



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.

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 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 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 |
|-------------------|-------|

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 |
|--------|--------------------------|

Talk Back Output

| | |
|--------|--------------------|
| Format | 2 pairs line level |
|--------|--------------------|

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 |
|------------|---|

Indicators

| | |
|---------|--------------------|
| Display | Hi-brightness OLED |
|---------|--------------------|

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**