

7881IRD2 Series

Professional Digital Terrestrial/Cable/Satellite SD/HD Dual Modular Integrated Receiver Decoders



The 7881IRD2 series is the basis of a professional platform for receiving, demodulating and decoding digital ATSC/DVB-T/T2/ISDBTb/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 Evertz' 7800 series 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 MPEG-2 and H.264/AVC, SD or HD encoded signals, optionally up to 4:2:2 10-bit.

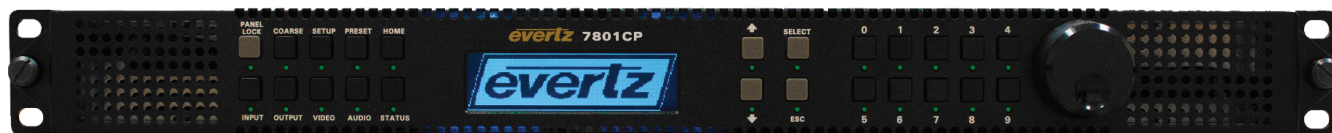
Full monitoring and control of the IRD are relayed over SNMP, for convenient remote access using Evertz' own VistaLINK® PRO SNMP monitoring and control package.

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 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
- Standard support for advanced modulation schemes, including DVB-S2 with 16APSK and 32APSK (7881IRD2-H264SD-LB4-CA version)
- Available two DVB-CI slots for conditional access modules (7881IRD2-H264SD-LB4-CA version)
- Quad 8VSB tuners with tuning capabilities of pre-stored physical channels (7881IRD2-ATSC)
- Quad DVB-T/T2 off-air or DVB-C/C2 cable signals (7881IRD2-DVBT2)
- Quad ISDBTb off-air signals (7881IRD2-ISDBT version)
- Quad DVBC/C2 cable signals (7881IRD2-DVBC version)
- 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, along with legacy MPEG-2
- Available BISS and BISS-E decryption
- Flexible mid-stage access to compressed domain signals, including ASI and optional IP output along with ASI and optional IP inputs
- 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, AAC and HE-AAC v1 & v2 for up to 5.1 channels
- Optional SCTE 105/34 translation
- Standard support for 4x AES outputs
- Control through web browser or SNMP using third-party application or Evertz' own VistaLINK® SNMP control and monitoring software
- Signal quality monitoring, including MER, BER and TR101-P1 errors

Front View — 7881IRD2 in 1RU with Control Panel

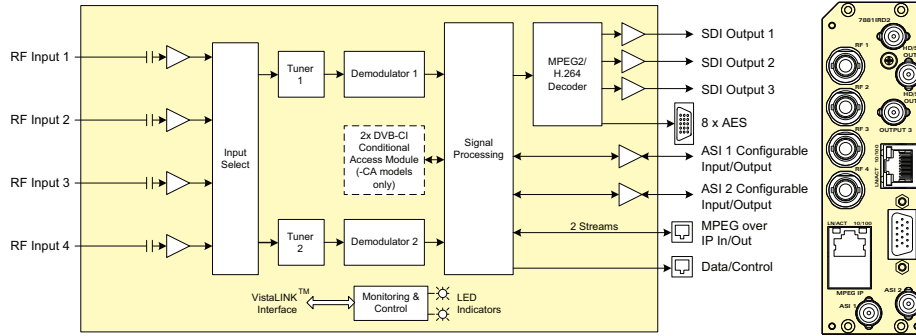


Rear View — 7881IRD2 in 1RU



The Complete Solution Provider

evertz



Specifications

RF Input:

Number: 4
Connector: F-Type

For -LB version:

Frequency: 950–2150 MHz
Power: -20 to -60dBm
LNB power: Activated on selected input
Current: 400mA
Voltage: 13, 18V (selectable)
LO Control: 22kHz (on/off selectable)

For -ATSC/DVBT/T2 and ISDBTb version:

Frequency: 50–860MHz
Input Power: 40 to -40 dBmV per carrier
Channel Bandwidth: 6MHz, 7MHz, 8MHz

Modulation Support:

For -LB version:

Symbol Rate: Up to:
8PSK: 67 Msps
16APSK: 50 Msps
32APSK: 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

For -ATSC version:

8VSB Demodulation Standard:
ATSC Per A53

QAM Demodulation Standard:

ITU-T J.83 Annex B, QAM 64, 256

For -DVBC2/DVBT2/ISDBT2 version:

Channel Bandwidth: 6MHz, 7MHz, 8MHz
(1.7MHz available for DVB-T2)
Sub Format: QAM16–QAM256, QPSK
Standard: DVB-T/T2, DVB-C/C2, ISDBTb (ITU-T J.83 Annex A and C)
Code Rate: 1/2, 2/3, 3/4, 5/6, 7/8 auto detection
FFT Mode: K2, K4, K8, K16, K32 auto detection
Guard Interval: 1/32, 1/16, 1/8, 1/4, 1/128, 19/128, 19/256, 1/64 auto detection
Pilot Pattern: PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8 auto detection

MPEG over IP Input/Output:

Connector: 1x RJ-45, 10/100/1000
Streams: 2
Type: SMPTE ST 2022-1, -2

Conditional Access Support:

- 2x DVB-CI slots

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

AES Audio Outputs:

Number: 8 (4x AES per decode)
Connector: BNC breakout from DB-15
Type: Unbalanced AES

Audio Processing:

- Supports decoding of MPEG-1 Layer 2, AAC, Dolby® E, Dolby® Plus and AC3
- Supports Dolby® E and AC3 pass-through

ASI Input/Output:

Number: 2 (configurable input/output)
Type: ASI per DVB TR101-891
Connector: 75Ω BNC

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 and 1 frame + 3 lines
- Programmable output phase with respect to reference input
- Reference input via common 7800FR frame reference connector

Monitored parameters:

For -ATSC and -DVBT2/ISDBTb version:

- Demodulator lock
- MER/BER
- Packet errors
- TR101-P1 Errors

Control:

- SNMP over Ethernet via frame controller
- Web browser

Electrical:

Power: < 46 Watts
Voltage: 12VDC
Temperature: 0–50°C

Physical:

Number of Slots: 2

Ordering Information

7881IRD2-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, MPEG-2/H.264 SD-SDI decode (4:2:0 8-bit), Dual DVB-CI conditional access slot

7881IRD2-ATSC

Dual channel ATSC IRD, quad RF input, dual ASI ports, dual MPEG-2 SD/HD decode

7881IRD2-DVBT2

Dual channel DVBT/T2 IRD, quad RF input, dual ASI ports, dual MPEG-2/H.264 SD/HD decode

7881IRD2-DVBC

Dual channel QAM/DVBC/C2 IRD, quad RF input, dual ASI ports, dual MPEG-2/H.264 SD/HD decode

7881IRD2-ISDBT

Dual channel ISDBT IRD, quad RF input, dual ASI ports, dual MPEG-2/H.264 SD/HD decode

Rear Plate Suffix:

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

3RU Enclosures:

7800FR 3RU multiframe, holds up to 15x single-slot modules

1RU Enclosure and Front Control Panel:

Note: 7801FC is required for 1RU IRD configuration

7801FR 1RU multiframe, holds up to 4x single- or 2x 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:

+FSE Integrated frame synchronizer
+10B422 10-bit 4:2:2 decoding option
+DD Dolby® E decode
+AAC AAC decode
+SCTE104-1 SCTE 35/104 translation
+DBISS BISS and BISS-E decryption
+IP IP input/output support