

7881IRD2 Series

Professional ATSC/DVB-T/T2/DVB-C/C2/DVB-S/S2 MPEG2/H.264 SD/HD Dual Integrated Receiver Decoders



The 7881IRD2 series is the basis of a professional platform for receiving, demodulating and decoding digital ATSC/DVB-T/T2/DVB-C/C2/DVB-S/S2 satellite signals. With a compact, modular form-factor the 7881IRD2 represents one of the highest density and most flexible solutions in the industry. The 7881IRD2 may be mounted in the Evertz 7800 series of enclosures, providing a high-density, modular solution. Options for an innovative removable front control panel and 1RU chassis also allow the 7881IRD2 to be packaged in the traditional IRD2 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, and also receive and distribute off-air local contents.

The 7881IRD2 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 7881IRD2 utilizes an advanced decoder with support for both MPEG2 and H.264/AVC, SD or HD encoded signals, optionally up to 4:2:2 10-bit.

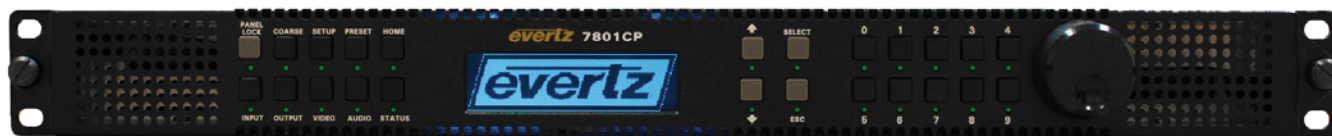
Full monitoring and control of the IRD are relayed over SNMP, for convenient remote access using Evertz own VistaLINK® PRO SNMP monitoring and control package. Additionally, low-speed data support is provided for in-band control.

For applications requiring decryption, the 7881IRD2 provides two slots 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 (up to seven IRD2 in one 3RU frame)
- May be mounted in the 7801FR and fitted with the 7801CP control panel, yielding a 1RU IRD 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. 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
- Supports on-board Input auto-failover between various inputs including RF/ASI/ or IP inputs
- Standard support for advanced modulation schemes, including DVB-S2 with 16APSK and 32APSK
- Flexible dual 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, along with legacy MPEG2
- Available two DVB-CI slots for conditional access modules
- Optional BISS and BISS-E decryption
- Flexible mid-stage access to compressed domain signals, including two ASI and optional IP outputs
- Straight pass through or PID filtering/remapping of compressed stream outputs
- Standard Dolby pass through and decode of Dolby AC-3 and MPEG2 Layer 1 audio
- Optional decoding of Dolby E, Plus, AAC, and HE-AAC v1 & v2 for up to 5.1 channels
- Four AES outputs for each decode
- Optional SCTE 105/34 translation
- Optional Audio Video Monitoring (AVM) for audio mute and video freeze and black detection
- Control through web-browser or SNMP using third-party application or Evertz' own VistaLINK SNMP control and monitoring software
- Quad 8VSB tuners with tuning capabilities of pre-stored physical channels
- Signal quality monitoring, including MER, BER and TR101- P1 errors
- Quad DVB-T/T2 off-air or DVB-C/C2 cable signals
- Optional IP FEC encoding in output streams

Front View - 7881IRD2 in 1RU with Control Panel

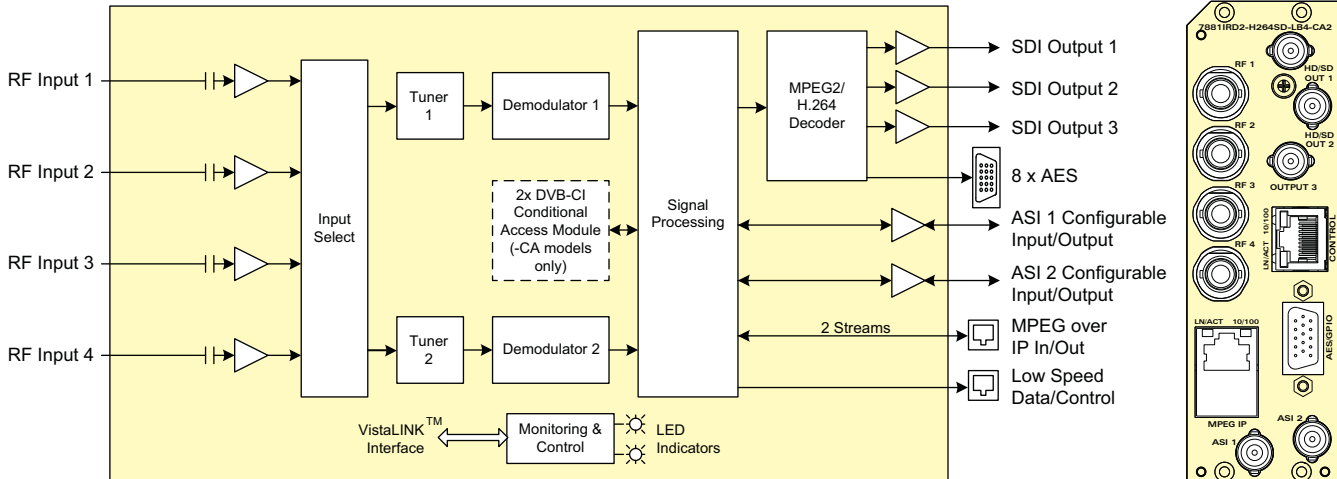


Rear View - 7881IRD2 in 1RU



The Complete Solution Provider





Specifications

<p>RF Input: Number: 4 Connector: F-Type Frequency: -LB: 950 to 2150MHz -ATSC: 50 to 860MHz -LB: -20 to -60 dBm -ATSC: +40 to -40 dBmV per carrier Channel Bandwidth (-ATSC): 6MHz, 7MHz, 8MHz</p> <p>Modulation Support: Symbol Rate: Up to: 8PSK: 67 Msps 16APSK: 50 Msps 32APSK: 40 Msps</p> <p>Coding Rates: <u>For -LB version:</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</p> <p><u>For -ATSC version:</u> 8VSB Demodulation Standard: ATSC Per A53 QAM Demodulation Standard: ITU-TJ.83 Annex B, QAM 64, 256</p> <p><u>For -DVBT2 version:</u> Channel Bandwidth: 6MHz, 7MHz, 8MHz Sub Format: QAM16 - QAM256, QPSK Standard: DVB-T/T2, DVB-C/C2 (ITU-T J.83 Annex A and C)</p>	<p>MPEG over IP Input/Output: Number of Connectors: 1 Number of Streams: 2 Type: SMPTE 2022-1, -2 Connector: RJ45, 10/100/1000 FEC: per SMPTE 2022 (Output only) Optional SMPTE2022-1 FEC encoding with L&D following the following range: • L*D ≤100 • 1 ≤L ≤20 • 4 ≤D ≤20 • if L < 4, then D = 4 always</p> <p>Conditional Access Support: • 2x DVB-CI slot</p> <p>Baseband Video Outputs (Dual Decode*): Number: 3 Connector: BNC Type: SDI (SMPTE ST 259), HD-SDI (SMPTE ST 292-1) * Both channels must decode the same codec on both services</p> <p>AES Audio Outputs: Number: 8 (4 AES per each decode) Connector: BNC breakout from DB-15 Type: Unbalanced AES</p> <p>Audio Processing: • Supports decoding of MPEG1 Layer 2, AAC, Dolby E, Plus and AC-3 • Supports Dolby E and AC-3 pass-through</p> <p>ASI Input/Output: Number: 2 (configurable input/output)</p>	<p>Type: ASI per DVB TR101-891 Connector: 75Ω BNC</p> <p>Low Speed Data: Number: 1 Type: De-encapsulation from control data PID Connector: RJ45, 10/100/1000</p> <p>Frame Sync (+FSE Option): • Sync 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 525i/59.94, 625i/50 • Video Delay between 3 lines & 1 frame + 3 Lines • Programmable output phase with respect to reference input • Reference input via common 7800FR frame reference connector</p> <p>Monitored parameters (for -ATSC & -DVBT2 version): • Demodulator lock • MER/BER • Packet Errors • TR101 -P1 Errors</p> <p>Control: • SNMP over Ethernet via frame controller • Web browser • Low speed control data over Ethernet output derived from data PID</p> <p>Electrical: Power: <46 Watts Voltage: 12VDC Temperature: 0-50°C</p> <p>Physical: Number of slots: 2</p>
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Ordering Information

<p>7881RD2-H264SD-LB4-CA2 DVBS/S2 IRD, up to 32APSK, quad L-Band input, dual demodulator and dual decoder, 2x ASI output and IP output standard, MPEG2/H264 SD-SDI decode (4:2:0 8 bit). Dual DVB-CI conditional access slot</p> <p>7881RD2-H264SD-LB4 DVBS/S2 IRD, up to 32APSK, quad L-Band input, dual demodulator and dual decoder, 2x ASI output and IP output standard, MPEG2/H264 SD-SDI decode (4:2:0 8 bit)</p> <p>7881RD2-ATSC Dual channel ATSC IRD, quad RF input, dual ASI ports, dual MPEG-2 SD/HD decode</p> <p>7881RD2-DVBT2 Dual channel DVBT/T2 IRD, quad RF input, dual ASI ports, dual MPEG-2/H264 SD/HD decode</p>

Rear Plate Suffix	
+3RU	3RU Rear Plate for use with 7800FR or 7801FR Multiframe
3RU Enclosures	
7800FR	3RU Multiframe which holds up to 15 single slot modules

1RU Enclosure and Front Control Panel

Note: 7801FC is required for 1RU IRD configuration

7801FR	1RU Multiframe which holds up to 4 single or 2 dual slot modules
+781PS	Redundant power supply (optional)
7801FC	Frame controller module
7801CP	Removable front control panel for 7801FR populated with 7881IRD(s)

Ordering Options

+HD	HD-SDI dual decode
+FSE	Integrated frame synchronizer
+42210B	4:2:2 (MPEG2/H.264) and 10 bit (H.264) decode
+AVM	Basic freeze, black and mute audio/video monitoring
+DD	Dolby E decode
+AAC	AAC decode
+SCTE104-1	SCTE 35/104 translation
+DBISS	BISS and BISS-E decryption
+IP	IP input/output support
+FEC	Forward Error Correction Capability for IP output
+B75	75 Ohm, BNC connector for RF input