-S/S2/S2X satellite signals. With a compact, modular form-factor the 7882IRD represents one of the highest density and most flexible solutions in the industry. The 7882IRD-S2X may be mounted in Evertz 7800 Series enclosures, providing a high-density, modular solution. Options for an innovative removable front control panel and 1RU chassis also allow the IRD to be packaged in the traditional IRD form factor, while maintaining all of the benefits of modularity.

Applications include signal reception for broadcasters, cable, DTH and IPTV providers, or any other small to large head-end operators who need to receive and utilize or re-distribute satellite content. The 7882IRD series provides ASI and IP outputs, ideal for turnaround, transcoding, monitoring or other applications where the received signal remains in the compressed domain. For baseband output, the 7882IRD2 utilizes an advanced decoder with support for both MPEG-2 and H.264/AVC, SD or HD encoded signals, optionally up to 4:2:2 10-bit.

The 7882IRD-S2X-10GE supports SMPTE ST 2110 output, therefore video

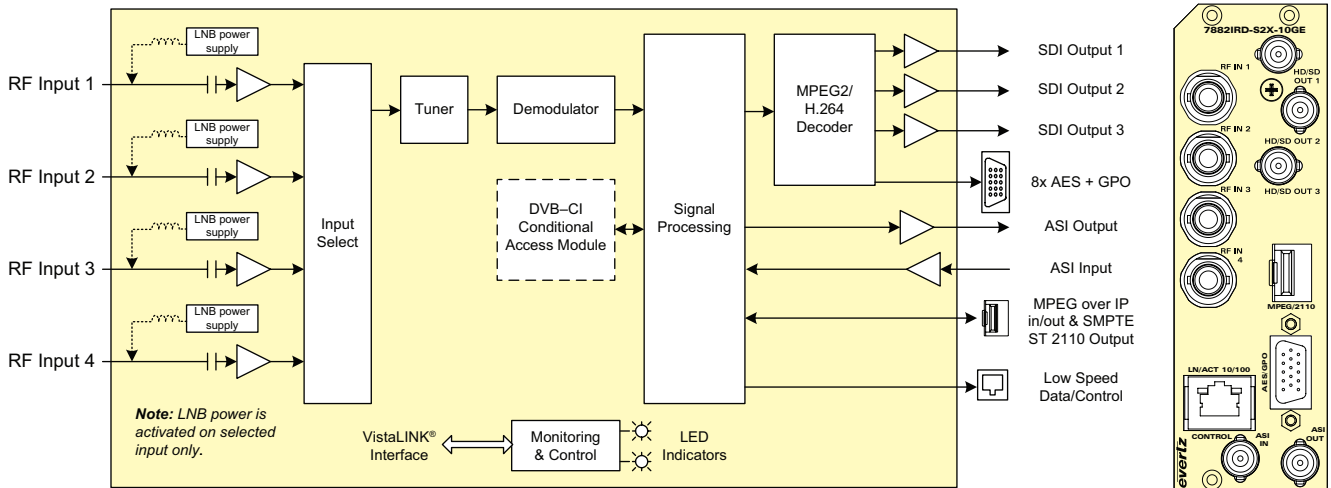
and ANC data will be sent over different multicast addresses over 10GbE allowing the configuration of the multicast IP address for the SMPTE ST 2110 outputs for video, audio and ANC.

In addition to a quad-RF input, the 7882IRD also provides inputs for IP and ASI signals, making it a future-proof, universal reception platform for signals delivered over satellite, fiber and other network media. Monitoring parameters such as RF power, lock status, EsNo ratio/margin, L-Band frequency, MER, BER, packet errors and constellations diagrams present a convenient solution for broadcasters and cable companies who wish to not only receive, but also remotely monitor signal quality. Also, these parameters as well as Full monitoring and control of the IRD are relayed over SNMP, for convenient remote access using Evertz' VistaLINK® PRO SNMP monitoring and control package. Additionally, low-speed data support is provided for in-band control.

For applications requiring decryption, the IRD provides a slot for installation of a customer supplied conditional access module. DVB-CI compliant conditional access modules and formats are supported.

► Features & Benefits

- Modular design, allowing flexible configurations along with easy system reconfiguration and service
- May be mounted in the 7800FR series frames in high-density applications
- May be mounted in the 7801FR and fitted with the 7801CP control panel, yielding a 1RU 7882IRD with removable front control panel and optional redundant power supplies, all of which are hot-swappable and may be serviced without any de-cabling required
- Compatible with Evertz CP-9000 remote control panel
- Up to two units may be mounted in the 7801FR and used with the 7801CP, providing a dual-IRD solution in 1RU
- Future-proof with upgrade paths to support future modulation and encoding technologies
- Standard support for advanced modulation schemes, including DVB-S2 with 16APSK, 32APSK and 64APSK
- Optional DVB-S2X modulation support
- Standard support for advanced transport stream processing including service filtering and output bitrate control
- Long frames and short frames
- CCM, VCM and ACM
- SCPC and MCPC support
- Automatic detection and configuration of modulation type, filter roll-off, symbol rate, pilot presence (on/off) and frame length
- Supports optional on-board Input auto-failover between various inputs including RF/ASI or IP inputs
- Flexible decoding of SD and HD as standard
- Support for encoding profiles from distribution to contribution grade, including H.264 in 4:2:0 8-bit and optional 4:2:2 10-bit formats "software upgradable", along with legacy MPEG-2
- Available DVB-CI slot for conditional access modules
- Available BISS and BISS-E decryption
- Supports variable clock rates to interface with various CAM types
- CAM autoselect feature automatically descrambles the channel being decoded
- Flexible mid-stage access to compressed domain signals, including ASI and IP output along with ASI and IP input
- SMPTE ST 2022-6 and ST 2110 uncompressed IP outputs with 10GbE SFP
- Straight pass through or PID filtering/remapping of compressed stream outputs
- Standard Dolby® pass through and decode of Dolby® AC3 and MPEG-2 Layer 1 audio
- Optional decoding of Dolby® E, Dolby® Plus and AAC
- Eight AES outputs
- Optional Audio Video Monitoring (AVM option) for audio mute and video freeze and black detection
- Optional SCTE 105/34 translation
- Control through web-browser or SNMP using third-party application or Evertz' own VistaLINK® SNMP control and monitoring software
- Ability to store ten preset configurations
- Event log support with exporting capabilities are supported on VLPRO and built-in control port for direct control and management of the IRD
- Syslogs available to download locally and export to a remote server
- Import/export configuration



► Specifications

<p>RF Input: Number: 4 Connector: 75Ω F-Type (optional BNC connector) Frequency: 950–2150MHz Power: -20 to -65dBm Voltage: 13/18V DC, off (selectable) Max Current: 400mA Protection: Short circuit, overload Local Oscillator Control: 22kHz on/off (selectable); 1000–35000MHz to be used for C-Band & Ku-Band Input Return Loss: 15dB Min. Noise Figure: 9dB Max. AFC Tuning Range: ±67MHz using search range IF Filter Bandwidth: Adjusted from 6MHz to 50MHz in 1MHz steps</p> <p>Modulation Support: Symbol Rate: Up to: QPSK, 8PSK, 16APSK: 64 Msps 32APSK: 51 Msps 64APSK: 43 Msps</p> <p>Coding Rates: <u>FECFRAME (normal) 64 800 (bits)</u> 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 DVB-S2x QPSK: 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 DVB-S2x 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10, 23/36, 25/36, 13/18 DVB-S2x 8APSK-L: 5/9, 26/45 DVB-S2x 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (S2-MODCODs), 26/45, 3/5, 28/45, 23/36, 25/36, 13/18, 7/9, 77/90 DVB-S2x 16APSK-L: 5/9, 8/15, 1/2, 3/5, 2/3 DVB-S2x 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 32/45, 11/15, 7/9 DVB-S2x 32APSK-L: 2/3 DVB-S2x 64APSK: 11/15, 7/9, 4/5, 5/6 DVB-S2x 64APSK-L: 32/45</p>	<p><u>FECFRAME (short) 16 200 (bits)</u> DVB-S2x QPSK: 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 DVB-S2x 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 7/15, 8/15, 26/45, 32/45 DVB-S2x 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 7/15, 8/15, 26/45, 3/5, 32/45 DVB-S2x 32APSK-L: 2/3, 32/45</p> <p>ASI Input: Number: 1 Type: ASI per DVB TR101-891 Connector: 75Ω BNC</p> <p>ASI Output: Number: 1 Type: ASI per DVB TR101-891 Connector: 75Ω BNC</p> <p>MPEG over IP Input/Output & SMPTE ST 2110 Output: Number: 1 Type: SMPTE ST 2022-1, -2, 2110 Connector: 1/10GbE data port using SFP (SFP ordered separately)</p> <p>Conditional Access Support: One DVB-CI slot</p> <p>Baseband Video Outputs: Number: 3 (third BNC is configurable to be ASI or SDI output) Connector: 75Ω BNC Type: SDI (SMPTE ST 259), HD-SDI (SMPTE ST 292-1), SMPTE ST 272-1994 (10-bit) 270Mb/s, 3Gb/s (SMPTE ST 424M/ST 424M-AB)</p> <p><i>Note: +HDC feature is not supported when decoding 3G video</i></p> <p>AES Audio Outputs: Number: 8 PIDS (16 channels of embedded PCM) Connector: BNC breakout from DB-15 Type: Unbalanced AES Standard: AES3 (aka AES/EBU) as an AES output standard</p>	<p>Compression Format: MP1L2 and Dolby® Digital AC-3 upto 3/2L Passthrough: PCM, Dolby® Digital, Dolby® E Optional: Dolby® E decode and AAC-LC</p> <p>Ancillary Data: Embedding of: Audio passthrough Closed caption/Teletext SCTE35 to 104 (+SCTE104 option) AFD/WSS Time code</p> <p>High Quality Down Convert (+HDC option): Down Conversion: SMPTE ST 292 to ST 259 Aspect Ratio: Fixed Scalar or follow AFD</p> <p><i>Note: +HDC feature is not supported when decoding 3G video</i></p> <p>Low Speed Data: Number: 1 Type: De-encapsulation from control data PID Connector: RJ-45, 10/100/1000</p> <p>Frame Sync (+FSE Option):</p> <ul style="list-style-type: none"> • Sync 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 525i/59.94, 625i/50 • Video Delay between 3x lines and 1x frame + 3x lines • Programmable output phase with respect to reference input • Reference input via common 7800FR/7801FR frame reference connector <p>Control:</p> <ul style="list-style-type: none"> • SNMP over Ethernet via frame controller • Web browser • Low speed control data over Ethernet output derived from data PID • 4x GPO following commercial trigger <p>Electrical: Power: <46W Voltage: 12V DC Temperature: 0–50°C</p> <p>Physical: Number of Slots: 2</p>
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► Ordering Information

7882IRD-S2X-10GE Single-channel Satellite IRD with quad L-Band input, conditional access slot, ASI input and output, MPEG-2/H.264 SD/HD decode (4:2:0 8-bit) with SMPTE ST 2110 output. Optional software license to support S2x features.

Ordering Options:

+FSE	Integrated frame synchronizer
+10B422	10-bit 4:2:2 decoding option
+DD	Dolby® E decode
+AAC	AAC decode
+IP	IP midstage in/output (SFP sold separately)
+SCTE104-1	SCTE 35/104 translation
+DBISS	BISS and BISS-E decryption
+HDC	High quality downconverter
+AVM	Audio and video monitoring support
7882DM-FK-S2K	License to enable DVB-S2X (broadcast and DSNG profiles) demodulation standards

SFP Interface Options (SFPs sold separately):

SFPTR-RJ45-SGM-AV	SFP module for 10/100/1000 interface ports
SFP1G-TR13	SFP optical transceiver, 1.25Gb/s, 1310nm, SMF, 20km
SFP1G-TR15S	SFP optical transceiver, 1.25Gb/s, 1550nm, SMF, 40km
SFP1G-TR15H	SFP optical transceiver, 1.25Gb/s, 1550nm, SMF, 80km
SFP10G-TR13-J	SFP+ optical transceiver, 10Gb/s, 1310nm, SMF, 10km
SFP10G-TR15S	SFP+ optical transceiver, 10Gb/s, 1310nm, SMF, 40km

Rear Plate Suffix:

+3RU	3RU rear plate for use with 7800FR or 7801FR multiframe
+B75	75Ω BNC connector for RF input

Enclosures and Front Control Panel:

<i>Note: 7801FC is required for 1RU IRD configuration</i>	
7800FR	3RU multiframe, holds up to 15x single-slot modules
7801FR	1RU multiframe, holds up to 4x single- or 2 dual-slot modules
+781PS	Redundant power supply (optional)
7801FC	Frame controller module
+IRDPC	Removable front control panel for 7801FR populated with 7882IRD(s)