

Matrox™ **Extio™ 3 Series**

- N3408 Transmitter card • N3408 Transmitter unit
 - N3408 Receiver unit
- N3208 Transmitter card • N3208 Transmitter unit
 - N3208 Receiver unit

User Guide

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Matrox safety information



To ensure safe and reliable operation of your Matrox product, to avoid personal injury, and to prevent damage to your computer or Matrox hardware, read the following guidelines.

Installation and operation

- Read and retain all instructions. Only use your Matrox product according to the instructions, operating ranges, and guidelines provided in the Matrox user guide and other related Matrox documentation. Failure to follow these instructions could result in damage to your product or injury to the user or installer.
- Don't expose your Matrox product to rain, water, condensation, or moisture.
- Your Matrox product (card or unit) can become hot while operating. Always turn off your computer, unplug it, then wait for it to cool before touching any of the internal parts of your computer or installing your Matrox card. Allow hot surfaces to cool before touching your Matrox unit. 
- Static electricity can severely damage electronic parts. Before touching any electronic parts, drain static electricity from your body (for example, by touching the metal frame of your computer).
- When handling a card, carefully hold it by its edges and avoid touching its circuitry.
- Don't stack devices or place devices so close together that they're subject to recirculated or preheated air.
- Don't operate your system or Matrox product near a heat source or restrict airflow to your system, and make sure the ambient temperature doesn't exceed the maximum recommended temperatures. Don't block ventilation holes on your unit or system.

If a power supply (internal or external) was included with your product

- Don't place the external power supply directly on top of the device.
- Only use power supplies originally supplied with the product or use a replacement that's approved by Matrox. Don't use the power supply if it appears to be defective or has a damaged chassis.

- Don't defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug doesn't fit into your outlet, consult an electrician to replace the obsolete outlet.
- Make sure that nothing rests on the power cables and that the cables aren't located where they can be stepped on, pinched, or tripped over.
- Don't use damaged power cables.
- Unplug your system or device during lightning storms or if unused for long periods of time.

If your product includes laser-based technology

- The device contains a Class 1 laser product for use only under the recommended operating conditions and guidelines. For more information, see your Matrox user guide.
- Invisible laser radiation may be emitted from disconnected fibers or connectors. Don't stare into beams or view directly with optical instruments.
- Only use optical transceivers originally supplied with the product or use a replacement that's approved by Matrox.
- For more information on laser support and compliance, see your Matrox user guide.

If your product includes a battery

- The battery is non replaceable.
- To dispose of your product, see www.matrox.com/environment/weee.



Repair

- Don't attempt to open or repair a power supply unit (if one was supplied).
- Don't attempt to open or repair your Matrox product.
- If there's a fault with your Matrox product, review your Matrox warranty for more information.

Overview

Thank you for purchasing a Matrox Extio 3 Series product. Matrox Extio 3 is an IP KVM extender that enables you to work on a computer from a distance. It captures the peripheral signals from the computer (such as the keyboard, video, mouse, audio, and other peripherals) and extends these signals to a remote location.

Matrox Extio N3408 IP KVM extenders support up to four (4) monitors. Matrox Extio N3208 IP KVM extenders support up to two (2) monitors.

Hardware supplied*

Depending on your Extio 3 device, the following hardware is supplied:

- **Extio N3408 or N3208 transmitter card** – Transmitter card, 1 USB cable (A to mini B connectors), RJ45 transceiver.
- **Extio N3408 or N3208 transmitter unit** – Transmitter unit, 1 USB cable (A to B connectors), 1 power supply.
- **Extio N3408 or N3208 receiver unit** – Receiver unit, 1 power supply.

On-screen display (OSD)

- **Extio OSD** – to manage and use your *point-to-point* Extio 3 devices through an On-Screen Display (OSD). If your Extio 3 devices are *networked*, you can use the OSD to log into to your receiver and switch to different transmitters. The OSD is available only on your receiver device.

Software available

- **Extio Central Manager** – to remotely manage, monitor, and configure your *networked* Extio 3 devices. For more information, see [“Installing Matrox Extio Central Manager software”](#), page 37.

* The hardware supplied with your Matrox product may vary depending on the SKU or part number of your product. For more information, contact your Matrox representative.

Hardware required (sold separately)

Depending on your device and setup, you may need the following hardware:

- CAT5e, CAT6, or CAT7 cable
- LC-LC fiber optic cable
 - Multi-mode (62.5/125 μ m (OM1), 50/125 μ m (OM2, OM3, or OM4))
 - Single-mode (9/125 μ m (OS1 or OS2))
- Shielded DisplayPort™ 1.1 or 1.2 cable*

Optional hardware (sold separately)

You may also need any of the following hardware:

- Multi-mode fiber optic transceiver†
- Single-mode fiber optic transceiver†
- Mini DisplayPort to DisplayPort adapter‡
- Analog audio cable
- Matrox secure cable solution

Matrox rack mount kit

Matrox makes available a rack mount kit to mount your Extio devices. To purchase a Matrox rack mount kit, contact your Matrox representative.

* Shielded DisplayPort™ 1.2 cable is required for 4K60 resolutions.

† To purchase a multi-mode fiber optic transceiver (part number XTO3-SFPMM) or single-mode fiber optic transceiver (part number XTO3-SFPSM) for your Matrox product, contact your Matrox representative.

‡ Not recommended for 4K60 resolutions.

More information

Your Matrox Extio 3 Series User Guide provides information on installing and connecting your Matrox hardware, updating your firmware package, and using the Extio OSD.

For information on how to use and configure Extio Central Manager software, see the Matrox Extio Central Manager User Guide.

Be sure to check for any last-minute release notes included with your product. Also, check the Matrox web site (www.matrox.com/graphics) for the latest Matrox software, technical support, and product information.

Getting started

The following outlines the steps for installing, connecting, and setting up your Extio 3 device.

Networked mode

In networked mode, Extio 3 devices operate over a copper-based or fiber-based Gigabit Ethernet network.

- 1 Install your card – see “Installing your Extio 3 transmitter card”, page 11.
- 2 Connect your devices – see “Connecting your Extio 3 devices”, page 14.
- 3 Validate your setup – see “Validating your Extio 3 setup”, page 18.
- 4 Update your firmware – see “Updating your Extio 3 firmware”, page 28.
- 5 Validate your network discovery – see “Validating your Extio 3 setup”, page 18.
- 6 Install your Extio Central Manager software – see “Installing Matrox Extio Central Manager software”, page 37.
- 7 Configure your Extio devices through Extio Central Manager software – For more information on using Extio Central Manager software, see the Matrox Extio Central Manager User Guide.
- 8 Log into your receiver and switch to different transmitters (OSD) – see “Using the OSD (On-Screen Display)”, page 34.

Point-to-point mode

In point-to-point mode, Extio 3 transmitter and receiver devices are directly linked to each other using copper or fiber optic cable.

- 1 Install your card – see “Installing your Extio 3 transmitter card”, page 11.
- 2 Connect your device – see “Connecting your Extio 3 devices”, page 14.
- 3 Update your firmware – see “Updating your Extio 3 firmware”, page 28.
- 4 Enable point-to-point mode – see “Using the OSD (On-Screen Display)”, page 38 and “Setting up point-to-point mode”, page 37.
- 5 Configure your Extio devices – see “Configuring your Extio devices”, page 39.

Installing your Extio 3 transmitter card

This section describes how to install your Matrox Extio 3 transmitter card. If your Matrox card is already installed in your system, skip to [“Connecting your Extio 3 devices”, page 14](#). For information specific to your system, like how to remove its cover, see your system manual.

Before you begin

To avoid personal injury and to prevent damage to your system or Matrox hardware, read the following guidelines before installing and connecting your Matrox hardware.

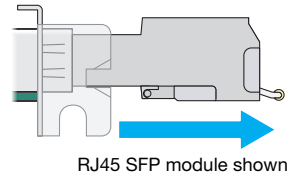
Preventing damage to your hardware

- Always turn off your system, unplug it, then wait for it to cool before touching any of the internal parts of your computer or installing your Matrox product.
- While your system is turned off but still plugged in, some electrical current is supplied to the motherboard. This current may prevent newly installed hardware from working properly.
- Always try to insert or remove your card as straight as possible.
- When connecting devices, make sure the connectors are properly fastened.
- Before installing your transmitter card, make sure the SFP module is removed. For more information on removing the SFP module, see [“Removing the SFP module”, page 22](#).
- Review the safety information provided. For more information, see [“Matrox safety information”, page 5](#).

Step-by-step installation

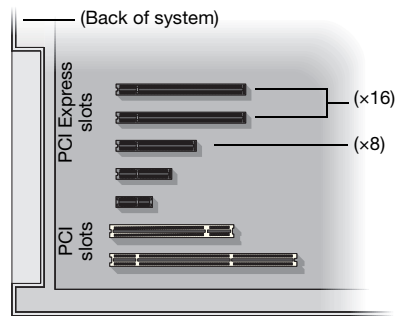


WARNING: Before installing your transmitter card, make sure the SFP module is removed. For more information on removing the SFP module, see “Removing the SFP module”, page 22.



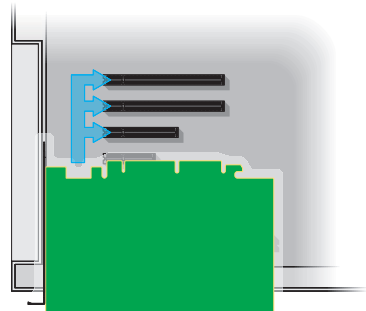
1 Choose an expansion slot

Most systems have different types of expansion slots. Choose a PCI Express® ×8 or ×16 (PCIe®) slot. Your system manual should identify the location of each type of expansion slot in your system.



2 Insert your Matrox card

- a** Position your Matrox card over the expansion slot you've chosen.
- b** Push the card in firmly and evenly until it's fully seated in the slot.
- c** Secure the bracket of your Matrox card to the frame of your system.



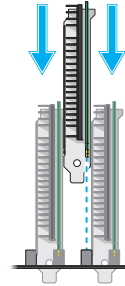
Your Matrox card is now installed. If you're installing more than one card, see “Installing multiple cards”, page 13. *Before restarting your system*, connect your devices (see the “Connection setup” section for the card you want to connect).

Installing multiple cards

Your system may support the installation of multiple Extio 3 transmitter cards in your system.



WARNING: To avoid damaging your cards, always insert your card as straight as possible into the slot. Don't rock the card from side to side. If you meet resistance, don't force the card into the slot.



Connecting your Extio 3 devices

This section describes the connectors available on your Matrox Extio 3 devices.

Before you begin

To avoid possible problems that could damage your monitors or prevent you from using your Matrox product, read the following guidelines before connecting your Matrox graphics hardware.

- Whenever you change your connection setup, make sure you're using the correct connectors and that all connectors are properly fastened.
- Make sure your devices are powered off. Never change connections while your system, Extio transmitter, or receiver are turned on.
- Review the safety information provided. For more information, see [“Matrox safety information”, page 5](#).

Supported monitor adapters

Adapter	Description
Mini DisplayPort to DisplayPort^{*†}	If your graphics hardware has a DisplayPort connector, use a mini DisplayPort to DisplayPort adapter to connect your graphics hardware to the mini DisplayPort connector on your Matrox device.
DisplayPort to mini DisplayPort[†]	If your monitor has a mini DisplayPort connector, use a DisplayPort to mini DisplayPort adapter to connect your monitor cable to the DisplayPort connector on your Matrox device.
DisplayPort to DVI (active)[‡]	If your monitor has a DVI connector, use a DisplayPort to DVI adapter (active) to connect your monitor cable to the DisplayPort connector on your Matrox device.
DisplayPort to HDMI (active)[‡]	If your monitor has an HDMI connector, use a DisplayPort to HDMI adapter (active) to connect your monitor cable to the DisplayPort connector on your Matrox device.

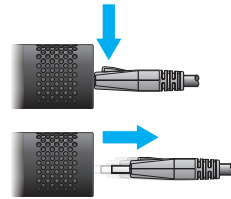
* Mini DisplayPort to DisplayPort adapter is supported on Extio N3408 or N3208 transmitter card only.

† Not recommended for 4K60 resolutions.

‡ Only active adapters (sold separately) are supported. Passive adapters aren't supported.



WARNING: To avoid damaging the DisplayPort connector on your DisplayPort monitor cable or on your Matrox product, carefully remove the DisplayPort cable by pressing the latch on the top of the DisplayPort connector while removing the connector.



Output capabilities*

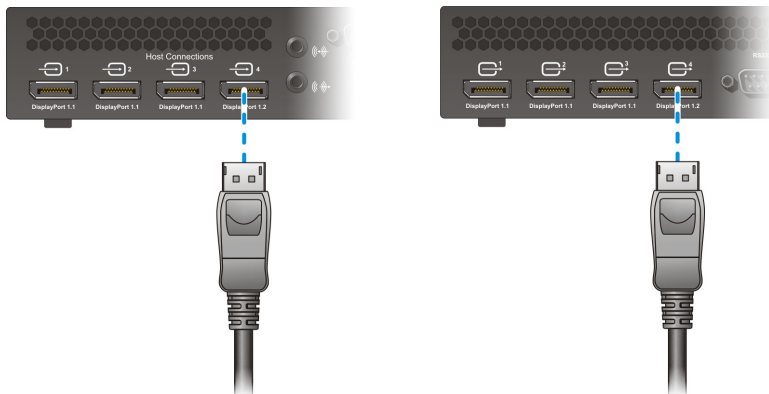
	Connector 1	Connector 2	Connector 3*	Connector 4*
DisplayPort 1.2	—	—	—	✓
DisplayPort 1.1	✓	✓	✓	✓
HDMI 1.4	✓	✓	✓	✓
Single link DVI	✓	✓	✓	✓
Dual link DVI	✓	✓	✓	✓

* Connector 3 and connector 4 are available on Extio N3408 devices only.

† Connector 4 supports 3840 × 2160 @ 60 Hz. For more information, see “Using 4K60 resolutions”, page 15.

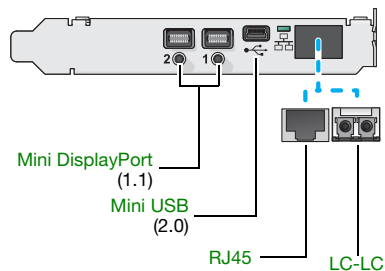
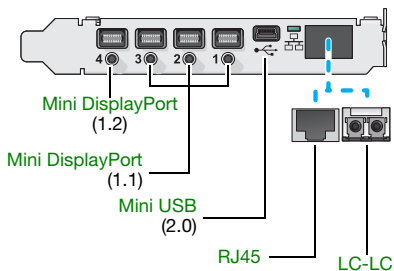
Using 4K60 resolutions

N3408 transmitter/receiver only – To use 4K resolutions, use your monitor cable to connect your monitor to the DisplayPort 1.2 connector labeled **4**. You can connect only 1 (one) 4K monitor to your device.

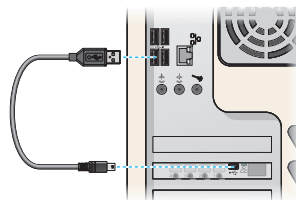


* For more information on supported resolutions and video signals, see “Product information”, page 46.

Extio N3408 or N3208 transmitter card



Note: Connect one end of the USB cable included with your product to the mini USB connector on your transmitter card. Connect the other end of your cable to a USB connector on the motherboard of your system. Make sure your connectors are properly connected.

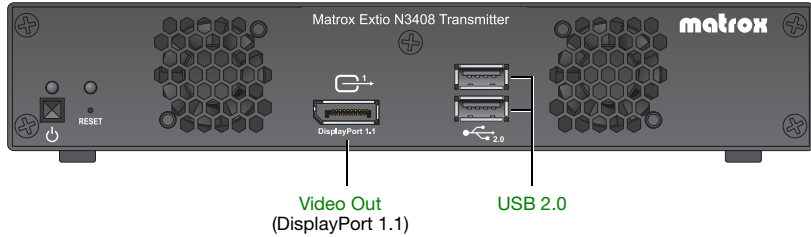


Description of supported connections

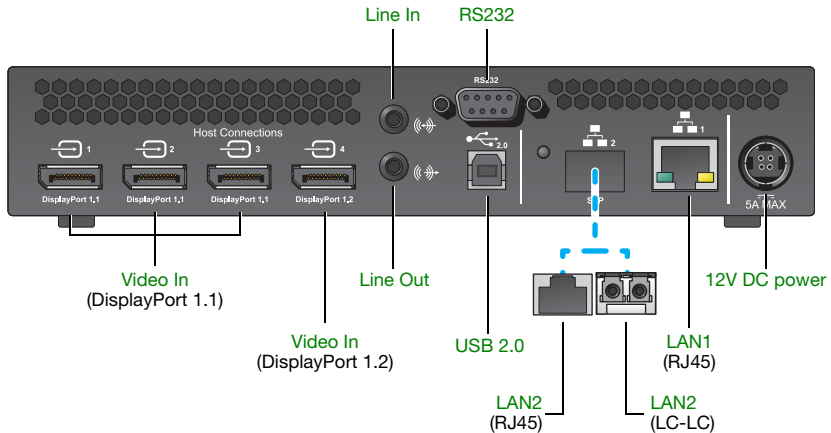
Connector	Description
Mini DisplayPort	Connect your mini DisplayPort to DisplayPort cable to your Matrox card. Connect the other end of the cable to your host system. Note: To connect to this connector, you need a shielded DisplayPort cable.
Mini USB	Connect one end of your USB cable to the USB connector on your transmitter card. Connect the other end of your cable to a USB connector on the motherboard of your system.
RJ45	Connect an RJ45 cable to this connector.
LC-LC	Connect an LC-LC fiber optic cable to this connector.

Extio N3408 transmitter or receiver unit

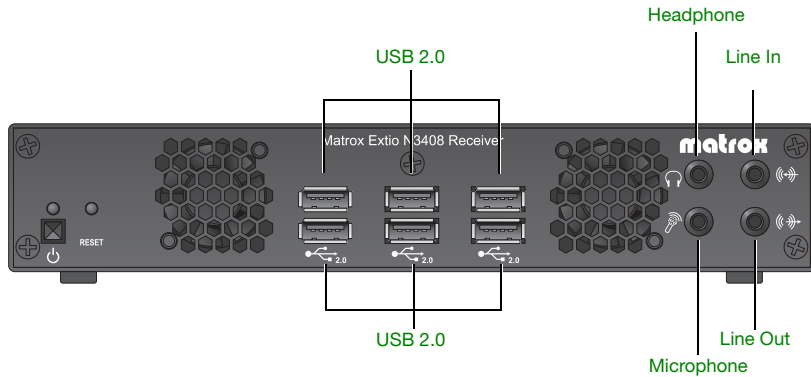
Extio N3408 transmitter unit (Front)



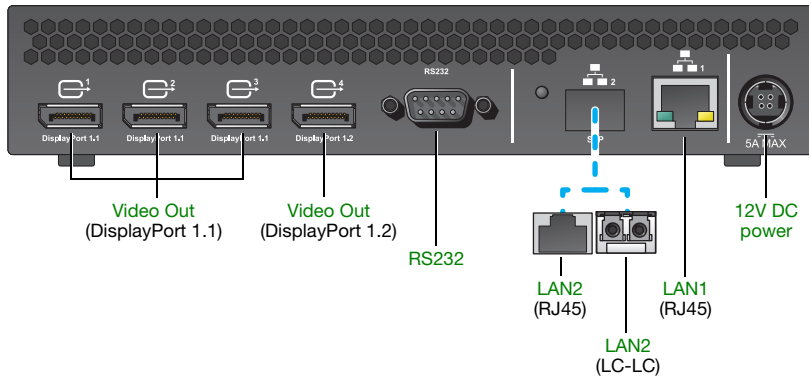
Extio N3408 transmitter unit (Back)



Extio N3408 receiver unit (Front)



Extio N3408 receiver unit (Back)



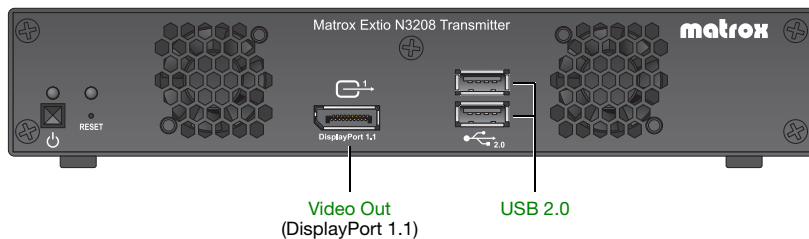
Description of supported connections

Connector			Description
12V DC power	✓	✓	Connect the 12V DC power supply included with your product to this connector.
Video In	✓		Connect your video source (graphics hardware) to this connector. Note: To connect to this connector, you need a shielded DisplayPort cable.
Video Out	✓	✓	Connect a digital monitor to this connector. Note: To connect to this connector, you need a shielded DisplayPort cable.
Headphone		✓	Connect your headphones to this connector. This connector supports a 3.5 mm stereo jack. While headphones are connected, the Line Out connector remains enabled.
LAN1	✓	✓	Connect an RJ45 cable to this connector.
LAN2	✓	✓	Connect an SFP module (RJ45 cable or LC-LC fiber optic cable) to this connector. For more information, see “Installing the SFP module” , page 22.
Line In	✓	✓	Connect the Line Out connector of your computer (host) or of another audio device (local or remote) to this connector. This connector supports a 3.5 mm stereo jack.
Line Out	✓	✓	Connect the Line In connector of your computer (host) or of another audio device (local or remote) to this connector. This connector supports a 3.5 mm stereo jack.
Microphone		✓	Connect your microphone to this connector. This connector supports a 3.5 mm stereo jack.

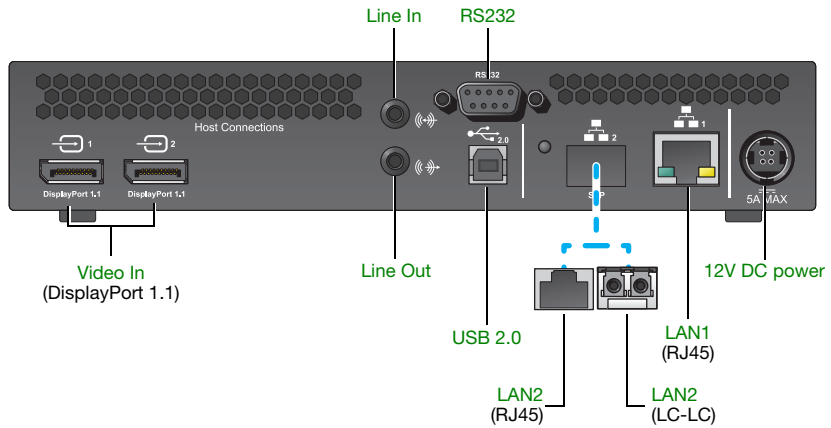
Connector	Tx	Rx	Description
RS232	✓	✓	To control an RS232 device on one of your devices with an RS232 controller connected to device, or with an RS232 controller sending commands over the network. If your RS232 device has a DB25 connector, use a DE9 (also known as a DB9) to DB25 converter to connect your device to this connector.
USB 2.0	✓	✓	Connect a USB device to this connector.

Extio N3208 transmitter or receiver unit

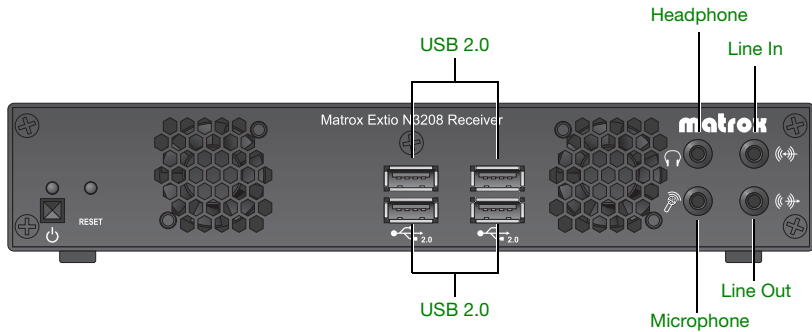
Extio N3208 transmitter unit (Front)



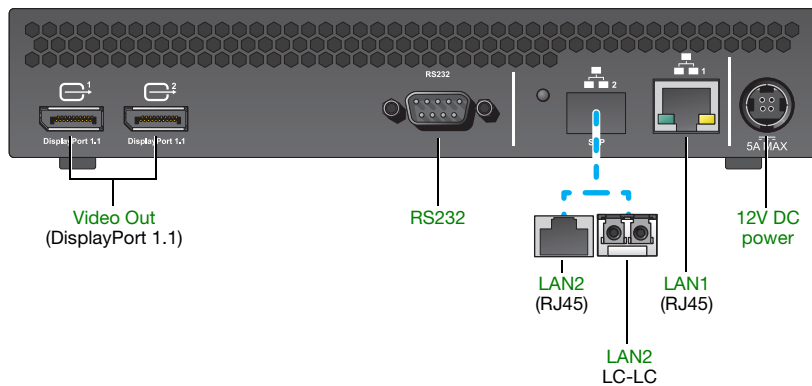
Extio N3208 transmitter unit (Back)



Extio N3208 receiver unit (Front)



Extio N3208 receiver unit (Back)



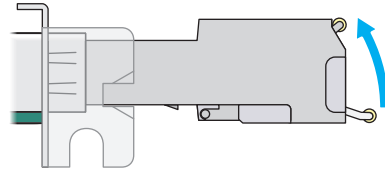
Description of supported connections

Connector	TX	RX	Description
12V DC power	✓	✓	Connect the 12V DC power supply included with your product to this connector.
Video In	✓		Connect your video source (graphics hardware) to this connector. Note: To connect to this connector, you need a shielded DisplayPort cable.
Video Out	✓	✓	Connect a digital monitor to this connector. On a transmitter, you can use this digital monitor as a console display. Note: To connect to this connector, you need a shielded DisplayPort cable.
Headphone		✓	Connect your headphones to this connector. This connector supports a 3.5 mm stereo jack. While headphones are connected, the Line Out connector remains enabled.
LAN1	✓	✓	Connect an RJ45 cable to this connector.
LAN2	✓	✓	Connect an SFP module (RJ45 cable or LC-LC fiber optic cable) to this connector. For more information, see “Installing the SFP module” , page 22.
Line In	✓	✓	Connect the Line Out connector of your computer (host) or of another audio device (local or remote) to this connector. This connector supports a 3.5 mm stereo jack.
Line Out	✓	✓	Connect the Line In connector of your computer (host) or of another audio device (local or remote) to this connector. This connector supports a 3.5 mm stereo jack.
Microphone		✓	Connect your microphone to this connector. This connector supports a 3.5 mm stereo jack.
RS232	✓	✓	To control an RS232 device on one of your devices with an RS232 controller connected to device, or with an RS232 controller sending commands over the network. If your RS232 device has a DB25 connector, use a DE9 (also known as a DB9) to DB25 converter to connect your device to this connector.
USB 2.0	✓	✓	Connect a USB device to this connector.

Installing the SFP module

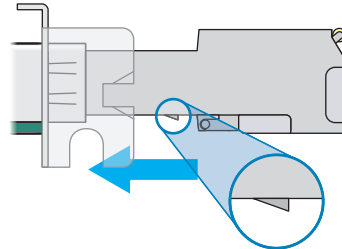
When installing the SFP (Small Form Factor Pluggable) module, make sure you properly secure the module in its housing.

- 1 Close the latch handle.

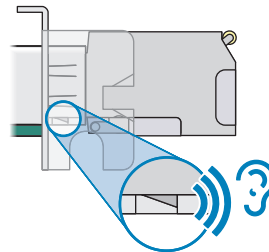


(RJ45 SFP module shown)

- 2 Push the module into the SFP housing in your Matrox product. Make sure the module is properly oriented. A properly oriented module should slide easily into the housing.



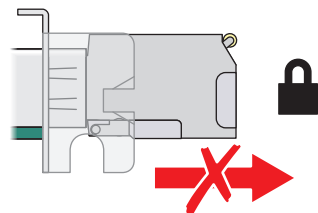
- 3 Make sure the SFP module is inserted all the way into the housing. When locking in place, you may hear a “click” sound. To make sure the SFP module is securely inserted, you can pull gently on the module without lowering the latch handle.



Removing the SFP module

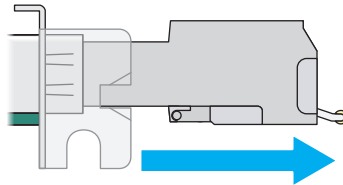
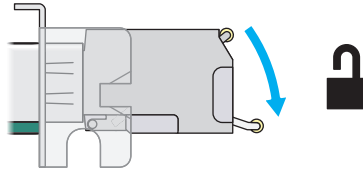


WARNING: A properly installed SFP module is securely locked in its housing. Forcing the SFP module out of its housing without unlocking it may damage your SFP module, the housing, or your Matrox product.



To remove the SFP module:

- 1** Pull the latch handle down to unlock the SFP module from its housing.
- 2** Grasp the SFP module by the side walls and carefully pull the module out of the housing.



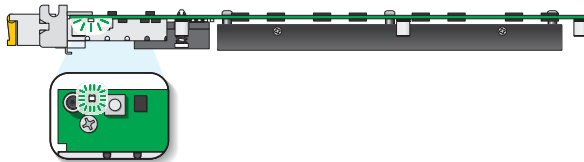
Description of LEDs

The LED on your Extio 3 device provides information to help you troubleshoot your Extio 3 product. The following describes the LED on your Extio 3 device.

Power/status LEDs

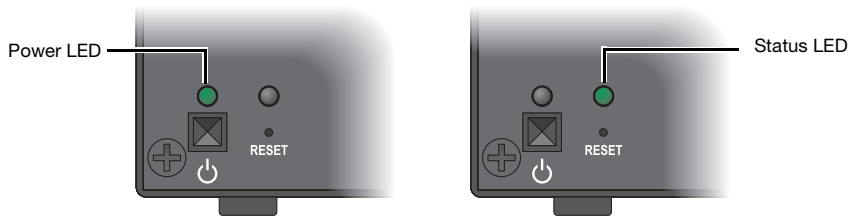
The LEDs on your device provide information on the power and status of your device.

Extio N3408 or N3208 transmitter card



LED color	Status LED
Green (solid)	Driver is ready.
Green (fast blink)	Configuration reset in process.
Amber (solid)	Card is in maintenance mode.
Amber (slow blink)	Card is restarting in maintenance mode.
Amber (fast blink)	Device is updating the firmware.
Red (solid)	No source detected.
Red (slow blink)	No network detected.
Red (fast blink)	Device has detected a fatal error. Try rebooting your device. If, after rebooting your device, the LED is still red, contact your vendor for technical support (see “Customer support” , page 57). For more information on rebooting your Extio 3 device, see “Rebooting or resetting your Extio 3 device” , page 41.

Extio N3408 or N3208 unit

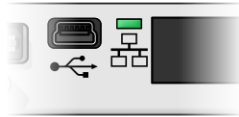


LED color	Power LED	Status LED
Green (solid)	Driver is ready.	Software is ready.
Green (slow blink)	Device is restarting.	—
Green (fast blink)	Configuration reset in process.	—
Amber (solid)	Device is in maintenance mode.	Device is restarting.
Amber (slow blink)	Device is restarting and is in maintenance mode.	Firmware mismatch detected.
Amber (fast blink)	Device is updating the firmware.	▪ Transmitter – No USB connected. ▪ Receiver – No keyboard detected.
Red (solid)	—	▪ Transmitter – No source detected. ▪ Receiver – No monitor detected.
Red (slow blink)	—	No network detected.
Red (fast blink)	Error detecting the driver.	Fatal error occurred.
Black (no LED)	No power. Make sure your device is properly installed. Also, make sure your system isn't in power saving mode (see “Connecting your Extio 3 devices” , page 14). For more information, contact your vendor (see “Customer support” , page 57).	—

Network LEDs

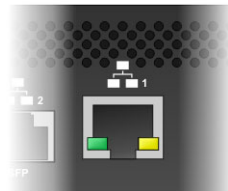
The network connectors on your device use LEDs to provide information on the network activity and presence. The following describes the different network connector LEDs.

Extio N3408 or N3208 transmitter card



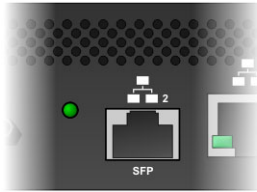
LED color	Network
No LED (black)	No power.
Green (fast blink)	Network cable detected. Transmitting at 1 Gbps.
Amber (fast blink)	Network cable detected. Current transmission speed not supported.
Red (fast blink)	Network cable detected. Transmission error occurred.

Extio N3408 or N3208 transmitter unit (LAN1)



LED color	LAN1 (Left LED)	LAN1 (Right LED)
No LED (black)	No activity detected.	Transmitting at 1 Gbps.
Green (solid)	—	—
Green (fast blink)	Network activity detected.	—
Amber (solid)	—	Transmitting at 100 Mbps.

Extio N3408 or N3208 transmitter unit (LAN2)



LED color	LAN2
No LED (black)	No power.
Green (solid)	Network activity detected.
Green (fast blink)	Data transfer in progress.
Amber (solid)	No transceiver detected.
Red (solid)	Error establishing communication. Verify all network connections, then reboot your Extio 3 devices. For more information on rebooting your Extio 3 device, see “Rebooting or resetting your Extio 3 device”, page 41.

Updating your Extio 3 firmware

The Matrox Extio 3 Firmware Updater enables you to update the firmware of your Matrox Extio 3 products.



Note: Your Matrox Extio 3 product may ship with an older firmware version. Before using your Extio 3 product, you must update the firmware version installed on your devices to use the version of your deployed release. All Extio 3 devices must use the same version of the firmware package.

Before you update your firmware

Before you update the firmware on your Extio 3 devices, read the following guidelines:

- Make sure you have at least 1 GB of free disk space available.
- To avoid possible problems with your Extio 3 devices, we recommend running only one instance of the Extio 3 firmware updater on your network at a time.
- Make sure you're running the latest version of the Matrox Extio 3 Firmware Updater.
- Make sure Microsoft .NET Framework version 4.5.x is installed on your system.
- Make sure you have a DHCP (Dynamic Host Configuration Protocol) server on your network. The firmware updater requires constant IP addresses to update the devices properly. As the firmware updater requires a device to reboot multiple times, make sure your DHCP server maintains the IP address of a device when it reappears on the network. Otherwise, we recommend assigning fixed IP addresses to your devices.
- Close any programs that may be running (such as Extio Central Manager).
- If your system doesn't have access to a DNS server, configure your system to use a fixed IP address (such as local host - 127.0.0.1) as its DNS server. Otherwise, the firmware update process may take a long time to complete. For more information, see your Matrox Extio 3 Series User Guide.

Obtaining the Matrox Extio 3 firmware updater package

Matrox makes the latest Extio 3 firmware updater package available on the Matrox web site (www.matrox.com/graphics/extio3sw).

Updating your Matrox Extio 3 firmware (networked mode)



Note: If you're using networked mode, make sure the version of your firmware package matches the version of the Matrox Extio Central Manager software package installed on your controller system.

1 Download and extract the firmware package

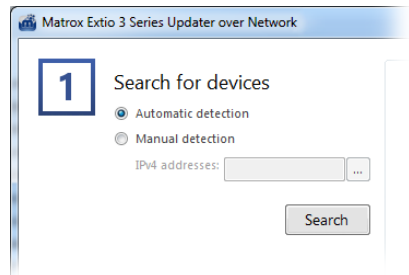
Download the latest firmware package and extract the files to a local folder on your system (for example, *C:\Extio3FirmwareUpdate*). If you don't select a local folder, the files will automatically extract to *C:\Matrox*.

2 Run the *Updater Over Network* file

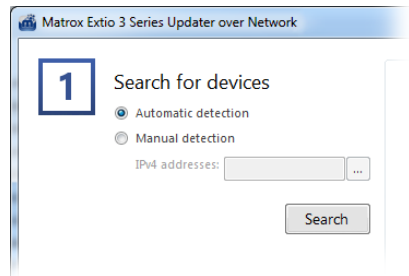
Browse to the folder containing the extracted files, then run the *UpdaterOverNetwork.exe* file.

3 Scan for available Extio 3 devices or locate your Extio 3 device using the IP address

Automatic detection – To scan for Extio 3 devices on your subnet, select **Automatic detection**, then click **Search**.



Manual detection – To locate one or more Extio devices using their IP address, select **Manual detection**, and next to **IPv4 addresses** enter the IP address of each Extio device you want to locate. If you're entering multiple addresses, separate each address with a space. (You can also enter the IP addresses by clicking the browse button (three dots) and entering one IP address per line.)



When you're done entering the IP addresses, click **Apply**.

To stop searching for devices, click **Stop**. To resume searching for devices, click **Search** again.

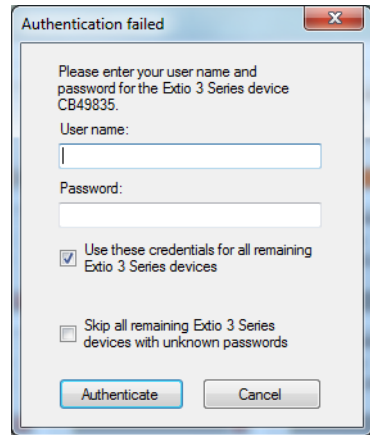
4 Authenticate the devices found

If you provided a password for your Extio 3 Series devices, you may be prompted to authenticate the devices found. If you're prompted, enter your **User name** and **Password** for the Extio 3 Series devices found.

- If you're updating multiple Extio devices, enable the **Use these credentials for all remaining Extio 3 Series devices** check box.
- If you don't know the password of some of the Extio devices on your network, enable **Skip all remaining Extio 3 Series devices with unknown passwords**.

Enabling this option ignores the Extio devices that don't use any of the passwords already entered. Any skipped devices won't be available for update.

When you're done, click **Authenticate**.



Note: If a configuration reset of the Extio device was performed, the device password was also reset. The device will be detected as having no password. In this case, you'll be prompted to add that device to the list of devices to update. When prompted, click **Yes**.



5 Select the devices to update

Select the devices you want to update. Devices with an older firmware version are automatically selected.

6 Enable the update options

To reset device settings, including the IP address, while updating the firmware, enable **Reset configuration**.

7 Update the firmware

When you're done adding Extio 3 devices to the list of devices you want to update, click **Update**. Wait while the devices are being updated (up to 20 minutes).

For more information on the device update process, click **Show log** (▼) at the bottom of the program window.

Updating your Matrox Extio 3 firmware (point-to-point mode)

You can update the firmware of a single Extio 3 transmitter or of an Extio 3 transmitter and receiver pair (in point-to-point mode) using the USB connection between your host system and transmitter unit.

1 Download and extract the firmware package

Download the latest firmware package and extract the files to a local folder (for example, *C:\Extio3FirmwareUpdate*) on your host system (the system connected to your Extio 3 transmitter). If you don't select a local folder, the files will automatically extract to *C:\Matrox*.

2 Run the *Updater from host* file

On your host system, browse to the folder containing the extracted files, then run the *Updaterfromhost.exe* file.

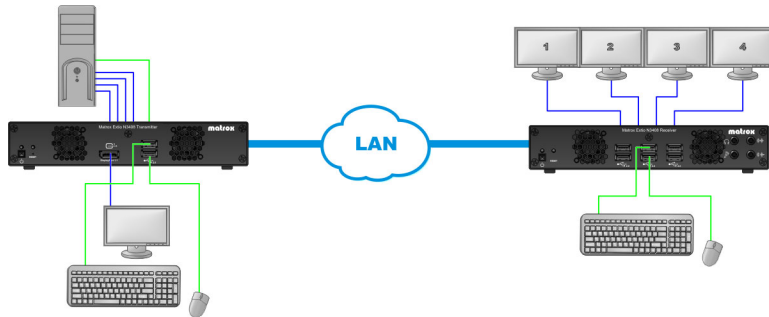
3 Update the firmware

Make sure the devices you want to update are listed in the program window. Devices that require an update are listed with a green status bar.

Click **Update** to update your devices. Wait while the devices are being updated (up to 20 minutes).

Setting up networked mode

Your Matrox Extio 3 product is an IP KVM extender. In networked mode, Extio 3 devices operate over a copper-based or fiber-based Gigabit Ethernet network.



Before you begin

- Whenever you change your connection setup, make sure you're using the correct connectors and that all connectors are properly fastened. Also, don't change connections while your Extio transmitter and receiver are turned on. For more information, see [“Connecting your Extio 3 devices”](#), page 14.
- Make sure your Extio Central Manager software is installed on a separate system on your network, and you've set the allowed connections between your Extio transmitter and receiver devices. For more information, see your Matrox Extio Central Manager User Guide.
- Make sure all of your Extio 3 transmitter and receiver devices are using the latest version of the Matrox Extio 3 firmware package. For more information, see [“Updating your Matrox Extio 3 firmware \(networked mode\)”](#), page 29).
- Make sure all your Extio 3 devices are using the **same version** of the firmware package. The version of your firmware package must also match the version of your Extio Central Manager software package.
- To assign an initial IP address to your devices, a DHCP (Dynamic Host Configuration Protocol) server is required.
- Windows Server 2016, Windows Server 2012 R2, and Windows Server 2008 R2 – Make sure the SSDP Discovery service, network discovery, and file sharing options are enabled.
- Review the safety information provided. For more information, see [“Matrox safety information”](#), page 5.

Validating network discovery

Extio 3 devices are initially assigned their IP addresses through DHCP (Dynamic Host Control Protocol). After connecting your devices, we recommend verifying that all of your devices are discovered by the network.

Windows 10/7 – To make sure all of your devices are discovered by the network:

- **Windows 10** – Click **Start** → **File Explorer** → **Network**. Under **Other Devices**, make sure all the Extio 3 devices connected are listed.
- **Windows 7** – Click **Start** → **Acessories** → **Windows Explorer** → **Network**. Under **Other Devices**, make sure all the Extio 3 devices connected are listed.

If prompted to enable network discovery and file sharing on your network when validating network discovery, enable these two features by clicking on the prompt at the top of your Windows Explorer window. These two features must be enabled for Extio Central Manager software to detect the Extio 3 devices.

Installing Matrox Extio Central Manager software

Matrox Extio Central Manager software enables you to remotely manage, monitor, and configure your *networked* Extio 3 devices.



Supported operating systems

Matrox Extio Central Manager supports the following operating systems: *Windows® Server® 2016*, *Windows® 10 (64-bit)*, *Windows® Server 2012 R2*, *Windows® Server® 2008 R2*, and *Windows® 7*.

Obtaining Matrox Extio Central Manager software

To obtain the latest Extio Central Manager software, contact your Matrox representative. Matrox makes the latest Extio Central Manager software available on the Matrox web site (www.matrox.com/graphics/extio3sw).

Installing Matrox Extio Central Manager software

To install the software for your Extio 3 product, run the installation program for your software package on any system on the network. Follow the on-screen instructions.



Note: Only one (1) instance of Extio Central Manager software needs to be installed.

Accessing Extio Central Manager software

Windows 10/7 – To access the main interface of Extio Central Manager software:

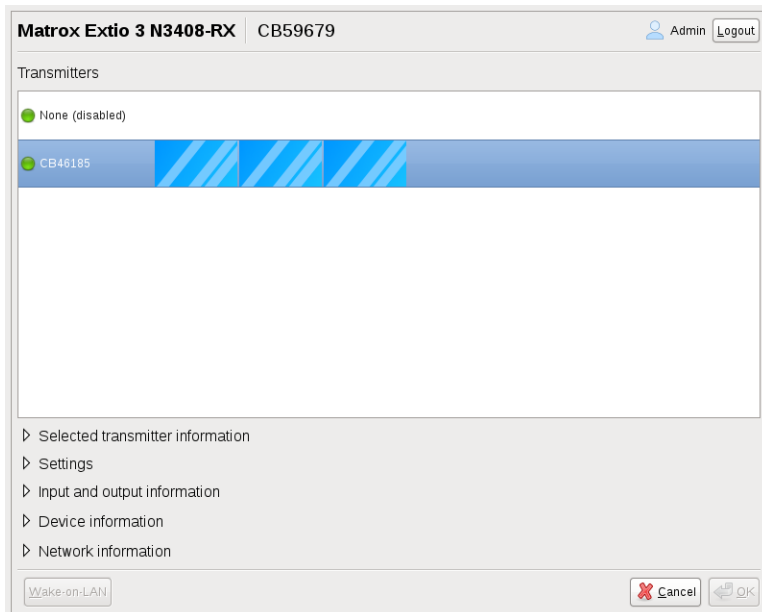
- Windows 10 – Click **Start** → **All apps*** → **Matrox Extio Central Manager*** → **Matrox Extio Central Manager**. (* Depending on your configuration of Windows, this part may not be necessary.)
- Windows 7 – Click **Start** → **All Programs** (or **Programs**) → **Matrox Extio Central Manager*** → **Matrox Extio Central Manager**. (* Depending on your version and configuration of Windows, this part may not be necessary.)

Configuring Extio Central Manager software

Before you can access and use the OSD, your Extio Central Manager software must be configured. For information on how to use and configure Extio Central Manager software, see the Matrox Extio Central Manager User Guide.

Using the OSD (On-Screen Display)

If your devices are networked, the OSD enables you to log into your receiver and switch to different transmitters.



Accessing the OSD



Note: To access the OSD and enable networked mode, make sure you obtain a user name and password from your Extio 3 environment administrator. For more information, contact your network administrator.

The OSD is available only with Extio 3 receiver devices. To access the OSD, enter the OSD keyboard shortcut on the keyboard connected to your receiver. The default keyboard shortcut is the [Scroll Lock] key.

Changing the OSD keyboard shortcut

You can change the keyboard shortcut used to access the OSD.

Change the keyboard shortcut through Extio Central Manager. For more information, see your Matrox Extio Central Manager User Guide.

Enabling networked operation mode



Note: To change the operation mode of your Extio 3 configuration (for example, changing from networked mode to point-to-point mode), you need to perform a configuration reset of your devices. For more information, see [“Changing the operation mode of your devices”, page 43](#).

To use networked mode, you need a user name and password. To obtain a user name and device password (or if you’ve forgotten your user name or device password), contact your Extio environment administrator.

Basic functions

OK	Click OK for your changes to take effect.
Cancel	Click Cancel to discard any changes that weren’t applied.
Logout	Click this to log out of the device.
Wake-on-LAN	Click Wake-on-LAN to wake up your transmitter if it turns off. This has no effect if a transmitter isn’t detected.

Switching to a different transmitter

- 1 Under **Transmitters**, select the transmitter you want to switch to.
- 2 Click **OK**.

Viewing transmitter information



Note: For the transmitters to be available under **Transmitters**, an allowed connection must first be set between your Extio transmitter and receiver devices. For more information, see your Matrox Extio Central Manager User Guide.

To view information on a transmitter, select a transmitter under **Transmitters**.

Selected transmitter information

View the connection information (**Video In** and **Line In**) for the selected transmitter.

Settings

Adjust the **Audio** and **Video** settings for the sources connected to your transmitter and receiver.

Input and output information

View the connection information of the devices connected to the selected transmitter.

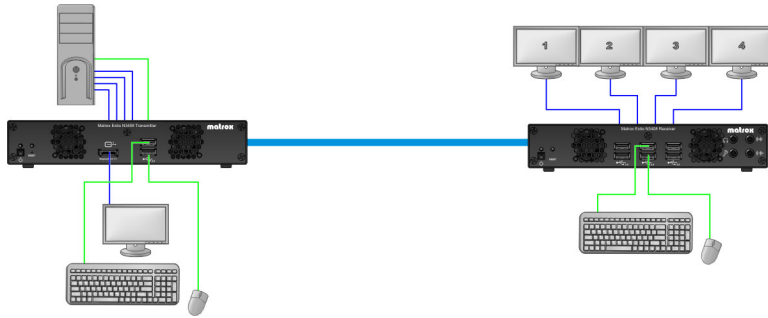
- **Monitor** – Indicates the model and status of the connected monitor.
- **Microphone** – Indicates if a microphone is connected.
- **Line In** – Indicates if an audio cable is connected.

Device information

Provides information (such as the model, serial number, firmware package version, and temperature) on your Extio 3 device.

Setting up point-to-point mode

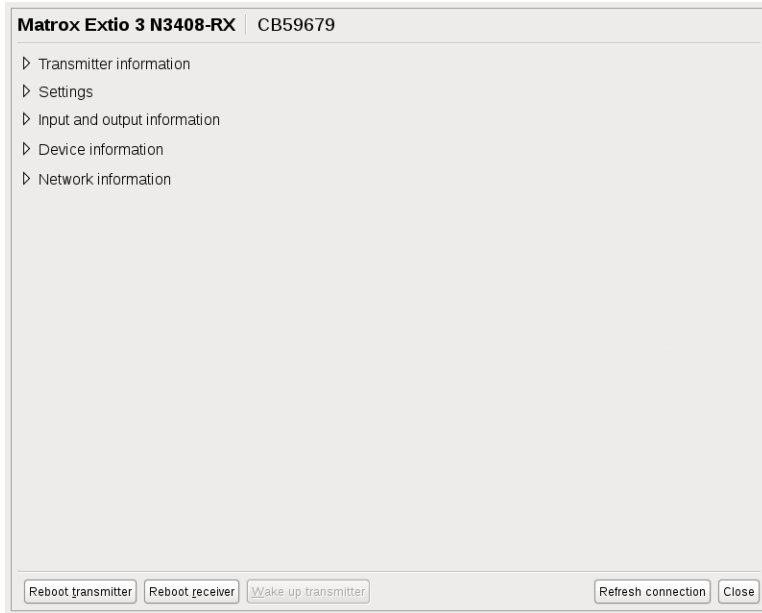
Matrox Extio 3 transmitters and receivers can be configured as a point-to-point extender. In point-to-point mode, Extio 3 transmitter and receiver devices are directly linked to each other using copper or fiber optic cable.



Before you begin

- Whenever you change your connection setup, make sure you're using the correct connectors and that all connectors are properly fastened. Also, don't change connections while your Extio transmitter and receiver are turned on. For more information, see [“Connecting your Extio 3 devices”, page 14.](#)
- Make sure all of your Extio 3 transmitter and receiver devices are using the latest version of the Matrox Extio 3 firmware package.
- To enable point-to-point mode, make sure your transmitter device and receiver device are directly (physically) connected to each other. For more information, For more information, see [“Connecting your Extio 3 devices”, page 14.](#)
- For information on supported cable types and distances, see [“Maximum distance \(point-to-point mode\)”, page 49.](#)
- Review the safety information provided. For more information, see [“Matrox safety information”, page 5.](#)

Using the OSD (On-Screen Display)



Accessing the OSD

The OSD is available only with Extio 3 receiver devices. To access the OSD, enter the OSD keyboard shortcut on the keyboard connected to your receiver. The default keyboard shortcut is the [Scroll Lock] key.

Changing the OSD keyboard shortcut

You can change the keyboard shortcut used to access the OSD. To change the keyboard shortcut, use the **OSD settings** option.

Enabling point-to-point operation mode



Note: To change the operation mode of your Extio 3 configuration (for example, changing from networked mode to point-to-point mode), you need to perform a configuration reset of your devices. For more information, see [“Changing the operation mode of your devices”, page 43.](#)

To use your devices in point-to-point mode, click **Point-to-Point** from the OSD startup screen. Wait for the mode to be enabled. For more information, see [“Configuring your Extio devices”, page 39.](#)

Configuring your Extio devices

The OSD provides the following features and options to configure your Extio 3 Series transmitter and receiver.

Basic functions

Close	Click Close to close the OSD.
Reboot transmitter	Click Reboot transmitter to reboot your transmitter device.
Reboot receiver	Click Reboot receiver to reboot your receiver device.
Wake up transmitter	Click Wake up transmitter to wake up your transmitter if it turns off.
Refresh connection	Click Refresh connection if the connection between your receiver and transmitter devices is lost. Wait while your connection is refreshed.

Transmitter information

View the connection information (**Video In** and **Line In**) for your transmitter.

Settings

Audio/Video	Control the Analog Volume of your audio inputs and outputs (Line In , Microphone , Line Out , and Headphone).
Monitors	▪ Optimize video mode compatibility with monitors – Enable this to make sure the video parameters and EDID of your monitors are optimized for maximum compatibility with your device. This option is enabled by default. ▪ Stabilize display output – Enable this to reduce flickering associated with video output. This option is disabled by default. For more information, see “Random display flickering occurs while using a point-to-point connection”, page 45. ▪ Use fixed EDID – Enable this feature to apply a fixed EDID to your output. If a monitor is currently connected to an output on the receiver, click Update to apply the EDID settings of that monitor to your transmitter. If a monitor isn't currently connected to that output, click No monitor so that no EDID is applied.
Audio source selection	Adjust the audio settings for your device: ▪ Headphone audio source – Select the audio source (for your headphone) from the transmitter. ▪ Line Out audio source – Select the audio source (for your Line Out device) from the transmitter. ▪ Microphone or Line In audio source – Select the input audio source from the receiver.

Other	To disable the audio on your Extio 3 device, enable the Disable audio option. Your device will reboot for this change to take effect.
RS232	To modify your RS232 settings, click Edit RS232. This opens a new dialog box. To enable RS232, enable the Enable RS232 option, edit your RS232 settings. ▪ Baud rate – The speed, in bits per seconds (or baud), used for the RS232 connection. The default is 115200. ▪ Data bits – The number of bits per block of data transmitted. The default is 8. ▪ Parity – The type of parity bits (None, Odd, or Even) used for the data transmitted. The default is None. ▪ Stop bits – The number of bits used to identify the end of a data block. The default is 1. ▪ Flow control – The signal type (None or RTS/CTS) used to pause and resume data transmission. The default is None. When you're done, click Apply.
OSD settings	Assign a keyboard shortcut for accessing the on-screen display (OSD).
Power	To disable the power button on your device, enable Disable power button. ▪ Never start – Never start your Extio device after a power loss. ▪ Always start – Always start your Extio device after a power loss. ▪ Restore last state – Always start and restore the last state of your Extio device after a power loss.

Input and output information

View the connection information of the devices connected to the selected transmitter.

- **Monitor** – Indicates the model and status of the connected monitor.
- **Microphone** – Indicates if a microphone is connected.
- **Line In** – Indicates if an audio cable is connected.

Device information

Provides information (such as the model, serial number, firmware package version, and temperature) on your Extio 3 device.

Network information

Provides the connection status and IP address of the device (connected through **LAN1** or **LAN2**).

Rebooting or resetting your Extio 3 device

This section describes how to *reboot* or perform a *configuration reset* of your Extio 3 card or unit.

When to reboot or reset your device

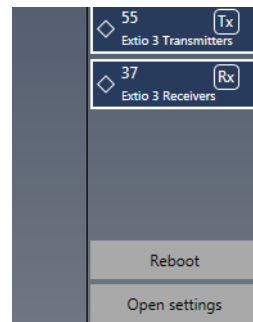
What to do...	When to do it...	What the result is...
Software reboot (Extio Central Manager)	Your Extio device has encountered an error (red device tile).	Keeps all of your device settings, including the IP configuration and password.
Software reboot (OSD – Point-to-point mode only)		
Hardware reboot	- Your Extio device is listed as unresponsive (yellow device tile). - Extio Central Manager software is unresponsive, and you can't perform an Extio Central Manager software reboot.	Keeps all of your device settings, including the IP configuration and password.
Configuration reset	- Your Extio device is still listed as unresponsive (yellow device tile) after a hardware reboot. - You're changing the operation mode of your Extio device.	Resets all of your device settings, including the IP configuration and password.

Software reboot

Extio Central Manager

From the Extio Central Manager main interface, click the **Reboot** button to reboot your device.

For more information on Extio Central Manager software, see your Extio Central Manager user guide.



OSD (point-to-point mode only)

From the OSD main interface, click **Reboot transmitter** to reboot your transmitter device or **Reboot receiver** to reboot your receiver device.

Reboot transmitter

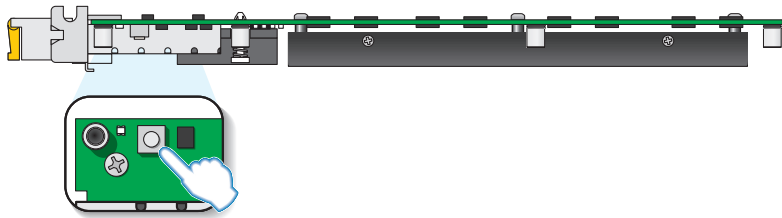
Reboot receiver

Hardware reboot or configuration reset



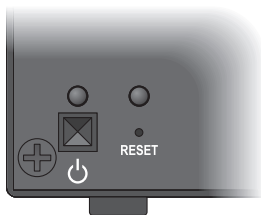
WARNING: A configuration reset restores the default settings of your Extio 3 device. This *resets all of* your device settings, including the IP configuration and password.

Extio N3408 or N3208 transmitter card



- **Hardware reboot** – Quickly press the button (*1 second*) to reboot your device.
- **Configuration reset** – Press and hold the button for *4-5 seconds* (until the LED turns fast blinking green) to reboot your device and restore the default settings.

Rebooting your Extio N3408 or N3208 unit



- **Hardware reboot** – Press and hold the **Reset** button on your device with the tip of a paper clip for *less than 2 seconds* (until the LED turns slow blinking green) to reboot your device.
- **Configuration reset** – Press and hold the **Reset** button on your device with the tip of a paper clip for *4-5 seconds* (until the LED turns fast blinking green) to reboot your device and restore the default settings.

Changing the operation mode of your devices

If you change the operation mode of your Extio 3 configuration (for example, changing from networked mode to point-to-point mode, or vice versa), you need to do the following:

- 1 Disconnect the network cables from your Matrox transmitter device and receiver device (see [“Connecting your Extio 3 devices”](#)).
- 2 Perform a configuration reset on your transmitter device and receiver device (see [“Hardware reboot or configuration reset”](#), page 42).
- 3 Change the connection setup of your devices (see [“Connecting your Extio 3 devices”](#), page 14).
- 4 Reboot both your Matrox transmitter device and receiver devices (see [“Rebooting or resetting your Extio 3 device”](#), page 41).
- 5 Configure your Extio 3 devices again:
 - **Networked mode** – use Extio Central Manager software to configure your devices. For more information, see your Matrox Extio Central Manager user guide.
 - **Point-to-Point mode** – use the OSD to configure your devices (see [“Setting up point-to-point mode”](#), page 37).

Troubleshooting

What to do if you have a problem

If you experience problems with your Matrox product:

- Make sure your Matrox device is properly installed, you're using the correct connectors, and that all connectors are properly fastened.
- Try rebooting or resetting your device (see [“Rebooting or resetting your Extio 3 device”](#), page 41).
- Make sure you have administrator rights on the system you want to use. For more information, see Windows documentation.
- For more information on problems related to Matrox Extio Central Manager software, see the Matrox Extio Central Manager User Guide.

If your problem persists, contact Matrox. For more information, see [“Customer support”](#), page 57.

Common problems and solutions

This section addresses specific problems to your Matrox product that could prevent you from using your system or product.

Problem After changing operation mode, Extio 3 device doesn't work

Cause Your Extio device may be trying to use settings that no longer exist.

Solution Try performing a configuration reset of your Extio devices. A configuration reset restores the default settings of your Extio 3 device. For more information, see [“Changing the operation mode of your devices”](#), page 43.

Problem Extio device not discovered on the network

Cause Your Matrox product may not be properly installed or connected.

Solution Verify the connection and status LEDs on your Matrox product (see [“Validating your Extio 3 setup”](#), page 12). Also, make sure your Matrox product is properly installed or connected, and that all connectors are properly fastened.

Cause Windows Server 2016/2012 R2/2008 R2 only – The Windows SSDP Discovery service may be disabled on your system.

Solution Make sure the SSDP Discovery service is enabled on your system.

Cause Network discovery and file sharing may not be enabled on your system.

Solution Enable network discovery and file sharing on your system.

Cause The firewall for your system or for your network may be enabled and may prevent communication with your Extio devices.

Solution Make sure your firewall is properly configured to allow the necessary communication between your Extio devices and the various networked components. For more information, see “Appendix B – Firewall requirements”, page 52.

Problem Random display flickering occurs while using a point-to-point connection

Cause Your video output is unstable, or you may be using a fixed frequency monitor.

Solution Point-to-point mode only – In the OSD, click **Settings** → **Audio/Video** → **Monitors**. Make sure the **Stabilize display output** option is enabled.

Product information

Hardware specifications

Extio 3 transmitter card

	Extio N3408 transmitter card	Extio N3208 transmitter card
Product type	PCIe x16 card (x8 electrical and mechanical, x16 mechanical)	PCIe x16 card (x8 electrical and mechanical, x16 mechanical)
Form factor	Full height	Full height
Video input connectors	4x Mini DisplayPort	2x Mini DisplayPort
DisplayPort 1.1	✓	✓
DisplayPort 1.2	✓*	—
Color space	YUV 4:4:4 RGB 8:8:8	YUV 4:4:4 RGB 8:8:8
Networking interface	1000 Base-T Ethernet	1000 Base-T Ethernet
SFP cage	✓	✓
RJ45 copper transceiver	✓	✓
SFP fiber module	Optional	Optional
Proxy stream resolution	1x 1920 x 1080 @ 60 Hz YUV 4:2:0	1x 1920 x 1080 @ 60 Hz YUV 4:2:0
Power consumption	32W	TBD
Laser emission†	850 µm laser compliant to 21CFR, Subpart J, Class 1	
Certifications	Class A: ACMA, CE, FCC, ICES, VCCI, Korea	

* DisplayPort version 1.2 is supported on connector labeled 4 only.

† Only when using a multi-mode SFP module.

Extio 3 transmitter unit

	Extio N3408 transmitter unit	Extio N3208 transmitter unit
Product type	Standalone appliance	Standalone appliance
Form factor	1 RU, half width	1 RU, half width
Video input connectors	4× DisplayPort (with stereo L-PCM audio)	2× DisplayPort (with stereo L-PCM audio)
Video output connectors	1× DisplayPort (for local console)	1× DisplayPort (for local console)
Audio input connector (analog)	1× mini-stereo jack	1× mini-stereo jack
Audio output connector	1× mini-stereo jack	1× mini-stereo jack
RS232 connector	1× DE9 (or DB9) – Female	1× DE9 (or DB9) – Female
Networking interface	1000 Base-T Ethernet	1000 Base-T Ethernet
SFP cage	✓	✓
RJ45 copper transceiver	✓	✓
SFP fiber module	Optional	Optional
USB ports	2× USB 2.0 (front), 1× USB 2.0 (back)	2× USB 2.0 (front), 1× USB 2.0 (back)
DisplayPort version 1.1	✓	✓
DisplayPort version 1.2	✓*	—
Color space	YUV 4:4:4 RGB 8:8:8	YUV 4:4:4 RGB 8:8:8
Maximum input resolution†	4× 1920 × 1080 @60 Hz, 3× 1920 × 1200 @60 Hz, 2× 2560 × 1600 @60 Hz, 2× 3840 × 2160 @30 Hz, 1× 3840 × 2160 @60 Hz	2× 1920 × 1200 @60 Hz, 1× 2560 × 1600 @60 Hz
Proxy stream resolution	1× 1920 × 1080 @ 60 Hz YUV 4:2:0	1× 1920 × 1080 @ 60 Hz YUV 4:2:0
Power requirements‡	+12 V DC, maximum 5 A (5 A fuse for overcurrent protection)	+12 V DC, maximum 5 A (5 A fuse for overcurrent protection)
Power connector	DIN 4 female (4-pin)	DIN 4 female (4-pin)
Power consumption	44W	TBD
Laser emissions§	850 µm laser compliant to 21CFR, Subpart J, Class 1	
Certifications	Class A: ACMA, CE, CSA, FCC, ICES, VCCI, Korea	

* DisplayPort version 1.2 is supported on connector labeled **4** only.

† Additional display resolutions may be available. For more information, contact your Matrox representative.

‡ Only use the power supply originally supplied by Matrox with your Matrox Extio 3 Series product.

§ Only when using a multi-mode SFP module.

Extio 3 receiver unit

	Extio N3408 receiver unit	Extio N3208 receiver unit
Product type	Standalone appliance	Standalone appliance
Form factor	1 RU, half width	1 RU, half width
Video output connectors	4× DisplayPort (with stereo L-PCM audio)	2× DisplayPort (with stereo L-PCM audio)
Audio input connector (analog)	4× mini-stereo jacks	4× mini-stereo jacks
Audio output connector	1× mini-stereo jack	1× mini-stereo jack
Microphone input	1× mini-stereo jack	1× mini-stereo jack
RS232 connector	1× DE9 (or DB9) – Male	1× DE9 (or DB9) – Male
Networking interface	1000 Base-T Ethernet	1000 Base-T Ethernet
USB ports	6× USB 2.0 (front)	4× USB 2.0 (front)
DisplayPort version 1.1	✓	✓
DisplayPort version 1.2	✓*	—
Color space	YUV 4:4:4 RGB 8:8:8	YUV 4:4:4 RGB 8:8:8
Maximum output resolution†	4× 1920 × 1080 @60 Hz, 3× 1920 × 1200 @60 Hz, 2× 2560 × 1600 @60 Hz, 2× 3840 × 2160 @30 Hz, 1× 3840 × 2160 @60 Hz	2× 1920 × 1200 @60 Hz, 1× 2560 × 1600 @60 Hz
Proxy stream resolution	1× 1920 × 1080 @ 60 Hz YUV 4:2:0	1× 1920 × 1080 @ 60 Hz YUV 4:2:0
Power requirements‡	+12 V DC, maximum 5 A (5 A fuse for overcurrent protection)	+12 V DC, maximum 5 A (5 A fuse for overcurrent protection)
Power connector	DIN 4 female (4-pin)	DIN 4 female (4-pin)
Power consumption	41W	TBD
Laser emissions§	850 µm laser compliant to 21CFR, Subpart J, Class 1	
Certifications	Class A: ACMA, CE, CSA, FCC, ICES, VCCI, Korea	

* DisplayPort version 1.2 is supported on connector labeled **4** only.

† Additional display resolutions may be available. For more information, contact your Matrox representative.

‡ Only use the power supply originally supplied by Matrox with your Matrox Extio 3 Series product.

§ Only when using a multi-mode SFP module.

Product dimensions

	Extio N3408/N3208 transmitter unit	Extio N3408/N3408 receiver unit
Length	18.9 cm (7.45 inches)	18.9 cm (7.45 inches)
Height	4.26 cm (1.676 inches)	4.26 cm (1.676 inches)
Width/Depth	21.66 cm (8.526 inches)	21.66 cm (8.526 inches)

Maximum distance (point-to-point)*

	Extio N3408/N3208 transmitter card	Extio N3408/N3208 transmitter unit	Extio N3408/N3408 receiver unit
OM2, OM3, OM4 (50/125µm) multi-mode cable type		550 m (1804 feet)	
OM1 (62.5/125µm) multi-mode cable type		275 m (902 feet)	
OS1, OS2 (9/125µm) single-mode cable type		5 km (3.10 miles)	
CAT5e, CAT6		100 m (328 feet)	

* Longer distances are supported in networked mode. For more information, contact your Matrox representative.

External power supply*

	Extio N3408/N3208 transmitter unit	Extio N3408/N3208 receiver unit
Input AC voltage range	100V to 240V AC	
Input frequency	50 to 60 Hz	
Input connector	IEC 60320-C13	
Output voltage	+12V DC, 5A	
Output connector	DIN 4 male (4-pin) with lock	
Maximum power	60W	

Environmental

Temperature, operational	Operating: 0 to 40 °C (32 to 104 °F)
Temperature, non-operational storage and transportation	-40 to 70 °C (-40 to 158 °F)
Humidity, operational (indoor)	20 to 80% (non-condensing)
Humidity, non-operational storage and transportation	5% to 95% (non-condensing)
Atmospheric pressure, operational	650hPa (3,580 meters / 11,745 feet) to 1013hPa (0 meters / 0 feet)
Atmospheric pressure, non-operational and transportation	192hPa (12,000 meters / 39,370 feet) to 1020hPa (-50 meters / -164 feet)

* Only use the power supply originally supplied by Matrox with your Matrox Extio 3 Series product.

Appendix A – Providing adequate airflow to your Extio 3 device

Extio N3408/N3208 transmitter and receiver units only – Because your Extio device disperses heat, it requires adequate airflow to ensure proper operation and to prevent damage. The following provides guidelines for effective airflow around your device.

- **Leave the proper amount of room around your device** – To prevent airflow restriction, we recommend allowing *at least* 0.75 inches (1.91 cm) of clearance between the top of your device and anything above it. More space may be required depending on your environment.

When your device is resting on a plain surface, make sure your device is resting on the original rubber feet.

- **Operate your device in a well ventilated location** – Don't operate your device near a heat source or restrict airflow to your device (for example, by operating your device inside a desk cabinet).
- **Monitor your ambient temperatures** – Make sure the ambient temperature doesn't exceed the maximum recommended temperatures.

For more information on supported operating temperatures, see [“Environmental”, page 50](#).

Appendix B – Firewall requirements

The following are the firewall requirements for your Extio 3 device.

Extio Central Manager software

The following are the firewall requirements for your controller system.

Network Port	Type	Inbound	Outbound	Functionality
53	TCP	—	✓	DNS: DNS requests
443*	TCP	—	✓	HTTPS: Central Manager commands
1900*	UDP	✓	✓	UPnP: Microsoft SSDP for discovery of UPnP devices
		✓	✓	Note: ICMP must be enabled (ping).

* Minimum requirements.

Firmware updater

The following are the firewall requirements for a system running the Matrox Firmware Updater.

Network Port	Type	Inbound	Outbound	Functionality
20,21	TCP	—	✓	FTP: File upload
22*	TCP	✓	✓	SSH: Firmware update
443*	TCP	—	✓	HTTPS: Authentication
1900*	UDP	✓	✓	UPnP: Microsoft SSDP for discovery of UPnP devices

* Minimum requirements.

Extio 3 devices

The following are the requirements for a network firewall present on a network with an Extio 3 environment.

Network Port	Type	Inbound	Outbound	Functionality
20,21	TCP	✓	—	FTP : File download (firmware)
22*	TCP	✓	✓	SSH : Firmware update
69	UDP	—	✓	DHCP : DHCP client
123	UDP	✓	✓	NTP : Network Time Protocol
161	UDP	✓	✓	SNMP : Network management (public community string)
443*	TCP	✓	—	HTTPS : Extio Central Manager commands and Firmware Updater Authentication
1900*	UDP	✓	✓	UPnP : Microsoft SSDP for discovery of UPnP devices
6720-6744, 6792-6798, 6804-6810	UDP	✓	✓	RTP/RTCP : Audio and video streams and control
8554, 3049*	TCP	✓	✓	RTSP : Streaming (configurable)
12000	TCP	✓	✓	RS232 : RS232 virtualization

* Minimum requirements.

Accessing your Windows Firewall settings



Note: You may need administrator rights to modify your Windows Firewall settings. For more information, see Windows documentation or contact your system administrator.

To access your Windows Firewall settings:

Windows 10/7 –

- 1 Windows 10 – Click **Start** → **Settings** → **Network & Internet** → **Ethernet** → **Windows Firewall**.

Windows 7 – Click **Control Panel** → **Network and Internet*** → **Network and Sharing Center**. (* Depending on your configuration, these steps may be unnecessary.)

- 2 Windows 10 – In the left panel, click **Advanced Settings**.

Windows 7 – In the left panel, click **Windows Firewall** → **Advanced Settings**.

Adding rules to your Windows Firewall settings



Note: You may need administrator rights to modify your Windows Firewall settings. For more information, see Windows documentation or contact your system administrator.

Windows 10/7 –

- 1 Windows 10 – Click **Start** → **Settings** → **Network & Internet** → **Ethernet** → **Windows Firewall**.

Windows 7 – Click **Control Panel** → **Network and Internet*** → **Network and Sharing Center***. (* Depending on your configuration, these steps may be unnecessary.)

- 2 Windows 10 – In the left panel, click **Advanced Settings**.

Windows 7 – In the left panel, click **Windows Firewall** → **Advanced Settings**.

- 3 Click **Inbound Rules**.

- 4 In the **Actions** panel, click **New Rule**. Configure the new rule with the following settings:

- **Rule** – Select **Custom**.
- **Program** – Select **All programs**.
- **Protocol and Ports** – Next to **Protocol**, select **TCP**. Next to **Local port**, select **Specific ports**. For the port number, enter **445**. Next to **Remote port**, select **All Ports**.
- **Scope** – Under the remote IP address, add the IP range you want to use for your transmitter. You can use a range (such as *192.168.1.0/24*) or a single IP address (such as *192.152.168.62*).
- **Action** – Select **Allow the connection**.
- **Profile** – Select the network location of your system (**Domain**, **Private**, or **Public**).
- **Name** – Enter the name for your rule (such as *Extio 3 – TCP rule*).

- 5 In the **Actions** panel, click **New Rule**. Configure the new rule with the following settings:

- **Rule type** – Select **Custom**.
- **Program** – Select **All programs**.
- **Protocol and Ports** – Under **Protocol type**, select **ICMPv4**.
- **Scope** – Under the remote IP address, add the IP range you want to use for your transmitter. You can use a range (such as *192.168.1.0/24*) or a single IP address (such as *192.152.168.62*).
- **Action** – Select **Allow the connection**.

- **Profile** – Select the network location of your system (**Domain**, **Private**, or **Public**).
- **Name** – Enter the name for your rule (such as *Extio 3 – ICMPv4 rule*).

For more information on configuring your Windows firewall, see your network administrator.

Appendix C – Mounting your devices

This section provides guidelines for mounting your Extio N3408 or N3208 device.

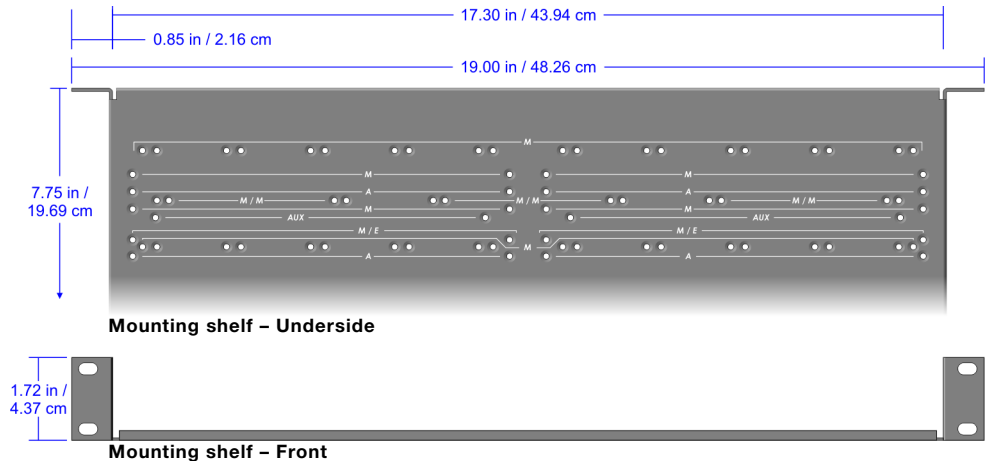
Mounting guidelines

To prevent damage to your Matrox hardware, read the following guidelines before mounting your Matrox hardware:

- Make sure not to block the ventilation holes on your device.
- Don't stack anything directly over the device.
- Make sure all cables and cords are slack.
- Make sure the ambient temperature doesn't exceed the maximum recommended temperatures.

Mounting your Extio 3 device

You can mount two (2) devices horizontally on a single shelf.



- To mount your device, use the holes labeled **M/E**. These holes are 3.15 inches (8.00 cm) from the front edge of the mounting shelf.
- Your device has two (2) mounting holes under its casing. Use two (2) 6 mm M3 flat-head screws (included in the kit) to secure each device. You need to remove the four (4) rubber pads under your device before you can secure your device to the shelf.

Customer support

Matrox web

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

Technical support

Matrox values your business and offers professional support for your Matrox product.

If your product was purchased through a Matrox dealer, contact your dealer for product support. This is the quickest and most effective method of technical assistance. Your dealer is familiar with your complete system.

If your product was purchased through Matrox, contact your Matrox representative or visit our technical support Web site at www.matrox.com/graphics/support.

Information we need

Please give a complete description of the problem, and include:

- Matrox product serial number, model number, revision number, and firmware number.
- Source specifications.
- Control system (system running Extio Central Manager) specifications.
- Specific Extio Central Manager or OSD (On-Screen Display) options and features used.

View your warranty information

Matrox makes warranty information available on the Matrox site (www.matrox.com/warranty).

View the third party software notices

Matrox makes third party software notices and/or additional terms and conditions available on the Matrox site (thirdpartylicenses.matrox.com).

Register your Matrox product

Please register online (www.matrox.com/graphics/en/registration) to be eligible for customer support, new product announcements, and information on special offers and upcoming events.

Hot surface Allow hot surfaces to cool before touching your Matrox unit.

Surface chaude Laissez refroidir les surfaces chaudes avant de toucher votre appareil Matrox.

Battery replacement The battery is non replaceable. To dispose of your product, see www.matrox.com/environment/weee.

Remplacement des piles La pile n'est pas remplaçable. Pour se défaire du produit, voir www.matrox.com/environment/weee.



USA

FCC Compliance Statement

Remark for the Matrox hardware products supported by this guide This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING Changes or modifications to this unit not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment. The use of shielded cables for connection of the monitor to the card is required to meet FCC requirements.

CANADA

(English) Industry Canada Compliance Statement

Remark for the Matrox hardware products supported by this guide These digital apparatus does not exceed the Class A limits for radio noise emission from digital devices set out in the Radio Interference Regulation of Industry Canada.

(Français) Conformité avec les exigences du ministère de l'Industrie Canada

Remarque sur les produits matériels Matrox couverts par ce guide Ce présent appareil numérique n'émet aucun bruit radioélectrique dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada.

JAPAN

VCCI Compliance Statement

Remark for the Matrox hardware products supported by this guide This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

KOREA

A 급 기기 (업무용 방송통신기자재)

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(English) European user's information – Declaration of Conformity

Remark for the Matrox hardware products supported by this guide These devices comply with EC Directive 2014/30/EU for a Class A digital device. They have been tested and found to comply with EN55022/CISPR22 and EN55024/CISPR24. In a domestic environment these products may cause radio interference in which case the user may be required to take adequate measures. To meet EC requirements, shielded cables must be used to connect the monitor and other peripherals to the card. These products have been tested in a typical class A compliant host system. It is assumed that these products will also achieve compliance in any class A compliant system.

(Français) Informations aux utilisateurs Européens – Déclaration de conformité

Remarque sur les produits matériels Matrox couverts par ce guide Ces unités sont conformes à la directive communautaire 2014/30/EU pour les unités numériques de classe A. Les tests effectués ont prouvé qu'elles sont conformes aux normes EN55022/CISPR22 et EN55024/CISPR24. Le fonctionnement de ces produits dans un environnement résidentiel peut causer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre les mesures appropriées. Pour respecter les impératifs communautaires, les câbles de connexion entre le moniteur ou autres périphériques et la carte doivent être blindés. Ces produits ont été testés dans un système hôte typique compatible classe A. On suppose qu'ils présenteront la même compatibilité dans tout système compatible classe A.

(Deutsch) Information für europäische Anwender – Konformitätserklärung

Anmerkung für die Matrox Hardware-Produktunterstützung durch dieses Handbuch Diese Geräte entsprechen EC Direktive 2014/30/EU für ein digitales Gerät Klasse A. Sie wurden getestet und entsprechen demnach EN55022/CISPR22 und EN55024/CISPR24. In einer Wohnumgebung können diese Produkte Funkinterferenzen erzeugen, und der Benutzer kann genötigt sein, entsprechende Maßnahmen zu ergreifen. Um EG-Anforderungen zu entsprechen, müssen zum Anschließen des Monitors und anderer Peripheriegeräte an die Karte abgeschirmte Kabel verwendet werden. Diese Produkt wurden in einem typischen, der Klasse A entsprechenden, Host-System getestet. Es wird davon ausgegangen, daß diese Produkte auch in jedem Klasse A entsprechenden System entsprechend funktionieren.

(Italiano) Informazioni per gli utenti europei – Dichiarazione di conformità

Nota per i prodotti hardware Matrox supportati da questa guida Questi dispositivi sono conformi alla direttiva CEE 2014/30/EU relativamente ai dispositivi digitali di Classe A. Sono stati provati e sono risultati conformi alle norme EN55022/CISPR22 e EN55024/CISPR24. In un ambiente domestico, questi prodotti possono causare radiointerferenze, nel qual caso all'utente potrebbe venire richiesto di prendere le misure adeguate. Per soddisfare i requisiti CEE, il monitor e le altre periferiche vanno collegati alla scheda grafica con cavi schermati. Questi prodotti sono stati provati in un tipico sistema host conforme alla classe A. Inoltre, si dà per scontato che questi prodotti acquisiranno la conformità in qualsiasi sistema conforme alla classe A.

(Español) Información para usuarios europeos – Declaración de conformidad

Observación referente a los productos de hardware de Matrox apoyados por este manual Estos dispositivos cumplen con la directiva de la CE 2014/30/EU para dispositivos digitales de Clase A. Dichos dispositivos han sido sometidos a prueba y se ha comprobado que cumplen con las normas EN55022/CISPR22 y EN55024/CISPR24. En entornos residenciales, estos productos pueden causar interferencias en las comunicaciones por radio; en tal caso el usuario deberá adoptar las medidas adecuadas. Para satisfacer las disposiciones de la CE, deberán utilizarse cables apantallados para conectar el monitor y demás periféricos a la tarjeta. Estos productos han sido sometidos a prueba en un típico sistema anfitrión que responde a los requisitos de la clase A. Se supone que estos productos cumplirán también con las normas en cualquier sistema que responda a los requisitos de la clase A.

(English) European user's information – Directive on Waste Electrical and Electronic Equipment (WEEE)

Please refer to the Matrox Web site (www.matrox.com/environment/en/weee) for recycling information.

**(Français) Informations aux utilisateurs Européens – Règlementation des déchets d'équipements électriques et électroniques (DEEE)**

Se référer au site Web de Matrox (www.matrox.com/environment/en/weee) pour l'information concernant le recyclage.

(Deutsch) Information für europäische Anwender – Europäische Regelungen zu Elektro- und Elektronikaltgeräten (WEEE)

Bitte wenden Sie sich an der Matrox-Website (www.matrox.com/environment/en/weee) für Recycling-Informationen.

(Italiano) Informazioni per gli utenti europei – Direttiva sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE)

Si prega di riferirsi al sito Web Matrox (www.matrox.com/environment/en/weee) per le informazioni di riciclaggio.

FRANCE

Avertissement sur l'épilepsie

À lire avant toute utilisation d'un jeu vidéo par vous-même ou votre enfant Certaines personnes sont susceptibles de faire des crises d'épilepsie ou d'avoir des pertes de conscience à la vue de certains types de lumières clignotantes ou d'éléments fréquents dans notre environnement quotidien. Ces personnes s'exposent à des crises lorsqu'elles regardent certaines images télévisées ou qu'elles jouent à certains jeux vidéo. Ces phénomènes peuvent apparaître alors même que le sujet n'a pas d'antécédent médical ou n'a jamais été confronté à une crise d'épilepsie.

Si vous-même ou un membre de votre famille avez déjà présenté des symptômes liés à l'épilepsie (crise ou perte de conscience) en présence de stimulations lumineuses, veuillez consulter votre médecin avant toute utilisation.

Nous conseillons aux parents d'être attentifs à leurs enfants lorsqu'ils jouent avec des jeux vidéo. Si vous-même ou votre enfant présentez un des symptômes suivants: vertige, trouble de la vision, contraction des yeux ou des muscles, perte de conscience, trouble de l'orientation, mouvement involontaire ou convulsion, veuillez immédiatement cesser de jouer et consultez un médecin.

Précautions à prendre dans tous les cas pour l'utilisation d'un jeu vidéo Ne vous tenez pas trop près de l'écran.

- Jouez à bonne distance de l'écran de TV et aussi loin que le permet le cordon de raccordement.
- Utilisez de préférence les jeux de vidéo sur un écran de petite taille.
- Évitez de jouer si vous êtes fatigué ou si vous manquez de sommeil.
- Assurez-vous que vous jouez dans une pièce bien éclairée.
- En cours d'utilisation, faites des pauses de dix à quinze minutes toutes les heures.

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