

# Matrox® **Display Wall Driver Release Notes**

For Matrox® Mura™ MPX and IPX Series driver version 2.07.01

For Matrox® Mura™ IPX and Matrox® C-Series driver version 1.02.00

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# Overview

This document describes the current release of the Matrox Mura drivers for MPX based display wall controller (v. 2.07.00) and the Matrox Mura drivers for C-Series based display wall controllers (1.01.00) for Microsoft® Windows® operating systems. Matrox provides these notes to describe bug fixes and improvements to the software, API, and driver.

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## What's new in this release

This release of the Matrox driver adds support for the new Matrox Mura IPX Series along with support for Matrox C-Series C680 multi-display graphic cards. This new release also adds the following features and options:

- Added support for the following configurations in a system:
  - Multiple Mura MPX Series and IPX Series cards
  - Up to 2 C680 cards plus multiple Mura IPX Series cards
  - Up to 2 C680 cards without Mura IPX Series cards
- Introduction of a new library: VWLib API. This new library supports systems with C-Series or C-Series plus Mura IPX Series. VWLib API is a C/C++ based API used to build applications able to capture, stream, and display video wall content. The VWLib API makes use of DirectX under Windows and OpenGL under Linux.
- Added support for the following Operating Systems under the following configurations:
  - Mura MPX plus Mura IPX configuration:
    - Windows 7 64-bit
    - Windows Embedded Enterprise 7 64-bit
    - Windows Embedded Standard 7 64-bit
    - Windows Server 2008 R2 64-bit
  - C-Series C680 standalone or C-Series C680 plus Mura IPX configuration:
    - Windows 7 64-bit
    - Windows Embedded Enterprise 7 64-bit
    - Windows Embedded Standard 7 64-bit
    - Windows Server 2008 R2
    - Windows Server 2012 R2

- ♦ Windows 8.1 64-bit
- ♦ Windows 10 64-bit (Some performance limitations may occur when using physical HDMI sources.)
- Network API: New *Capabilities* interface. Queries supported functionality on different system configurations.
- Network API: Added support for IP sources. Allows you to create and configure IP sources coming into and being decoded by a Mura IPX Series card.
- Network API: Added new parameter to the *Start* command: *NoLayout* which allows you to start your appliance without having a layout automatically loaded.
- Network API: *SetProxy* now supports proxy authentication.
- Network API: Two new commands, *IPXDevice* and *SetIPDevice* added. Commands can be used to retrieve information and configure network adapters on Mura IPX Series cards.
- Network API: Now provided as a 64-bit version.
- Network API: Added support for HTTPS communication protocol.
- Network API: Added source preview over HTTPS.
- Network API: Added prescale option.

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# Driver changes in version 2.07.00

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## Fixed issues

- Fixed issues with offsets applied to analog devices in Network API (MPX-6).
- Fixed issue with VLC touring memory leak (MPX-17).
- Fixed issue with capturing interlaced sources (29471).
- Fixed issue with Network API crashing with many VLC streams open (28710).
- Fixed issue with Network API RS-232 communication and certain USB-to-RS232 cables. (29669).

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## Notes and limitations

- To avoid possible problems with a new installation, you must first uninstall all Matrox software, including **Matrox PowerDesk**, **Matrox Driver**, **Matrox DisplayWall.msi**, **Matrox Network API**, and **MRTSetup.msi**.
- The network component of Mura IPX Series cards supports DHCP (default) and Static IP addressing. If static is used, your network must have a time server for the Mura IPX Series card to function properly.
- Mura IPX Series card performance is limited to the following number of streams (or combination thereof):
  - One (1) 4k60 stream
  - Two (2) 4k30 streams
  - Eight (8) 1080p60 streams
  - Fourteen (14) 1080p30 streams

Adding more streams may affect performance (such as causing frame drops).

- Interlaced video is unsupported by Mura IPX Series cards.
- Some issues may be encountered while trying to connect to and decode some IP Devices.
- Some issues may be encountered with detection of some baseband source devices.
- Performance issues may be encountered with physical HDMI captures on Mura IPX Series cards on a Windows 10 system.
- Depending on where the stream windows are located on the desktop, full frame rates may be unsupported for certain stream windows.

- Applying a Geometric Rotation angle to a streaming window may affect rendering performance.
- Using streaming windows that contain too many layers may affect rendering performance.
- The render rate may be affected if the outputs don't all use the same refresh rate.
- Running two display wall applications simultaneously isn't supported.
- When starting PowerDesk immediately after a system restart, PowerDesk may not start. We recommend waiting a while, and then trying to restart PowerDesk.
- The horizontal resolution of your stretched mode layout can't be higher than 32768 pixels system and 16384 pixels on a C-Series based system.
- Windows Aero needs to be enabled on C-Series based systems.
- Microsoft .NET 4.5 must be installed.
- While trying to connect on an IP device, all other streams on the wall are paused.
- Some systems may exhibit bus transfer performance issues that don't allow you to attain the suggested performances listed above.
- The Portwell M9020B system is limited to 4 total cards when running a C680 plus Mura IPX Series configuration. Please contact your Matrox representative for more details.
- Using HTTPS communication with the Network API bypasses any passwords set using telnet communication.
- DirectShow filters are unsupported. Please contact your Matrox representative for DirectShow support.
- **Matrox SMD-2** - Matrox SMD-2 is an EOL product and is no longer manufactured or sold by Matrox. The latest driver version to support Matrox SMD-2 products is version 2.03.00.

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## **Millennium P690 support**

- Only Matrox Millennium P690 PCIe and P690 Plus LP PCIe are supported as consoles with your Matrox Mura MPX Series product.
- If you're using a P690 product as a console, make sure you uninstall any Matrox drivers previously installed, and install the latest Mura driver. The latest Mura drivers support P690 products.

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## HDCP support\*

- HDCP is only supported on Mura MPX-4/X Series cards. For HDCP support on Mura IPX Series, please contact your Matrox representative.
- Enabling HDCP capture may affect rendering performance.
- HDCP is supported on a maximum of 10 cards.
- All monitors used in the current output desktop configuration must be HDCP compliant, turned on, and connected using an HDCP compliant cable. If HDCP capture isn't properly enabled, you may experience problems such as corruption on your outputs, monitors blinking periodically, streaming windows turning blue, and systems freezing.
- Using HDCP repeaters on the Mura output connectors isn't supported.
- The *Preview surface* functionality of the Display Wall Library isn't supported on HDCP encrypted streams.
- Each HDCP encrypted stream can only be shown on a maximum of 11 downstream devices. Some source devices support less downstream devices.
- Moving a streaming window from one monitor to another while an HDCP encrypted stream is displayed will cause a monitor revalidation process (required for HDCP) and cause temporary image defects on the stream.
- When an HDCP input streaming window is rotated, the number of HDCP downstream devices required to be authenticated may increase due to the position of the underlying bounding rectangular window. [29070]
- HDCP sources won't stream protected content on a monitor currently on a revocation list.

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\* Certain limitations may apply. Matrox strongly recommends that you review the HDCP website ([www.digital-cp.com](http://www.digital-cp.com)) and make sure you understand your legal obligations and responsibility.

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# Driver installation

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## Before you begin

- Remove any existing non-Matrox graphics hardware installed in your system. If graphics hardware is built into the motherboard of your computer, make sure it's disabled.
- Make sure the correct operating system is installed. Mura MPX Series based systems support Windows 7 Professional Edition 64-bit, Windows Embedded Enterprise 7 64-bit, Windows Embedded Standard 7 64-bit, and Windows Server 2008 R2 64-bit. C-Series based systems support Windows 7 Professional Edition 64-bit, Windows Server 2008 R2 64-bit, Windows Server 2012 R2 64-bit, Windows 8.1 Professional Edition 64-bit, and Windows 10 64-bit.
- Make sure all the latest hot fixes for Windows 7 are installed on your system. For improved stability under Windows 7 and Windows Server 2008 R2 (XDDM mode), you must install the Microsoft KB980731 hot fix. For Windows 7, this hot fix is part of SP1.
- Make sure you have administrator rights on your system. You need administrator rights to install certain software and change certain settings.
- Make sure that the necessary exceptions are added to your firewall to allow network communications. The Network API uses port 23 for telnet and port 46272 for HTTPS and Preview Surfaces.

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## Setting up your Mura MPX Series and IPX Series system

- 1 Install and connect your Mura card or cards.
- 2 Install the Matrox Mura drivers for MPX systems by running Setup.exe. This may take *several* minutes. If virus scan software is active during the installation process, the installation will take longer to complete (up to two or three times longer than if it's disabled). Don't shut down or turn off your system until the installation is complete.
- 3 Restart the system after installation completed successfully.
- 4 Run PowerDesk to configure your desktop layout (multi-display setup).

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## Setting up your C-Series and Mura IPX Series system

- 1 Install and connect your C-Series C680 and Mura IPX Series cards.
- 2 Install the Matrox Mura Drivers for C-Series systems by running *Matrox.Setup.exe*. This will take several minutes. If a virus scan software is active during the installation process, the installation will take significantly longer to complete (up to 2 or 3 times longer than if it's disabled). Don't shut down or turn off your system until the installation is complete.
- 3 Restart the system after installation completed successfully.
- 4 Run PowerDesk to configure your desktop layout (multi-display setup). Make sure to use same monitor brand/model on all outputs and the same brand/model active dongles.
- 5 We strongly recommend enabling EDID emulation on your outputs to disable HPD events and prevent an undesired output configuration change. To enable EDID emulation, follow these steps:
  - a Open PowerDesk and go into **Multi-Display Setup**.
  - b Click **EDID management** and accept the notice that appears.
  - c Select **Apply EDID emulation for selected outputs**, then click **Select all** from the list.
  - d Accept the changes and restart the system.

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## Setting up your standalone C-Series system

- 1 Install and connect your C-Series C680 cards.
- 2 Install the Matrox Mura Drivers for C-Series systems by running *Matrox.Setup.exe*. This will take several minutes. If a virus scan software is active during the installation process, the installation will take significantly longer to complete (up to 2 or 3 times longer than if it's disabled). Don't shut down or turn off your system until the installation is complete.
- 3 Restart the system after installation completed successfully.
- 4 Run PowerDesk to configure your desktop layout (multi-display setup). Make sure to use same monitor brand/model on all outputs and the same brand/model active dongles.
- 5 We strongly recommend enabling EDID emulation on your outputs to disable HPD events and prevent an undesired output configuration change. To enable EDID emulation, follow these steps:
  - a Open PowerDesk and go into **Multi-Display Setup**.
  - b Click **EDID management** and accept the notice that appears.



- c** Select **Apply EDID emulation for selected outputs**, then click **Select all** from the list.
- d** Accept the changes and restart the system.

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## 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](http://www.matrox.com/graphics).

If you have any questions or comments about our products or solutions, contact us at [www.matrox.com/graphics/contact](http://www.matrox.com/graphics/contact).

You can get technical assistance by contacting Matrox technical support at [dwcsupport@matrox.com](mailto:dwcsupport@matrox.com).

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