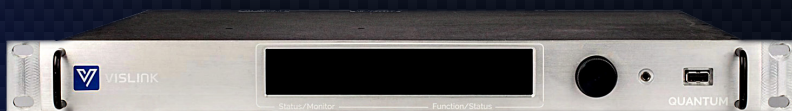


Quantum Encoder

IP-Native Contribution Encoder



Vislink's Quantum Encoder provides high-quality, low-latency encoding, offering multi-service HD encoding as well as superior 4K UHD. With support for 4:2:2 10-bit HDR, the Quantum Encoder delivers stunning visuals that preserve the detail of the camera image throughout the broadcast chain. Its cost-efficient HEVC encoding achieves low data rates with ultra-low latencies, enabling production teams to create dynamic and responsive programming.

With high-density capabilities, the Quantum Encoder can encode four simultaneous HD signals, significantly reducing hardware costs while maximizing operational efficiency. Sync mode allows all four HD inputs to be synchronized and encoded with end-to-end latency of less than 35 milliseconds in progressive formats, making it ideal for the fast-paced demands of live sports coverage. Additionally the Quantum encoder offers single HD/UHD end to end in sub frame latency, ensuring minimal delay for critical content delivery.

In addition to supporting up to 16 channels of embedded audio and 4 channels of analogue audio, the Quantum Encoder features optional AES or BISS encryption, ensuring secure transmission for sensitive content. It also supports SRT (Secure Reliable Transport) for robust, low-latency video delivery over unreliable networks. As an IP-native device, it interfaces seamlessly with globally connected infrastructure, delivering video content to any geographic location, a perfect fit for modern remote productions.

Key Features

4K UHD HDR encoding

4 x HD signal transmission at up to 1080p50/59

Sync mode - 4 x HD signals in Ultra Low Delay

10-bit Luma and 4:2:2 Chroma profile video support

HEVC Ultra Low Latency encoding

IP and DVB-ASI I/O supported

Reduces bit rate by as much as 50% compared to H.264

Legacy H.264 & MPEG2 supported

Typical Applications

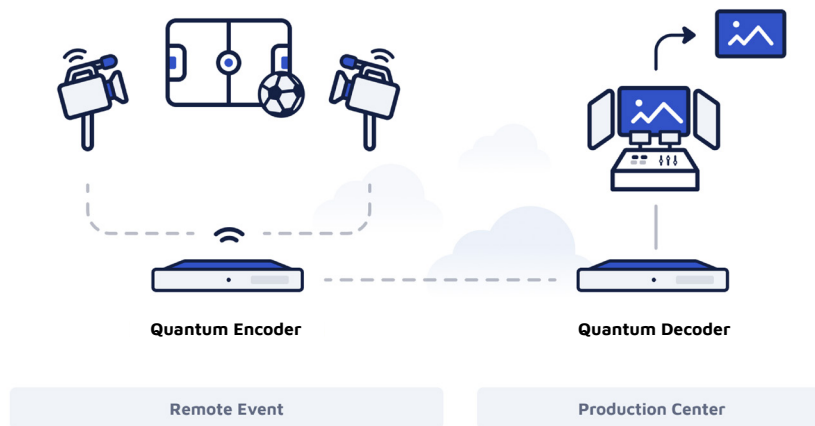
Live event contribution

Content backhaul

Remote Production

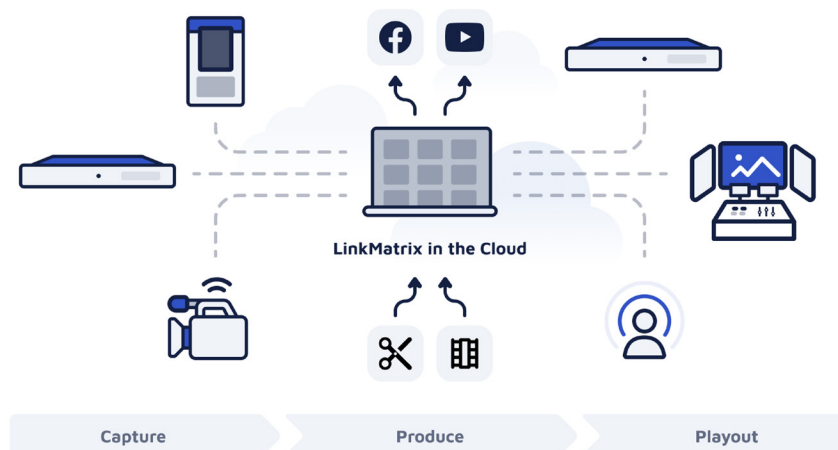
Outside broadcast production

Remote Production Workflow with Vislink Quantum Encoder and Quantum Decoder



LinkMatrix Centralized Control and Configuration

Vislink's LinkMatrix control platform provides the ability to remotely configure and control Quantum devices from an operations center. By utilizing the LinkMatrix management platform, staff can work more efficiently and workflows can be streamlined. LinkMatrix can be used to simplify ways of working for ad-hoc or scheduled events to ensure that configurations and signal paths are set for data streaming as required.



Quantum Encoder Datasheet



Technical Specifications	
Video and Audio Parameters	
Video Encoder Profiles	• HEVC (H.265) UHD, HD & SD - Main, Main 10, Main 4:2:2 10 - 4:2:0/4:2:2 8/10 bit up to 4K UHD p60 • MPEG-4 AVC (H.264) HD & SD - Main, High, Baseline up to Level 5.2, High 10/High 4:2:2 • MPEG-2 (H.262) HD & SD - 4:2:0 8 bit, up to 1080i60
Video Inputs	2 SFP+ module slots supporting electrical and optical interfaces Supports 4x HD SDI Video inputs: • 4x 3G SDI up to 1080p 50/60 - 4x HD-SDI SMPTE-292M - 4x 3G-SDI SMPTE-424M • 12G SDI up to 4K UHD p50/60 - 1x 12G-SDI SMPTE-2082
Video Formats	• 720p @ 50, 59.94, 60 • 1080i @ 50, 59.94, 60 • 1080p @ 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 • 1080psF @ 23.98, 24, 25, 29.97, 30 • 2160p (UHD) @ 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
HDR	• HLG • S-Log • PQ
Latency	Single frame (4K UHD/1080p)* * End to end latency with Quantum Rx.
Encode Inputs	• Single encode up to 4K UHD • Quad encode up to 3G - (synchronous or unsynchronized multiple HD inputs)
Audio Inputs	• 8x Stereo pairs embedded audio over SDI / HD SDI / 3G SDI / 12G SDI • 2x Stereo pairs analogue audio configured as Mic / Line level
Audio Encoding	• AAC (AAC-LC & HE-AAC) • MPEG-1 (Layer 1 & Layer 2) • Linear PCM Passthrough
Transport Stream Processing	
ASI	• Input - DVB-ASI (for streaming over IP output) • Output - DVB-ASI - transports stream up to 90Mb/s
IP	• Output - UDP / RTP / RTSP / SRT
PIDS	PIDs user configurable
User Interface	
User Interface	• Touchscreen with push-wheel controlled front panel • Ethernet control via internal webserver

Quantum Encoder Datasheet



Physical Connectors	
Connectors	• 2x SFP+ module slots supporting electrical and optical interfaces: - 4x HD-SDI - 4x 3G-SDI - 1x 12G-SDI • Power Connector: - IEC C16 • Audio Connector: - 2x 5-pin Lemo socket • Ethernet Control Connector: - 3x LAN RJ45 10/100 - 1x WAN RJ45 10/100 • ASI In Connector: - 75 Ω BNC (F) • ASI Out Connector: - 75 Ω BNC (F) • 4x Module Slots: - See Hardware Options below
Flexibility and Power Supply	
Voltage	100 – 240VAC
Power Consumption	Up to 230W (approximate, depending on configuration)
Licenses	
Optional Licenses	• QENC-LICE-0001 - Quantum Encoder Licence 4K UHD HEVC & Multi-Service Encode
Physical & Environmental	
Size and Weight	• Size: - (H) 44mm x (W) 430mm x (L) 404mm [427mm including SFPs] - (H) 1.7" x (W) 17" x (L) 15.9" [16.8" including SFPs] • Weight: - 4.5kg (approximate, depending on configuration)
Hardware Options	
Hardware Options	• QANT-ASSY-5110 - Quantum Hardware ASI Out Module (for Encoder)

Notes:

- Some features specified are available via optional licenses.
- Not all encoder interface options are concurrently available.
- We reserve the right to change specifications at any time without prior notice.

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