



#### FEATURES

**MDR Rack compatible HEVC, H.264, MPEG-2 Decoder**

**Decoding of 4x simultaneous HD signals from a single half-rack unit (QuadSync mode)**

**Reception of true 4K UHD signals with HDR**

**Ultra-low Latency for live applications**

**IP SRT and DVB-ASI in**

**2 slot MDR rack kit for high-density mounting**

**Legacy H.264 and MPEG2**

#### BENEFITS

**Extends life of MDR Rack infrastructure.**

**Saves Rack Real-Estate – up to 4x HD Decoders in 2 slots!**

**IP streaming with SRT for internet**

## Sapphire-MDR Decoder

Sapphire-MDR is a broadcast quality H.265 Decoder, in an MDR Rack compatible format. The Sapphire-MDR occupies two slots in an MDR Rack and integrates with the MDR Rack control system. The Sapphire-MDR decodes HEVC, H.264 and MPEG-2 in resolutions up to 4K UHD.

Full control and monitoring of the Sapphire-MDR decoder is offered through the comprehensive web browser interface. Front panel LEDs provide status indication for Power, ASI Lock, Decoder Lock, Genlock and Data. Similar status indication is available through the MDR Rack chassis monitoring system.

Sapphire-MDR is ultra-compact and in QuadSync mode, can deliver up to 4x decoded HD signal streams in a 2 rack slot package. Sapphire's unique QuadSync mode encodes 4x non-synchronous HD signals of differing formats (frame-rate must be the same) and at the decode side, outputs them converted to a single production format and fully synchronised.

QuadSync mode is the ideal format for any multi-camera application such as motor sport, yachting and air-craft applications, requiring minimum cost, space and equipment.

To ensure backwards-compatibility, legacy compression systems such as H.264 and MPEG2 are also supported. Streams can be inputted via the ASI or IP interfaces.

Genlock input is provided for syncing to studio signals, as well as two stereo pairs of analogue audio. Serial RS 232 Private user interfaces can be employed to carry telemetry data and the Sapphire-MDR supports decoding of DBS and Vislink formats.

**Connectors**

HDSDI-3G	4x BNC Female 75 ohm
ASI IN	BNC Female 75 ohm
ASI OUT	BNC Female 75 ohm
GENLOCK	BNC Female 75 ohm
Network	RJ45
Audio Out	2 x 6 way screw terminal
Data Out	Binder 719 Series

**Video Decoder**

Profiles	4K UHD. 4:2:2/4:2:0, 8/10-bit 2160p / 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60
	HD. 4:2:2/4:2:0, 8/10-bit 720p / 50 / 59.94 / 60 1080i / 50 / 59.94 / 60 1080p / 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 1920x1080psf 30/29.97/25/24/23.97Hz
	SD 4.2.2/4.2.0 480i / 29.97 576i / 25
Legacy Decoding modes	H.264 and MPEG2

**Latency (if used with Sapphire Encoder)**

Encoder + Decoder	60ms (70ms in 4K mode) with ULL option
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**Audio Decoder**

Format	Embedded
Decoder	MPEG-1 Layer2, AAC-LC, Linear PCM
Quantity	4 pairs (8 Pairs if MPEG or Liner PCB)

**Analogue Audio**

Format	2 pairs line / mic level
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**Stream Inputs / Outputs**

DVB_ASI	Transport stream to 100Mb/s
IP Interface	10/100/1000 base-T
IP Stream Format	Unicast/Multicast / SRT

**Data**

RS232	Private Data from TX to RX, supports Vislink and DBS modes
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**Indicators**

Front Panel	Power, ASI Lock, Decoder Lock, Genlock and Data Valid
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**Control**

Local	MDR Rack Status and Monitoring
Remote	IP web-browser Control

**HDR/WGC**

We support	Rec. ITU-R BT.2100-2 (PQ and HLG) Rec. ITU-R BT.2020
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**Dimensions**

Size	MDR Rack 2 slot width
Weight	1kg
Mounting	MDR Rack Mount

**Power**

DC In:	16W @ 4K Decoding
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**Order Codes**

Sapphire-MDR	Sapphire HEVC/H.264 Encoder 4:2:2/4:2:0/10bit/8bit 1080i/1080p Encoder, 2 MDR Slot width
LIC-QUAD	Software license for Quad Mode
LIC-4K	Software license for 4K UHD
LIC-PSF	Software license for PSF

