At the Forefront of Technology
Bringing Innovations to Market & Shaping Tomorrow's World

Capture • Encode • Stream • Record • Switch • Decode • Extend • Display • Control

matrox.com/graphics

matrox®
Graphics for Professionals

The Matrox Advantage

Matrox® is passionate about innovation. Numerous award-winning products and industry recognition in multiple markets demonstrate our singular commitment to making the latest technologies available to our customers. Building on over 40 years of experience, Matrox leverages our industry know-how and leadership in key areas to continue delivering unique hardware and software solutions that bring tangible value to businesses.

Engineered for excellence

Matrox products stand for superior engineering and unprecedented performance. We champion industry standards to ensure maximum scalability, flexibility, compatibility, and interoperability—including with third parties.

Longevity

Matrox protects our customers' investments through careful design and selection of components to ensure long product life cycles. We also dedicate resources to improving existing products with new releases. Known for their reliability and stability, Matrox products are built to last.

Comprehensive customer support

Our world-class technical and engineering teams help ensure a seamless customer experience, with pre- and post-sales care, developer support, and integration assistance.

Strategic partnerships

A global infrastructure of hardware, software, service, and commercial partners means our customers benefit from deep technical knowledge and application expertise. The top names in the market trust Matrox, and in turn, we offer customers access to the best of the industry.

Maevex Series
AV-over-IP Encoders & Decoders

The Maevex family of products deliver up to quad 4K/UHD and Full HD video and audio over standard LAN connectivity at user-defined low bitrates. Multiple protocol support, high-quality video, interoperability, and multi-chroma sub-sampling are but a few of the features the Maevex Series provides, along with capacity to record simultaneously to local or network servers with ease.

Maevex PowerStream Plus software comes included for easy remote management of the entire Maevex network topology. Available upon request, the PowerStream Plus API or REST APIs enable integrators and developers to create new software applications or integrate specific PowerStream Plus features into existing software applications.

Remote Recorder

The Maevex 6020 Remote Recorder is a Panopto-dedicated appliance that delivers video recording and live streaming for education and enterprise environments via the Panopto cloud video platform. The Maevex 6020 Configuration and Firmware Utility is used to configure the units and simplifies the connection and operation with the Panopto Cloud VMS.

Maevex 6100 Series – Dual and Quad 4K enterprise encoders

Product	Part number	Form factor	Video input/output	Maximum capture resolution — Other resolutions also available including Full HD	Stereo audio	Video compositing	Encoding formats	Streaming protocols	Recording	Connector networking interface	Bitrate range per stream	Software available as free download
Maevex 6100 Quad 4K Enterprise Encoder Card	MVX-E6100-4	Single-slot, full-height PCIe x8[1] card	In: 4x mini HDMI (Type C)	3840x2160; 2x @60Hz[2], 4x @30Hz 4096x2160; 2x @60Hz[2], 4x @30Hz	HDMI only	Yes, fixed formats including picture-in-picture (PIP), quadrant, and picture-by-picture (PBP)	Video: H.264/MPEG-4 Part 10 (AVC) Audio: MPEG-4 AAC-LC HEv1/HEv2	RTSP (TCP), RTCP & RTP (UDP) - all required, RTP/RTCP (both required) over UDP, RTMP, MPEG2.TS over UDP, SRT over UDP	Yes, stand-alone or simultaneous with streaming	1x RJ45 100/1,000 base-T Ethernet, auto speed, half/full duplex	50 Kbps to 120 Mbps[3]; 15 Mbps (default)	Maevex PowerStream Plus, Maevex PowerStream Plus API and REST API[5]
Maevex 6150 Quad 4K Enterprise Encoder Appliance	MVX-E6150-4	1U ½ R, appliance	In: 4x HDMI (Type A) with audio support Out: (pass-through) 4x HDMI (Type A) with audio support Out: (monitoring)[4] 1x DisplayPort 1.1	3840x2160; 2x @60Hz[2], 4x @30Hz 4096x2160; 2x @60Hz[2], 4x @30Hz	HDMI and analog					2x RJ45 100/1,000 base-T Ethernet, auto speed, half/full duplex	50 Kbps to 120 Mbps[3]; 15 Mbps (default)	
Maevex 6120 Dual 4K Enterprise Encoder Appliance	MVX-E6120-2	1U ½ R, appliance	In: 2x HDMI (Type A) with audio support Out: (pass-through) 2x HDMI (Type A) with audio support Out: (monitoring)[5] 1x DisplayPort 1.1	3840x2160; 2x @60Hz[2], 2x @30Hz 4096x2160; 2x @60Hz[2], 2x @30Hz	HDMI and analog					2x RJ45 100/1,000 base-T Ethernet, auto speed, half/full duplex	50 Kbps to 120 Mbps[3]	

1. Power only; no driver required. 2. Requires specific source timings; contact Matrox for more details. 3. Maximum operational bitrate per stream is dependent on number of streams and features enabled. 4. Maximum resolution: 1920x1080. 5. Maximum resolution: 2560x1600.

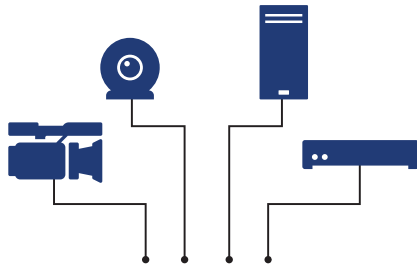## Maevex 5100 Series – Full HD encoders and decoders

Product	Part number	Form factor	Video input/output	Maximum capture resolution	Stereo audio	Encoding formats	Streaming protocols	Recording	Connector networking interface	Bitrate range	Software available as free download
Maevex 5150 Encoder Appliance	MVX-E5150F	1U ½ R, appliance	In: 1x HDMI, 1x DVI[1] Out: (pass-through) 1x HDMI, 1x DVI[1], 1x HD15	1920x1080; 1x @60Hz 1920x1200; 1x @60Hz	HDMI and analog	Video: H.264/MPEG-4 Part 10 (AVC) Audio: MPEG-4 AAC-LC	RTSP (TCP), RTCP & RTP (UDP) - all required	Yes	1x RJ45 100/1,000 base-T Ethernet	100 Kbps to 25 Mbps	Maevex PowerStream Plus, Maevex PowerStream Plus API and REST API[3]
Maevex 5150 Decoder Appliance	MVX-D5150F	1U triple-density appliance	Out: 1x HDMI, 1x DVI[2]					No	2x RJ45 100/1,000 base-T Ethernet	100 Kbps to 25 Mbps	
Maevex Encoder/ Decoder Bundle	MVX-ED5150F	Appliance (bundle)	Includes a Maevex encoder and decoder and all accompanying components of each unit. All above specs apply.								

1. Via an included adapter. 2. Via an adapter (sold separately). 3. Contact Matrox for more details.

Maevex 6020 – Remote Recorder

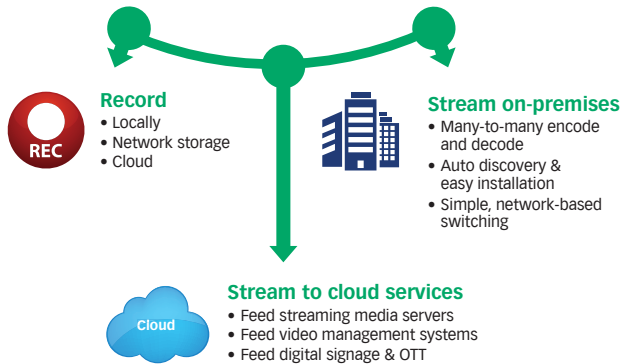| Product	Part number	Form factor	Video input/output	Maximum capture resolution	Stereo audio	Encoding formats	Live streaming	Recordings per input	Connector networking interface	Software included
Maevex 6020 Remote Recorder Appliance	MVX-RR6020-P	1U ½ R, appliance	In: 2x HDMI (with LPCM stereo audio) Out: (pass-through) 2x HDMI Out: (monitoring) 1x DisplayPort 1.1 (1920x1080)	1920x1080; 2x @60Hz	HDMI and analog	Video: H.264/MPEG-4 (AVC)	2x 1920x1080 via RTMP	Primary (max): 1920x1080, 1280x720, 960x540, 768x432 Secondary (max): 1920x1080, 1280x720, 960x540	RJ45 GigE LAN port	Maevex 6020 Configuration and Firmware Utility

Dual & quad 4K & HD capture
from any source

Maevex PowerStream Plus
management software

Maevex 6100 dual & quad 4K encoders

Simultaneous

4K capture, multi-protocol stream & record,
on a 1 GigE network.

REC

Record
• Locally
• Network storage
• Cloud

Stream on-premises
• Many-to-many encode
  and decode
• Auto discovery &
  easy installation
• Simple, network-based
  switching

Stream to cloud services
• Feed streaming media servers
• Feed video management systems
• Feed digital signage & OTT

Cloud

Maevex 6100 Series ensures flexible set-ups, no matter the requirement. Whether on site
or to the cloud, benefit from simultaneous multiple streams and recordings

Maevex PowerStream Plus Software and APIs

Maevex PowerStream Plus is a game-changer in streaming software management. The most advanced AV-over-IP software tool on the market, PowerStream Plus offers a completely centralized management platform for all Maevex devices and allows for control, adjustment, monitoring, and maintenance with credentialed management for users and administrators. The easy-to-use interface provides complete reach and control over the entire Maevex network from one or multiple central locations. PowerStream Plus delivers unprecedented flexibility over all network connections: zoom out for a macro-level overview of the entire Maevex infrastructure, and drill in on particular units or groups to fine tune parameters for each stream within a given device. The plug-and-play software provides simple access to the robust feature set; for even greater flexibility, PowerStream Plus and REST APIs are available upon request. These APIs enable integrators and developers to create new software applications or integrate specific features into existing software applications. Powerful enterprise connectivity begins here.

Easy deployment with PowerStream Plus

PowerStream Plus offers plug-and-play functionality and full access to the complete feature set immediately after download with a mature and easy-to-use user interface. This complimentary software renders all Maevex Series encoders and decoders entirely configurable and manageable from a single interface, accessible from anywhere on the network.

Rapid customization with PowerStream Plus API

Available upon request, the PowerStream Plus API—for both Windows® and Linux®—grants integrators and developers the ability to build personalized Maevex control applications and/or to integrate Maevex functionality in existing or even third-party applications.
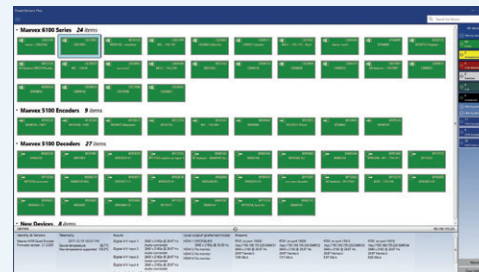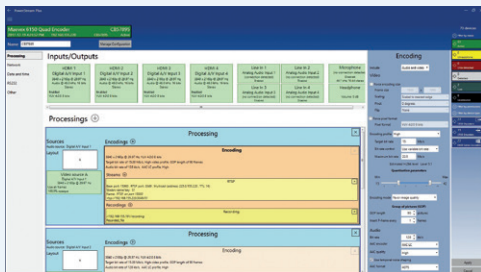
The Maevex PowerStream Plus API allows access to the entire application feature set and supports a range of customization options, ranging from the creation of a straightforward, single-function application to full integration of all PowerStream Plus features into a mirrored application.

Enhanced flexibility through Maevex REST APIs

For even more flexibility and direct access to the Maevex devices themselves, Maevex RESTful APIs are available for both Maevex 5100 Series and 6100 Series products. These REST APIs allow for direct control of the state of individual Maevex devices and provide for a more flexible and portable software development environment.

White-label re-branding solutions

Matrox's simple white-label option lets OEMs and integrators customize the graphic appearance of the PowerStream Plus user interface for brand consolidation. The white-label toolkit allows for easy re-branding of Matrox software with enterprise naming, logos, colors, and identity for complete corporate integration.

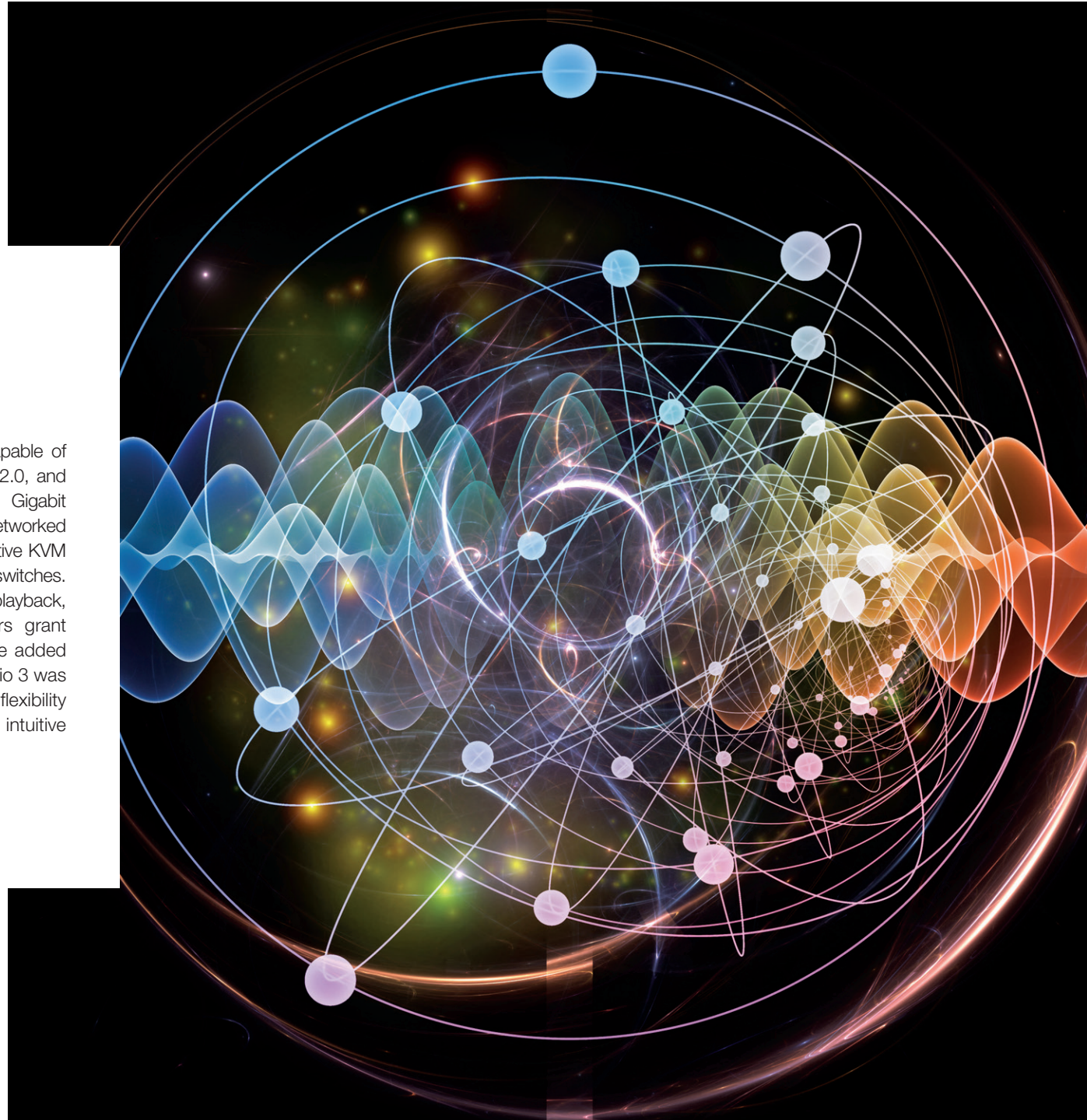Left: Maevex PowerStream Plus software allows administrators to easily adjust Maevex encoding parameters, including audio and video bitrates, video encode resolution, frame rate, and even H.264-detailed stream parameters

Right: Network administrators can use Maevex PowerStream Plus software to remotely discover and monitor the status of all Maevex encoders and decoders on the subnet, as well as units added outside the subnet

Extio™ 3 Series
IP KVM Extenders

Matrox Extio 3 is the world's first IP KVM extender capable of supporting 4Kp60 4:4:4 video, keyboard, mouse, USB 2.0, and audio at unprecedented low-bitrates over a standard Gigabit Ethernet network. Working as either a point-to-point or networked KVM extender, Extio 3 creates a scalable and cost-effective KVM matrix-switching environment using standard network switches. With exceptional remote performance, smooth video playback, and pristine image quality, these IP KVM extenders grant seamless remote access to secured systems, plus the added benefit of smart control over the IP network. Matrox Extio 3 was designed to ease integration and provide operational flexibility for information sharing, fast decision-making, and intuitive collaboration. Start driving KVM connections now.

Extio 3 Series – IP KVM extenders

Product	Part number	Form factor	Video input connectors	Video output connectors	Network interface and connector	Maximum resolutions	Stereo audio	USB 2.0 ports	RS-232	Software available as free download
Extio N3408 Transmitter Appliance	XTO3-N3408TX	1U ½ R	1x DisplayPort 1.2 3x DisplayPort 1.1	1x DisplayPort 1.1 (local output)	1x RJ45 network port 1x SFP cage[1] 1,000 base-T Ethernet, auto detect, half/full duplex	1x 3840x2160 @60Hz or 2x 3840x2160 @30Hz or 2x 2560x1600 @60Hz or 4x 1920x1080 @60Hz	Analog or embedded digital audio	2	9-pin D-Type	Matrox Extio Central Manager
Extio N3408 Transmitter Card	XTO3-N3408CTX	Full-height PCIe x8 card	1x Mini DisplayPort 1.2 3x Mini DisplayPort 1.1	—	1x SFP cage with RJ45 copper transceiver[2] 1,000 base-T Ethernet, auto detect, half/full duplex		Embedded digital audio	—		
Extio N3408 Receiver Appliance	XTO3-N3408RX	1U ½ R	—	1x DisplayPort 1.2 3x DisplayPort 1.1	1x RJ45 network port 1x SFP cage[1] 1,000 base-T Ethernet, auto detect, half/full duplex		Analog or embedded digital audio	6		
Extio N3208 Transmitter Appliance	XTO3-N3208TX	1U ½ R	2x DisplayPort 1.1	1x DisplayPort 1.1 (local output)	1x RJ45 network port 1x SFP cage[1] 1,000 base-T Ethernet, auto detect, half/full duplex	1x 2560x1600 @60Hz or 2x 1920x1200 @60Hz	Analog or embedded digital audio	2		
Extio N3208 Transmitter Card	XTO3-N3208CTX	Full-height PCIe x8 card	2x Mini DisplayPort 1.1	—	1x SFP cage with RJ45 copper transceiver[2] 1,000 base-T Ethernet, auto detect, half/full duplex		Embedded digital audio	—		
Extio N3208 Receiver Appliance	XTO3-N3208RX	1U ½ R	—	2x DisplayPort 1.1	1x RJ45 network port 1x SFP cage[1] 1,000 base-T Ethernet, auto detect, half/full duplex		Analog or embedded digital audio	4		

1. Supports RJ45 copper transceiver, SFP multi-mode or single-mode transceiver (sold separately). 2. Upgradeable to fiber multi-mode or single-mode SFP transceiver (sold separately).

Extio 3 supports one-to-one, many-to-one or many-to-many configurations

Exito 3 extends up to four displays over a standard one Gigabit Ethernet network infrastructure

Matrox Extio Central Manager Software and API

Secure, centralized management of all networked IP KVM extenders is overseen through Extio Central Manager, an easy-to-use software to configure, manage, and monitor all Extio 3 units. Extio Central Manager delivers smart control over the network, with an intuitive interface that facilitates discovery of networked Extio units, manages connections, and offers options to adjust device parameters. Smart IP KVM control begins here.

Connection broker

Create and manage connections between Extio 3 transmitter and receiver units. Route any host system to any remote user station, forming one-to-one or many-to-many configurations. Easily build a scalable KVM matrix-switching environment over a standard one Gigabit Ethernet network.

Secure access

Password-protected KVM environment protects assets; easily create and manage user rights directly through Extio Central Manager or use Microsoft Active Directory Services to manage user authorization authentication. Extio 3 IP KVM extenders safeguard installations by use of HTTPS—a secure communication protocol for sending control commands over the network—and by transmitting AES-encrypted signals.
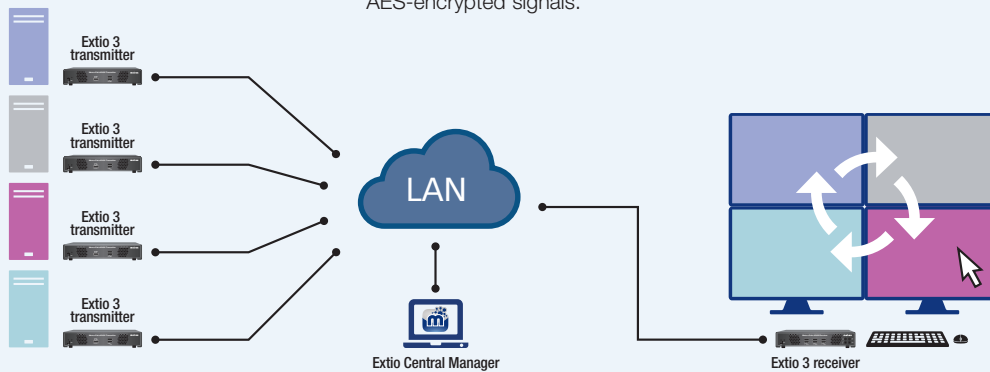
Device monitoring

See system functionality at a glance through a vibrant, color-coded visual interface. Remotely update units over IP from a central location and log critical performance parameters. Use of Simple Network Management Protocol (SNMP) allows for monitoring units through third-party network management software.

Remote access control

Preview authorized computer desktops from the receiver unit through the on-screen-display (OSD), which provides ready connection access to host systems and programmable hotkeys to instantly switch to a favorite system.

Matrox Extio Central Manager API

Integrators and developers gain command-level access to build personalized Extio Central Manager applications and/or integrate Extio 3 functionality into existing or even third-party applications.

Extio 3's Aggregator mode allows to view, access, and operate multiple systems simultaneously from one remote station using a single keyboard and mouse

Avio and Extio Series
Fiber-optic KVM Extenders

Matrox high-performance KVM extenders deliver best-in-class resolution and multi-monitor support for point-to-point deployments. Leveraging fiber-optic cabling to deliver resolutions up to 2K (2560x1600 @60Hz), the Extio and Avio Series separate keyboard, video, mouse, audio, and USB devices from workstations, and enable users to work remotely on systems without compromising performance. Industry-leading extension technology centralizes systems within server rooms, increasing security, protecting equipment against environmental hazards, and reducing system noise and heat emissions from the user environment.

Avio Series – Fiber-optic KVM extenders

Product[1]	Part number	Video input connectors	Video output connectors[1]	Maximum resolution	USB HID ports	USB 2.0 ports	PS/2[2]	Stereo audio	Maximum distance[3]	Software
Avio F120 Transmitter	AV-F120TXF	1x DVI-I SL/DL 1x DVI-I SL	1x DVI-I SL/DL 1x DVI-I SL	2x 1920x1200 @60Hz or 2x 2048x1080 @60Hz or 1x 2560x1600 @60Hz or 1x 4096x2160 @30Hz	2	2	Yes	Analog	400 m / 1,312 ft (multi-mode) 10 km / 6.2 mi (single-mode)	—
Avio F120 Receiver	AV-F120RXF	—			4	—				—
Avio F125 Transmitter	AV-F125TXF	1x DVI-I SL/DL 1x DVI-I SL			2	2				—
Avio F125 Receiver	AV-F125RXF	—			2	4				—

1. In dual-link DVI mode, only a single display is supported. 2. Keyboard and mouse support for industrial or legacy systems. 3. Matrox Avio F120 and F125 ship with multi-mode transceivers; single-mode transceivers are sold separately (part number AV-SFP10G-2SMF).

Extio Series – Fiber-optic KVM extenders

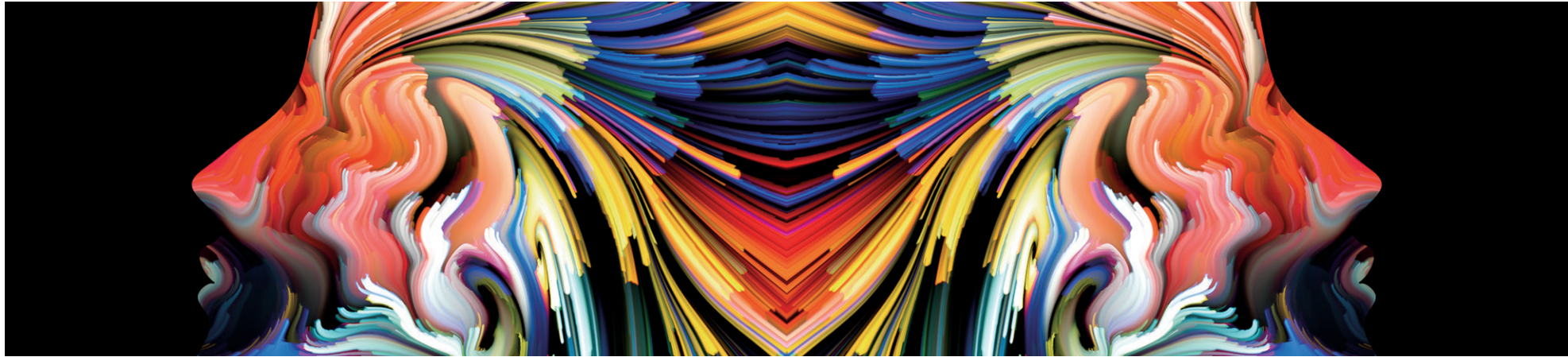| Product[1]	Part number	Maximum number of displays	Graphics memory	Connectors	Maximum resolution			Maximum distance	Interface card required	Software available as free download
					DisplayPort	Digital	Analog			
Extio F2208	XTO2-F2208F	2	1 GB	2x DisplayPort connectors 5x USB 2.0 ports 1x dual-LC fiber-optic connector 4x audio connectors, 1x power input	2x 2560x1600	2x 1920x1200[2]	2x 1920x1200[2]	400 m / 1,312 ft (multi-mode) 1 km / 3,280 ft (single-mode)	PCIe x1 XTO2A-FESLPAF (sold separately)	Matrox PowerDesk
Extio F2408	XTO2-F2408F	4		4x DisplayPort connectors 5x USB 2.0 ports 1x dual-LC fiber-optic connector 4x audio connectors, 1x power input	4x 2560x1600	4x 1920x1200[2]	4x 1920x1200[2]			
Extio F2408E Expander	XTO2EX-F2408F	4		4x DisplayPort connectors 1x dual-LC fiber-optic connector 1x power input	4x 2560x1600	4x 1920x1200[2]	4x 1920x1200[2]	5 m (must use cable provided)	—	

1. Fiber-optic cables for products are required (sold separately). 2. Two DisplayPort to DVI connector adapters included with Extio F2208. Four DisplayPort to DVI connector adapters included with Extio F2408. DisplayPort to analog (VGA) adapters available from third-party vendors.

Extio F2208, F2408, and F2408E Expander units combine to drive up to 16 remote displays from a single PC

Avio F125 extends dual-digital video and USB 2.0 devices by up to 10 km (6.2 mi) over a single fiber-optic cable

Mura IPX Series, MPX Series, C-Series, and QuadHead2Go Series
Video Wall Products

Matrox video wall products offer the most reliable, scalable, industry-tested architecture available. Build collaborative video walls using Mura IPX Series cards, Mura MPX Series cards, or C-Series cards. Pair QuadHead2Go™ Series with C-Series and third-party graphic cards for expanded configuration options and the highest density footprint on the market. Matrox offers a 360° approach, delivering a comprehensive range of hardware and software products designed to meet any video wall project requirements, whether small-scale systems for digital signage, conference or classroom presentations, or medium-sized and large multi-board configurations for security, traffic management, or control rooms. MuraControl management software is available for Windows or iPad®, and includes easy-to-use APIs.

C-Series – Nine- and six-output graphics cards

Product	Part number	Maximum number of displays				Card type	Graphics memory	Form factor Card/ bracket	Cooling	On-board connectors	Maximum resolution per display			Optional accessories[1]	Software available as free download
		DisplayPort	DVI	HDMI	Total						DisplayPort	DVI	HDMI		
C900	C900-E4GBF	—	9[2,3]	9	9[3]	PCIe x16	4 GB	ATX/ATX	Active	9x Mini HDMI	—	9x 1920x1200 @60Hz[4] (dual-link) 9x1920x1200 @60Hz[4] (single-link)	9x 1920x1200 @60Hz[3,4]	Board-to-board framelock cable Secure Cable Solution P/N: SK-C900-0F	Matrox PowerDesk, Matrox MuraControl[5]
C680	C680-E4GBF	6	6[6]	6[6]	6					6x Mini DisplayPort (secure)	6x 4096x2160 @30Hz[7] 3x 4096x2160 @60Hz[7]	6x 2560x1600 @60Hz[6] (dual-link) 6x 1920x1200 @60Hz[6] (single-link)	6x 3840x2160 @30Hz[6] 6x 1920x1200 @60Hz[6]	Mini DisplayPort to DisplayPort adapter Board-to-board framelock cable DisplayPort Secure Cable Solution P/N: SK-SLNB-4F	

1. Sold separately. Details available at www.matrox.com/graphics. 2. Third-party DVI adapter required (sold separately). 3. Supports 3, 6, or 9 display configurations; all displays must run at the same resolution. 4. Third-party adapters required (sold separately). 5. A 21-day free trial of Matrox MuraControl for Windows is available for download. Following the expiry of the free trial, users must purchase a software license in the form of a USB dongle to continue using the software. 6. Third-party active adapters required (sold separately). 7. Passive adapters may be required (sold separately).

Mura IPX Series – Capture, encode, decode, and display cards

Board Type	Connectors (part number)	Pixel transfer formats	Resolutions[3]	H.264 encode/decode[4] up to level 5.2	Bitrates	H.264 profiles	Software available as free download[1]
Four Captures and IP Decode	4 x Mini HDMI (Type C), 1 x 100/1000 Base-T RJ45 Ethernet Port [pn: MURAIPXI-D4JF (fan sink), pn: MURAIPXI-D4JHF (fanless)] 2 x DisplayPort 1.2, 1 x 100/1000 Base-T RJ45 Ethernet Port [pn: MURAIPXI-D2MF (fan sink), pn: MURAIPXI-D2MHF (fanless)]	RGB: 8:8:8, 10:10:10 (24/32 bits per pixel) YUV: 4:4:4, 4:2:2, 4:2:0 (8/10 bits per component) Mono: Color space conversion support	Input resolutions (HDMI/DisplayPort): 4096x2160 @60Hz[2], 4096x2160 @30Hz, 3840x2160 @60Hz[2], 3840x2160 @30Hz, 2560x1600 @60Hz Input resolutions (SDI): 12G-SDI, 3G-SDI, HD-SDI, SD-SDI	Decode: 2x 3840x2160 @60Hz, 4x 3840x2160 @30Hz, 8x 1920x1080 @60Hz, 16x 1920x1080 @30Hz, or numerous SD IP channels	100 Kbps to 500 Mbps CABAC 100 Kbps to 800 Mbps CAVLC	BP MP HiP Hi10P Hi422P Hi444PP	Matrox MuraControl
Four Captures and IP Encode/ Decode	4 x Mini HDMI (Type C), 1 x 100/1000 Base-T RJ45 Ethernet Port [pn: MURAIPXI-E4JF (fan sink), pn: MURAIPXI-E4JHF (fanless)] *New* 2 x DisplayPort 1.2, 1 x 100/1000 Base-T RJ45 Ethernet Port [pn: MURAIPXI-E2MF (fan sink), pn: MURAIPXI-E2MHF(fanless)] *New* 2 x 12G-SDI, 2x 3G-SDI, 1 x 100/1000 Base-T RJ45 Ethernet Port [pn: MURAIPXI-E4SF (fan sink), pn: MURAIPXI-E4SHF (fanless)]			Encode and/or decode: 2x 3840x2160 @60Hz, 4x 3840x2160 @30Hz, 8x 1920x1080 @60Hz, 16x 1920x1080 @30Hz, or numerous SD IP channels			
Four DisplayPort Outputs and IP Decode	*New* 4 x Mini DisplayPort, 1 x 100/1000 Base-T RJ45 Ethernet Port [pn: MURAIPXO-D4LF (fan sink), pn: MURAIPXO-D4LHF (fanless)]		Output resolutions (DisplayPort): 4096x2160 @30Hz, 3840x2160 @30Hz, 2560x1600 @60Hz	Decode: 2x 3840x2160 @60Hz, 4x 3840x2160 @30Hz, 8x 1920x1080 @60Hz, 16x 1920x1080 @30Hz, or numerous SD IP channels			

1. A 21-day free trial of Matrox MuraControl for Windows is available for download. Following the expiry of the free trial, users must purchase a software license in the form of a USB dongle to continue using the software. 2. For the HDMI capture card only, input resolution is in YUV 4:2:0, 12 bits per pixel (8 bits per component). 3. Standard resolutions listed. Support for standard and custom resolutions available; contact Matrox for more details on specific requirements. 4. Listed number of streams are in YUV 4:2:0, 12 bits per pixel (8 bits per component). Support for 4:2:2 and 4:4:4 streams also available.

Mura MPX Series – Video wall capture & display cards

Product	Part number	Board type	Interface	Memory	Transfer rate	Output resolutions[1]		Input resolutions[1] per display					Software available as free download
						SL-DVI	RGB (VGA)	SL-DVI[2]	RGB (VGA)[2,3]	Component (VPbPr)	S-video composite	SDI	
Mura MPX-4/4	MURA-MPX44HF	4x outputs, 4x inputs	PCIe x16 (Gen2)	2 GB[4]	64 Gbit/sec	2048x1152 @60Hz	2048x1536 @60Hz	1920x1200 @60Hz 2560x1600 @30Hz	1920x1200 @60Hz 2048x1536 @47Hz[5]	1080i	NTSC/PAL SECAM	—	Matrox PowerDesk, Matrox MuraControl[7]
Mura MPX-4/2	MURA-MPX42HF	4x outputs, 2x inputs				2048x1152 @60Hz	2048x1536 @60Hz	1920x1200 @60Hz 2560x1600 @30Hz	1920x1200 @60Hz 2048x1536 @47Hz[5]	1080i	NTSC/PAL SECAM	—	
Mura MPX-4/0	MURA-MPX40HF	4x outputs, 0x inputs				2048x1152 @60Hz	2048x1536 @60Hz	—	—	—	—	—	
Mura MPX-SDI	MURA-MPXSDIF	2x outputs, 2x inputs	PCIe x16 (Gen1)	1 GB[4]	32 Gbit/sec	2048x1152 @60Hz	2048x1536 @60Hz	—	—	—	—	1920x1080 @60Hz 3G SDI, HD SDI, SD SDI	
Mura MPX-V16	MURA-MPXV16F	0x outputs, 16x inputs	PCIe x4 (Gen1)	256 MB[6]	8 Gbit/sec	—	—	—	—	—	NTSC/PAL SECAM	—	Matrox MuraControl[7]
Mura MPX-V8	MURA-MPXV8F	0x outputs, 8x inputs		128 MB[6]		—	—	—	—	—	NTSC/PAL SECAM	—	

1. Maximum resolutions listed. Support for standard and custom resolutions available; contact Matrox for more details on specific requirements. 2. RGB (VGA) adapter included with Mura MPX 4/0, Mura MPX 4/2, and Mura MPX 4/4. 3. Adapters for component, S-video, and composite (sold separately). Contact Matrox for more details. 4. Shared memory for inputs and outputs. 5. Contact Matrox for more details on specific requirements. 6. Input memory. 7. A 21-day free trial of Matrox MuraControl for Windows is available for download. Following the expiry of the free trial, users must purchase a software license in the form of a USB dongle to continue using the software.

Mura IPX Series pairs readily with Mura MPX Series and C-Series products, as well as third-party graphics, for scalable, modular video wall configurations, which are intuitively managed by MuraControl software, as well as supplemental Matrox APIs

Matrox MuraControl Software and Matrox APIs and SDKs

Matrox MuraControl is an intuitive, feature-rich software for managing video walls built of mix-and-match hardware from Mura IPX Series, Mura MPX Series, and C-Series[1]. Available for Windows and for iPad[2], MuraControl runs either locally or remotely and can be used to create, save, and edit layouts offline or in real time. The software provides a user-friendly interface for controlling all aspects of Matrox video walls. For even deeper flexibility and customization options, choose from a range of SDKs, APIs, and libraries to build custom interfaces and applications. Take control of video walls, starting here.

Manage video wall layouts intuitively

MuraControl software deploys right out of the box, providing easy control of all baseband and network-connected sources, cards, and local applications, and the ability to manage layouts and display function with a few simple clicks. This powerful software lets users create layouts offline before pushing live or edit layouts online in real time, as well as render HTML-5 feeds and external applications directly on the video wall. MuraControl also allows for previewing the entire video wall— adjusting quality and refresh rates—via the unique Preview Surface functionality.

Control networked video walls through a single interface
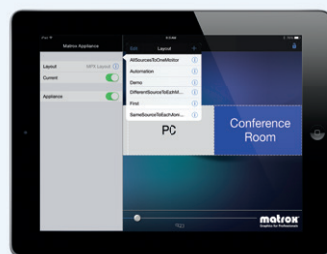
Build small- and large-scale networked video walls by combining Mura IPX with C-Series or Mura MPX cards. With MuraControl, users get network connectivity and the capacity to switch sources automatically within one or more windows in a layout, as well as rename, crop, rotate, and overlay text directly on source content. Matrox Mura IPX cards offer integrated decoding support for IP sources, for even more flexibility over display content.

Skin applications and expand product offerings

MuraControl software provides users expansion possibilities to fit installation needs. At the highest level, the white-label skinning solution allows OEMs and system integrators to tailor the MuraControl user interface for brand consolidation. The MuraControl Tablet SDK[3] allows users to expand complete package product offerings and develop iPad and Android™-based tablet programs.

Leverage APIs and SDKs for deeper customization[3]

A range of supplemental APIs afford tremendous flexibility to drill down on specific functionality needs. The Matrox Network API grants users access to build custom capture, streaming, and display video wall applications using Telnet, RS-232, and/or HTTP/HTTPS. Users can enable existing applications using Microsoft DirectShow filters to capture and decode video through the MuraControl interface. Using C/C++ code, the Matrox VWLib API supports building custom applications using DirectX[®4] and OpenGL[®5], while the Matrox DWC API enables tailoring performance, flexibility, and control of video walls through a display-wall controller.

Left: Build layouts featuring HDMI, DisplayPort, IP, and other source content, and configure formats (e.g., PIP, shown) for placement anywhere on the video wall

Right: Transform Apple® and Android tablets—using MuraControl for Windows or iPad and/or the Matrox Tablet SDK—into intuitive touch-panel control interfaces capable of remotely managing video wall installations

1. Excluding Matrox C420. 2. Not all MuraControl functionality is available with MuraControl for iPad. Contact Matrox for more details. 3. Depending on display wall configurations, certain APIs/SDKs may not be available. Contact Matrox for more information. 4. Under Windows. 5. Under Linux.

QuadHead2Go™ Series
Multi-Monitor Controllers

Matrox QuadHead2Go™ multi-monitor controllers make video wall deployments easy. Capable of driving four displays from one signal, this powerful, compact, plug-and-play unit available in both appliance and card formats, provides complete video wall scalability and flexibility. QuadHead2Go is designed to power any video wall configuration of any possible dimension, from any video source—reliably delivering flawless image quality across expansive video wall displays. QuadHead2Go's on-device buttons and pre-set configurations ensure an out-of-the-box, trouble-free installation experience. The included Matrox PowerWall™ software offers an intuitive and feature-rich interface to effortlessly configure the latest emerging, artistic, and innovative video walls. Installation is as easy as 1-2-3—connect, configure, and deploy.

QuadHead2Go Series – Multi-monitor controllers

Product	Part number	Maximum number of monitors	Input	Outputs	DisplayPort input maximum resolution	HDMI output maximum resolution	Hardware included	Dimensions WxDxH	Software
QuadHead2Go Appliance	Q2G-DP4K	4	DisplayPort 1.2 (audio and video)	4x HDMI (audio and video)	3840x2160 @60Hz 3840x2160 @30Hz 7680x1080 @60Hz 7680x1080 @30Hz 1920x4320 @60Hz 1920x4320 @30Hz Other resolutions including 8K x 8K are supported. Contact Matrox for more details.	1920x1080 @60Hz 1920x1080 @30Hz 1920x1200 @60Hz 1920x1200 @30Hz Other output resolutions are supported. Contact Matrox for more details.	4 x 6 ft power cables for US, EU, UK, Aus/Nz 1x 12 V, 3.5 A, 42 W external power supply with mini DIN Connector	5.50 x 1.25 x 7.21 in 13.97 x 3.18 x 18.31 cm	Matrox PowerWall for Windows
QuadHead2Go PCIe Card	Q2G-D4K-C						—	0.85 x 5.00 x 6.21 in 2.16 x 12.70 x 15.77 cm	

Deploy easily using on-device buttons or pre-set configurations of 2x2, 4x1, 1x4, 3x1, 2x1, 1x2, artistic configurations, and more

Or

Use multiple QuadHead2Go units (appliances or cards) to easily create and/or expand large-scale video wall solutions

Matrox PowerWall Software and API

Matrox PowerWall is an advanced yet easy-to-use management software included with the Matrox QuadHead2Go multi-monitor controllers. It allows communicating with and managing all the QuadHead2Go units in an installation from one location. The intuitive user interface also allows to flexibly customize artistic and classic rectangular configurations of any type and size for deploying stunning video walls. These configurations can even be created and saved in advance by working offline without needing an active connection to a video wall controller or any other source, enabling faster set ups. Designed to simplify video wall designs and installations, the software allows the QuadHead2Go devices to be set up in three quick steps—connect and discover, configure, and deploy. Develop custom functions and applications using the QuadHead2Go REST API.

Discover multiple units instantly

Locate devices effortlessly over the network using DHCP or Static IP address. From a central location, discover multiple QuadHead2Go units and set their respective configurations.

Configure with free rein

Customize configurations of any type and size. Create, edit, save, or delete configurations at will. Manage display modes with a great degree of flexibility by taking in an input video of any resolution up to 8K x 8K and displaying each output in any resolution up to Full HD 1920 x 1200 @ 60 Hz.

Optimize visuals

Optimize visuals by positioning, cropping, rotating, and scaling content as desired. Also, fine-tune and control bezels using the pre-set images in the box (or your own) to ensure seamless image displays.

Work offline or online

Matrox PowerWall software can be operated in offline mode – without needing any hardware – leading to much faster set ups.

Customize applications

Develop custom functions and applications using the QuadHead2Go REST API. Using the white-label solutions, rebrand the Matrox PowerWall software and QuadHead2Go hardware for quick and complete integration.

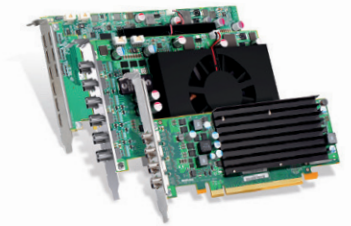Rotate and position outputs independently from one another

Control and fine-tune bezels using the pre-set images in the box to ensure seamless image displays

C-Series and M-Series
Multi-Display Graphics Cards

A pioneer in multi-monitor graphics technology, Matrox offers the most extensive lineup of multi-display graphics cards—dual, quad, and beyond—on the market today. Delivering the optimal combination of resolution support up to 4K, display density, low power consumption, best-of-breed image quality, high mean time between failure (MTBF), and long product life cycles, Matrox graphics cards offer flexible multi-display configurations, providing more workspace to see and do more for a variety of applications.

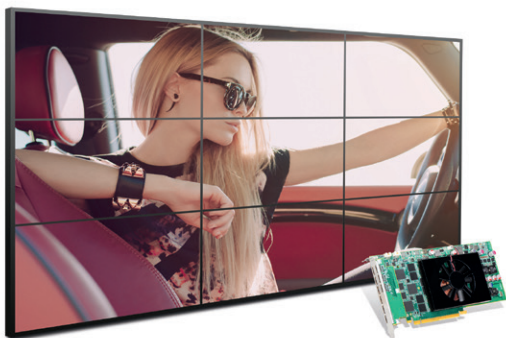**C-Series** – Nine, six, and four-output graphics cards

Product	Part number	Maximum number of displays				Card type	Graphics memory	Form factor card/ bracket	Cooling	On-board connectors	Maximum resolution per display			Optional accessories[1]	Software available as free download
		DisplayPort	DVI	HDMI	Total						DisplayPort	DVI	HDMI		
C900	C900-E4GBF	—	9[2,3]	9	9[3]	PCIe x16	4 GB	ATX/ATX	Active	9x Mini HDMI	—	9x 1920x1200 @60Hz[4] (dual-link) 9x 1920x1200 @60Hz[4] (single-link)	9x 1920x1200 @60Hz[3,4]	Board-to-board framelock cable Secure Cable Solution P/N: SK-C900-0F	Matrox PowerDesk, Matrox MuraControl[5]
C680	C680-E4GBF	6	6[6]	6[6]	6					6x Mini DisplayPort (secure)	6x 4096x2160 @30Hz[7] 3x 4096x2160 @60Hz[7]	6x 2560x1600 @60Hz[6] (dual-link) 6x 1920x1200 @60Hz[6] (single-link)	6x 3840x2160 @30Hz[6] 6x 1920x1200 @60Hz[6]	Mini DisplayPort to DisplayPort adapter Board-to-board framelock cable DisplayPort Secure Cable Solution P/N: SK-SLNB-4F	Matrox PowerDesk, Matrox MuraControl[5]
C420	C420-E4GBLAF	4	4[6]	4[6]	4			LP/ATX & LP	Passive	4x Mini DisplayPort (secure)	4x 2560x1600 @60Hz[7] 2x 3840x2160 @30Hz[7]	4x 2560x1600 @60Hz[6] (dual-link) 4x 1920x1200 @60Hz[6] (single-link)	4x 1920x1200 @60Hz[6]	Mini DisplayPort to DisplayPort adapter DisplayPort Secure Cable Solution P/N: SK-SLNB-4F	Matrox PowerDesk

1. Sold separately. Details available at www.matrox.com/graphics. 2. Third-party DVI adapter required (sold separately). 3. Supports 3, 6, or 9 display configurations; all displays must run at the same resolution. 4. Third-party adapters required (sold separately). 5. A 21-day free trial of Matrox MuraControl for Windows is available for download. Following the expiry of the free trial, users must purchase a software license in the form of a USB dongle to continue using the software. 6. Third-party active adapters required (sold separately). 7. Passive adapters may be required (sold separately).

M-Series – Multi-output graphics cards

Product	Part number	Maximum number of displays				Card type	Graphics memory	Form factor card/bracket	Cooling	On-board connectors	Maximum resolution per display			Optional adaptor/cable[1]	Software available as free download
		DisplayPort	DVI/HDMI	Analog	Total						DisplayPort	DVI	Analog		
M9120	M9120-E512F	—	2	2	2	PCIe x16	512 MB	ATX/ATX	Passive	2x DVI-I	—	1920x1200	2048x1536	—	Matrox PowerDesk
M9120 Plus LP PCIe x1	M9120-E512LAU1F	—	2	4[2]	4[3]	PCIe x1	512 MB	LP/ATX & LP		LFH-60	—	1920x1200	2x 2048x1536 or 3x, 4x 1920x1200[4]	LFH-60 to 4x HD15 (analog)[5]	
M9120 Plus LP PCIe x16	M9120-E512LPUF	—	2	4[2]	4[3]	PCIe x16	512 MB	LP/ATX & LP		LFH-60	—	1920x1200	2x 2048x1536 or 3x, 4x 1920x1200[4]	LFH-60 to 4x HD15 (analog)[5]	
M9125	M9125-E512F	—	2	2	2	PCIe x16	512 MB	ATX/ATX		2x DVI-I	—	1920x1200 and 2560x1600	2048x1536	—	
M9128 LP	M9128-E1024LAF	2	2[3]	—	2	PCIe x16	1 GB	LP/ATX & LP		2x DisplayPort	2560x1600	1920x1200	—	DisplayPort to DVI-D (single-link)[6]	
M9138 LP	M9138-E1024LAF	3	3[3]	—	3	PCIe x16	1 GB	LP/ATX & LP		3x Mini DisplayPort	2560x1600	1920x1200	—	DisplayPort to DVI-D (single-link)[6]	
M9140 LP	M9140-E512LAF	—	4	4	4	PCIe x16	512 MB	LP/ATX & LP		KX20	—	1920x1200	1920x1200	—	
M9148 LP	M9148-E1024LAF	4	4	—	4	PCIe x16	1 GB	LP/ATX & LP		4x Mini DisplayPort	2560x1600	1920x1200	—	—	
M9188	M9188-E2048F	8	8	—	8	PCIe x16	2 GB	ATX/ATX	Active	8x Mini DisplayPort	2560x1600	1920x1200	—	—	

1. Cable pricing details available at www.matrox.com/graphics. 2. LFH-60 to 4xHD15 cable upgrade required. 3. Using optional adapter cable (sold separately). 4. 1920x1200 supported with quad analog upgrade cable. 5. Part number CAB-L60-4XAF (sold separately). 6. Part number CAB-DP-DVIF (sold separately).

Power unique 9x1 or 3x3 video wall configurations with Matrox C900 cards

Combine two Matrox C680 cards to drive up to 12 displays from one system via board-to-board framelock capabilities
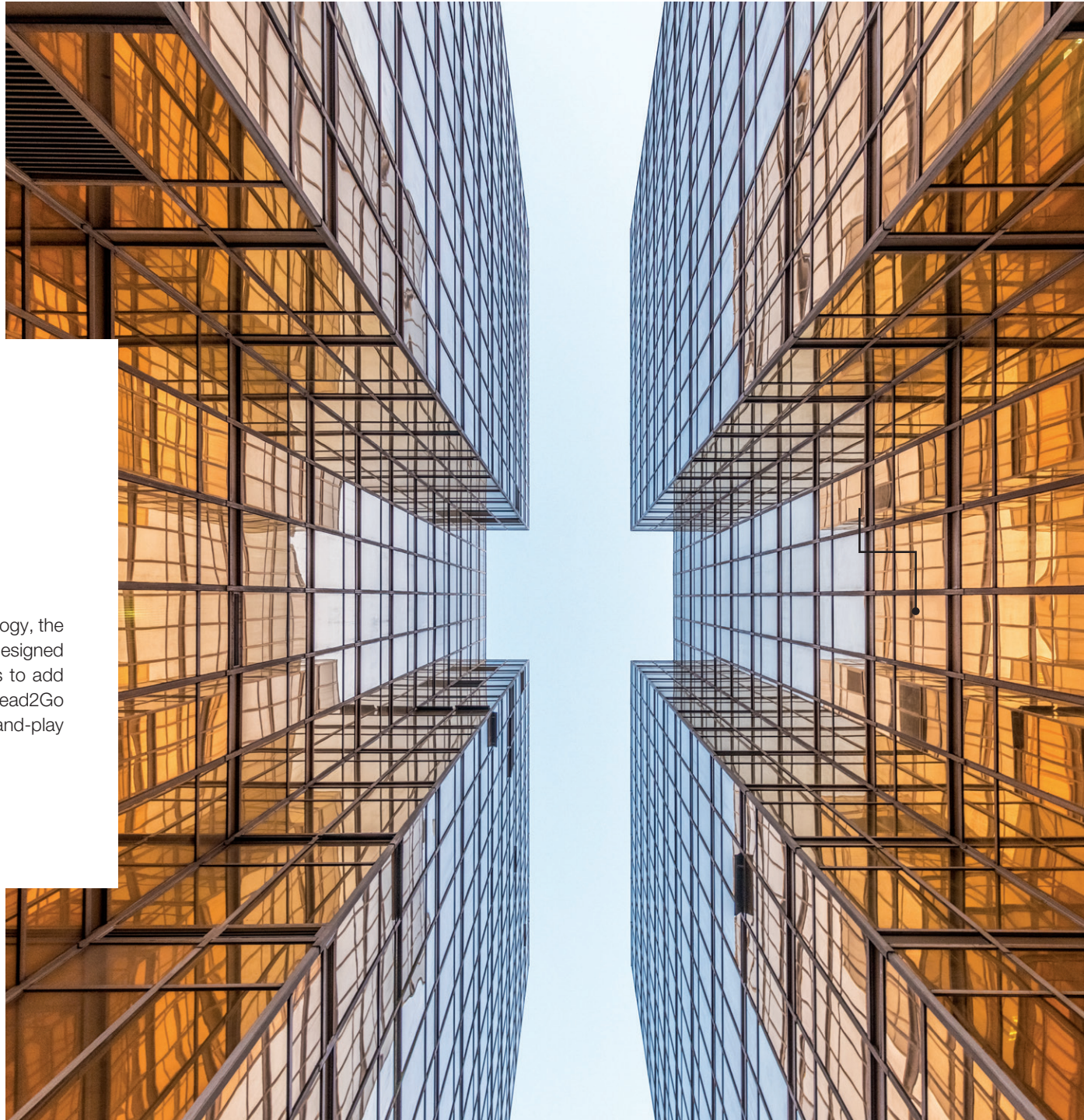

Stretch operator desktops with passively cooled C-Series or M-Series multi-display graphics cards (Matrox C420 shown)

DualHead2Go, TripleHead2Go, and QuadHead2Go Series
Graphics eXpansion Modules

A first mover in the graphics eXpansion modules technology, the DualHead2Go and TripleHead2Go multi-adapters are designed to help increase workplace efficiency by allowing users to add up to three monitors to a laptop or desktop. The QuadHead2Go multi-monitor controllers are powerful, compact, plug-and-play solutions designed to build dynamic video walls.

DualHead2Go and TripleHead2Go – External multi-display adapters

Product	Part number	Maximum number of monitors	Connectors		Maximum resolutions per display[1]			Hardware included	Dimensions WxDxH	Software available as free download
			To system input	To monitors output	DisplayPort	DVI	VGA			
DualHead2Go Digital ME	D2G-DP2D-MIF	2	Mini DisplayPort or Thunderbolt[2]	DVI	—	2x 1920x1200	—	Mini-DisplayPort-to-DisplayPort input cable, USB cable	3.8x2.5x1.1in / 9.7x6.4x2.8 cm	Matrox PowerDesk for Mac
DualHead2Go Digital SE	D2G-DP2D-IF		DisplayPort	DVI	—	2x 1920x1200	—	DisplayPort-to-DisplayPort input cable, USB cable	3.8x2.5x1.1in / 9.7x6.4x2.8 cm	
DualHead2Go Digital Edition	D2G-A2D-IF		VGA	VGA[3] or DVI	—	2x 1920x1200	2x 1680x1050	VGA-to-VGA (analog) input cable, USB cable	3.9x5.5x1.3 in / 9.9x14x3.3 cm	
TripleHead2Go Digital SE	T2G-DP3D-IF	3	DisplayPort	DVI	—	3x 1920x1080[3] 2x 1920x1200	—	DisplayPort-to-DisplayPort input cable, Mini-DisplayPort-to-DisplayPort input cable, USB cable	5.25x2.5x1.1 in / 13.3x6.4x2.8 cm	
TripleHead2Go Digital Edition	T2G-D3D-IF		VGA or dual-link DVI	VGA[3] or DVI	—	3x 1920x1080[3,5] 2x 1920x1200	3x 1360x768[4] 2x 1680x1050[4]	VGA-to-VGA (analog) input cable, DVI-to-DVI monitor cable, USB cable	4.4x5.5x1.1 in / 11.2x14x2.8 cm	
TripleHead2Go DP Edition	T2G-DP-MIF		DisplayPort, Mini Display-Port, or Thunderbolt[2]	VGA[3], DVI, or DisplayPort	3x 1920x1080[3] 2x 1920x1200	3x1920x1080[3,6] 2x1920x1200[6,7]	3x 1360x768[7] 2x 1920x1080[7]	DisplayPort-to-DisplayPort input cable, Mini-DisplayPort-to-DisplayPort input cable, USB cable	4.4x5.5x1.1 in / 11.2x14x2.8 cm	

1. Maximum resolution supported is GXM model, system, GPU, operating system, and display dependent. 2. Thunderbolt system connectivity is supported only under Mac. 3. Resolutions supported at 50Hz which may be incompatible with some displays; widescreen resolutions higher than 3x 1360x768 are not available under any Mac OS X operating system. 4. DVI-to-VGA adapter required (sold separately; part number ADP-DVI-AF). 5. These modes are available when TripleHead2Go Digital Edition is connected to the system's dual-link DVI output. 6. DisplayPort-to-DVI adapter (sold separately; part number CAB-DP-DVIF). 7. Using third-party active adapter (sold separately).

QuadHead2Go Series – Multi-monitor controllers

Product	Part number	Maximum number of monitors	Input	Outputs	DisplayPort input maximum resolution	HDMI output maximum resolution	Hardware included	Dimensions WxDxH	Software
QuadHead2Go Appliance	Q2G-DP4K	4	DisplayPort 1.2 (audio and video)	4x HDMI (audio and video)	3840x2160 @60Hz 3840x2160 @30Hz 7680x1080 @60Hz 7680x1080 @30Hz 1920x4320 @60Hz 1920x4320 @30Hz Other resolutions including 8K x 8K are supported. Contact Matrox for more details.	1920x1080 @60Hz 1920x1080 @30Hz 1920x1200 @60Hz 1920x1200 @30Hz Other output resolutions are supported. Contact Matrox for more details.	4 x 6 ft power cables for US, EU, UK, Aus/Nz 1x 12 V, 3.5 A, 42 W external power supply with mini DIN Connector	5.50 x 1.25 x 7.21 in 13.97 x 3.18 x 18.31 cm	Matrox PowerWall for Windows
QuadHead2Go PCIe Card	Q2G-D4K-C						—	0.85 x 5.00 x 6.21 in 2.16 x 12.70 x 15.77 cm	

OEM and Developer Toolkits

Matrox offers a complete range of software, APIs, and libraries that allow OEMs and developers to deploy intuitive, ready-to-use software or develop custom interfaces and applications based on project needs. Whatever the installation requirement, Matrox provides the necessary toolkit to help build complete end-to-end solutions. Discover the multitude of OEM software options available:

	User applications						Command-level APIs[1]		Development libraries[2]								Low-level hardware and software design libraries	
	Ready-to-use software applications to configure and manage Matrox boards and appliances. White-labelling/skinning options are available on select software.						High-level APIs can be transmitted from any network computer including traditional PCs, smartphones, tablets, etc.		High-level APIs are available in SDKs complete with sample code for deep OEM/developer personalization and control of Matrox hardware.								Low-level toolkits come complete with hardware reference designs, source code, sample code, and more. These libraries exploit the deepest corners of Matrox core intellectual property and help developers create products with vertically specialized capabilities well beyond the standard complement of Matrox product offerings.	
	Matrox PowerDesk	Matrox MuraControl	Maevex PowerStream	Maevex PowerStream Plus	Matrox PowerWall	Matrox Extio Central Manager	Matrox Network API[4]	Matrox Tablet SDK[3]	Matrox PowerDesk API	Maevex PowerStream Plus API	Maevex REST API	QuadHead2Go REST API	Matrox Extio Central Manager API	Matrox VWLib API[6]	Matrox DWC API	Matrox DirectShow support	Fully programmable libraries	GPU, FPGA, and other source code
Maevex 6100 Series				●						●	●							
Maevex 5100 Series			●	●						●	●							
Extio 3 Series						●							●					
Extio Series	●								●									
Mura IPX 4K Capture cards with C-Series	●[5]	●[5]					●[5]	●[5]	●[5]					●[5]		●[6]		
Mura IPX 4K Capture cards with MPX Series	●	●					●	●	●						●			
Mura IPX 4K Capture cards with third-party graphics		●					●	●							●			
Mura IPX 4K IP Decode & Display		●					●	●										
Mura MPX Series	●	●					●	●							●			
C-Series	●	●[5]					●[5]	●[6]	●[9]									
QuadHead2Go Series					●							●						
M-Series	●								●									
DualHead2Go	●																	
TripleHead2Go	●																	
Endea																	●	●

1. Matrox command-level APIs can be used through Telnet, RS-232, and HTTP/HTTPS. 2. Matrox development libraries can be based on C/C++, C#, and others. 3. Android and iPad. 4. .NET framework 4.5 (or higher) based. 5. Matrox C420 not supported. 6. C/C++-based API; makes use of DirectX under Windows and OpenGL under Linux.

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Matrox Graphics is a global manufacturer of reliable, high-quality ASICs, boards, appliances, and software. Backed by in-house design expertise and dedicated customer support, Matrox products deliver stellar capture, extension, distribution, and display. Engineering high-quality products since 1976, Matrox technology is trusted by professionals and partners worldwide. Matrox is a privately held company headquartered in Montreal, Canada. For more information, visit www.matrox.com/graphics.

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