



FEATURES

Up to 50% bit-rate reduction compared with H.264

Transmission of 4x simultaneous HD signals up to 1080p50/59 (QuadSync mode)

Transmission of true 4K UHD signals with HDR

Ultra-low Latency for live applications

IP and DVB-ASI in/out

Legacy H.264 and MPEG2 Encoding also supported*

BENEFITS

High density, low latency encoding make Onyx ideal for remote production

Reduced hardware costs - encodes 4x HD signals simultaneously

Software upgrade to 4K/UHD

Feature-rich interfaces and options

Available as Codec for operational flexibility

Onyx HEVC Encoder

Onyx HEVC is a broadcast quality H.265 Encoder, offering exceptional compression ratios on video resolutions up to 4K UHD. The Onyx Encoder is ideal for remote production applications over leased lines or satellite, handling 4 HD or 1 UHD feed with ultra low latency.

Onyx is a feature-rich family of professional broadcast encoders and decoders. Onyx encoders can stream across dual networks using a variety of IP formats including SRT, at bitrates of up to 120Mb/s. The use of ST2022-7 technology at the decoder ensure glitch free recovery from network errors or path fail over. For legacy systems and satellite modem connection the Onyx encoder is equipped with ASI inputs and outputs. Built in encryption mechanisms such as a BISS and DES can be employed to protect valuable content.

The unique quad mode allows four HD inputs to be synchronised and encoded with an end to end latency of <40ms in progressive formats, this high density and low latency of encoding is ideal for the coverage of live sporting events.

Each video input can support 2 stereo pairs of embedded audio. As well as embedded audio inputs, Onyx is equipped with a two stereo analogue audio inputs as well as return 'talk back' audio interfaces.

SFP cages are provided for ST2110 interfacing.

The separate control port offers web browser control and a front panel is supplied for local control and monitoring.

A dual input power supply is provided for use where redundant power systems are available.

Connectors

Video In 1-4	3G / 12G SDI HD-BNC x 4
ASI In	HD-BNC
ASI Out	HD-BNC
Stream 1 / 2	1000Base-T ethernet RJ45 x 2
Control	1000Base-T ethernet RJ45
Audio In / Out / Data	High Density DType 26 way
SFP Port	SFP Cage
DC In	Hirose 6 way
Mains In	IEC Connector

Video Encoder

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
Bitrates	To 90Mb/s

Latency (if used with Onyx Decoder)

Encoder + Decoder	<40ms
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Audio Encoder

Format	Embedded
Encoder	MPEG-1 Layer2, AAC-LC (Linear PCM in Ultra-Low Delay) Dolby E pass through
Quantity	4 pairs (8 pairs MPEG or Linear PCM)

Analogue Audio

Format	2 pairs line / mic level
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Talk Back Output

Format	2 pairs line level
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Stream Inputs / Outputs

DVB_ASI	Transport stream to 90Mb/s
IP Interface	3 x 1000Base-T ethernet
IP Stream Format	Unicast / Multicast / UDP / RTP / SRT
IP Stream Rate	120Mb/s maximum
Packet Switching	ST2022-7

HDR/WGC

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

Display	Hi-brightness OLED
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Control

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

Dimensions

Size (WxDxH)	210mm x 352mm x 1RU
Weight	1.9Kg
Mounting	Side-by-side mount kit available as an option

Power

AC In:	90-255VAC 24W at 4K encoding
DC In	9-16V (12V nominal)

Order Codes

ONYX-E-RACK	Onyx HEVC Encoder Rack Unit
ONYX-D-RACK	Onyx HEVC Decoder Rack Unit
LIC-4K	4K Licence
LIC-QUAD	QuadSync (4x HD Inputs/Outputs)
LIC-PSF	PSF Video Formats

*** Development – please check for availability**