

# Superior AV over IP



## Matrox® MaeveX 6122 Dual 4K Encoder Dual 4K Encoding at Ultra Low Latency

Matrox® MaeveX 6122 is a dual HDMI® video encoder that delivers 4K input capture and encode, and supports at least two 4K streams and recordings—simultaneously. Providing zero latency pass-through and multiple protocol support including SRT and on-device HLS, MaeveX 6122 is ideal for easy and secure streaming locally or across the world. Two Gb Ethernet ports allow for dual network streaming or separate networks for control data and video data.

## Key features and benefits

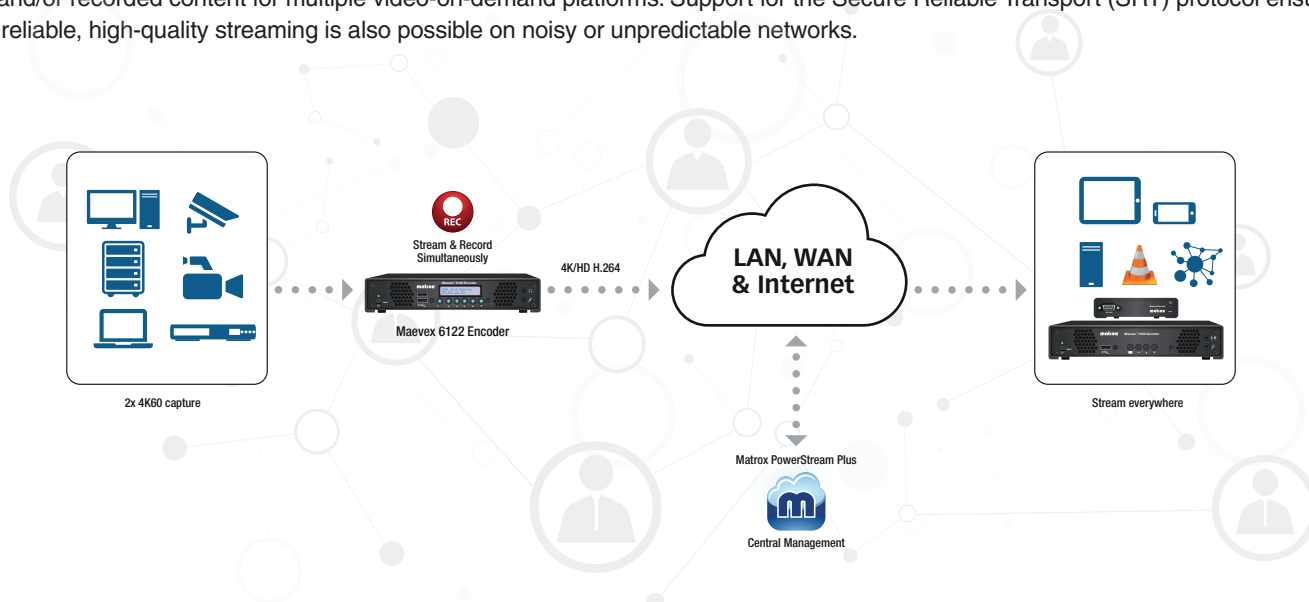
<b>Dual 4K input with zero latency pass-through</b>	Achieve zero-latency pass-through for real-time output of audio/video content on up to two 4K displays.
<b>Exceptionally low latency</b>	Maximize your existing infrastructure investment with glass-to-glass latency as low as 50 ms when paired with MaeveX 6100 Series decoders.
<b>Streaming flexibility</b>	Enjoy six streaming protocols—HLS, MPEG2-TS, RTP, RTMP, RTSP, and SRT—for secure, trouble-free streaming.
<b>HDCP compliant</b>	Support for both HDCP 1.4 and 2.2.
<b>H.264</b>	Standards-based codec that delivers flawless quality at much lower bandwidth with exceptionally low latency.
<b>Flawless image quality</b>	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.
<b>Quiet and rack mountable</b>	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.
<b>Complimentary MaeveX SDKs and APIs</b>	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. It can also transmit live and/or recorded content for multiple video-on-demand platforms. Support for the Secure Reliable Transport (SRT) protocol ensures that reliable, high-quality streaming is also possible on noisy or unpredictable networks.



# Markets

Maevox 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
 Industrial, Automation & Production	 Healthcare	 Government	 House of Worship
 Education	 Security	 Video on Demand	 OTT Services

# Appliance overview



- |   |                                       |  |
|---|---------------------------------------|--|
| 1. Power Button                         | 7. MIC In                             | 13. USB 3.0                                    |
| 2. Reset Button                         | 8. 2x Secure Locking Connector Thread | 14. LAN 1                                      |
| 3. 2x USB 2.0                           | 9. 2x HDMI 2.0 Input                  | 15. LAN 2                                      |
| 4. Programmable and LCD Control Buttons | 10. 2x HDMI 2.0 Output                | 16. RS-232                                     |
| 5. LCD Display                          | 11. 2x Analog Audio Input             | 17. DIN 4-pin Power Connector Female (locking) |
| 6. Headphones Out                       | 12. DisplayPort 1.1                   |  |

# Technical specifications

## Performance

### Maximum Capture Resolution

- 2x 3840x2160 @60Hz or 2x 4096x2160 @60Hz

### Color Space Capture

- RGB and YUV 8- and 10-bit support
- Color space conversion support

## Encoding

### Formats (Codecs)

- Video: H.264/MPEG-4 Part 10 (AVC)
- Audio: MPEG-4 AAC-LC/HEV1/HEV2

### Chroma Sub-Sampling

- 4:0:0, 4:2:0 (8-bit and 10-bit)
- 4:2:2 (8-bit), 4:4:4 (8-bit)

### Encoding Capability

#### (Maximum & Other Examples)<sup>1</sup>

##### @4:2:0

- 2x 3840x2160 @60Hz
- 1x 4096x2160 @60Hz
- 4x 3840x2160 @30Hz
- 3x 4096x2160 @30Hz
- 2x 1920x1080 @60Hz
- 4x 1920x1080 @60Hz
- 8x 1920x1080 @60Hz
- 16x 1920x1080 @30Hz

##### @4:4:4

- 1x 3840x2160 @30Hz
- 1x 4096x2160 @30Hz
- 2x 1920x1080 @60Hz
- 3x 1920x1080 @60Hz
- 6x 1920x1080 @30Hz

### 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 (Per Stream)<sup>2</sup>

- 50 Kbps to 120 Mbps
- 15 Mbps (default)

### Rate Control

- CBR, VBR, adjustable GOP size

### Audio Sample Frequency

- 32 kHz, 44.1 kHz, and 48 kHz

### Audio Bitrates

- Up to 576 Kbps (AAC-LC), 288 Kbps (AAC-HEV1), 144 Kbps (AAC-HEV2)

### Video Compositing

- Yes, fixed formats including Picture-in-Picture (PiP), Picture-by-Picture (PbP), quadrant

### Scaling

- Yes

## Recording

### File Formats

- MP4, MOV, fMP4

### Programmability

- Start date and time, duration, maximum file length, file frequency

### Recording Locations

- Shared network drive or NAS
- Local USB ports for USB flash drive and external hard drive
  - 2x USB 2.0 (front) and 1x USB 3.0 (back)

## Networking interface

### Streaming Protocols

- RTSP (TCP), RTCP & RTP (UDP) - all required
- RTP/RTCP (both required) over UDP
- SRT over UDP
- RTMP
- MPEG2-TS over UDP
- HLS
- RTSP over TCP (interleaved)

### Command & Control

- HTTPS over TCP, UPnP (discovery)

### Network Standard

- 100/1,000 base-T Ethernet, auto speed, half/full duplex

### IP Addressing

- IPv4, IPv6, DHCP (default) and static IP address support

### IP Stream Support

- Unicast, multi-unicast, multicast

## Software

### PowerStream Plus (Free download)

- Compatible with MaeveX 6100 Series and MaeveX 5100 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

### MaeveX SDK for Windows and Linux<sup>3</sup>

- Full access to entire feature set via SDK
- NET 4.5.1 or higher, standalone library and Mono 5.2 or higher for Linux<sup>®</sup>

### MaeveX 6100 Series RS-232 API

#### (Free download)

- Control MaeveX 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

### MaeveX 6100 Series REST API<sup>3</sup>

- Available for lower-level development

### Supported Operating Systems

- Microsoft® Windows® 10 (64-bit), Windows® Server® 2016, Windows® 7 (32-bit, 64-bit), Windows® Server® 2008 R2, Windows® Server® 2019

## Connectivity

### Network Connector

- 2x RJ45 with status LED indicators
  - 1x control and stream
  - 1x stream only

### Video Input

- 2x HDMI® (Type A) with audio support

### Video Output/Pass-Through

- 2x HDMI® (Type A) with audio support

### Video Monitoring Output<sup>4</sup>

- 1x DisplayPort™ 1.1

### 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)

### USB (For Recording)

- 2x USB 2.0 (front)
- 1x USB 3.0 (back)

## Hardware

### Noise Emission

- ~25 dB at full stream/record capacity

### Power Supply

- 100-240 VAC in, 12 VDC out, 60W
- DIN4 locking power connector

### Power Cords Included

- US, EU, UK, Aus/NZ

### Product Dimensions

- 8.53 x 7.52 x 1.68 in (21.7 x 19.1 x 4.3 cm)

### Form Factors

- Standalone appliance
- Rack mountable (1U, 1/2R)

### Part Numbers

- Part Number: MVX-E6122-2

### Accessories

- Rackmount Kit (part number: RMK-19TR-A)
- Secure Cable Solution for HDMI (part number: SK-SLND-4)
- NRG Redundant Power Supply Unit
  - 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)

1. 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.

2. Maximum operational bitrate per stream is dependent on number of streams and features enabled.

3. For more information, contact Matrox.

4. Maximum resolution: 1920x1080.

## Contact Matrox

**Montreal Headquarters:** 1-800-631-4903 (North America), 514-822-6364 (Worldwide) | [video@matrox.com](mailto:video@matrox.com)

**London Office:** +44 (1895) 827300

Serving: United Kingdom, Ireland, Benelux, France, Spain, Portugal, Middle East, Africa

**Munich Office:** +49 89 62170-444

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