

Matrox® **Mura MPX™ Series**

How to use a Matrox GXM™ product as an output device

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www.matrox.com/graphics

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Graphics for Professionals

Overview

Matrox Mura MPX-4/4, MPX-4/2, and MPX-4/0 products now support GXM (Graphics Expansion Module) products.

Adding a Matrox *DualHead2Go Digital Edition* or *TripleHead2Go Digital Edition* product to your Mura MPX Series setup increases the number of available outputs on your Mura MPX Series card. You can connect up to four (4) GXM units to each Mura MPX card, increasing the number of available outputs on each Mura MPX card to 8 (using DualHead2Go Digital Edition) and 12 (using TripleHead2Go Digital Edition).

Before you begin

To prevent possible problems that could prevent you from using your Matrox product, read the following guidelines before installing or connecting your Matrox product.

- Matrox Mura MPX driver version 2.01.00 (or newer) must be installed.
- Four (4) GXM products at a time can be connected to each Mura card.
- **TripleHead2Go** – To achieve higher display resolutions, use the analog input (not the digital input) connector on your TripleHead2Go unit.
- Because all outputs in a display wall using Mura products must use the same display resolution, every output in a system must be using a GXM product and your GXM products must all use the same resolution.
- Only GXM products from the same series can be used (same make and model), and only DualHead2Go Digital Edition or TripleHead2Go Digital Edition products are supported.
- Make sure all your GXM have the same firmware version installed (we recommend installing the most recent version).
- Monitors must all support the same native resolution.
- Each GXM connected requires an external power supply. To purchase a Matrox power adapter kit for GXM, see the Matrox online store (shopmatrox.com).

Required hardware

Depending on your connection setup, you may also need any of the following hardware:

- Matrox HD-15 to HD-15 input cable (included with your Digital Edition product)
- Matrox power adapter kit for GXM

- DVI to HD-15 adapter
- USB hub

To purchase any Matrox cables or adapters not included with your Matrox product, see the Matrox online store (shopmatrox.com).

Software supplied

- **Matrox PowerDesk** – to use your Matrox product. Matrox PowerDesk software supports Windows® 7 64-bit and Windows® Server® 2008 R2. Matrox makes new software available on the Matrox Technical Support Web site (www.matrox.com/graphics/en/support/drivers).

More information

The following provide additional documentation such as the installation, the connection setup, and the hardware information for the Matrox products discussed in this document and on the software to configure these products.

- **Matrox Mura MPX Series User Guide** – provides information on installing your Mura MPX Series product.
- **Matrox DualHead2Go Series User Guide** – provides information on connecting your DualHead2Go Digital Edition product.
- **Matrox TripleHead2Go Series User Guide** – provides information on connecting your TripleHead2Go Digital Edition product.
- **Matrox PowerDesk help** – provides information on Matrox software features and options.

Connecting your GXM

This section explains how to connect your GXM product to your Mura MPX Series card.

Before you begin

Make sure your Matrox Mura MPX Series cards are already installed in your system and your KX20 to quad-DVI or KX20 to dual-DVI cable (included with your Mura card) is already connected to your Mura MPX card. For more information on how to install your Mura product, see your Matrox Mura MPX Series user guide.

Step-by-step connection setup

1 Turn off your computer

Before you connect your Matrox product, make sure you shut down and turn off your system.

2 Connect the Power/USB cable



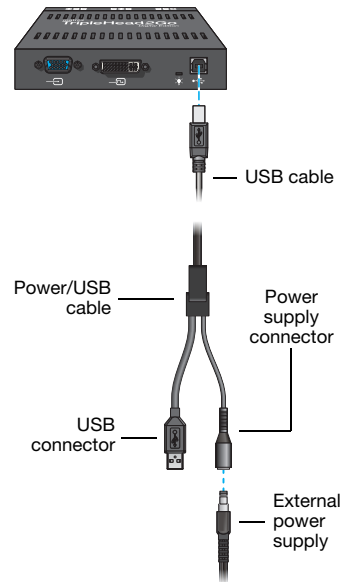
Note: Each GXM connected requires an external power supply. To purchase a Matrox power adapter kit for GXM, see the Matrox online store (shopmatrox.com).

Plug one end of the Power/USB cable into the USB connector (•↔•) on your Matrox GXM product.

Plug the other USB connector into a USB port on your system or into a USB hub.

Plug the power supply connector of the Power/USB cable into the external power supply.

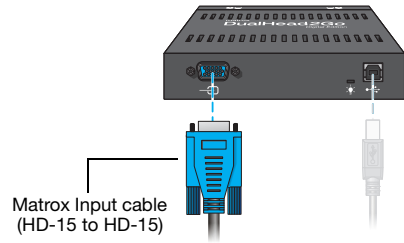
Finally, plug the power supply cord into an electrical outlet.



(TripleHead2Go Digital Edition shown)

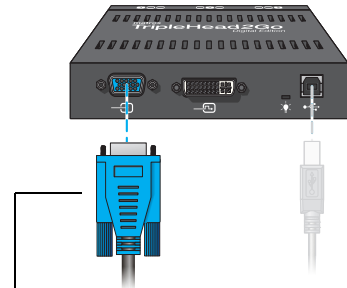
3 Attach the Matrox input cable

DualHead2Go – Using a DVI to HD-15 adapter (sold separately), attach one end of the Matrox input cable (HD-15 to HD-15) provided with your GXM product to the KX20 to quad-DVI or KX20 to dual-DVI cable connected to your Mura card. Attach the other end of the cable to the input connector (—) on your GXM product.



(DualHead2Go Digital Edition shown)

TripleHead2Go – Attach one end of the Matrox HD-15 to HD-15 cable provided with your Matrox product to the graphics connector on your computer. Attach the other end of the cable to the HD-15 input connector (—) on your Matrox product.

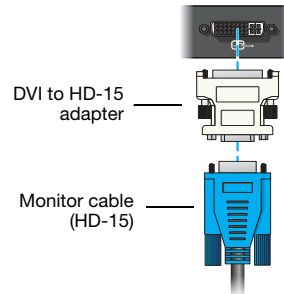


(TripleHead2Go Digital Edition shown)

4 Connect the monitors to your GXM

Use a DVI to HD-15 adapter (sold separately) to connect your monitor to the connector.

Connect the other end of your monitor cable to the KX20 to quad-DVI or KX20 to dual-DVI cable provided with your Mura MPX Series product.



Note: Monitors must be connected directly to your GXM products, not your Mura cards.

The order in which you connect your monitors depends on your layout. Since GXM units use a 2×1 (DualHead2Go) or 3×1 layout, the resulting display wall must be a multiple of this.

For example, you can connect 4 TripleHead2Go units to 2 Mura MPX-4/4 cards, so that your 2×4 display wall layout (outputs **A1** to **D2**) can use 24 monitors in a 6×4 layout (monitors **1** to **24**). The resulting display wall setup would look like this:

1	A1	2	3	4	A2	5	6
7	B1	8	9	10	B2	11	12
13	C1	14	15	16	C2	17	18
19	D1	20	21	22	D2	23	24

Outputs **A1**, **A2**, **B1**, and **B2** are the TripleHead2Go units connected to the output connectors of the first Mura card, and outputs **C1**, **C2**, **D1**, and **D2** are the TripleHead2Go units connected to the outputs of the second Mura card.

Your GXM product is now connected. Restart your computer and install your software.

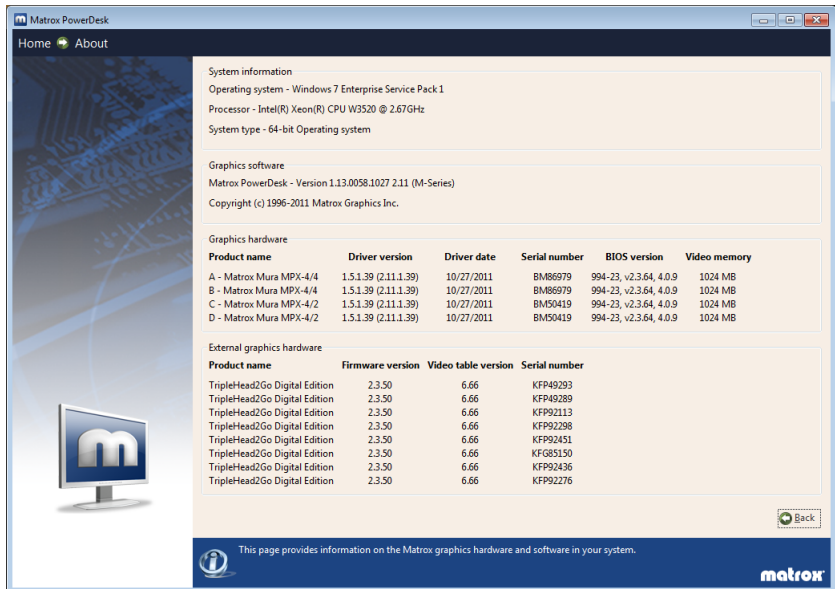
Setting up your software

Installing the driver

- 1 From the setup program, click **Install Drivers**. Follow the on-screen instructions. When prompted to restart your system, click **Yes**.
- 2 After your system restarts, PowerDesk continues configuring your system. When prompted to restart your system a second time, click **Yes**.

Verifying your GXM products

From the PowerDesk main interface, click **About**. Under **External graphics hardware**, make sure all the GXM products connected to your Mura cards are listed.



The screenshot shows the Matrox PowerDesk 'About' window. It displays system information, graphics software details, and two tables of hardware information.

System information

- Operating system - Windows 7 Enterprise Service Pack 1
- Processor - Intel(R) Xeon(R) CPU W3520 @ 2.67GHz
- System type - 64-bit Operating system

Graphics software

- Matrox PowerDesk - Version 1.13.0058.1027 2.11 (M-Series)
- Copyright (c) 1996-2011 Matrox Graphics Inc.

Graphics hardware

Product name	Driver version	Driver date	Serial number	BIOS version	Video memory
A - Matrox Mura MPX-4/4	1.5.1.39 (2.11.1.39)	10/27/2011	BM86979	994-23, v2.3.64, 4.0.9	1024 MB
B - Matrox Mura MPX-4/4	1.5.1.39 (2.11.1.39)	10/27/2011	BM86979	994-23, v2.3.64, 4.0.9	1024 MB
C - Matrox Mura MPX-4/2	1.5.1.39 (2.11.1.39)	10/27/2011	BM50419	994-23, v2.3.64, 4.0.9	1024 MB
D - Matrox Mura MPX-4/2	1.5.1.39 (2.11.1.39)	10/27/2011	BM50419	994-23, v2.3.64, 4.0.9	1024 MB

External graphics hardware

Product name	Firmware version	Video table version	Serial number
TripleHead2Go Digital Edition	2.3.50	6.66	KFP49293
TripleHead2Go Digital Edition	2.3.50	6.66	KFP49289
TripleHead2Go Digital Edition	2.3.50	6.66	KFP92113
TripleHead2Go Digital Edition	2.3.50	6.66	KFP92298
TripleHead2Go Digital Edition	2.3.50	6.66	KFP92451
TripleHead2Go Digital Edition	2.3.50	6.66	KFG85150
TripleHead2Go Digital Edition	2.3.50	6.66	KFP92436
TripleHead2Go Digital Edition	2.3.50	6.66	KFP92276

This page provides information on the Matrox graphics hardware and software in your system.

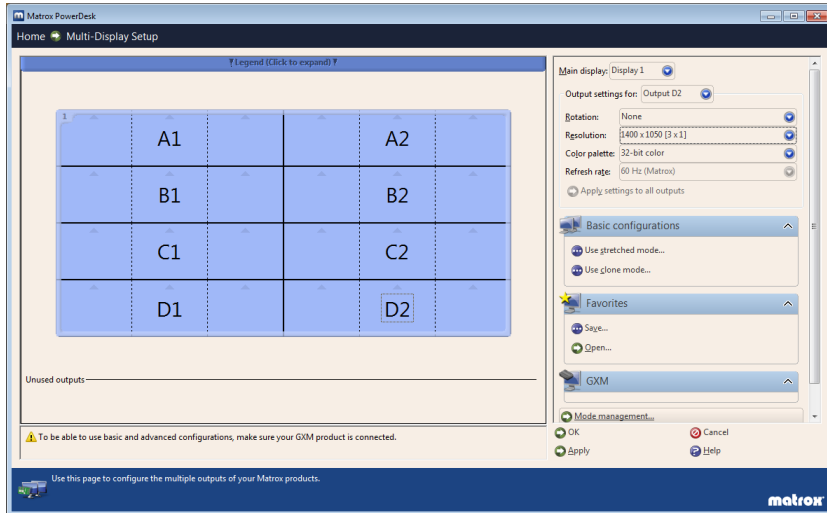


Note: If any GXM products are missing from the list, verify that your USB cables are properly connected.

Creating your multi-display layout

- 1 From the PowerDesk main interface, click **Multi-Display Setup**.
- 2 Create your multi-display layout. PowerDesk uses dotted lines to indicate the outputs of each GXM product and solid lines for the outputs of your Mura card. In this case, the multi-display layout of your display wall is a 2×4 layout which becomes a 6×4 layout with the addition of multiple TripleHead2Go units (8).
- 3 Select a resolution for your 24 GXM outputs (for example, 1400×1050).
- 4 When you're done, click **Apply settings in all outputs** → **OK**.

Your layout would like this in PowerDesk:



For more information, see Matrox PowerDesk help.

Using unlisted display modes

For display modes currently unavailable to your Matrox products, Matrox provides increased resolution support by enabling you to select display modes not provided by default in your monitor's EDID. This means you can access a variety of wide-screen resolutions, video timings, and refresh rates. You can select resolutions from a default list or a customized list for each output.

For more information, see Matrox PowerDesk help under *Managing your modes*.

Display modes

Supported display resolutions¹

	DualHead2Go Digital Edition	TripleHead2Go Digital Edition	
Dual-monitor resolutions	3840×1200 (2× 1920×1200)	3840×1200 (2× 1920×1200)	
	3840×1080 (2× 1920×1080)	3840×1080 (2× 1920×1080)	
	3360×1050 (2× 1680×1050)	3360×1050 (2× 1680×1050)	
	3200×1200 (2× 1600×1200)	3200×1200 (2× 1600×1200)	
	3200×900 (2× 1600×900)	3200×900 (2× 1600×900)	
	2880×900 (2× 1440×900)	2880×900 (2× 1440×900)	
	2800×1050 (2× 1400×1050)	2800×1050 (2× 1400×1050)	
	2720×768 (2× 1360×768)	2720×768 (2× 1360×768)	
	2560×1024 (2× 1280×1024)	2560×1024 (2× 1280×1024)	
	2560×960 (2× 1280×960)	2560×960 (2× 1280×960)	
	2560×800 (2× 1280×800)	2560×800 (2× 1280×800)	
	2560×768 (2× 1280×768)	2560×768 (2× 1280×768)	
	2560×720 (2× 1280×720)	2560×720 (2× 1280×720)	
	2048×768 (2× 1024×768)	2048×768 (2× 1024×768)	
	1600×600 (2× 800×600)	1600×600 (2× 800×600)	
	1600×480 (2× 800×480)	1600×480 (2× 800×480)	
	Triple-monitor resolutions	N/A	4800×900 (3× 1600×900)
			4320×900 (3× 1440×900)
		4200×1050 (3× 1400×1050)	
		4098×768 (3× 1366×768)	
		4080×768 (3× 1360×768)	
		3840×1024 (3× 1280×1024)	
		3840×960 (3× 1280×960)	
		3840×800 (3× 1280×800)	
		3840×768 (3× 1280×768)	
		3840×720 (3× 1280×720)	
		3072×768 (3× 1024×768)	
		2400×600 (3× 800×600)	
	2400×480 (3× 800×480)		
	1920×480 (3× 640×480)		

¹ These display resolutions are achieved with one GXM unit connected to one Mura output. For example, connecting four TripleHead2Go Digital Edition units to a single Mura card results in a display resolution of 4800×3600 (3×4 1600×900).

Contact us

The Matrox Web site has product literature, press releases, technical material, a sales office list, trade show information, and other relevant material. Visit us at www.matrox.com/graphics.

If you have any questions or comments about our products or solutions, contact us at www.matrox.com/graphics/contact.

You can get technical assistance by contacting Matrox technical support at dwcsupport@matrox.com.

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