

# kyrion DR5000

## HEVC / H264 / MPEG2 Ultra Low Latency Integrated Receiver Decoder



# kyrion DR5000

The Kyrion<sup>®</sup> DR5000 is a single channel multi-CODEC IRD, with easy setup, fast signal lock, and the industry best input robustness.

The Kyrion<sup>®</sup> DR5000 is a future-proof solution, with HEVC<sup>1</sup> software upgrade option and support for 10-bit 4:2:2, SD, HD, UHD<sup>2</sup>, MPEG2 and H264.

The Kyrion<sup>®</sup> DR5000 provides the industry best baseband video quality, with high quality down scaling and de-interlacing, based on ATEME 5<sup>th</sup> generation STREAM<sup>®</sup> engine.

The Kyrion<sup>®</sup> DR5000 receives feeds via 4x RF inputs, 2x ASI inputs and 2x IP inputs, all user selectable via front panel and web based user interface.

The Kyrion<sup>®</sup> DR5000 features advanced IP output forwarding options with descrambling and services filtering for re-distribution.

When used with ATEME Kyrion<sup>®</sup> CM5000 encoder, the Kyrion<sup>®</sup> DR5000 enables ultra-low latency MPEG/DVB compliant link.

### Key features

- SD/HD/UHD HEVC, H264, MPEG2
- 10-bit 4:2:2
- Ultra low latency mode
- Confidence Audio / Video input monitoring
- DVB-Common Interface option
- Service filtering with remuxed output
- Contribution over Internet support
- DVB-S2x Demodulation
- UHDLOCK<sup>™</sup> Synchronization for 4K H264 reception

### Benefits

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

# kyrion AM2102

## H264 / MPEG2 Broadcast Encoder

### Front Panel

Confidence Audio/Video monitoring on Front panel with LCD Menus  
17-keys keyboard for input & navigation  
Presets import and export from USB slot  
Serviceable Air Filters

### Rear Panel

#### IP interface

1 x 100/BaseT Ethernet for out-of-band management  
2 x 1000/BaseT 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 Analogue audio output  
Up to 8 mono channels

#### Video output

3 x 3G-SDI (SMPT-424M)  
Optional CVBS BNC Analog Video Output with 2 x CINCH Analog audio<sup>3</sup>

#### Synchronization

Genlock, Black Burst Tri-level input  
Genlock, Black Burst Tri-level Loop output

#### RF interface

1x RF demodulator with 4x selectable F-type (75 Ohms) inputs  
Loop-through output  
Fast Satellite Frequency locking  
L-Band input, C-band, Ku-band support  
Frequency Range: 950-2150 MHz (L-Band)  
Downlink / L-Band frequency calculator  
RF input level: -65 dBm to -25 dBm  
C/N, BeR, C/N margin, Link margin monitoring  
Automatic or Manual DVB-S or DVB-S2 selection  
Adjustable search Range

#### DVB-S (DSNG EN 300174)

Constellation 8PSK, FEC 3/5, 2/3, 3/4, 5/6, 8/9, 9/10

#### DVB-S (EN 300421)

Constellation QPSK  
Symbol rate up to 45 MBaud

#### DVB-S2 (EN 302307-1)

Constellation QPSK, 8PSK, 16APSK, 32APSK  
Symbol rate range for QPSK up to 68 MBaud  
Symbol rate range for 8PSK up to 68 MBaud  
Symbol rate range for 16APSK up to 45 MBaud  
Symbol rate range for 32APSK up to 38 MBaud

#### DVB-S2x (EN 302307-2) \*\*

Constellation QPSK, 8PSK, 8APSK-L, 16APSK, 16APSK, 32APSK, 32APSK-L, 64APSK, 64APSK-L  
Symbol rate range up to 54 MSps  
Roll-Off: 0.35, 0.25, 0.20, 0.15, 0.10, and 0.05

### Video

HEVC, Main 12, Main 4:2:2 10, Main 4:2:2 12, 60 Mbps max<sup>1</sup>  
H264 (4:2:0 8-bit, 4:2:0 10-bit, 4:2:2 8-bit, 4:2:2 10-bit)  
MPEG2 (4:2:0 8-bit & 4:2:2 8-bit)  
Video decoding MPEG-2, H264 Bitrate: 1 to 80 Mbps  
SD up to HD 1080p50/60  
TS VBR support

### Audio

MPEG-1 Layer II, AAC  
Dolby Digital E, DD, DD+, AC3, AC3+, PCM pass through  
Optional Dolby Digital / Dolby digital Decoding<sup>3</sup>

#### Audio decoded

Up to 16 mono channels on SDI and AES

#### Audio Pass through

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

### Configuration & Management

Ultra-fast-boot  
Web Graphic User Interface  
Video and Audio Confidence monitoring on front panel and web GUI  
128 Presets configurations memory slots  
In-Band and Out-Of-Band Management  
SNMP (MIB v2c) with remote SNMP supervisor  
MIB download from web GUI  
Firmware Update Over-The-Air (ETSI 102-006)

### Descrambling

BISS 0/1/E/ (EBU R139)  
DVB-CI Common Interface Hardware option to descramble  
Multi services descrambling included  
MPTS with support of major CAS vendors:  
Conax, Irdeto, NDS, Viaccess<sup>3</sup>

### Physical & Environmental

19" 1-RU (482 x 44 x 310 mm/19"x1.73"x 12.8")  
3.4 kg/8.5 lbs.  
Cooling air flow from front to back  
User Serviceable Air Filters  
Power supply 100-240 VAC, 50/60 H or 48VDC<sup>3</sup>  
Typical consumption 36 W  
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

Hardware bundles		
	Common interface	Analog Audio output
DR5000		
DR5000-CI	•	
DR5000-CI-ANL	•	•
DR5000-ANL		•
48 VDC PSU		○

● Included ○ Optional

Hardware Options	
DR5000-CI	Common Interface with 2 CAM slots - Multi services Descrambling included
DR5000-ANL	Analog audio outputs- up to 8 mono channels. Required AEXTD-CBL not included
DR5000-VANL <sup>3</sup>	DR5000-VANL Optional CVBS BNC Analog Video Output with 1x CINCH Analog audio stereo pair - Uses 1 3G-SDI output
AEXTD-CBL	8 XLR Balanced Breakout cable for External AES / Analog Audio input for DR5000-ANL

Software bundles					
	SD	HD	MPEG-2 4:2:0/4:2:2	H.264 4:2:0 8-bit	H.264 4:2:2 10-bit
DR5000-1-SD-420	•	○	•	•	○
DR5000-1-HD-420	•	•	•	•	○
DR5000-1-SD-422	•	○	•	•	•
DR5000-1-HD-422	•	•	•	•	•

● Included ○ Optional

Software Options	
DR5000-LIC-HD	Software license – High Definition support. License per channel
DR5000-LIC-422	Software license – 4:2:2 chrominance support. License per channel
DR5000-LIC-1632APSK	Software license – DVB-S/S2 demodulation 16/32 APSK support. License per channel
DR5000-LIC-UHDLCK	Software license – 4K specific synchronization mode on DR5000. License per channel
DR5000-LIC-1080p50/60	Software license – 1080p50/60 decoding support. License per channel
DR5000-LIC-DD/DD+	Software license – Dolby Digital (AC3) & Dolby Digital Plus (AC3+) Audio decoding support. One license per Track (up to 5.1)
DR5000-LIC-ZIXI	Software license – Open Internet One Stream Zixi Receiver support for DR5000 decoder. Works only in pair with Kyrion CM5000

<sup>1</sup> Committed Roadmap item available via software upgrade

<sup>2</sup> Via cascading

<sup>3</sup> Contact Factory for availability