

# Matrox **Maevex™** 5100 Series

LAN

Maevex Decoders



Maevex Video over IP  
Any Video, Anytime, Anywhere

# Maevex Video over IP—Any Video, Anytime, Anywhere

The Matrox Maevex video distribution over IP solution consists of the Maevex 5100 Series encoder/decoder pair that extends 1080p60 video and audio over a standard IP network. The Maevex Encoder captures video and audio from a host PC or another media source and seamlessly extends the signals to one or more Maevex Decoders via standard networking equipment, such as switches, routers, and CATx cabling. The technology's H.264 encode/decode platform delivers Full HD, excellent-quality video extension over standard LAN connectivity at user-defined low bit rates for minimal network bandwidth consumption. The robust Matrox PowerStream software application is used to remotely discover, manage, and adjust the Maevex network and lets administrators conveniently define multiple stream parameters and balance network bandwidth consumption if necessary. Maevex hardware architecture, I/O functionality, and PowerStream features combine to yield an excellent-quality video over IP solution at a cost-effective price for a wide variety of applications.

## Key Features:

- Cost-effective extension over a standard IP network
- Excellent image quality with very low network bandwidth consumption
- Extend Full HD, 1080p60 and 1920x1200 video and audio
- Support for wide-screen and standard aspect ratios and a wide variety of resolutions
- Scale streams locally before distributing them over the network to lower bandwidth consumption
- Scaling and cropping features enable flexible display of source content on the Decoder output
- Open encoding enables non-Maevex software decode through VLC player software
- Operates on standard 10/100/1000Mb Ethernet networks
- Decoder integrated network switch allows for Maevex daisy-chaining, network extension, and redundant network topology
- Allows user-defined fine-tuning of encoding and decoding process and network bit rate
- Features a solid-state, energy-efficient design for high MTBF and long product life cycles
- Matrox PowerStream software application allows for multiple instances and remote management of the Maevex network
- HDMI or analog audio support
- Local real-time pass-through and confidence preview on Encoder
- Detailed LED indicators for easy and effective troubleshooting
- PowerStream auto-detection and discovery of Maevex units on subnet (DHCP server required)
- Failure resilience—power, network, and device auto-recovery features
- PowerStream-controlled user access from secured PC
- Convenient access to device ID, IP address, streaming state, bit rate, and other vitals in PowerStream

## Applications

Maevex video over IP solutions can be applied to drive dynamic digital signage for retail and restaurant environments, transportation, banking, healthcare, and other sectors. Maevex can also distribute high-quality video distribution in such sectors as healthcare (non-digital signage) and for academic and instructional technology and training, where zero latency is not required. The need for high-quality video distribution on non-proprietary, standardized IT equipment is common in these application areas, with Maevex serving as an excellent, cost-effective solution.

Additionally, Maevex can serve collaborative video wall and control room environments by making it easier to integrate data and video. In control rooms for example, Maevex serves as a seamless, standardized IT solution to deliver desktop, video, and other content to the video wall as well as share operator display outputs, desktops, and applications.

Within these environments, Maevex takes full advantage of existing and standardized COTS IT networking equipment and networks, employing them to send data, as well as high-quality, Full HD video at very low bandwidth. Maevex consequently possesses tremendous value due to its low price point, but also its overall cost-effectiveness, leveraging standardized COTS networking equipment and providing excellent quality at low bandwidth.



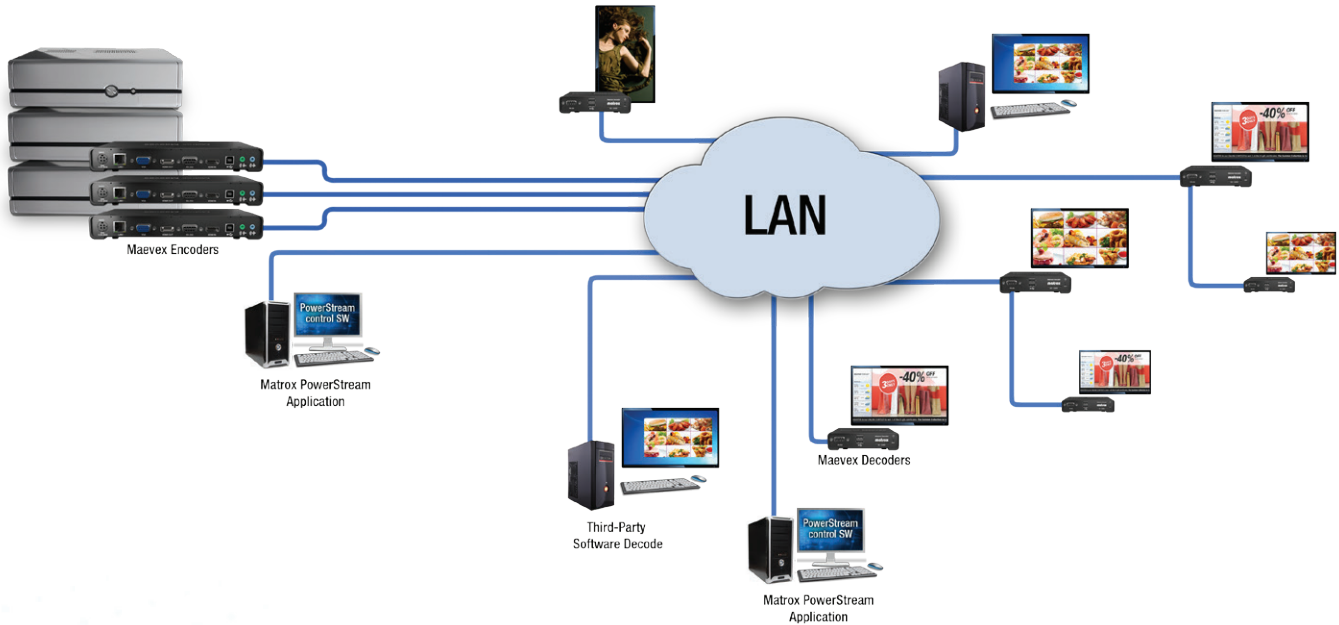
Matrox Maevex 5150 Encoder unit front/back



Matrox Maevex 5150 Decoder unit front/back

# Distribute Multiple Full HD 1080p60 Video Streams over the Network

Matrox MaeveX units support cost-effective one-to-one unicast, multi-unicast, and one-to-many multicast streaming over a standard IP network, using off-the-shelf networking equipment. An integrated network switch on the MaeveX Decoder enables MaeveX daisy-chaining and/or network extension and can also provide a redundant network topology. When deploying MaeveX Encoder and Decoder units, users can choose to encode as many streams as their network bandwidth can accommodate and have each Decoder configured to stream whatever Encoder content is desired. Leverage the Matrox MaeveX Series' ability to operate on a standard 10/100/1000Mb Ethernet network to create native networks—or extend existing ones.



## Matrox PowerStream

The Matrox MaeveX Series comes bundled with Matrox PowerStream—a robust software application that enables remote control and management of the entire MaeveX network topology. Installed on a network PC, the command & control application supports a variety of features, making MaeveX appliances entirely configurable, manageable, and updateable via the network and all from one or more central locations. PowerStream also allows Decoders to be assigned to streams. MaeveX administrators can start and stop streams as well as balance image/stream quality and bit rate by managing a variety of encoding and decoding parameters. Easy adjustment of input and output resolutions and aspect ratios provide administrators with additional flexibility and control.

The image displays the Matrox PowerStream software interface, which is used for managing the network topology of Matrox MaeveX units. The interface is divided into several sections:

- Encoders:** A list of active encoders, each showing its name, status (Encoding), and bit rate (e.g., 1.22 Mbit/s, 14.51 Mbit/s, 14.29 Mbit/s, 0.01 Mbit/s).
- Decoders:** A list of active decoders, each showing its name and status (Decoding) (e.g., 0.21 Mbit/s, 0.11 Mbit/s).
- Encoder Settings:** A detailed configuration window for a specific encoder (BP20685 HQ...). It includes:
  - Capture:** Video capture (Use all frames), Audio capture (From HDMI), and Sampling rate (48 kHz).
  - Encoding:** Video (Use specific video size: 640 x 480), Bit rate limit (20 Mbit/s), Strategy (Favor speed), Group of picture (GOP) length (90), and Insert P frames every (2 frames).
  - Local output:** Pass through (selected), Customized settings, and Video (Center image in display, Stretch to display, Fit image in display).
  - Network:** Obtain an IP address automatically (selected) or Use a fixed IP address.
  - Size and transformations:** Force display mode.
  - Audio:** Mute (selected) and Analog channel (90).

The background features a photograph of a Matrox MaeveX decoder unit with its front panel ports labeled 'VGA' and 'HDMI OUT'. The Matrox logo and 'Graphics for Professionals' tagline are visible at the bottom right.

# Matrox MaeveX 5100 Series – Specifications

## MaeveX 5150 Encoder:

### Video Input

- HDMI with digital L-PCM audio
- DVI via DVI-to-HDMI adapter
- Resolutions up to 1920x1080p60, 1920x1200(60Hz) and many more wide-screen and standard-definition resolutions

### Video Output

- HDMI with digital L-PCM audio, local pass-through w/o scaling or confidence preview w/ optional scaling
- DVI–via HDMI to DVI-D adapter, local pass-through w/o scaling or confidence preview w/ optional scaling
- HD15, Analog VGA – confidence preview w/ optional scaling
- Resolutions up to 1920x1080p60, 1920x1200(60Hz)
- ProcAmp control: contrast, brightness, saturation, hue
- Scaled output (i.e., 1080p60 input/720p60 scaled output)

### Audio Line-In:

3.5mm analog stereo audio

### Audio Line-Out (Local Pass-Through):

3.5mm analog stereo audio

### Network Connector:

RJ45

## MaeveX 5150 Decoder:

### Network Connectors:

2 x RJ45 (fully switched)

### Video Output

- HDMI with digital L-PCM audio
- Resolutions up to 1920x1080p60, 1920x1200(60Hz) and many more wide-screen and standard-definition resolutions
- ProcAmp control: contrast, brightness, saturation, hue
- Destination cropping support

### Audio Line-Out:

3.5mm analog stereo audio

## Video Encoding / Decoding:

### Single-Channel HD:

Up to 1920x1080p60 and 1920x1200(57Hz - TBC) and many more wide-screen and standard-definition resolutions

### Compression Standard:

H.264/Mpeg4 Part 10 (AVC)

### Profiles:

Baseline, Main, High

### Levels:

Up to 4.2

### Bit Rates:

100Kbps to 25Mbps

### Rate Control:

CBR, VBR, Favor Speed, Favor Quality

## Audio Encoding/Decoding:

### Compression Standard:

MPEG4 AAC-LC

### Channels:

2 channel (stereo)

### Sample Frequency:

32, 44.1, and 48kHz

### Bit Rates:

96, 128, 192, and 256Kbps

## Networking Interface:

### 10/100/1000base-T Ethernet

### Streaming Protocols:

UDP, RTP/RTSP/RTCP

### Command & Control Protocols:

HTTP/HTTPS

### IPv4 Support

### Unicast, Multicast and Multi Unicast

### DHCP (Default) / Fixed IP Address Support

### CAT5-or-Better Network Cables

## Management Software:

### Central Command and Control Application

- Resides on any PC network node
- MaeveX network configuration & control
- Encoding and decoding control and manipulation
- Frame rate and resolution control
- Password protection
- Failsafe over the network FW updates

### OS Support:

Windows 7/Windows 8 (requires Microsoft .NET 4.5)

## Power Supply:

### 100-240V AC In, 5VDC Out, 15W

### DIN4 Locking Power Connector

### Power Cords/Adapters Included:

US, EU, GB/HKG, AU/NZL

## Regulatory:

### CE/FCC/VCCI/ICES/C-Tick/KCC Class B

### ROHS/WEEE

## Environmental:

### Operating Temperature:

0 to 55 degrees Celsius (TBC)

### Non-Operating Temperature:

-40 to 70 degrees Celsius

### Operating Humidity:

20 to 80% (non-condensing)

### Non-Operating Humidity:

5 to 95% (non-condensing)

## MTBF:

### Encoder:

135.05 years @ 40 degrees Celsius (excl. power supply)

### Decoder:

164.81 years @ 40 degrees Celsius (excl. power supply)

### External Power Supply:

11.45 years @ 25 degrees Celsius, full load

### Fanless (no moving parts)

## Mechanical:

### Dimensions Encoder:

21.59cm x 2.59cm x 10.16cm (8.50" x 1.02" x 4.00")

### Dimensions Decoder:

12.83cm x 2.59cm x 10.9cm (5.05" x 1.02" x 4.29")

### Weight Encoder:

378g (excl. external power supply and power cords)

### Weight Decoder:

286g (excl. external power supply and power cords)

### Rackmounting (optional rackmount tray)

Encoder: dual density - 1u

Decoder: triple density - 1u (horizontal mount); or

10-unit density in 3u (vertical mount)

## Packaging Content:

### MaeveX Encoder unit

- CAT5E Ethernet cable, RJ45 male to male, 6'/182.88cm
- DVI adapter – DVI-D male to HDMI female
- 3.5mm analog stereo audio cable, male to male, 6'/182.88cm
- Power supply, power cords and adapters (see "Power supply")
- Quick setup guide and release notes (if applicable)

### MaeveX Decoder unit

- Power supply, power cords and adapters (see "Power supply")
- Quick setup guide and release notes (if applicable)

## Ordering Information:

MaeveX Encoder P/N: MVX-E5150F

MaeveX Decoder P/N: MVX-D5150F

MaeveX Encoder/Decoder Bundle P/N: MVX-ED5150F

## Learn More or Purchase

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