

RD-30 Distribution Class Multi-Codec Receiver / Decoder



Applications

- Fiber & IP Transport
- Teleport Infrastructure
- Satellite to IP Turn-Around & Redistribution
- Distribution & Confidence Monitoring
- Satellite, Terrestrial & IP Distribution



Adtec Digital's lightweight RD-30 offers impressive features and specifications in its small 1-RU chassis.

Highlights include: eight channels of audio decoding, robust VBI support, 32APSK demodulation, and ease of use. The clean browser-based UI, SNMP-ready protocol, and front panel interface provide multiple control options from single-user to corporate NMS integrated control.

In addition to MPEG 1 Layer 2, AAC-LC, HE-AAC (v1/v2), Dolby Digital and Dolby Digital+ decoding, the RD-30 supports passthrough audio for Linear PCM, Dolby E, Dolby Digital and Dolby Digital+ (2.0 and surround).

- AVC (H.264) and MPEG 2 4:2:0 Video Decoding
- Eight Channels of Audio Processing
- MPEG 1 Layer 2, AAC-LC, HE-AAC (v1/v2), Dolby (AC-3) and Dolby Digital+ (E-AC-3)
- Analog, AES and SDI Embedded Audio Outputs
- ASI and IP I/O (IP Supports SMPTE 2022 FEC)
- 32APSK Capable Demodulator with DVB-CI CAM Option
- SCTE 35 to SCTE 104 Conversion

The RD-30's robust inputs and outputs, feature set, and reliability enable satellite, terrestrial, IP and fiber applications for broadcast, digital television, and distribution markets.

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VIDEO DECODER PROFILES

MPEG 2 SD/HD Profile : ISO 13818-2 MP@ML and MP@HL

MPEG 4 SD/HD Profile: ISO/IEC 14496-10 MP@L3 HP@L4.2

Supported Resolutions:
480i59.94, 576i50, 720p50/59.94/60,
1080i50/59.94/60,
1080p23.97/24/25/29.97/30

INPUTS

Sync Input: Auto-detects Bi-Level and Tri-level sync for Genlock
Connector: 1 X BNC (75 Ohm)

DVB-ASI Input: ASI (EN 50083-9 250 kb/s to 200 Mb/s)
Connector: 1 X BNC (75 Ohm)

IP Input: UDP, RTP and SMPTE 2022-1 2007 FEC
Supports 1 to 7 TS packets per IP packet
IGMP v1, v2 and v3 support
TS Rate: 250 kb/s to 150 Mb/s
Receiver capability: 2 simultaneous MPEG over IP transport streams
Connector: 2 X RJ45
Connector speed: GigE (10/100/1000 Auto-Negotiate)

AUDIO PROCESSING PROFILES

Supported Audio: Up to four pairs (eight channels) of audio
MPEG 1 Layer 2, AAC-LC, AAC-HE (v1/v2)
Dolby Digital AC-3 / Dolby Digital+ E-AC-3 stereo, discrete 5.1 surround and passthrough
Dolby E / Linear PCM passthrough

**ALL OUTPUTS OPERATE CONCURRENTLY IN SD.
CVBS INACTIVE IN HD.**

SD-SDI / HD-SDI

Standard: Video & Audio SMPTE 259M - SD
SMPTE 292M - HD
Connector: 2 X BNC (75 Ohm)

CVBS

Standard: SD NTSC, PAL-M, PAL-B/G,
PAL-N Composite Video Output
NTSC Pedestal selection
Black at 7.5 IRE or Black at 0 IRE
Connector: 1 X BNC (75 Ohm)

AES AUDIO

Standard: AES3/EBU Unbalanced
Connector: 4 X BNC (75 Ohm)

ANALOG AUDIO

Standard: Four balanced pairs via two DB15 connectors. (2 audio pairs per DB15)
Connector: 2 X DB15

VBI / VANC PROCESSING

SDI Ancillary Support: Closed Captioning (CEA-708)
AFD (SMPTE 2016)
OP-47 (SMPTE RDD-08)
SMPTE RDD-11
SCTE 127 (SMPTE 2031)
EN301775 (SMPTE 2031)
Time Code (SMPTE 12M-2)
SCTE 35 to SCTE 104 Conversion

CVBS/SDI VBI Waveform Support: Line 21 captions (CEA-608)
TVG2x
AMOL-48/96 (SCTE 127)
Teletext/WSS/VPS (EN 301775)

CONDITIONAL ACCESS

Standard: DVB Common Scrambling Algorithm Basic Interoperable Scrambling System (BISS)
- Mode 0 Clear (Free To Air - FTA)
- Mode 1
- Mode E

:: TRANSPORT OUTPUTS ::

DVB-ASI OUTPUT

Asynchronous Serial Interface per EN 500083-9
ASI Mirrored from DVB-ASI Input, IP Input, or RF Input with purchase of optional tuner package.
Connector: 1 X BNC (75 Ohm)

IP OUTPUT

UDP, RTP and SMPTE 2022-2 (COP3 FEC)
Up to ten output destinations
Connector: Shares input connectors

SERVICE FILTERING

Up to ten services per output can be defined to the ASI and IP Outputs

PHYSICAL

Operating Temperature (Ambient): -40C to +65C/-40F to +149F

Power Supply (nominal): 100 - 240 VAC

Wattage: 40W (120V @280mA)

Weight: RD30 - 6lbs. / 2.72kgs.
RD30-LB - 7lbs. / 3.18kgs.

Measurements: (H X W X D)
1.72" X 17.2" X 14.6"
43.68mm X 436.88mm X 370.84mm

MANAGEMENT:

Front Panel Controls
Browser-based Web Interface
SNMP
DB9 Relay for monitoring

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Hardware Models

All models include 1RU chassis, front panel, MP1L2, AAC-LC, HE-AAC v1, HE-AAC v2, Dolby Digital, Dolby Digital+, Dolby E audio decoding, Genlock and VBI Processing as standard features.

RD30	Multi-Codec Receiver / Decoder
RD30-LB	Multi-Codec Receiver / Decoder with DVB-S/S2 Demodulator

Software Options

All keys are field upgradable.

AUD-EXP	Enables two additional audio PID decode. MP1, AAC, AC3.
BISS	Enables BISS descrambling.
IP-OUT	Enables MPEG/IP FEC output.
SCTE104	Enables SCTE 35 ->104 Conversion, SCTE 35-> GPO and SCTE 35 generation.
SURROUND	Enables discrete channel audio output for surround decoding of AAC/AC3/AC3+.
SVC-FLTR	Enables PID/Service Filtering. Demultiplexer MPTS to SPTS or MPTS to Program reduced MPTS.
ESAM-POIS	Enables Cablelabs ESAM POIS Interface.

DVB-S/S2 HARDWARE OPTION

(RD30-01-LB) - The LB option is a hardware option.

DVB-CI Descrambling

(DVB-CI EN 50221)
Descrambles decoded service only without purchase of RD30-CAM-KEY.
RD30-CAM-KEY provides up to maximum amount of decryptable services supported by CAM module.

Maximum DVB-CI TS bitrate: 100 Mb/s
All major CA vendors supported

Interface: 2 X DVB-CI CAM slots

DVB-S/S2 L-Band Tuner

(DVB-S EN 300 421 and DVB-S2 EN 302 307)
Four switched L-Band inputs available for decode
Connector: 4 X F Type, Female

Modulation Schemes:

QPSK / 8PSK / 16APSK / 32APSK

Supported Roll-off:

5%, 10%, 15%, 20%, 25%, 35%

Symbol Rate Range:

1 - 60Msym/s

Frequency Range:

950 - 2150MHz

Input Level:

-65dBm to -25dBm

LNB Power and Control:

0, 13, 14, 18 and 19 VDC @ 450mA
22kHz (band selection according to universal LNB for ASTRA satellites)
VCM Demodulation Support
Multistream Support (Single ISI)

Demodulator Software Options

16/32APSK	DVB-S2 advanced feature license (Enables Multistream, VCM, 16/32APSK Modes).
CAM	Enables DVB-CI Multi-service.

