

Matrox Maeve™ 5100 Series



Affordable Full HD, Low-Bandwidth AV-over-IP
Maeve H.264 Encoders and Decoders

MaeveX AV over IP – Distribute & Record at Excellent Quality and Low Bandwidth

The Matrox MaeveX video distribution over IP solution consists of the MaeveX 5100 Series encoders and decoders that can extend or record up to 1080p60 video and audio over a standard IP network at user-defined low bit rates for excellent quality and minimal network bandwidth consumption. The MaeveX encoder streams or records high-quality video and audio and uses the H.264 video compression standard. It can stream to MaeveX decoders or any device or PC that supports the required network protocols. It can also record to a shared network or NAS drive. The robust Matrox PowerStream™ software application is included with the hardware and is used to remotely discover, manage, and adjust the MaeveX network and lets administrators conveniently define multiple stream parameters and balance network bandwidth consumption and quality. The MaeveX API is also available to enable programmers to integrate current features into existing applications or create new, independent PowerStream-like software to meet their specific needs. MaeveX's H.264 hardware architecture, I/O functionality, and PowerStream features together yield an excellent-quality video over IP solution at a cost-effective price for a wide variety of applications.

Key Benefits:

Encoding:

- Extend/record up to Full HD 1080p60 and 1920x1200 video and audio
- H.264 compression for high-quality, low-bandwidth AV-over-IP
- Support for wide-screen & standard aspect ratios and many resolutions
- Scale streams before distribution for lower bandwidth consumption
- HDMI or analog audio support
- Open encoding allows for third-party software decode (e.g. VLC)

Recording:

- Record up to 1080p60/1920x1200 to NAS or shared network drive
- Control frequency and duration of recording
- Schedule the start time and date of recording sessions
- Recorded user-defined file name includes timestamp for easy file management

Network Management:

- Operates on standard 100/1000Mb Ethernet networks
- Auto-detect and discover MaeveX units on subnet (DHCP server required)
- Full/half-duplex mode and static IP address support
- CBR, VBR support
- Network bit-rate control (100 Kbps – 25 Mbps)

Failsafe:

- Play back pre-recorded content at the decoder in case of a network disruption or if encoder stops streaming (e.g. loss of power)
- Programmable time delay before failsafe activates

MaeveX API:

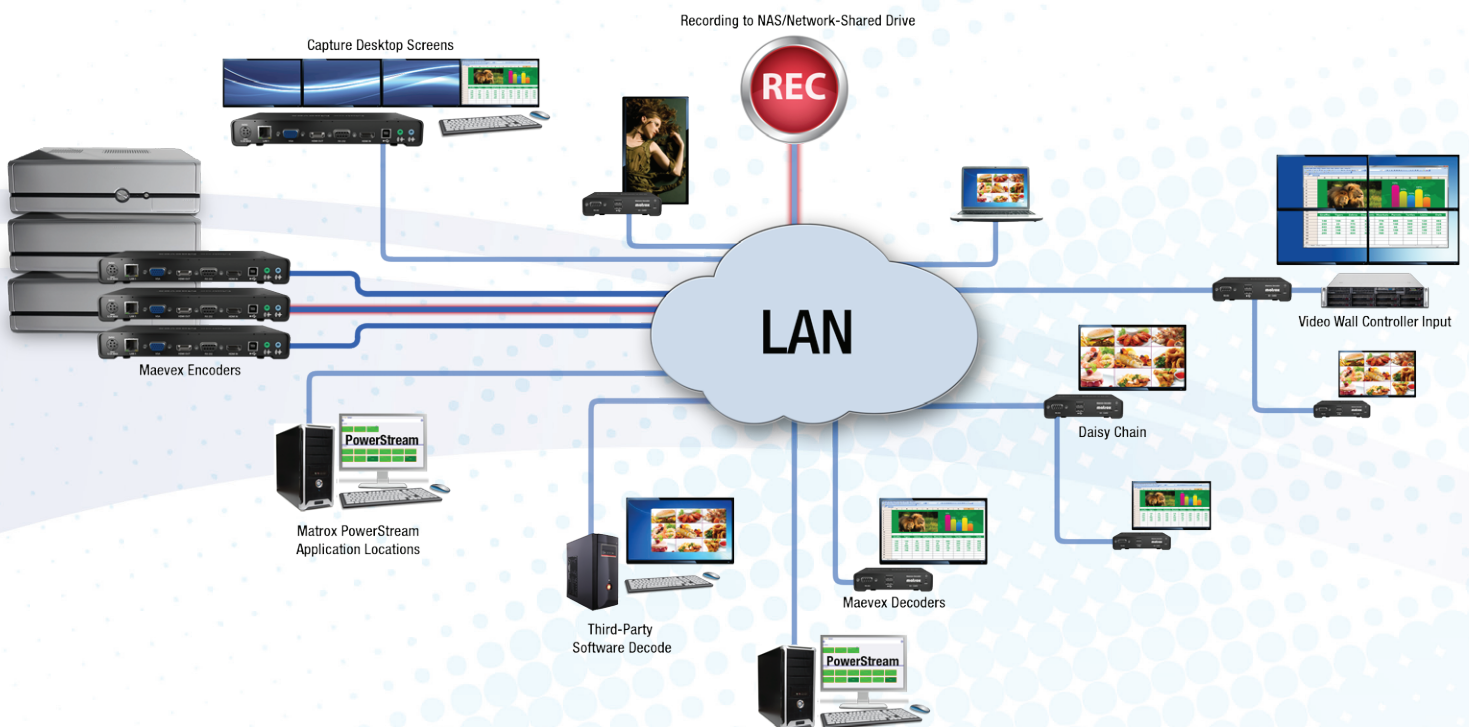
- Integrate MaeveX features in existing or new control software
- Based on easy-to-use .NET programming language
- Provided to select developers (no cost/license-free)

PowerStream Control Software:

- Remotely manage MaeveX network from different locations
- Conveniently access IP address, bit rate, and other vitals
- Fine-tune encode/decode parameters and adjust bit rates
- Scale & crop content to fit different outputs

Other Benefits:

- Daisy-chain decoders & extend network via integrated network switch
- Failure resilience—power, network, and device auto-recovery features
- Full duplex RS-232 control (pt. to pt.)
- Reliable, solid-state, energy-efficient design
- Local real-time pass-through and confidence preview on encoder
- PowerStream-controlled user access from secured PC
- Detailed LED indicators for easy and effective troubleshooting
- Customizable bitmap for encoder/decoder splash screen
- Rackmountable with optional rackmount tray and accessories



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), 1920x1080i60, 1920x1080i50
- 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
- Independent failsafe output

Audio Line-Out:

3.5mm analog stereo audio

Video Encoding/Decoding:

Single-Channel HD:

Up to 1920x1080p60 and 1920x1200(56Hz) 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, Adjustable GOP Size

Audio Encoding/Decoding:

Compression Standard:

MPEG4 AAC-LC

Channels:

2 channel (stereo), HDMI with digital L-PCM audio

Analog Sample Frequency:

32, 44.1, and 48kHz

Bit Rates:

96, 128, 192, and 256Kbps

Networking Interface:

100/1000base-T Ethernet

- 100Mbps full duplex
- 100Mbps Half/full duplex

Streaming Protocols:

RTSP/RTMP/RTCP (all required) over UDP

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
- Recording (up to 1080p60)
- Full Duplex RS-232 (pt. to pt.)
- Failsafe on the decoder
- Full-feature API available

OS Support*:

Windows® 8 & 8.1 (32-bit, 64-bit)

Windows Server® 2012 & 2012 R2 (64-bit)

Windows 7 (32-bit, 64-bit)

Windows Server 2008 R2 (64-bit)

* Microsoft .NET 4.5 is required for all

Power Supply:

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

DIN4 Locking Power Connector

Power Cords Included:

US, EU, UK

Regulatory:

CE/FCC/VCCI/CES/C-Tick/KCC Class B, ROHS/WEEE

Environmental:

Operating Temperature:

0 to 45 degrees Celsius

Non-Operating Temperature:

-40 to 55 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)

Rackmountable with optional rackmount tray and accessories

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

MaeveX Decoder unit

- Power supply and power cords (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

Rackmount Kit P/N:

RMK-19TRF (see user guide for details)

Angled Bracket Kit P/N:

RMK-6BRKTF (see user guide for details)

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