

HARP IPX Encoder

Broadcasting 4K IP Video Streams

H.264



The Harp IPX encoder delivers industry-leading 4K/UHD and Full HD multi-channel capture, encode, and stream AV-over-IP. Built on H.264, the world's most common codec, this plug-and-play solution fits seamlessly into existing infrastructures and interoperates with any device on the network, ensuring high-density content distribution and system scalability.

With simultaneous streaming, processing, and recording on all channels, IPX Encoder allows for transmission of live or recorded content to and from multiple video-on-demand platforms. The H.264 universal codec lets you encode on multiple channels at low-bitrates for excellent quality and minimal network bandwidth consumption—even at 4K; you can then decode network contents using any device. Customizable settings on each independent channel provide powerful scaling and deinterlacing to ensure only pristine graphics and video are encoded.

Features

H.264/MPEG-4 Part 10 Encoding

4 x HDMI Inputs

4 x Up to 4096x2160@30Hz Capture

Up to 4:4:4 Chrome sub-Sampling

50kbs-120Mbps Bitrate Range



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VISUAL COMMUNICATION SOLUTIONS

integration solutions

TECHNICAL DATA

Connectivity	
Bus Interface	PCIe x8
Form Factor	Full height
Bracket (Mounted)	ATX
Maximum Number of Cards per System	System dependent
Multi-Card Support	Yes
Supported Video Input Formats	4x Mini HDMI (Type C)
Performance	
Color Space Capture	RGB and YUV 8- and 10-bit support Color space conversion support
Chroma Sub-Sampling	4:4:4 (8-bit) 4:2:2 (8-bit) 4:2:0 (8-bit and 10-bit) 4:0:0 (8-bit and 10-bit)
Audio Input	4x HDMI 1.4 with digital LPCM audio and two-channel stereo
Maximum Capture Resolution	2x 3840x2160 @60Hz 2x 4096x2160 @60Hz 4x 3840x2160 @30Hz 4x 4096x2160 @30Hz
Support for Custom Resolutions	Project dependent; please contact Matrox for details
Encoding	
Video Encoding Formats (Codecs)	H.264/MPEG-4 Part 10 (AVC)
Encoding Profiles	Baseline (BP) Main (MP) High (HIP) High 10 (Hi10P) High 4:2:2 (Hi422P) High 4:4:4 predictive profile separate plane (Hi444PP) CAVLC 4:4:4 intra (44)
Encoding Level	Up to 5.2
Bitrate Range	50 kbps to 120 Mbps ¹ 15 Mbps (default)
Rate Control	CBR VBR Favor quality (optimize for desktop or latency) Adjustable GOP size
Audio Encoding Format (Codec)	MPEG4 AAC-LC/HEV1/HEV2
Audio Sample Frequency	32 kHz 44.1 kHz 48 kHz
Audio Bit Rates	Up to 576 kbps (AAC-LC) Up to 288 kbps (AAC-HEV1) Up to 144 kbps (AAC-HEV2)
Video Compositing	Yes, fixed formats including PIP, PBP
Scaling	Yes
Recording	
Recording File Format	.mp4
Filename	Customizable prefix (optional)
Timestamp	Automatic in filename
Recording Programmability	Start date and time Duration Maximum file length File frequency
Stored Recording Locations	Shared network drive or NAS
Networking Connectivity	
Network Connector	RJ45
Network Standard	100/1,000 base-T Ethernet Auto speed Half/full duplex Unicast, Multi-unicast, Multicast
Streaming Protocols	HTTP/HTTPS over TCP UPnP RTSP/RTCP/RTP (all required) RTP MPEG2.TS over UDP
IP Addressing	IPv4 support DHCP (default)/static IP address support



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