

H-IRD-V3S-AUDIO

Professional Dual-Program Broadcast Audio Decoder



Overview

The H-IRD-V3S-AUDIO is a professional dual-program broadcast audio decoder designed for headend, distribution, and contribution applications. The unit accepts one tuner input, two ASI inputs, and two IP inputs, and can decode two selected audio programs simultaneously. Each decoded program can be delivered as balanced analog audio, AES/EBU digital audio, and SPTS over IP. Its combination of flexible inputs, professional audio interfaces, and simple local and web-based management makes it well suited for modern digital broadcasting systems.

Applications



Broadcast
Headends



Cable/IPTV
Systems



Satellite
Downlink Sites



Professional
Audio Distribution

Key Features

- ✓ Dual audio decoding
- ✓ 1 tuner input
- ✓ Supports DVB-S / DVB-S2 / DVB-S2X on the H-IRD-V3S-AUDIO version
- ✓ 2 ASI inputs and 2 UDP/RTP IP inputs via unicast or multicast
- ✓ Supports MPEG-1 Layer II, MPEG-2 AAC, AC-3, E-AC-3, and DRA decoding
- ✓ Analog balanced audio output via XLR interfaces
- ✓ AES/EBU digital audio output via XLR interfaces
- ✓ Supports left, right, and stereo audio track output
- ✓ Adjustable audio gain: -24 dB to +12 dB
- ✓ 2 SPTS outputs over UDP/RTP protocol
- ✓ LCD / keypad local control and Web GUI management
- ✓ Optional single or dual hot-swappable power supply

H-IRD-V3S-AUDIO

Detailed Input & Tuner Specifications



Section	Parameter	Specification
Input	Tuner	1 tuner input, F-type. H-IRD-V3S-AUDIO version: DVB-S / DVB-S2 / DVB-S2X. OEM platform alternate configuration: DVB-C / DVB-T / DVB-T2 / ISDB-T.
	ASI	2 ASI inputs, BNC interface.
	IP	2 IP inputs (UDP/RTP) via 2 x 100/1000M self-adaptive RJ45 ports; unicast or multicast.
Cable / DVB-C	Input frequency	60-890 MHz.
	Standard	DVB-C / J.83A, J.83C, J.83B.
	Constellation	16 / 32 / 64 / 128 / 256 QAM for J.83A/C; 64 / 256 QAM for J.83B.
	Symbol rate	1.0-7.0 Msps.
DVB-T	Input frequency	60-890 MHz.
	Constellation	QPSK, 16QAM, 64QAM.
	Bandwidth	6 / 7 / 8 MHz.
DVB-T2	Input frequency	60-890 MHz.
	Constellation	QPSK, 16QAM, 64QAM, 256QAM.
	Bandwidth	5 / 6 / 7 / 8 MHz.
ISDB-T	Input frequency	60-890 MHz.
	Constellation	DQPSK, QPSK, 16QAM, 64QAM.
DVB-S	Input frequency	950-2150 MHz.
	Symbol rate	0.5-45 Msps.
	Signal strength	-65 to -25 dBm.
	FEC	1/2, 2/3, 3/4, 5/6, 7/8.
DVB-S2	Constellation	QPSK.
	Input frequency	950-2150 MHz.
	Symbol rate	QPSK / 8PSK / 16APSK: 0.5-45 Msps; 32APSK: 0.5-40 Msps.
	FEC - QPSK	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10.
	FEC - 8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10.
	FEC - 16APSK	2/3, 3/4, 4/5, 5/6, 8/9, 9/10.
	FEC - 32APSK	3/4, 4/5, 5/6, 8/9, 9/10.
DVB-S2X	Constellation	QPSK, 8PSK, 16APSK, 32APSK.
	Input frequency	950-2150 MHz.
	Symbol rate	QPSK / 8PSK / 16APSK: 0.5-45 Msps; 8APSK / 32APSK: 0.5-40 Msps.
	FEC - QPSK	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20.
	FEC - 8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10.
	FEC - 8APSK	5/9-L, 26/45-L.
	FEC - 16APSK	2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90.
	FEC - 32APSK	3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9.
	Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK.



The H-IRD-V3S-AUDIO front panel and connector arrangement shown in this datasheet are based on the OEM platform image supplied by the customer.

H-IRD-V3S-AUDIO

Decoding, Output & System Specifications



Section	Parameter	Specification
Decoding	Audio formats	MPEG-1 Layer II, MPEG-2 AAC, AC-3, E-AC-3, DRA.
	Sample rates	48 kHz, 44.1 kHz.
	Audio programs	2 simultaneous audio decodes.
	Audio channel mode	Left, right, or streeo audio track output.
	Audio gain	Adjustable from -24 dB to +12 dB.
Output	Analog audio	2 balanced analog audio outputs via XLR interfaces.
	Digital audio	2 AES/EBU digital audio outputs via XLR interfaces.
	IP streaming	2 SPTS outputs over UDP/RTP, unicast or multicast, for the two decoded audio programs respectively.
	Data interfaces	2 x 100/1000M self-adaptive RJ45 interfaces.
System	Local interface	LCD plus control buttons.
	Remote management	Web-server management.
	Language	English.
	Upgrade	Web management.
Power	Power options	Single power supply optional; dual hot-pluggable power supplies optional.
Mechanical	Dimensions	482 x 350 x 44 mm (W x D x H).
	Approximate weight	3.2 kg.
Environmental	Operating temperature	0 to 45 °C.
	Storage temperature	-20 to 80 °C.
Electrical	Power requirements	AC 110 V ±10%, 50/60 Hz; AC 220 V ±10%, 50/60 Hz.
	Power consumption	Less than 20 W.

Rear-Panel Connector Overview

- ✓ **BAL1 / BAL2:** balanced analog audio outputs
- ✓ **AES1 / AES2:** AES/EBU digital audio outputs
- ✓ **ASI IN1 / ASI IN2:** ASI input interfaces
- ✓ **DATA1 / DATA2:** IP data inputs
- ✓ **NMS:** network management port
- ✓ **RF IN / LOOP OUT:** tuner input and loop-through output
- ✓ **Dual PSU modules:** optional redundant hot-swappable power supplies

Specifications are based on the supplied OEM decoder platform and Thor Broadcast branding adaptation.