

Multi-Format Receiver/Decoder



MPEG-2/H.264 HD and SD Decoder for IPTV and Contribution

Aimed at both IPTV and contribution markets, the DR8100 is a professional receiver/decoder for HD and SD video compressed with MPEG-2 and H.264. The DR8100 meets industry requirements for satellite, telco, and terrestrial networks. Built upon a highly flexible, scalable, and future-proof architecture, multiple slots are available to host interface boards that best fit your specific application.

The DR8100 is available in a single channel configuration for receiving H.264 video for contribution applications or in a multi-channel configuration for space-critical applications such as MPEG-2 to H.264 conversion for IPTV.

Designed to match with Kyrion® MPEG-4/H.264 encoders, the DR8100 ensures that you will benefit from the latest advances in compression technology, delivering new contribution links at reduced bandwidths and lower latencies.

The widely deployed DR8100 guarantees interoperability with numerous CAS systems. In order to ensure success in executing complex operations, the DR8100 provides full control through SNMP. With NMS (Network Management System) redundancy management, the DR8100 is a key component of ATEME's complete head-end solution.

KEY FEATURES

- 4:2:0 MPEG-4/H.264 and MPEG-2 decoding
- SD and HD support
- Descrambling with CAS support and BISS decryption
- Extensive input interface range, including IP with FEC, ASI, DVB-S/S2, COFDM DVB-T, QAM

BENEFITS

- Facilitates transition towards H.264 for IPTV head end, dealing with legacy MPEG-2 signals
- Integrated with DataMiner NMS solution for redundancy management
- Pairing with Kyrion H.264 encoders to achieve high quality H.264 contribution links

CHASSIS

Video decoding

MPEG-4 H.264 ISO/IEC 14496-10 MP@L4.1 / HP@L4.0 up to 80 Mbps
MPEG-2 ISO/IEC 13818-2 - 4:2:0 MP@ML/HL up to 30 Mbps
Max TS input datarate 160 Mbps
Genlock input: analog SD Hsync (BlackBurst) / Tri-Level - optional

Video processing

Display modes: Full, letterbox, cropped, anamorphic, AFD
Aspect ratio control: 4:3, 16:9 (selectable)
Down conversion / Cross conversion selectable
OSD: Closed caption, service info, SI, EPG (selectable)

Audio decoding

Dolby Digital AC3, MPEG layer 1 and 2, Linear PCM,
MPEG-2/4 AAC-LC/HE ADTS & LOAS, Dolby E
Downmix (selectable): Lo/Ro (Stereo), Lt/Rt (Surround),
Dual Mono, Dual Left, Dual Right

Conditional Access

Dual DVB-CI CAM slots and BISS 1 & E decryption

System management - local and remote

SNMP, web pages, front panel LCD with keypad
In the field upgradeability through the web-server interface
(for maintenance release & evolutions/enhancements)

OUTPUTS

HD video output

Connectors: 2 x HD-SDI (BNC, 75 Ohms) - SMPTE 292M / 274M / 296M
+ 1 analog component RGB/YPbPr (HD15)
Supported resolutions
1080i @ 25 Hz, 29.97 Hz, 30 Hz
1080p @ 23.98 Hz, 24 Hz, 25 Hz, 29.97 Hz, 30 Hz
720p @ 50 Hz, 59.94 Hz, 60 Hz
480i @ 29.97 Hz / 480p @ 59.94 Hz
576i @ 25 Hz
Embedded audio SMPTE 299M

SD video output

Connectors: 2 x SD-SDI (BNC, 75 Ohms) - SMPTE 259M
+ 1 composite video (BNC, 75 Ohms)
Supported resolutions
480i @ 29.97 Hz / 480p @ 59.94 Hz
576i @ 25 Hz
Closed caption: embedded - EIA-708B or EIA-608B
Line 21 - enable / disable (selectable)
DVB Teletext; VBI/VANC, EN 301775
SCTE35 to SCTE104 messaging (in Vanc)

Audio output

2 services supported, independent from embedded
Supported formats - selectable
Uncompressed IEC-60958 (Decoded / Downmix)
Compressed IEC-61937 (Passthrough)
PCM Downmix

INPUTS

ASI/S-310M input/output

Standards: EN50083-9 (V2:3/98) DVB-ASI, SMPTE 310M
Connectors: 2 x BNC 75 Ohms
TS input rate: max 160 Mbps (ASI) - 19.39 Mbps (S-310M)
Packets size: 188/204 byte

MPEG over IP input

Connectors: 1 x RJ45 + 1 x SFP port
10/100/1000 BaseT auto-negotiation
UDP or RTP multicasts and unicasts
FEC: Pro-MPEG CoP3
IGMP compatibility: version 1, 2, and 3

8VSB/QAM 64&256 Receiver/Demod

Standards: ATSC A/53E (8-VSB) and ITU-T,
Annex B (SCTE DVS-031) (QAM)
Connectors: 1x F-type 75 Ohms
Frequency range: 50-850 MHz
UHF/VHF chan 2-69, Cable chan 2-134 (FCC cable, IRC, HRC)
Sensitivity: -25 dBmV
Dynamic range: > 40 dB

DVB-S/S2 Receiver/Demod

Standards: EN 300 421 (DVB-S), EN 302 307 (DVB-S2)
Connectors: 2 x BNC 75 Ohms
Modulation: DVB-S QPSK, DVB-S2 QPSK/8PSK
Frequency range: L band 950-2150 MHz, KU band or C-band
Symbol rate: 1-45 MSym/s (DVB-S), 1-30 MSym/s (DVB-S2)
RF input level: -25 dBm to -65 dBm
DVB-S FEC: 1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2 FEC: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (QPSK)
3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK)

DVB-T/COFDM Receiver/Demod

Standard: EN 300 744
Connectors: 2 x BNC 75 Ohms
Modulation: QPSK, QAM16, QAM64
Guard interval: 1/4, 1/8, 1/16, 1/32
Frequency range: 49 MHz - 861 MHz,
Channel bandwidth: 6, 7, 8 MHz

PHYSICAL

Dimensions 19" 1-RU (482 x 44,5 x 530 mm / 19" x 1.75" x 21")
Weight 4.3 to 6.4kg / 8.6 to 12.8 lbs

ENVIRONMENTAL

Operating temperature 5° to 45°C / 41° to 113°F
Storage temperature -20 to 70 °C / -4° to +158 °F
Operating humidity 5 to 90% (non condensing)
Electrical compliance EN, FCC, UL
Input voltage 100-240 VAC , 50/60 Hz
Power consumption typical 45 W, max 70 W

ORDERING INFORMATION

DR8100-1HD-MP4-CI-xx

MPEG-2/4 HD decoder with CAM module

DR8100-2SD-MP4-CI-xx

Dual channel MPEG-2/4 SD decoder with CAM module

DR8100-1HD-MP4G-ASI-yy

MPEG-2/4 HD/SD decoder with genlock, ASI and IP or DVBS2 interface,
Pro MPEG FEC

DR8100-1SD-MP4G-ASI-yy

MPEG-2/4 SD decoder with genlock, ASI and IP or DVBS2 interface, Pro MPEG FEC

xx = DVBS2, DVBT or QAM input interfaces
yy = IP or DVBS2 for IP or Satellite contribution,
options for BISS decryption, AES/EBU outputs, etc.