



Sapphire Rack-Mount

Sapphire HEVC is a broadcast quality H.265 codec system. Offering exceptional compression ratios on video resolutions up to 4K UHD. The Sapphire Decoder can be easily integrated into existing Earth Station or MCR systems to provide a cost-effective upgrade to the latest decoding technology.

Description

HEVC compression offers significant bitrate savings over traditional H.264 solutions, this saves broadcasters money on contribution bandwidth and is set to become the go-to compression standard demanded by SNG Operators going forward. HEVC also supports the new 4K UHD formats required for contribution as the additional efficiency of HEVC makes wireless transmission of 4K possible from smaller, less powerful systems.

The Sapphire HEVC Decoder offers Downlink and MCR Operators a simple and cost-effective method of upgrading their existing infrastructure to HEVC operation as it functions as a 'bolt-on' to existing systems., rather than a complete replacement.

Sapphire is ultra-compact, delivering up to 4x HD decoders in a single half-width 1RU enclosure, so can be integrated with minimal disturbance to existing rack layouts. To ensure backwards-compatibility, legacy compression systems such as H.264 and MPEG2 are also supported. Compressed streams are available as IP or on DVB_ASI for interoperability.

The decoder connects to existing receive equipment via a single ASI co-ax cable for easy upgrade and several units can be looped together for decoding large MCPC signals.

Features:

- Up to 50% bit-rate reduction compared with H.264
- Decoding of 4x simultaneous HD signals from a single half-rack unit
- Reception of true 4K UHD signals with HDR
- Ultra-low Latency for live applications
- IP and DVB-ASI in/out
- 2x in 1RU rack kit for high density mounting
- Legacy H.264 and MPEG2 Decoding also supported

Benefits:

- Cost-Effective – up to 4x high quality HD decoders in a single unit
- Saves Rack Real-Estate – up to 8x HD decoders in a single 1RU!
- Software upgrade to 4K/UHD
- Cost-effective – uses existing IRDs & RF systems

Specifications

Connectors

HDSDI-3G	4x BNC Female 75 ohm
ASI IN	BNC Female 75 ohm
ASI OUT	BNC Female 75 ohm
Network	RJ45
AC In	IEC

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
	SD 4.2.2/4.2.0 480i / 29.97 576i / 25

Legacy Decoding modes	H.264 and MPEG2
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Latency (if used with Sapphire Encoder)

Encoder + Decoder	60ms (70ms in 4K mode)
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Audio Decoder

Format	Embedded
Encoder	MPEG-1 Layer2, AAC-LC, HE-AAC (Linear PCM in Ultra-Low Delay)
Quantity	4 pairs (1 pair in Ultra-Low Delay)

Analogue Audio

Format	2 pairs line / mic level
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Stream Inputs / Outputs

DVB_ASI	Transport stream to 60Mb/s
IP Interface	10/100/1000 base-T
IP Stream Format	Unicast / Multicast / RTSP

Indicators

Display	Hi-brightness OLED
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Control

Local	Joystick and menu screen
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Remote	IP web browser Control RS232 (module only)
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Dimensions

Size (WxDxH)	210x352x1RU
Weight	1.9Kg
Mounting	Full-width and side-by-side mount kits available as an option

Power

AC In:	90-ce 15W @ 4K Decoding
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Order Codes

SAPPHIRE-HEVC-ASI-DEC	Rack Unit -2x HD Decode
SAPPHIRE-HEVC-ASI-4DEC	Rack Unit - 4x HD Decode
SAPPHIRE-HEVC-4K-DEC	4K Decoding Upgrade Licence
SAPPHIRE-HEVC-IP-DEC	IP Decoding Upgrade Licence
SAPPHIRE-1RU	Full-width Rack Mount Kit (single unit in 1RU)
SAPPHIRE-DUAL1RU	Side-by-side Rack Mount Kit (2x units in 1RU)

