

KYRION DR5000

ULTRA-LOW LATENCY INTEGRATED RECEIVER DECODER HEVC, H264, MPEG-2



KYRION DR5000 is a single-channel multi-codec IRD, with easy setup, fast signal lock, and industry-best input robustness.

A future-proof solution, KYRION DR5000 provides an HEVC software upgrade option and support for 12-bit 4:2:2, SD, HD, UHD (*), MPEG-2, and H.264.

Featuring ultimate baseband video quality, KYRION DR5000 offers high-quality downscaling and de-interlacing, based on the Ateme 5th generation Stream engine.

KYRION DR5000 receives feeds via 4x RF inputs, 2x ASI inputs, and 2x IP inputs, all user-selectable via front-panel and web-based interface.

Advanced IP output forwarding options on KYRION DR5000 include descrambling and filtering services for redistribution.

When used with Ateme's KYRION CM5000e encoder, KYRION DR5000 enables an ultra-low latency MPEG/DVB compliant link.

Key Features

- SD/HD/UHD HEVC, H.264, MPEG-2
- 12-bit 4:2:2
- BISS-CA decryption system support
- Ultra-low latency mode
- Confidence audio/video input monitoring
- DVB-Common Interface option
- Service filtering with remuxed output
- Contribution over Internet support
- UHDLCK™ synchronization for 4K H.264 reception

Value-Added Benefits

- Best-in-class video quality
- Proven interoperability
- Ease of use with front panel and WebGUI
- Immediate service with ultra-fast boot and low latency
- Software upgradeability

Front Panel

Confidence audio/video monitoring on front panel with LCD menus
17-key keyboard for input & navigation
Presets import and export from USB slot
Serviceable air filters

Rear Panel

IP Interface

1 x 100/Base-T Ethernet out-of-band for management
2 x 1000/Base-T Ethernet for MPEG-2 TS/MPTS forward

ASI Interface

2 x DVB-ASI inputs
2 x ASI outputs with MPTS de-encryption/descrambling

Audio Interface

SDI embedded up to 16 mono channels
AES-EBU output on BNC up to 8 mono channels
Optional XLR 600 ohms balanced analog audio output up to 4 balanced stereo channels

Video Output

3 x 3G-SDI (SMPTE-424M)
Optional CVBS BNC analog video output with 1 x CINCH analog audio stereo pair

Synchronization

Genlock, Blackburst/Tri-level input
Genlock, Blackburst/Tri-level loop output

RF Interface

1 RF demodulator with 4 selectable RF inputs
Loop-through output
Fast satellite frequency locking
L-Band input support – frequency range: 950-2150 MHz
Downlink/L-band frequency calculator
RF input level: -70 dBm to 0 dBm
C/N, BER, C/N margin, link margin monitoring
Automatic or manual DVB-S, DVB-S2/S2x selection
Adjustable search range

DVB-S (EN 300421)

Constellation QPSK
Symbol rate up to 45-MBaud

DVB-S (DSNG EN 301210-1.1.1)

Constellation 8PSK
Symbol rate up to 45-MBaud

DVB-S2 (EN 302307-1)/DVB-S2x (EN 302307-2)

Constellation QPSK, 8PSK, 16APSK, 32APSK
Symbol rate range for QPSK to 16APSK up to 45-MBaud
Symbol rate range for 32APSK up to 40-MBaud
Roll-Off: 0.35, 0.25, 0.20, 0.15, 0.10, and 0.05

Video

HEVC Main, Main 10, Main 12, Main 422 10, Main 422 12, 60 Mbps max
H.264 Main, High, High 10, High 422
MPEG-2 Main, 422 Profiles/Main, High levels
Video decoding MPEG-2, H.264 bitrate: 1 to 80 Mbps
SD up to HD 1080p50/60
TS VBR support

Audio

MPEG-1 Layer II, AAC-LC, AAC-HEv1/v2 decode
Advanced Dolby E, AES302M passthrough
Optional DD/DD+ decode

Audio Decoded

Up to 16 mono channels on SDI and AES

Audio Passthrough

Up to 16 mono channels SDI
Up to 8 mono channels AES

Configuration & Management

Ultra-fast boot
Web-based graphic user interface
Video and audio confidence monitoring on front panel and WebGUI
128 configuration presets memory slots
In-band and out-of-band management
SNMP (MIB v2c) with remote SNMP supervisor
MIB download from WebGUI
Firmware update – over-the-air (OTA) (ETSI 102-006)
PID filtering demux/remux
Multi-protocol encapsulation

Descrambling

BISS 0/1/E (Tech 3292-rev.2 and EBU R139)/BISS-CA (Tech 3292-1)
NexGuard Network ID SDI forensic watermarking insertion
DVB-CI common interface hardware option to descramble
Multi-services descrambling included
MPTS with support of major CAS vendors: Conax, Irdeto, NDS, Viaccess

ARQ Solution

Zixi receiver – push and pull modes
SRT receiver – caller, listener, and rendezvous modes
RIST receiver – simple and main profiles

Physical and Environmental

19" 1-RU (482 x 44 x 310 mm/19"x1.73"x 12.8")
3.4 kg/7.5 lbs.
Cooling air flow from front to back
User-serviceable air filters
Power supply: 100-240 VAC 50/60 Hz
Typical consumption: 34-W/7s booting time
Operating temperature: 0 to 55°C/+41° to +131°F
Storage temperature: -20 to 70°C/+32° to +158°F
Operating humidity: 5 to 90% (non-condensing)

DR5000 Ordering References

Software Bundles				
	MPEG-2 420/422	H264 420 8-bit	H264 422 10-bit	HEVC 422 12-bit
DR5000-HD-420	✓	✓	Optional	Optional
DR5000-CI-CVBS-HD-420	✓	✓	Optional	Optional
DR5000-DP-CI-HD-422	✓	✓	✓	Optional
DR5000-DP-CI-HD-HEVC12	✓	✓	✓	✓

Hardware Versions			
	Dual Plug PSU	DVB Common Interface	Analog Video/Audio Output
DR5000-HD-420			
DR5000-CI-CVBS-HD-420		✓	✓
DR5000-DP-CI-HD-422	✓	✓	
DR5000-DP-CI-HD-HEVC12	✓	✓	

Hardware Options	
DR5000-UIP (**)	Ultra-low delay IP interface
AEXTD-CBL	8 XLR balanced breakout cable for external analog audio output of DR5000-x-CVBS-x

Software Options	
DR5000-HEVC-422-10/12	Software license – HEVC 4:2:0/4:2:2 - 8/10/12-bit decoding support
DR5000-BISS-CA	Software license - BISS-CA descrambling support
DR5000-LIC-ARQ	Software license – Open Internet Zixi stream receiver support
DR5000-LIC-SRT	Software license – Open Internet SRT stream receiver support
DR5000-LIC-DLB-FULL	Software license – DD & DD+ audio decoding, support up to 4 audio tracks (mono, stereo, or 5.1)
DR5000-420-FULL (*)	Software license package upgrade for DR5000-HD-420 and DR5000-CI-CVBS-HD-420, includes 4:2:2 10-bit support, 1080p, UHD lock, MPE, multiservice descrambling (reserved for CI option), VBR, interlaced upscale, S2x, 16/32APSK, multistream ISI, SRT
DR5000-422-FULL (*)	Software license package upgrade for DR5000-DP-CI-HD-422, includes HEVC (4:2:0 & 4:2:2 8 & 10/12-bit), 1080p, UHD lock, MPE, multiservice descrambling, VBR, interlaced upscale, S2x, 16/32APSK, multistream ISI, SRT

* Contact your sales representative for the detailed list of features

** Contact factory for availability