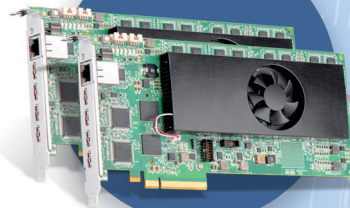# Product Lineup

Graphics & Video Processing for Over 40 Years.

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

matrox®

Graphics for Professionals

Connect the Dots In Your AV Distribution Ecosystem with Matrox Graphics…

High-quality H.264 encoders and decoders and 4K capture and IP encode/decode cards deliver unprecedented, low-bitrate AV-over-IP streaming and recording. Versatile video wall processor boards offer universal source capture, exceptional scaling capabilities, and intuitive control over multi-display layouts. Zero-latency KVM extenders enable real-time remote control over centralized computing resources. With decades of experience designing reliable, high-quality multi-display graphics cards as well as AV and IT products, Matrox can help you build up and work efficiently within merged data and AV-over-IP environments. We invite you to explore our latest products:

Mura IPX Series 4K capture & IP encode/decode and **Mura MPX Series** video wall processor cards drive small to large-scale canvases for local and networked content for everything from control rooms to digital signage.
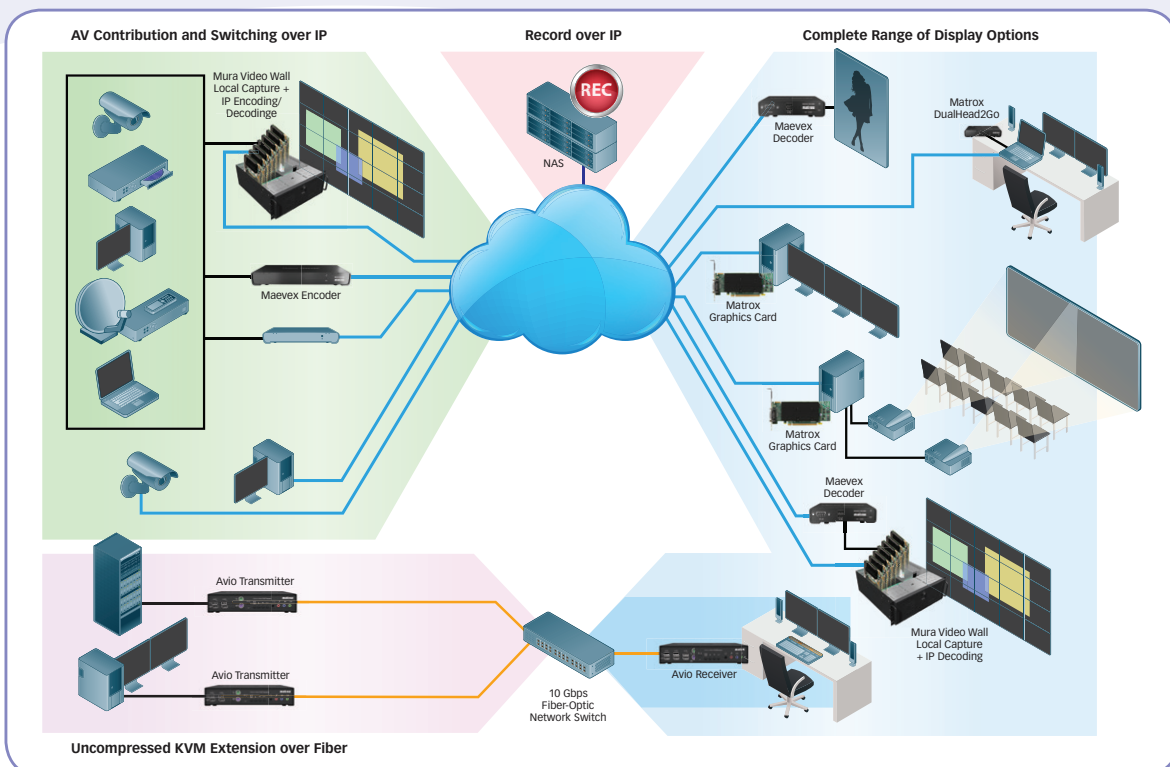
Maevex H.264 encoders & decoders distribute or record low-bandwidth, Full HD video & audio over IP, either one-to-one, one-to-many, many-to-many, or many-to-one.

C-Series and **M-Series** multi-display graphics cards drive multiple monitors on single systems.

Avio and **Extio** KVM extenders facilitate the centralization of workstations and IT maintenance via zero-compression fiber-optic transmission, so operators can work up to 6 miles away.

Matrox also offers the Endea OEM reference platform for access to strategic H.264 encode/decode and video processing capabilities—including support for multiple formats up to 4K—dramatically reducing R&D investment for designers. Meanwhile, Matrox SDKs and APIs are available to select companies integrating and/or developing custom control software for Matrox products. Manufacturers creating new, successful products are invited to inquire about our broad portfolio of graphics, imaging, and video IP in cores, chips, and hardware designs.

Matrox in Your AV Distribution Ecosystem

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. Contact Matrox today for more information at graphics@matrox.com.
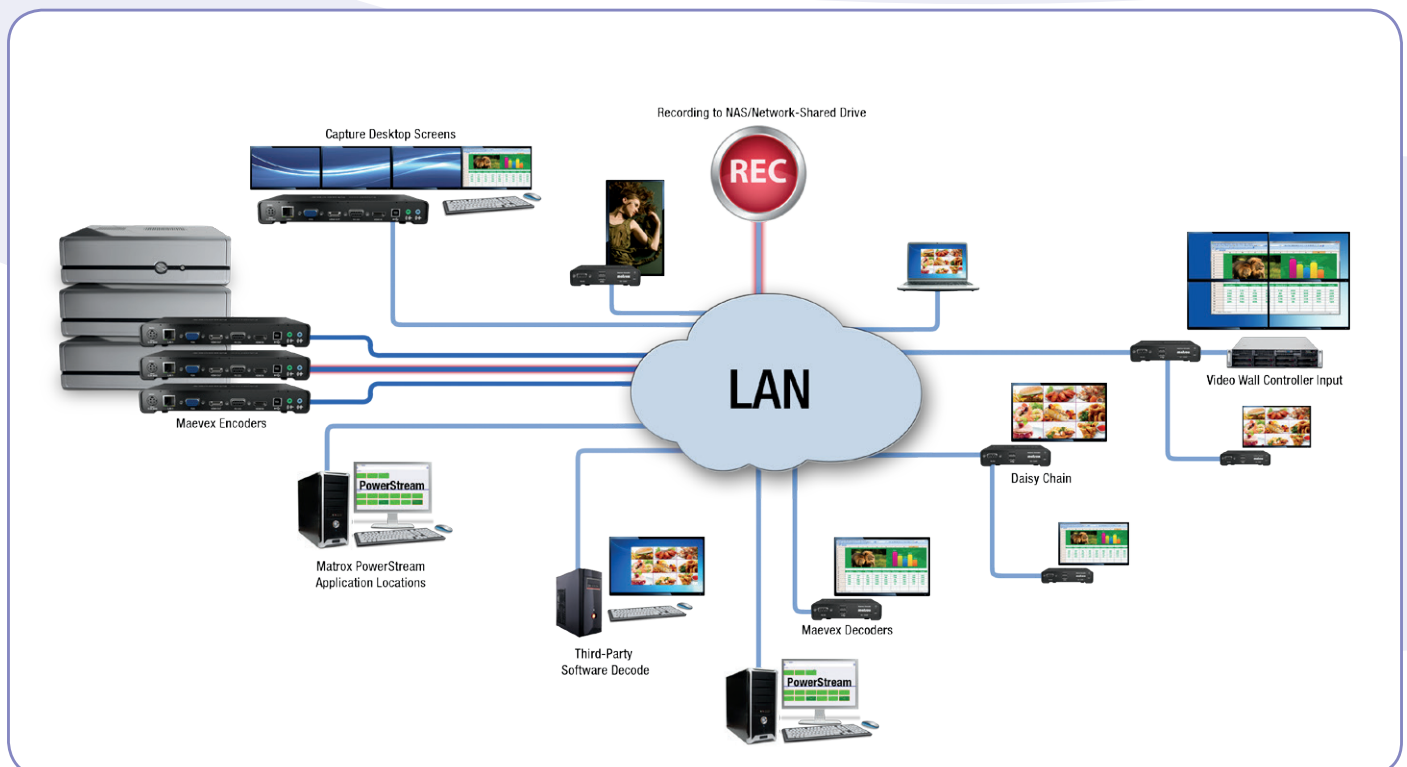
AV-over-IP Encoders & Decoders

Matrox Maevex delivers or records Full HD 1080p60 video and audio over standard LAN connectivity at user-defined low bitrates at a fraction of the cost of other solutions. Matrox PowerStream software comes included for easy remote management, while the full Maevex API, with access to the complete feature set, is also available upon request to integrators and developers looking to include Maevex functionality in third-party control applications.

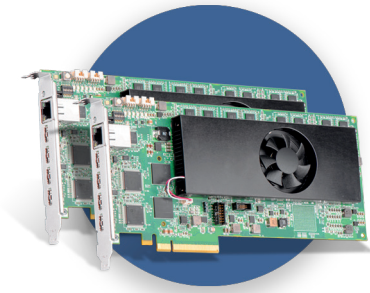**Matrox Maevex** – H.264 Encoders and Decoders

Product	Part Number	Video Input Connector	Video Output Connector	Network Connector	Maximum Resolution (Digital)	Audio Stereo	Video Encoding/ Decoding	Recording	Bit Rates	Local Pass-Through	Streaming Protocols	Networking Interface
Maevex 5150 Encoder	MVX-E5150F	1 x HDMI 1 x DVI[1]	1 x HDMI 1 x DVI[1]	1 x RJ45	1920x 1080p60 1920x1200	HDMI & Analog	H.264/MPEG-4 Part 10 (AVC)	Yes	100Kbps to 25Mbps	HDMI or VGA	UDP, RTP/ RTSP/ RTCP	100/1000 Base-T Ethernet
Maevex 5150 Decoder	MVX-D5150F	—	1 x HDMI 1 x DVI[2]	2 x RJ45	1920x 1080p60 1920x1200	HDMI & Analog	H.264/MPEG-4 Part 10 (AVC)	No	100Kbps to 25Mbps	—	UDP, RTP/ RTSP/ RTCP	100/1000 Base-T Ethernet
Encoder/ Decoder Bundle	MVX-ED5150F	Includes a Maevex encoder and decoder and all accompanying components of each unit. All above specs apply.										

[1] Via an included adapter.
[2] Via a separately sold adapter.

Matrox Maevex, for high-quality and affordable AV-over-IP, distributes video and audio wherever needed, with applications in education, digital signage, control rooms, enterprise, military, process control, and more.

Video Wall Products

Build small or large collaborative video walls using Mura MPX capture & display and Mura IPX 4K capture & IP encode/decode cards. Mura hardware, combined with easy-to-use APIs and MuraControl for iPad® or Windows® management software gives integrators the essential building blocks for control room, corporate boardroom, and digital signage video wall systems.

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)				
						SL-DVI	RGB (VGA)	SL-DVI[2]	RGB (VGA)[2]	Component (VPbPr)	S-Video Composite	SDI
Mura MPX-4/4	MURA-MPX44HF	4 outputs 4 inputs	PCI Express x16 (Gen2)	2GB[3]	64 Gbit/sec	2048x1152 @ 60Hz	2048x1536 @ 60Hz	1920x1200 @ 60Hz 2560x1600 @ 30Hz	1920x1200 @ 60Hz 2048x1536 @ 47Hz[5]	1080i	NTSC/PAL SECAM	
Mura MPX-4/2	MURA-MPX42HF	4 outputs 2 inputs	PCI Express x16 (Gen2)	2GB[3]	64 Gbit/sec	2048x1152 @ 60Hz	2048x1536 @ 60Hz	1920x1200 @ 60Hz 2560x1600 @ 30Hz	1920x1200 @ 60Hz 2048x1536 @ 47Hz[5]	1080i	NTSC/PAL SECAM	
Mura MPX-4/0	MURA-MPX40HF	4 outputs 0 inputs	PCI Express x16 (Gen2)	2GB[3]	64 Gbit/sec	2048x1152 @ 60Hz	2048x1536 @ 60Hz	—	—	—	—	
Mura MPX-SDI	MURA-MPXSDIF	2 outputs 2 inputs	PCI Express x16 (Gen1)	1GB[3]	32 Gbit/sec	2048x1152 @ 60Hz	2048x1536 @ 60Hz	—	—	—	—	1920x1080 @ 60Hz
Mura MPX-V16	MURA-MPXV16F	0 outputs 16 inputs	PCI Express x4 (Gen1)	256MB[4]	8 Gbit/sec	—	—	—	—	—	NTSC/PAL SECAM	—
Mura MPX-V8	MURA-MPXV8F	0 outputs 8 inputs	PCI Express x4 (Gen1)	128MB[4]	8 Gbit/sec	—	—	—	—	—	NTSC/PAL SECAM	—

[1] Maximum resolutions listed. Support for standard and custom resolutions available. For specific requirements contact Matrox.
[2] RGB (VGA) adapter included with Mura MPX 4/0, Mura MPX 4/2, and Mura MPX 4/4. Matrox adapters sold separately for component, s-video, and composite. Contact Matrox for details.
[3] Shared memory for inputs and outputs.   [4] Input memory.   [5] For specific requirements contact Matrox.

Mura IPX Series – 4K Capture & IP Encode/ Decode Cards

Product	Part Number	Board Type	Interface	Memory	Pixel Transfer Formats	Input Resolutions (HDMI)[1]	H.264 (up to level 5.2) encode/ decode	Bitrates	H.264 Profiles
Mura-IPX-I4DF *New*	MURAIPXI-D4JF	Four Captures and IP Decode	PCIe x8 (Gen2)	4 GB (34 GB/sec)	**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)	4096x2160 @ 60 Hz[2], 4096x2160 @ 30 Hz, 3840x2160 @ 60Hz[2], 3840x2160 @ 30 Hz, 2560x1600 @ 60 Hz	**Decode:** 2x 3840x2160 @ 60Hz, 4x 3840x2160 @ 30Hz, 8x1920x1080 @ 60Hz, 16x 1920x1080 @ 30Hz, or 100x SD channels	100 Kbps to 500 Mbps CABAC, 100 Kbps to 800 Mbps CAVLC	BP MP HiP Hi10P Hi422P Hi444PP
Mura-IPX-I4EF *New*	MURAIPXI-E4JF	Four Captures and IP Encode/ Decode					**Encode and/or Decode:** 2x 3840x2160 @ 60Hz, 4x 3840x2160 @ 30Hz, 8x1920x1080 @ 60Hz, 16x 1920x1080 @ 30Hz, or 100x SD channels		

[1] Standard resolutions listed. Support for standard and custom resolutions available. For specific requirements contact Matrox.
[2] In YUV 4:2:0, 12 bits per pixel (8 bits per component).

Matrox Mura IPX Series 4K capture and IP encoder and decoder cards can be combined with Mura MPX Series capture and display cards or C-Series multi-display graphics cards to drive video wall systems that can be easily managed with Matrox MuraControl software, which supports a multitude of window and source management features.

Matrox MuraControl for Windows

Control of your video wall is at your fingertips

Matrox MuraControl for iPad

KVM Extenders

Matrox KVM extenders deliver unparalleled performance and extend uncompressed single, dual, quad, or more video, audio, and USB signals over a single fiber-optic cable with zero latency and zero compression, enabling real-time, remote access to systems secured in climate-controlled machine rooms.

Matrox Avio – Extend uncompressed dual digital video, keyboard, mouse, USB, and analog stereo audio signals over a single duplex LC-LC fiber-optic cable

Product	Part Number	Video Input Connector	Video Output Connector[1]	Maximum Resolution	USB HID ports	USB 2.0 ports	PS/2[2]	Analog Stereo Audio	Maximum Distance[3]
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 1x 2560x1600 1x 4096x2160	2	2	Yes	Yes	400 m (1312 ft) in Multimode 10 km (6.2 mi) in Single-mode
Avio F120 Receiver	AV-F120RXF	—	1x DVI-I SL/DL 1x DVI-I SL	2x 1920x1200 1x 2560x1600 1x 4096x2160	4	—	Yes	Yes	400 m (1312 ft) in Multimode 10 km (6.2 mi) in Single-mode
Avio F125 Transmitter	AV-F125TXF	1x DVI-I SL/DL 1x DVI-I SL	1x DVI-I SL/DL 1x DVI-I SL	2x 1920x1200 1x 2560x1600 1x 4096x2160	2	2	Yes	Yes	400 m (1312 ft) in Multimode 10 km (6.2 mi) in Single-mode
Avio F125 Receiver	AV-F125RXF	—	1x DVI-I SL/DL 1x DVI-I SL	2x 1920x1200 1x 2560x1600 1x 4096x2160	2	4	Yes	Yes	400 m (1312 ft) in Multimode 10 km (6.2 mi) in Single-mode

[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 multimode transceivers; Single-mode transceivers are sold separately (Part# AV-SFP10G-2SMF).

Matrox Extio – Leveraging PCIe bus extension technology, Extio drives multiple monitors from a distance in environments requiring less noise & heat and more workspace

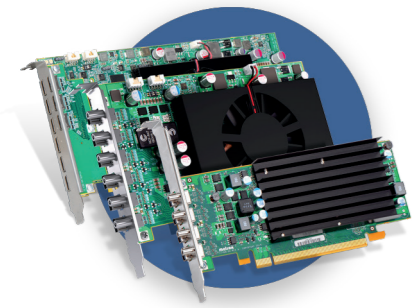| Product[2]	Part Number	Max. # of Displays	Graphics Memory	Connectors	Maximum Resolution			Maximum Distance	Interface card required
					DisplayPort	Digital	Analog		
Extio F2208	XTO2-F2208F	2	1GB	2 DisplayPort connectors, 5 USB 2.0 ports, dual-LC fiber-optic connector, audio connectors, power input	2x2560x1600	2x1920x1200[3]	2x1920x1200[3]	400 m (1312 ft) in Multimode 1 km (3280 ft) in Single-mode	PCIe x1 (Part # XTO2A-FESLPAF)
Extio F2408	XTO2-F2408F	4	1GB	4 DisplayPort connectors, 5 USB 2.0 ports, dual-LC fiber-optic connector, audio connectors, power input	4x2560x1600	4x1920x1200[3]	4x1920x1200[3]	400 m (1312 ft) in Multimode 1 km (3280 ft) in Single-mode	PCIe x1 (Part # XTO2A-FESLPAF)
Extio F2408E Expander	XTO2EX-F2408F	4	1GB	4 DisplayPort connectors, dual-LC fiber-optic connector, power input	4x2560x1600	4x1920x1200[3]	4x1920x1200[3]	5 m (must use cable provided)	—

[1] Matrox Extio F2208 and F2408 ship with multimode fiber optic cable transceivers. Single-mode upgrade kit sold separately.
[2] Fiber optic cables for products are required and sold separately.
[3] 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 3rd party vendors.

Matrox 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.

Matrox Extio F2408 and Matrox Extio F2408E Expander combine to power up to eight displays from a single workstation, fiber-optic cable, and adapter.

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 low power consumption, best-of-breed 3D image quality up to 4K, high MTBF, and long product life cycles, Matrox graphics cards offer flexible multi-display configurations to give you more workspace to see and do more for a variety of applications.

Find our C-Series and M-Series lines below. Refer to the Matrox Graphics website for more information on P-Series—for ultra-low power consumption, fanless cooling, easy deployment, and dual and quad multi-monitor support—and G-Series for cost-effective dual-monitor support.

Product	Part Number	Max. # of Displays				Card Type	Graphics Memory	Form Factor Card/Bracket	Cooling	On-Board Connectors	Maximum Resolutions (Per Display)			Optional Adapter/Cable Upgrade(s)[1] (sold separately)	
		DisplayPort	DVI/HDMI	Analog	Total						DisplayPort	DVI/HDMI	Analog	Cable Description	Cable Part Number
C-Series – Quad, six, and nine-output models. Best combination of performance, power consumption, display density, and image quality up to 4K.															
C420 LP PCIe x16	C420-E2GBLAF	4	4[3]	—	4	PCIe x16	2GB GDDR5	LP / ATX & LP	Passive	4 x miniDP	2560x1600[2]	2560x1600 (dual-link)[3] 1920x1200 (single-link)[3]	—	Mini DisplayPort to DisplayPort adapter	CAB-MDP-DPF
C680 PCIe x16	C680-E2GBF	6	6[3]	—	6	PCIe x16	2GB GDDR5	ATX / ATX	Active	6 x miniDP	4096x2160[2]	2560x1600 (dual-link)[3] 1920x1200 (single-link)[3]	—	Mini DisplayPort to DisplayPort adapter Board-to-board framelock cable	CAB-MDP-DPF CAB-FL-F
C900 PCIe x16 *New*	C900-E4GBF	—	9[4]	—	9	PCIe x16	4GB GDDR5	ATX / ATX	Active	9 x mini HDMI	—	1920x1200[2]	—	Board-to-board framelock cable	CAB-FL-F

Product	Part Number	Max. # of Displays				Card Type	Graphics Memory	Form Factor Card/Bracket	Cooling	On-Board Connectors	Maximum Resolutions (Per Display)			Optional Adapter/Cable Upgrade(s)[1] (sold separately)	
		DisplayPort	DVI	Analog	Total						DisplayPort	DVI	Analog	Cable Description	Cable Part Number
M-Series - Low power consumption. Fanless cooling[5]. Dual and Quad multi-monitor support. Exceptional performance and image quality.															
M9120 PCIe x16	M9120-E512F	—	2	2	2	PCIe x16	512MB DDR2	ATX / ATX	Passive	DVI-I x 2	—	1920x1200	2048x1536	—	—
M9120 Plus LP PCIe x1	M9120-E512LAU1F	—	2	4[6]	4[7]	PCIe x1	512MB DDR2	LP / ATX & LP	Passive	LFH-60	—	1920x1200	2048x1536 (x2) or 1920x1200 (x3, x4)[8]	LFH-60 to 4xHD15 Analog	CAB-L60-4XAF
M9120 Plus LP PCIe x16	M9120-E512LPUF	—	2	4[6]	4[7]	PCIe x16	512MB DDR2	LP / LP & ATX	Passive	LFH-60	—	1920x1200	2048x1536 (x2) or 1920x1200 (x3, x4)[8]	LFH-60 to 4xHD15 Analog	CAB-L60-4XAF
M9125 PCIe x16	M9125-E512F	—	2	2	2	PCIe x16	512MB DDR2	ATX / ATX	Passive	DVI-I x 2	—	1920x1200 and 2560x1600	2048x1536	—	—
M9128 LP PCIe x16	M9128-E1024LAF	2	2[7]	—	2	PCIe x16	1GB DDR2	LP / ATX & LP	Passive	DP x2	2560x1600	1920x1200	—	DP to DVI-D (DVI Single-Link)	CAB-DP-DVIF
M9138 LP PCIe x16	M9138-E1024LAF	3	3[7]	—	3	PCIe x16	1GB DDR2	LP / ATX & LP	Passive	3 x miniDP	2560x1600	1920x1200	—	DP to DVI-D (DVI Single-Link)	CAB-DP-DVIF
M9140 LP PCIe x16	M9140-E512LAF	—	4	4	4	PCIe x16	512MB DDR2	LP / ATX & LP	Passive	KX20	—	1920x1200	1920x1200	—	—
M9148 LP PCIe x16	M9148-E1024LAF	4	4	—	4	PCIe x16	1GB DDR2	LP / ATX & LP	Passive	4 x miniDP	2560x1600	1920x1200	—	—	—
M9188 PCIe x16	M9188-E2048F	8	8	—	8	PCIe x16	2 GB DDR2	ATX / ATX	Active	8 x miniDP	2560x1600	1920x1200	—	—	—

[1] Cable pricing details available at www.matrox.com/graphics.
[2] Passive adapters may be required (sold separately).
[3] Third-party active adapters required (sold separately).
[4] Third-party DVI adapter required (sold separately).
[5] M9188 does have a fan for cooling.
[6] LFH-60 to 4xHD15 cable upgrade required.
[7] Using optional adapter cable (sold separately).
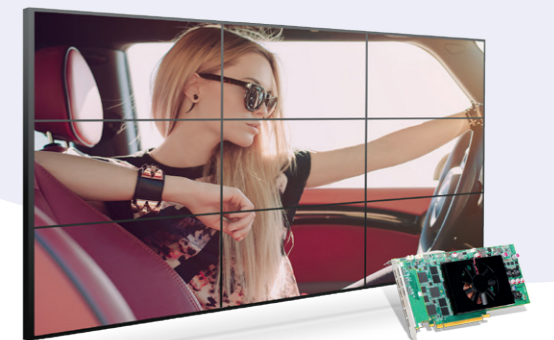[8] 1920x1200 supported with quad analog upgrade cable.

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

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

Connect up to six 4K/UHD displays to the single-slot Matrox C680.

Power unique 3x3 and 9x1 video wall configurations with Matrox C900.

Graphics eXpansion Modules

Matrox DualHead2Go and TripleHead2Go external multi-display adapters let you add two or three monitors to your laptop or desktop computer. They connect to the video output of your system and use its existing GPU to provide high quality, uncompressed graphics and video across all monitors. These little black or silver boxes are perfect for bringing multi-monitor functionality to computers with only one monitor, such as systems with integrated graphics or no available expansion slots—or closed systems that have already been validated.

Product	Part Number	Maximum # of Monitors	How It Connects		Maximum Resolutions (Per Display)[1]			Hardware Included	Dimensions (WxDxH)
			To System	To Monitors	DisplayPort	DVI	VGA		
DualHead2Go Digital ME	D2G-DP2D-MIF	2	Mini DisplayPort or Thunderbolt[2]	DVI	—	2x1920x1200	—	Mini-DP-to-DP input cable, USB cable	3.8"x 2.5"x1.1"
DualHead2Go Digital SE	D2G-DP2D-IF	2	DisplayPort	DVI	—	2x1920x1200	—	DP-to-DP input cable, USB cable	3.8"x 2.5"x1.1"
DualHead2Go Analog Edition	D2G-A2A-IF	2	VGA	VGA[4]	—	—	2x1280x1024	2-ft VGA-to-VGA (analog) monitor cable, USB cable	3.8"x 3.6"x0.94"
DualHead2Go Digital Edition	D2G-A2D-IF	2	VGA	VGA[4] or DVI	—	2x1920x1200	2x1680x1050[3]	2-ft VGA-to-VGA (analog) monitor cable, USB cable	3.9" x 5.5" x 1.3"
TripleHead2Go Digital SE	T2G-DP3D-IF	3	DisplayPort or Mini DisplayPort or Thunderbolt[2]	DVI	—	3x1920x1080[4] 2x1920x1200	—	DP-to-DP input cable, Mini-DP-to-DP input cable, USB cable	5.25"x2.5"x1.1"
TripleHead2Go Digital Edition	T2G-D3D-IF	3	VGA or Dual-link DVI	VGA[4] or DVI	—	3x1920x1080[4,5] 2x1920x1200	3x1360x768[3] 2x1680x1050[3]	2-ft VGA-to-VGA monitor cable, 2-ft DVI-to-DVI monitor cable, USB cable	4.4"x5.5"x1.1"
TripleHead2Go DP Edition	T2G-DP-MIF	3	DisplayPort or Mini DisplayPort or Thunderbolt[2]	VGA[4], DVI or DisplayPort	3x1920x1080[4] 2x1920x1200	3x1920x1080[4,6] 2x1920x1200[6][7]	3x1360x768[7] 2x1920x1080[7]	DP-to-DP input cable, Mini-DP-to-DP input cable, USB cable	4.4"x5.5"x1.1"

[1] Maximum resolution supported is GXM model, system, GPU, operating system, and display dependent.
[2] Thunderbolt system connectivity is supported only under Mac.
[3] DVI-to-VGA Adapter (part #ADP-DVI-AF) required, sold separately.
[4] Resolutions supported at 50Hz which may be incompatible with some displays; Widescreen resolutions higher than 3x1360x768 are not available under any Mac OS X operating system.
[5] These modes are available when TripleHead2Go Digital Edition is connected to the system's dual-link DVI output.
[6] DisplayPort-to-DVI adapter (part# CAB-DP-DVIF) sold separately.
[7] Using third-party active adapter (sold separately).

Create a video wall with two TripleHead2Gos and run dynamic content content across all the displays.

See more and do more with Matrox DualHead2Go; Increase your productivity with a dual-display setup.

Digital signage player

Matrox TripleHead2Go Digital SE powers a single ultra-large desktop across all three displays, ideal for digital signage and presentation applications.

matrox®
Graphics for Professionals