

Different options for different needs. Find which card is right for you.

	P690 PCIe x16	P690 PCI	P690 LP PCIe x16	P690 LP PCIe x1	P690 Plus LP PCIe x16	P690 Plus LP PCI
Part number	P69-MDDE128F	P69-MDDP128F	P69-MDDE128LPF	P69-MDDE128LA1F	P69-MDDE256LAUF	P69-MDDP256LAUF
Card type	PCIe x16	PCI	PCIe x16	PCIe x1	PCIe x16	PCI
Graphics memory	128 MB DDR2	128 MB DDR2	128 MB DDR2	128 MB DDR2	256 MB DDR2	256 MB DDR2
Form factor (card/bracket)	ATX/ATX	ATX/ATX	LP/LP	LP/ATX	LP/ATX	LP/ATX
Card dimensions <sup>1</sup>	6.6" x 4.38" / 16.76 x 11.13 cm	6.6" x 4.2" / 16.76 x 10.67 cm	6.6" x 2.71" / 16.76 x 6.88 cm	6.6" x 2.71" / 16.76 x 6.88 cm	6.6" x 2.71" / 16.76 x 6.88 cm	6.6" x 2.54" / 16.76 x 6.45 cm
Connectors	DVI x 2	DVI x 2	LFH60	LFH60	LFH60	LFH60
Adapter cables	n/a	n/a	LFH60-to-2-DVI-I	LFH60-to-2-DVI-I	LFH60-to-2-DVI-I	LFH60-to-2-DVI-I
Connector adapters	2 DVI-I-to-HD15	2 DVI-I-to-HD15	2 DVI-I-to-HD15	2 DVI-I-to-HD15	2 DVI-I-to-HD15	2 DVI-I-to-HD15
Max displays per card	2	2	2	2	2 (4 via separate upgrade <sup>2</sup> )	2 (4 via separate upgrade <sup>2</sup> )
Max digital resolution per display	1-2 Monitors: 1920 x 1200	1-2 Monitors: 1920 x 1200	1-2 Monitors: 1920 x 1200	1-2 Monitors: 1920 x 1200	1-2 Monitors: 1920 x 1200	1-2 Monitors: 1920 x 1200
Max analog resolution per display	1-2 Monitors: 2048 x 1536	1-2 Monitors: 2048 x 1536	1-2 Monitors: 2048 x 1536	1-2 Monitors: 2048 x 1536	1-2 Monitors: 2048 x 1536 3-4 Monitors: 1920 X 1200	1-2 Monitors: 2048 x 1536 3-4 Monitors: 1920 X 1200
Independent desktop mode	Yes	Yes	Yes	Yes	Yes <sup>3</sup>	Yes <sup>3</sup>
Stretched desktop mode	Yes	Yes	Yes	Yes	Yes	Yes
Passive cooling (fanless)	Yes	Yes	Yes	Yes	Yes	Yes
Power consumption	10W	10.7W	10W	9.5W	11.8W	11W
Unified driver package	Yes	Yes	Yes	Yes	Yes	Yes
PowerDesk software	Yes	Yes	Yes	Yes	Yes	Yes
EMC certifications	Class B - ACA, CE, CSA, FCC, VCCI	Class B - ACA, CE, CSA, FCC, VCCI	Class A - ACA, CE, CSA, FCC, VCCI	Class A - ACA, CE, CSA, FCC, VCCI	Class A - ACA, CE, CSA, FCC, VCCI	Class A - ACA, CE, CSA, FCC, VCCI
Cable upgrades	TV-output adapter cable <sup>4</sup> (Part # CAB-HD15-TVF)	TV-output adapter cable <sup>4</sup> (Part # CAB-HD15-TVF)	TV-output adapter cable <sup>4</sup> (Part # CAB-HD15-TVF)	TV-output adapter cable <sup>4</sup> (Part # CAB-HD15-TVF)	Quad analog output cable (Part # CAB-L60-4XAF)	Quad analog output cable (Part # CAB-L60-4XAF)
Supported operating systems <sup>5</sup>	Microsoft Windows XP and XP x64, Windows 2000, Windows Vista (XDDM) and Vista x64 (XDDM), Windows Server 2003 and Server 2003 x64	Microsoft Windows XP and XP x64, Windows 2000, Windows Vista (XDDM) and Vista x64 (XDDM), Windows Server 2003 and Server 2003 x64	Microsoft Windows XP and XP x64, Windows 2000, Windows Vista (XDDM) and Vista x64 (XDDM), Windows Server 2003 and Server 2003 x64	Microsoft Windows XP and XP x64, Windows 2000, Windows Vista (XDDM) and Vista x64 (XDDM), Windows Server 2003 and Server 2003 x64	Microsoft Windows XP and XP x64, Windows 2000, Windows Vista (XDDM) and Vista x64 (XDDM), Windows Server 2003 and Server 2003 x64	Microsoft Windows XP and XP x64, Windows 2000, Windows Vista (XDDM) and Vista x64 (XDDM), Windows Server 2003 and Server 2003 x64
Environmental	RoHS directive and WEEE directive compliant	RoHS directive and WEEE directive compliant	RoHS directive and WEEE directive compliant	RoHS directive and WEEE directive compliant	RoHS directive and WEEE directive compliant	RoHS directive and WEEE directive compliant
Warranty <sup>6</sup>	3 years	3 years	3 years	3 years	3 years	3 years

<sup>1</sup> Card size = length, not including bracket and bracket connector x height, including slot connector. Card width is within specifications for a single card of the given type.

<sup>2</sup> Quad-analog upgradable with the use of an optional upgrade cable (Part# CAB-L60-4XAF).

<sup>3</sup> In Quad-display configuration, each display must be set to the same refresh rate and resolution.

<sup>4</sup> This option is only available using Matrox 1.14 display driver and above.

<sup>5</sup> For other possible operating systems, contact Matrox.

<sup>6</sup> Please visit the Matrox web site for full product Limited Warranty information.

Ultra-low power consumption.  
Fanless cooling. Easy to deploy.

Millennium P690 Series  
Multi-Display Graphics Cards

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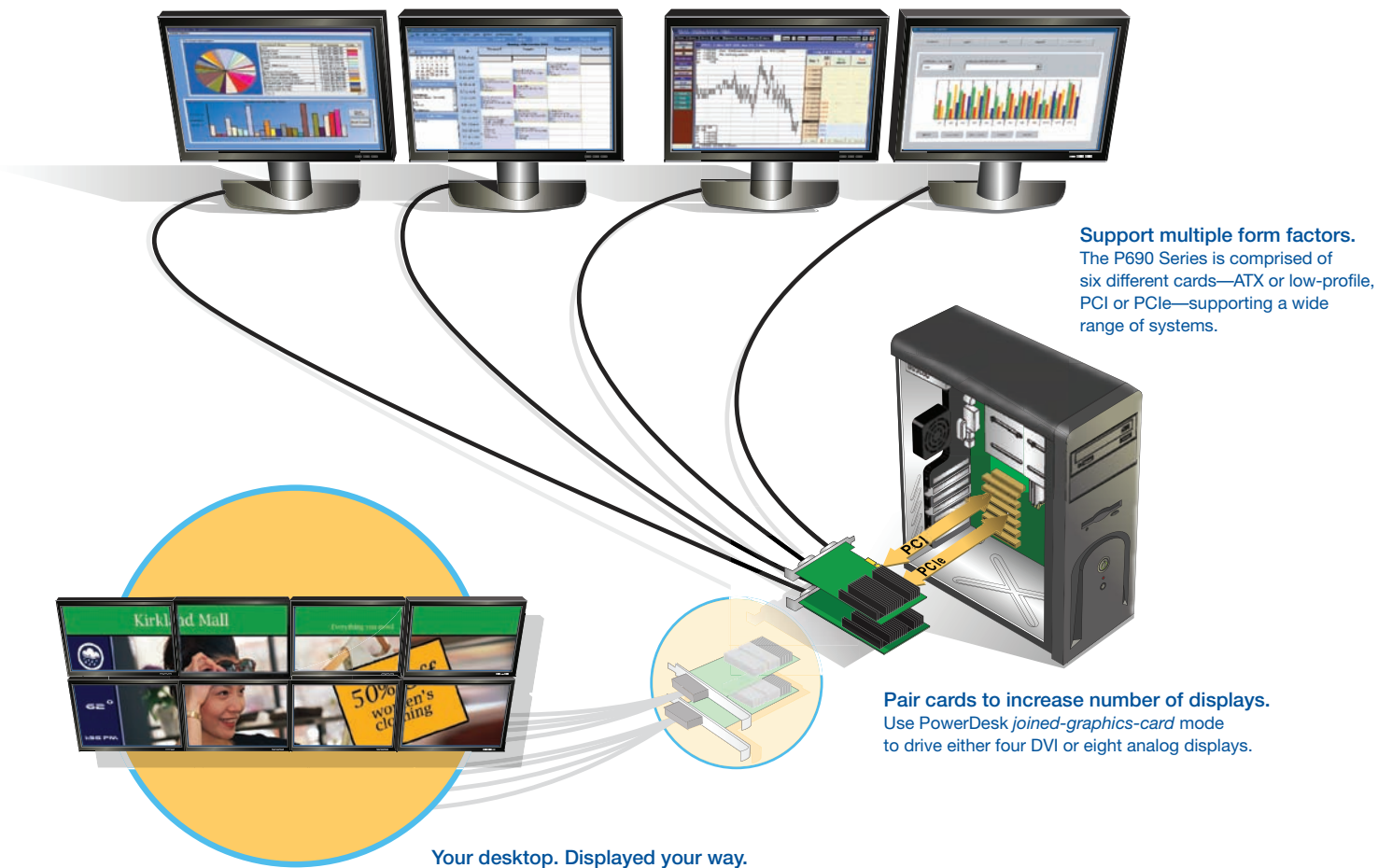
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# Millennium P690 Series Graphics Cards

The Matrox Millennium P690 Series is a redesign of the successful Matrox P650 Series of graphics cards, offering full DualHead® support for two digital or analog monitors at stretched resolutions up to 1920x1200 per digital display. In addition, the Millennium P690 Plus (256 MB) can be upgraded via a cable to drive four analog monitors, without the need to open the system chassis or update display drivers.

With maximum power consumption ranging between 10W and 12W, the Millennium P690 Series of graphics cards delivers the lowest power multi-monitor graphics offering available industry wide. The combination of ultra-low power consumption with best-of-breed 2D image quality and unified drivers makes the P690 Series ideal for a wide range of professional applications—from financial, enterprise, and government systems to industrial workstations, embedded computers, digital audio workstations, and digital signage.



**Support multiple form factors.** The P690 Series is comprised of six different cards—ATX or low-profile, PCI or PCIe—supporting a wide range of systems.

**Pair cards to increase number of displays.** Use PowerDesk *joined-graphics-card* mode to drive either four DVI or eight analog displays.

**Your desktop. Displayed your way.** Stretch your desktop across all displays, or have each monitor display content independently. Configure your desktop the way you wish using Matrox PowerDesk software.



**Green is good.** With ultra-low power consumption and full RoHS and WEEE compliance, the P690 Series products help promote sustainable design and environmental conservation.

	Max Digital Displays	Max Analog Displays*
One card	2	4
Two cards	4	8

\* Requires Quad Analog Output Cable.

## P690 Series Features & Benefits

The P690 Series is ideal for multi-display environments that require stable and robust solutions. Multiple form factors provide complete hardware compatibility with system chassis.

Use P690 cards individually or combined with other compatible Matrox cards to form advanced hybrid environments.

**Expanded Multi-Display Options**  
Set two digital or analog monitors as one large desktop, or at independent resolutions and display orientations.  
Upgrade the P690 Plus to drive up to four analog monitors, or



Use the unattended install package to deploy and maintain multiple systems. The new P690 Plus products provide a flexible option to standardize your DualHead, TripleHead, and Quad-display needs.

place two cards in your system to support four DVI displays.

**Flexible, Wide Enterprise Support**  
With six different cards, in a range of form factors, the P690 Series provides wide system coverage and cross-system compatibility.

Easily roll out DualHead configurations then upgrade to four-monitor support by simply changing a cable. The Quad Analog Output Cable (Quad-HD15) allows you to add quad-display functionality without the need to open the system chassis or upgrade display drivers.

**Proven and Mature Driver Software**  
The unified display driver architecture ensures one driver package can be used to manage all Matrox products—G-Series, P-Series, Parhelia Series, QID Series, MMS Series, Epica Series, and Extio Series.

**Ultra-Low Power Consumption and Passive Cooling**  
The fanless design eliminates noise, enhances product reliability, and improves system compatibility. The P690 Series has high mean-time-between-failure (MTBF), providing a stable and reliable hardware and software solution, while substantially decreasing power consumption across your entire installed base.

**Productivity Enhancing Features**  
Increase your productivity by stacking or pivoting individual monitors. Enjoy more screen real estate as a result of support for wide-screen and stretched resolutions for up to 1920x1200 (DVI).

## Manage Your Multi-Display Desktop

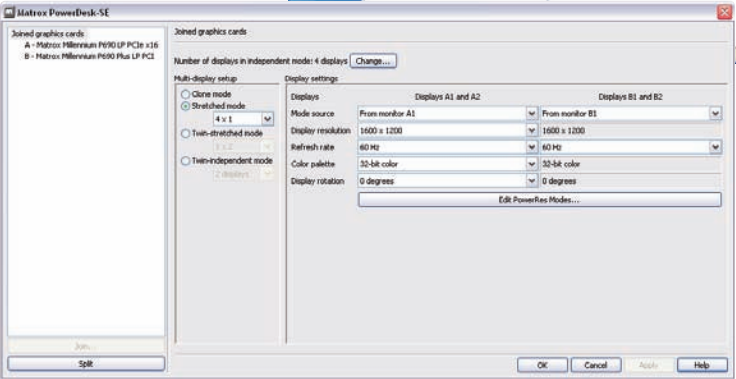
The easy-to-use Matrox PowerDesk software provides comprehensive, multi-display desktop management controls. Use this suite of window management software to configure and manage program windows.

Control application window maximization and dialog box positioning in an intelligent multi-monitor environment. Stretch the desktop across all monitors, clone a desktop across displays, or pivot a display to view it in portrait mode. All of these features are also available in PowerDesk *joined-graphics-card* mode, which enables two Millennium P690 multi-display graphics cards to work in tandem in several Microsoft® Windows® desktop combinations. PowerRes, one of the many features of PowerDesk, also offers increased resolution support for widescreen plasma and LCD displays—expanding your display options even further.

**Easily Control the Display of Your Content**  
P690 products are also compatible with the free Matrox PowerSpace software that allows you to manage multiple virtual desktops.

PowerSpace increases the productivity and efficiency of multi-display setups by adding a whole new level of functionality and performance. This powerful and innovative software tool allows you to customize your Windows desktop workspace and alleviates the need to minimize and maximize windows when working with multiple applications simultaneously.

Create multiple workspaces to organize screen space with PowerSpace.



Use PowerDesk *joined-graphics-card* mode to stretch your desktop across multiple monitors or clone multiple displays.