

Matrox[®] Maevox 6122 Dual 4K Encoder



High-density 4K encoding at ultra-low latency.

Matrox[®] Maevox 6122 is an HDMI[®] video encoder that delivers dual 4K capture, encode, stream, and record—with zero latency pass-through. The encoder supports multiple streaming protocols, including SRT and on-device HLS, for easy and secure streaming locally or across the world. Two Gigabit Ethernet ports allow for dual network streaming or separate networks for control data and video data. The complimentary Maevox SDK enables you to build new applications or integrate the functionalities of PowerStream Plus into existing applications. TAA compliant SKU available.

Key features and benefits.

Dual 4K input with zero latency pass-through

Achieve zero-latency pass-through for real-time output of audio/video content on up to two 4K displays.

Ultra low latency

Maximize your existing infrastructure investment with glass-to-glass latency as low as 50 ms when paired with MaeveX 6100 Series decoders.

Streaming flexibility

Enjoy six streaming protocols—HLS, MPEG2-TS, RTP, RTMP, RTSP, and SRT—for secure, trouble-free streaming.

Enterprise-grade security

HTTPS, Active Directory and 802.1x support.

H.264

Standards-based codec that delivers flawless quality at much lower bandwidth with exceptionally low latency.

Flawless image quality

Benefit from up to 4:4:4 sub-sampling support as well as user definable bitrates and quantization parameters to best balance the bitrate and compression demands of different content.

Quiet and rack mountable

Support up to two appliances from a single U of rack space. Whisper-quiet operation makes MaeveX ideal for environments that require a noise level of 25 dB and less.

Complimentary MaeveX SDKs and APIs

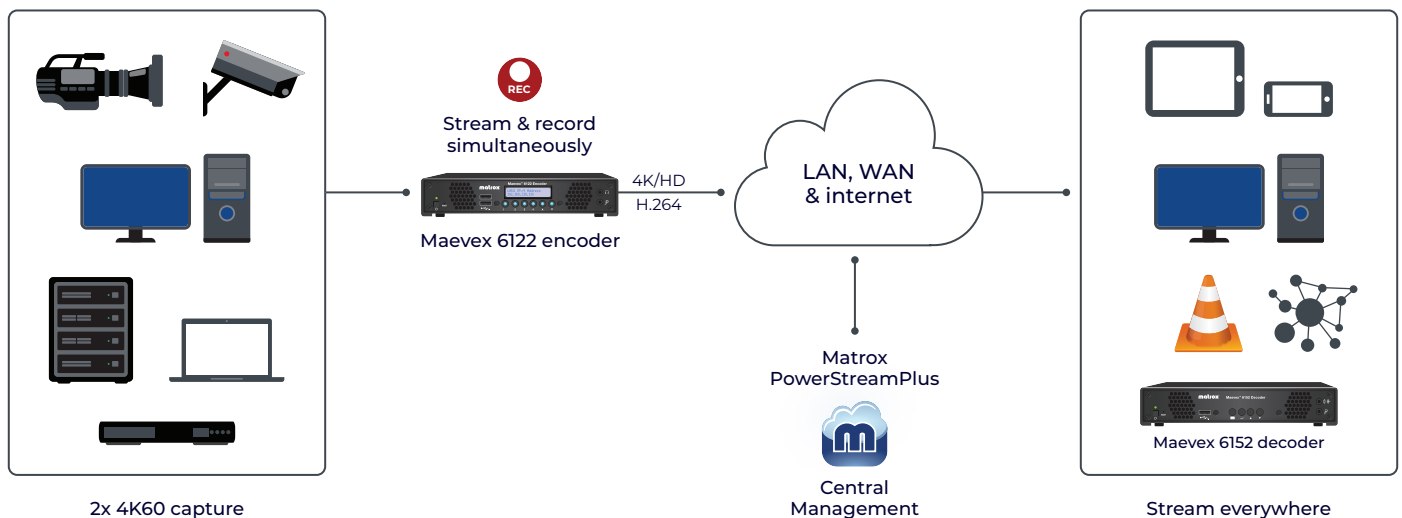
Build new applications or integrate the functionalities of PowerStream Plus into existing applications.

Low latency. High quality. Massive scalability.

A high-performance H.264 encoder, MaeveX 6122 integrates seamlessly into existing infrastructures and interoperates with virtually any network device, ensuring high-density content distribution and system scalability—all without sacrificing image quality. MaeveX uses existing 1 Gigabit Ethernet infrastructure to allow many streams of any quality to be transmitted on a single cable, eliminating the need for a dedicated distribution network.

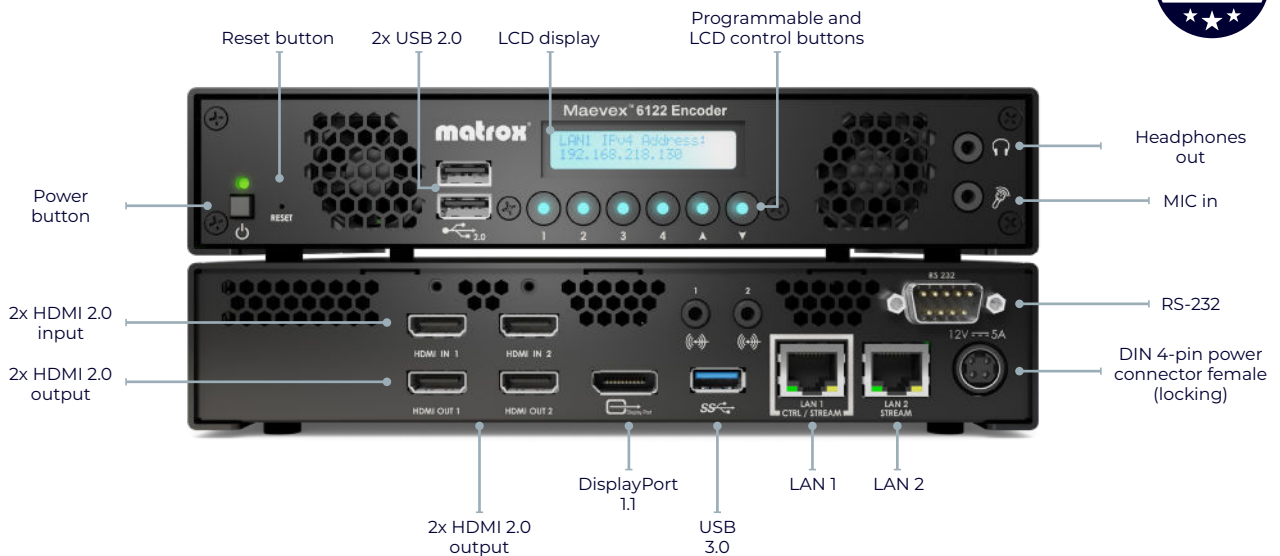
Dual stream and record. Anywhere, at the same time.

Reach your audience anywhere, anytime. The MaeveX 6122 encoder delivers source content to on-premises end points (over LAN, WAN, or internet), feeds cloud-based servers, and records to local or network storage for later editing and viewing.





Appliance overview



Matrox MaeveX 6122 dual 4K encoder (front/back view)

Markets and applications.

MaeveX 6122 4K encoders are a perfect fit for many applications. Have a specific idea in mind? Contact our sales team and work together to build a solution.

- Digital signage
- Military
- Enterprise
- Science & technology
- Education
- Healthcare
- Government
- House of worship
- Industrial, automation & production
- Security
- Video on demand
- OTT services



Always powered. Always on.

Safeguard against a potential loss of power. Matrox makes available rack-mounted, multi-output redundant power supply units (RPSU) to ensure uninterrupted operation of your Matrox device in case of a power module failure and a redundant power input in case a circuit breaker trips.



Rack mountable. Ultra quiet operation.

Safeguard against a potential loss of power. Matrox makes available rack-mounted, multi-output redundant power supply units (RPSU) to ensure uninterrupted operation of your Matrox device in case of a power module failure and a redundant power input in case a circuit breaker trips.

Technical specifications

Product		Maevox 6122 dual 4K encoder
Part numbers		• MVX-E6122-22
Form factor		• Standalone appliance • Rack-mountable: 1U, 1/2 rack (horizontal)
Connectivity		
Video input		• 2 channels • HDMI® (Type A) with audio support
Video output		• 2 channels • HDMI® (Type A) zero latency pass-through
Audio input		• 2x HDMI digital LPCM two-channel stereo audio • 2x 3.5 mm analog stereo audio – 1 Vrms (0 dBV) – 14.3 kΩ (gain = 0 dB) – -60 dB to +6 dB (default is 0 dB) • 1x 3.5 mm stereo mic in – 2.5 V – 1 Vrms (0 dBV) – 15 kΩ (gain = 0 dB), 5 kΩ (gain ≥ 10 dB) – -74 dB to +41 dB (default is 0 dB)
Audio output		• 2x HDMI digital LPCM two-channel stereo audio • 1x 3.5 mm headphones out – 1.2 Vrms (1.6 dBV) – 32 mW into 32Ω – -74 dB to 0 dB (default is 0 dB)
Network connector		• 2x RJ45 with status LED indicators (1x control and stream/record, and 1x stream/record only)
USB ports		• 2x USB 2.0 (front) • 1x USB 3.0 (back)
RS-232		• 1x for IP to RS-232 control
Confidence preview		• 1x DisplayPort 1.1 • Maximum resolution: 1920x1080
Multi-unit support		• Yes
Performance		
Color space and chroma sub-sampling		• RGB and YUV 8- and 10-bit support • Color space conversion support – 4:0:0 (8-bit and 10-bit*) – 4:2:0 (8-bit and 10-bit*) – 4:2:2 (8-bit) – 4:4:4 (8-bit) * 1080p60 max
Video input resolutions		• 2x 3840x2160@60Hz or 2x 4096x2160@60Hz
Video and audio processing		
Video scaling		• Yes
Video compositing		• Yes, fixed formats including Picture-in-Picture (PiP), Picture-by-Picture (PbP), quadrant
HDCP support		• Only available between Maevox 61X2 encoders and Maevox 6152 decoder
Audio encoding format		• MPEG-4 AAC-LC/HEV1/HEV2
Audio output format		• AAC, PCM, Stereo, and Mono
Audio sampling frequency		• 32 kHz • 44.1 kHz • 48 kHz
Audio bitrates		• Up to 144 Kbps (AAC-HEV2) • Up to 288 Kbps (AAC-HEV1) • Up to 576 Kbps (AAC-LC)

Codec	
Maevox 6122 dual 4K encoder	
Video encoding formats	• H.264/MPEG-4 Part 10 (AVC)
Encoding profiles	• Baseline (BP) • Main (MP) • High (HiP) • High 10 (Hi10P) • High 4:2:2 (Hi422P) • CAVLC 4:4:4 intra (44) • High 4:4:4 predictive profile separate plane (Hi444PP)
Encoder bitrates range	• 15 Mbps (default) • 50 Kbps to 120 Mbps (Maximum operational bitrate per stream is dependent on number of streams and features enabled.)
Encoding rate control	• Adjustable GOP size • Constant bitrate (CBR) • Favor quality and optimize for desktop or latency • Variable bitrate (VBR)
Encoding level	• Up to 5.2
Encoding	
Encoding capability	• 4:2:0* - 4x 3840x2160 @30Hz - 3x 4096x2160 @30Hz - 2x 3840x2160 @60Hz - 1x 4096x2160 @60Hz - 4x 2560x1600 @60Hz - 8x 1920x1080 @60Hz - 16x 1920x1080 @30Hz • 4:4:4* - 1x 2560x1600 @60Hz - 1x 3840x2160 @30Hz - 1x 4096x2160 @30Hz - 3x 1920x1080 @60Hz - 6x 1920x1080 @30Hz *Each encoding capability is independent of the others listed, and excludes any additional processing such as compositing, scaling, etc. Content can affect results. For more details and encoding capability support, contact Matrox.
Network	
Network standard	• 100/1,000 base-T ethernet • Auto speed • Half/full duplex • IGMP version 2 and 3
Routing scheme	• Unicast • Multicast • Multi-unicast
IP addressing	• IPv4 • IPv6 • DHCP (default) and static IP
Streaming protocols	• HLS • MPEG2.TS over UDP • RTMP • RTP/RTCP (both required) over UDP • RTSP (TCP), RTCP & RTP (UDP) – all required • RTSP over TCP (interleaved) • SRT
Command and control	• HTTPS over TCP • UPnP (discovery)
Security	• 802.1x (EAP-TLS) support
Physical	
Product dimensions	• 8.53 (L) x 7.52 (W) x 1.68 (H) inches • 21.7 (L) x 19.1 (W) x 4.3 (H) cm
Unit weight	• Device only ~1.5 kg • With accessories and packaging ~3 kg
Noise emission	• ~25 dB at full stream/record capacity

Recording		Maevox 6122 dual 4K encoder
File format		• MP4 • MOV • fMP4
Filename		• Customizable prefix (optional)
Timestamp		• Automatic in filename
Programmability		• Duration • File frequency • Maximum file length • Start date and time
Recording locations		• Local USB ports for USB flash drive and external hard drive • 2x USB 2.0 (front) and 1x USB 3.0 (back) • Shared network drive or NAS
Hardware & software		
Hardware included		• Maevox 6122 dual 4K encoder appliance • Power supply • 100-240 VAC in, 12 VDC out, 60W • DIN4 locking power connector • Power cords Included (US, EU, UK, Aus/NZ)
Accessories (sold separately)		• Rack mount kit (part number: RMK-19TR-A) - Rack mounting shelf (19 in/48.26 cm) - Pan head Phillips screws (4x 10-32 x 3/4 in) - Pan head Phillips screws (4x 12-24 x 3/4 in) - Flat head Phillips screws (6x M3 x 6 mm) • NRG redundant power supply Uunit - Rack tray with one NRG RPSU pre-installed (part number: NRG-5-1DB) - Rack tray with two NRG RPSU pre-installed (part number: NRG-5-2DB) • Secure cable solution for HDMI (part number: SK-SLND-4)
Software		• PowerStream Plus (free download)* - Compatible with Maevox 5100 Series and Maevox 6100 Series - Network discovery - Multi-encoding and recording management - Multi-protocol management - Frame rate management - Resolution control - Administrator and user credential management - Scaling management - SNMP support • Maevox 6100 Series RS-232 API (free download)* - Control Maevox 6100 appliances via Crestron™, Kramer™, Extron™, or other tabletop touch-screen controllers - Access basic commands including list, start/stop streaming and recording, and device reboot. • Maevox SDK for Windows and Linux* - Full-access to entire feature set via SDK - .NET 4.5.1 or higher, standalone library and Mono 5.2 or higher for Linux • Maevox REST API* - Maevox 6100 Series REST API - Available for lower-level development • Maevox 6100 Series Control Module for Crestron - Creston module to expand existing controlled environments * Contact Matrox for more details.
Environmental		
Operating conditions		• Temperature: 0 to 45 degrees Celsius • Altitude: 650 hPa (3,580 m) to 1,013 hPa (0 m) • Humidity: 20% to 80% non-condensing
Storage conditions		• Temperature: -40 to 70 degrees Celsius • Altitude: 192 hPa (12,000 m) to 1,020 hPa (-50 m) • Humidity: 10% to 90% non-condensing
Power consumption		• 45W
General		
Supported operating systems (software)		• Windows Server 2022 • Windows Server 2019 • Windows 11 and Windows 10
EMC/EMI compliance		• CE (EU), FCC (US), ICES-3 (Canada), KC (Korea), RCM (Aus/NZ)
Environmental compliance		• China RoHS, EU RoHS, REACH, WEEE
Warranty		• Two-year limited warranty with free online or telephone support



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