



Sapphire HEVC Encoder Module L1500 TX

Sapphire HEVC is a broadcast quality HEVC codec system. Offering exceptional compression ratios on video resolutions up to 4K UHD. The Sapphire HEVC L1500 allows legacy wireless camera back systems to be conveniently upgraded to HEVC and 4K.

The Sapphire L1500 HEVC Encoder module is a cost-effective way for users of L1500 MPEG2 transmitters to upgrade to H.264 and HEVC encoding formats. The increased encoding efficiency of these formats enables wireless camera operation with HD 1080p and 4K UHD for the first time.

The module integrates seamlessly in the blank/camera control module slot on the L1500 and uses no internal connections. The on-board MPEG-2 encoder in the L1500 is disabled and ASI from the Sapphire is fed via a single BNC cable. This is fed into the RF modulation engine of the L1500 and the system operates as a standard wireless camera. Sapphire module powering is via D-Tap connector on the existing battery port.

On the receive side, ASI is fed from the existing L2134/74/94 RX into the Sapphire decoder which then outputs the required video/audio signals.

Latency is critical in many broadcast applications and the Sapphire Codec is built to minimise latency without compromising quality. The 60mS end to end latency (70ms in 4K) makes the Sapphire solution suitable for all live event coverage.

FEATURES

- High quality HEVC codec
- Upgrades existing infrastructure to 1080p and 4K at a fraction of the cost
- Low Latency (60ms 'glass to glass') for live applications
- Transmission of true 4K UHD signals with HDR
- Transmission of 4x simultaneous 1080p50/59 HD
- IP and DVB-ASI in/out

APPLICATIONS

- Multi-camera on-boards in high quality
- Ariel Relay
- Super Slo-Mo
- Low Delay 4K Wireless

Connectors

HDSDI 3G 1-4	DIN 1.0/2.3 Female 75 ohm
Audio	Hirose 6 way
ASI	BNC Female 75 ohm
Network	RJ45
DC In	Hirose HR10 Male

Video Encoder / 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 Encoding modes	H.264

HDR/WGC

We Support	Rec. ITU-R BT.2100-2 (PQ and HLG)
	Rec. ITU-R BT.2020

Latency

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

Format	Embedded / 2 pairs line / mic level
Encoder	MPEG-1 Layer2, AAC-LC (Linear PCM in Ultra-Low Delay)
Quantity	8 pairs (1 pair in Ultra-Low Delay)

Stream Inputs / Outputs

DVB_ASI	Transport stream to 100Mb/s
IP Interface	10/100/1000 base-T
IP Stream Format	Unicast / Multicast / RTSP (to 30Mb/s)

Indicators

Display	Hi-brightness OLED
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Control

Local	Joystick and menu screen
Remote	IP web-browser Control

Dimensions

Size (WxDxH)	See below
Weight	700g
Mounting	Replaces the L1500 camera control module

Power

DC In:	9 - 18V
	18W typical @ 4K encoding

Product Codes

SAPPH-E-L1500	L1500 Base Unit, HEVC HD and Low Latency
LIC-4K	Software License for 4K
LIC-QUAD	Software license for Quad Mode
LIC-PSF	Software License for PSF

Kit Contents

SAPPH-E-L1500	L1500 Base Unit
DIN to BNC Cable	
Audio In Cable	
DTap Power Cable	