Matrox **C-Series™**

WINNER DIGI AWARDS 2017 Digital Signage Magazine

AV AWARDS 2016 WINNER

INAVATION AWARDS TECHNOLOGY FINALIST 2017

Digital Signage Magazine WINNER BEST of SHOW InfoComm 2016

BEST of SHOW '15 Presented at ISE 2015 Installation

BEST of SHOW '15 Presented at ISE 2015 NewBay Media

Matrox C-Series Graphics Cards
Performance Meets Flexibility

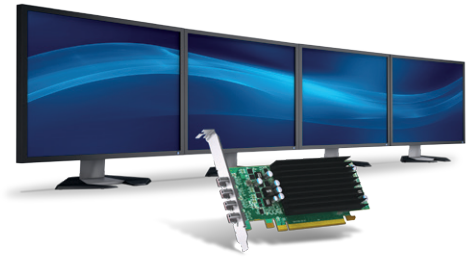
matrox.com/graphics

matrox® Graphics for Professionals

Matrox C-Series Graphics Cards

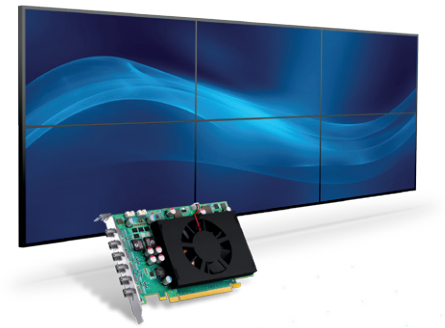
Performance Meets Flexibility

Matrox C-Series, multi-monitor video cards, featuring four, six, and nine-output models, let you drive multiple displays or projectors from a single graphics board. Designed and built to ensure excellent reliability, stability, and ease of deployment, C-Series PCI Express® x16 boards are ideal to power multi-screen desktops, workstations, digital signage players, and video wall systems in commercial and critical environments. They deliver advanced multi-monitor capabilities and outstanding performance for a wide range of applications in enterprise, industrial, pro A/V, digital signage, security, control rooms, and more.



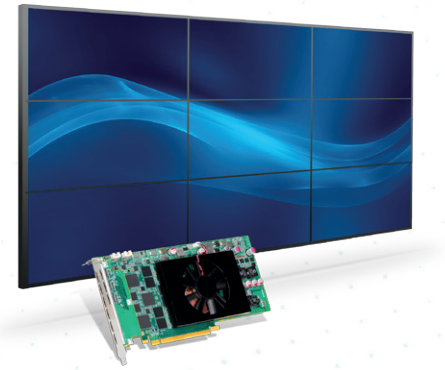
Matrox C420 LP PCIe x16

Low-profile, PCIe x16 quad video card. Provides increased reliability through its fanless design for both small-form-factor and full-height systems.



Matrox C680 PCIe x16

Full-height, PCIe x16 six-output graphics card. Delivers the best display density, resolution, and performance for demanding multi-monitor applications



Matrox C900 PCIe x16

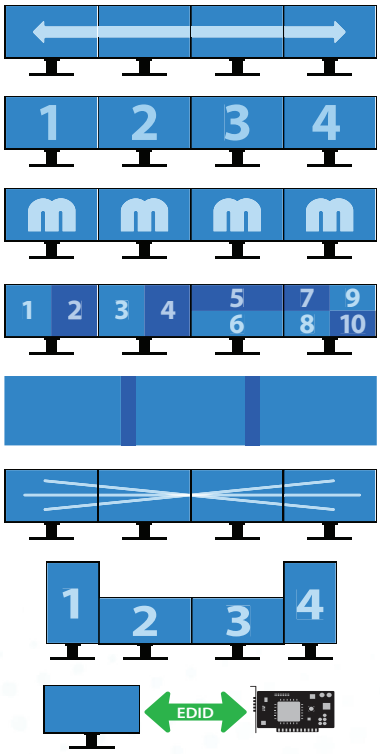
Full-height, PCIe x16 nine-output graphics card. Power nine displays from a single card and easily build 3x3 video wall systems.

Key Benefits

- Power 3x3 video walls with the single-slot Matrox C900 card (maximum resolution: 1920x1200)
- Drive up to six 4K displays with the Matrox C680 card (maximum resolution: 4096x2160)
- Connect up to four displays to the Matrox C420 (maximum resolution: 2560x1600)
- Experience smooth video playback and graphics performance with up to 4 GB of graphics memory
- Framelock two Matrox C680 or C900 cards together to reduce tearing and drive up to 18 displays
- Leverage Matrox C420's low-profile and fanless design to install it in a wide range of small-form-factor and full-height systems
- Pair C680 or C900 with Matrox Mura™ IPX Series for 4K capture and IP encode & decode
- Customize your setup with the easy-to-use Matrox PowerDesk™ desktop management software
- Facilitate enterprise-wide deployments by installing PowerDesk & drivers without any user interaction
- Create your custom multi-monitor desktop/output management software with Matrox PowerDesk API
- Prevent loose cabling with secure Mini-DisplayPort connectors
- Supports Microsoft® DirectX® 12, OpenGL® 4.4, and OpenCL™ 1.2 to run the latest professional applications

Matrox PowerDesk Software

The robust, field-proven Matrox PowerDesk desktop management software for Windows lets you easily configure and manage multi-display setups. It offers professional clients a comprehensive set of tools to deploy and control a variety of display configurations. Matrox advanced desktop management features also let you determine where and how program windows are displayed on the desktop — a productivity tool designed to enhance multi-display experiences.



Stretched Desktop
Create an ultra-large desktop to expand a single application across all screens.

Independent Desktop[1]
Set displays independently from one another to open different applications within each screen.

Clone Mode
Duplicate content to show the same information on all displays.

Desktop Divider
Split up your desktop into different sections to create additional partitions for all your applications.

Edge Overlap
Adjust the number of overlapping pixels between edge-blending projectors to build a seamless, unified image.

Bezel Management
Compensate for the physical space created by monitor bezels to output a continuous image across multiple displays.

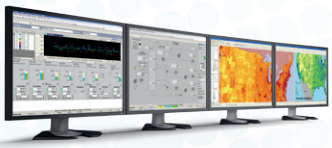
Pivot Mode[2]
Select any combination of portrait or landscape and set the orientation that works best for you.

EDID Management:
Provide consistent EDID signal to the graphics card to ensure video is displayed correctly

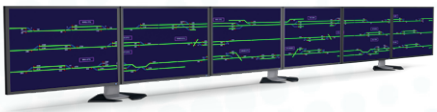
1) C900 is designed to run in a Streched Desktop; Independent Desktop mode is not supported.
2) Individual displays cannot be pivoted with C900; Need to pivot group of 3-displays.

Diverse Multi-Monitor Configurations

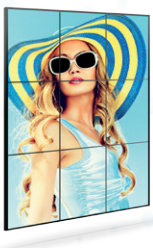
Matrox C-Series supports numerous multi-monitor combinations and helps you create the optimal setup for every need. You can work off a 2x2 display setup to improve productivity, power six or nine-monitor video walls to deliver high-impact, engaging content, or go as high as 18 monitors by combining two cards, all from a single system.



Drive demanding applications with increased reliability and performance.



View more critical information across an expansive configuration.



Create eye-catching configurations from a single card.

Output high-quality video content so operators can review critical information without compromise.

Showcase dynamic multimedia content across high-impact video walls.

Power 3x3 video walls from a single card.

Matrox C-Series Specifications

	Quad Monitor Video Card	Six Monitor Video Card	New Nine Monitor Video Card
Specifications	**Matrox C420 LP PCIe x16**	**Matrox C680 PCIe x16**	**Matrox C900 PCIe x16**
Part Number	C420-E2GBLAF	C680-E4GBF	C900-E4GBF
Bus Type	PCIe 3.0 x16	PCIe 3.0 x16	PCIe 3.0 x16
Number of Video Outputs	4	6	9[1]
Memory	2 GB GDDR 5	4 GB GDDR 5	4 GB GDDR 5
GPU	AMD™	AMD	AMD
Form Factor	Low Profile/Half Length	Full Height/Half Length	Full Height/¾ Length
Bracket	Full Height (mounted)/ Low Profile (in the box)	Full Height	Full Height
Dimensions	Length: 16.76 cm (6.6”), Height: 6.86 cm (2.7”)	Length: 16.76 cm (6.6”), Height: 10.27 cm (4.05”)	Length: 22.91 cm (9.02”), Height: 11.12 cm (4.376”)
Cooling	Passive	Active	Active
Power Consumption	20W	50W	75W
Board-to-Board Framelock[2]	No	Yes	Yes
Video Output Connectors	4x Mini DisplayPort (secure)	6x Mini DisplayPort (secure)	9x Mini HDMI
DisplayPort™ Specification	1.1	1.2	—
DisplayPort 1.2 Multi-Stream Transport (MST)[3]	No	Yes	—
Maximum Resolution DisplayPort[4]	4x 2560x1600 60Hz 2x 3840x2160 30Hz	6x 4096x2160 30Hz 3x 4096x2160 60Hz	—
Maximum Resolution HDMI	4x 1920x1200 60Hz[5]	6x 3840x2160 30Hz[5] 6x 1920x1200 60Hz[5]	9x 1920x1200 60Hz[1,6]
Maximum Resolution Dual-link DVI	4x 2560x1600 60Hz[5]	6x 2560x1600 60Hz[5]	9x 1920x1200 60Hz[6]
Maximum Resolution Single-link DVI	4x 1920x1200 60Hz[5]	6x 1920x1200 60Hz[5]	9x 1920x1200 60Hz[6]
Multi-Stream Audio	4 audio streams (through DisplayPort)	6 audio streams (through DisplayPort)	3 audio streams (through HDMI)
HDCP Compliance	Yes	Yes	Yes
Supported Graphics Standards	• DirectX® 12 • OpenGL® 4.4 • OpenCL™ 1.2	• DirectX® 12 • OpenGL® 4.4 • OpenCL™ 1.2	• DirectX® 12 • OpenGL® 4.4 • OpenCL™ 1.2
Matrox PowerDesk for Windows	Yes	Yes	Yes
Operating Systems[8]	Microsoft® Windows® 10 (32/64), Windows 8.1 (32/64), Windows 7 (32/64), Windows Embedded Standard 7 (32/64), Server 2012 R2 (64), Server 2008 R2 (64), Linux®[7]		
System Requirements	Single available PCI Express x16 lane, 4 GB of system memory, Internet access for software installation, Compatible operating system		
Warranty	3 years	3 years	3 years
Accessories (Sold Separately)			
Mini DisplayPort to DisplayPort Adapter	CAB-MDP-DPF	CAB-MDP-DPF	—
Board-to-Board Framelock Cable	No	CAB-FL-F	CAB-FL-F

1) Supports 3, 6, or 9 display configurations; All displays must run at the same resolution.
2) Available only under Microsoft Windows operating systems with same model cards. Requires framelock cable (CAB-FL-F), sold separately.
3) Requires DisplayPort 1.2 MST-capable monitors or hubs – the number of displays that can be daisy-chained depends on the resolution, timings and refresh rate of the connected monitors.
4) Passive adapters may be required (sold separately).
5) Third-party active adapters required (sold separately).
6) Third party adapter required (sold separately).
7) C900 Linux support coming soon.
8) Mainstream support for 32-bit Windows operating systems has ended, Matrox will provide limited support for 32-bit operating systems.

The Matrox Advantage

High Reliability Products
Backed with 3-year warranty, we deliver high-quality products through our expert design and manufacturing process.

Long Product Life-Cycles
Protect your investment by integrating Matrox products with long life cycles.

Direct Customer Support
Our strong technical support team helps you solve problems quickly.

Learn More or Purchase
North America: 800-361-1408
International: 514-822-6366
Email: graphics@matrox.com

© 2017 Matrox Graphics, Inc. All rights reserved. Matrox reserves the right to change specifications without notice. Matrox and Matrox product names are registered trademarks and/or trademarks of Matrox Electronic Systems, Ltd. and/or Matrox Graphics Inc. in Canada and/or other countries. AMD is a trademark of Advanced Micro Devices Inc. DisplayPort is a registered trademark of Video Electronics Standards Association (VESA) in the United States and/or other countries. HDMI is a registered trademark or trademark of HDMI Licensing, LLC in the U.S. and/or other countries. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries. OpenCL and the OpenCL logo are trademarks of Apple Inc. used by permission by Khronos. OpenGL® and the oval logo are trademarks or registered trademarks of Silicon Graphics, Inc. in the United States and/or other countries worldwide. Microsoft, DirectX, and Windows are registered trademarks of Microsoft Corporation in the U.S. and/or other countries. PCI Express® is a registered trademark of PCI-SIG. All other company and product names are registered trademarks and/or trademarks of their respective owners. 04/2017

matrox®
Graphics for Professionals