Matrox **Maevex™ 5100 Series**

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

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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

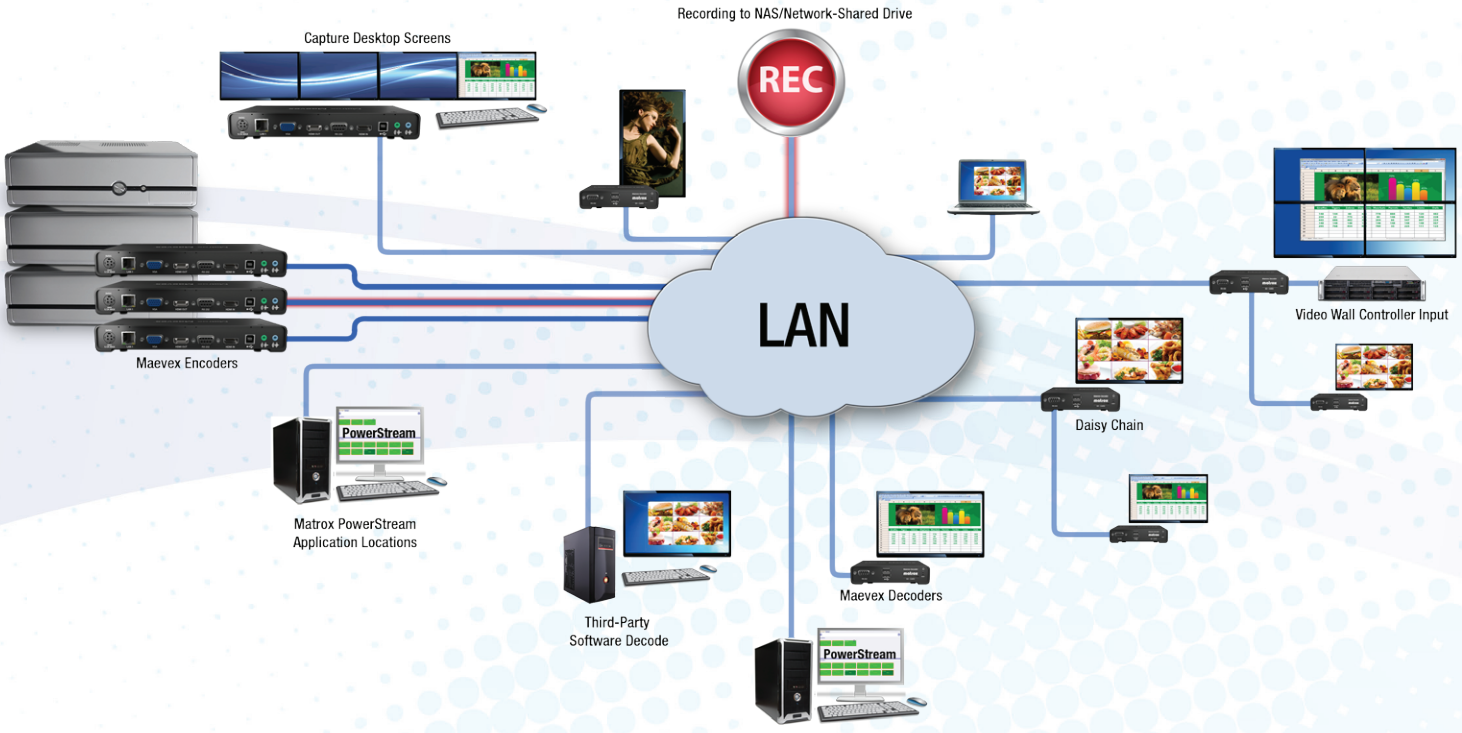
Network Management:
- Operates on standard 100/1000Mb Ethernet networks
- Auto-detect and discover Maevex units on subnet (DHCP server required)
- Full/half-duplex mode and static IP address support
- CBR, VBR support
- Network bit-rate control (100 Kbps – 25 Mbps)

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



Applications

Distribute and record high-quality video and audio with applications in healthcare, automation/production, education and training, security, banking, transportation, and dynamic digital signage. Additionally, Maevex can serve collaborative video wall and control room environments by making it easier to distribute and 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.

Extremely cost-effective, Maevex takes full advantage of existing and standardized COTS IT networking equipment and networks within these environments. In many cases, Maevex can run video and audio on existing data networks without requiring any special segregation or network management. Send data as well as high-resolution video at very low bandwidth, with excellent-quality results.

The need for high-quality, low-bandwidth video distribution on non-proprietary, standardized IT equipment is common in many application areas and Maevex can serve ProAV installers and integrators as an excellent, versatile, and cost-effective solution in their product portfolio. Contact Matrox today for a product demonstration.

Distribute and Switch Multiple 1080p60 Video Streams over the Network

Maevex units support cost-effective one-to-one unicast, one-to-many unicast, and one-to-many multicast streams over a standard IP network using off-the-shelf networking equipment. An integrated network switch on the decoder enables Maevex daisy-chaining and/or network extension. When deploying Maevex encoders and decoders, users and operators can choose to encode as many streams as their network bandwidth can accommodate and each decoder can capture and display all of the streams available. See and hear all channels at each decoder via “virtual” network-based matrix switching. Leverage the ability to operate on standard 100/1000Mb Ethernet networks at low bandwidth and let your IP network do the switching with no additional equipment and with simple and easy-to-use stream/channel identification for easy and effective channel switching.

Matrox PowerStream Software and Maevex API

Maevex Series comes bundled with Matrox PowerStream—a robust software application for remote management of the entire Maevex network topology. Installed on a network PC, the command & control application supports recording and bit-rate management among many more features, making Maevex appliances entirely configurable, manageable, and updateable via the network and all from one or more central locations.

Additionally, the Maevex API is available. Based on the .NET framework, the API is easy to use and enables integrators and developers to program independent Maevex control software or integrate different PowerStream features in existing applications with the help of provided source code examples.

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
- 1000Mbps full duplex
- 100Mbps Half/full duplex

Streaming Protocols:
RTSP/RTP/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/ICES/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)

Learn More or Purchase
North America Corporate Headquarters: 1 800-361-1408 or 514-822-6000
United Kingdom: +44 (0) 1895 827260
Deutschland: +49 89 62170-444
Email: graphics@matrox.com

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