Matrox® **Maevex™ 6020 Remote Recorder**

User Guide

www.matrox.com/video

matrox®

Contents

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.

- **Caution: Hot Surface, Do Not Touch**
  Your Matrox product can become hot while operating. Ensure that your computer cover is secured in place before turning it on.

  Always turn off your computer, unplug it, and then wait for it to cool before removing the cover of your computer to touch any of its internal parts or to install your Matrox card. Allow hot surfaces to cool before touching your Matrox unit.

- **Attention: Surface chaude, ne pas toucher**
  Votre produit Matrox peut devenir chaud durant son fonctionnement. Assurez-vous de bien fermer le couvercle de votre ordinateur avant de l'allumer.

  Éteignez votre ordinateur, débranchez-le et attendez qu'il refroidisse avant d'ouvrir son couvercle pour accéder à ses parties internes ou pour installer votre carte Matrox. Laissez les surfaces chaudes refroidir avant de toucher votre appareil Matrox.

- 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.

- Any AC-powered product must be connected to a grounded outlet installed by a licensed electrician. 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 a licensed 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 Maevex 6020 Remote Recorder. Your Matrox Maevex 6020 product is a dedicated multi-encoder and multi-recorder device designed specifically for the Panopto™ online video management platform.

Hardware supplied*

- Maevex 6020 remote recorder device, 1 power supply
- 3.5 mm Male to 2 RCA Female stereo adapter (6 inch)

Hardware required (sold separately)

- Network cable (CAT 5, 5e, 6, or 7)
- Shielded HDMI® cable or certified high-speed HDMI cable

Optional hardware (sold separately)

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

- Kuando™ Busylight
- Analog audio cable
- Microphone
- HDMI cable or adapter (for your monitor type)
- DisplayPort cable or active adapter (for your monitor type)†
- USB to serial adapter

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* 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.

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

More information

- **Matrox hardware** – Your Matrox user guide provides information on installing and connecting and configuring your Matrox hardware. Be sure to check for any last-minute release notes included with your product. Also, check the Matrox web site (www.matrox.com/video) for the latest Matrox software, technical support, and product information.

- **Panopto software** – For more information on scheduling and managing your recordings, see your Panopto documentation.

Getting started

Maevex 6020 Remote Recorder provides hardware streaming and recording technology that's integrated into the Panopto™ cloud video platform. Your Maevex device has two (2) 1080p inputs with multiple on-device quality recordings per input and two channels of 1080p live streaming while recording multiple sessions. The recorded sessions are simultaneously saved to the device's solid state drive (SSD) and uploaded to the Panopto cloud for immediate delivery, video-on-demand (VOD), or later transmission.
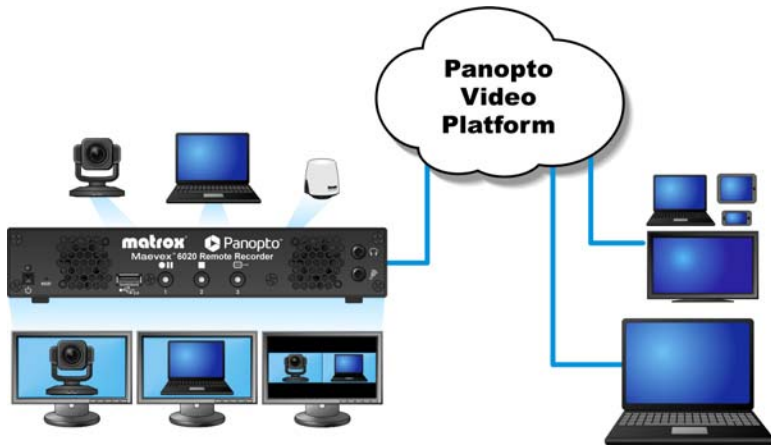
Before you begin

We recommend you have the following:

- IP address or host name for your remote recorder

- NTP (Network Time Protocol) server

- DHCP (Dynamic Host Configuration Protocol) server

- DNS (Domain Name System) server

- System running Microsoft® Windows®

- One output device (monitor) for previewing your recording session

- Camera or video source

- Panopto account

Setup overview

To set up your Matrox product:

1 Connect your product – see "Connecting your Maevex remote recorder", page 12.

2 Validate your setup – see "Validating your Maevex setup", page 19.

3 Configure your product – see "Using your configuration and firmware utility", page 25.

4 Manage your recordings – see "Managing your recordings", page 36.

Connecting your Maevex remote recorder

Before you begin

- Whenever you change your connection setup, make sure you're using the correct connectors and that all connectors are properly fastened.

- Don't connect or change input connections while your Maevex device is turned on. If connections are changed while your Maevex device is turned on, your devices may not be properly detected or your video sources may be lost. For more information, see "Notes and limitations", page 47.

- Review the safety information provided. For more information, see "Matrox safety information", page 5.

Connection overview

Maevex 6020 remote recorder (Front)

Power button

Control buttons

USB (Front)

Headphone   Microphone

Maevex 6020 remote recorder (Back)

HDMI In
(source)

Line In
(source)

HDMI IN 1   HDMI IN 2

HDMI OUT 1   HDMI OUT 2

12V ⎓ 5A

HDMI Out
(monitor)

DisplayPort
(console display)

USB (Back)

LAN
(network)

12V d.c. power
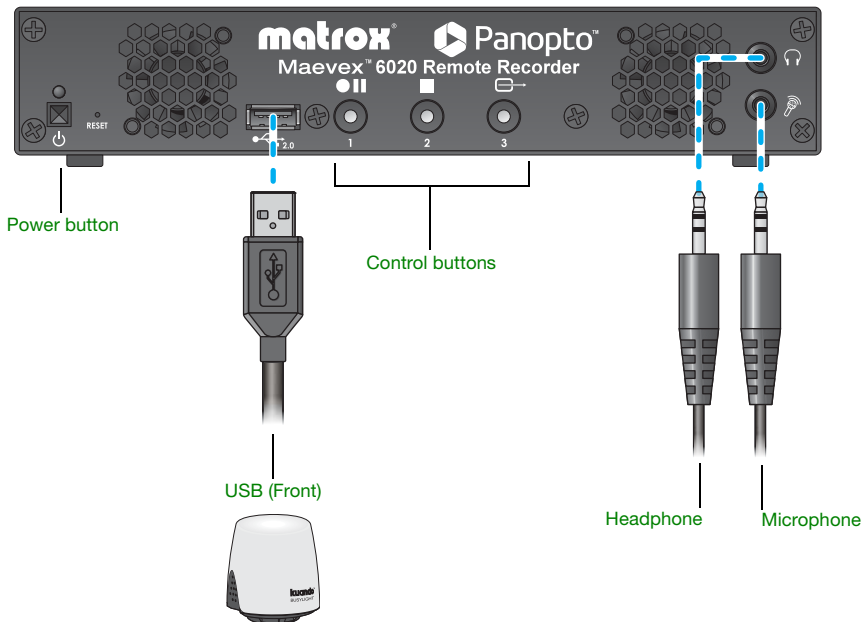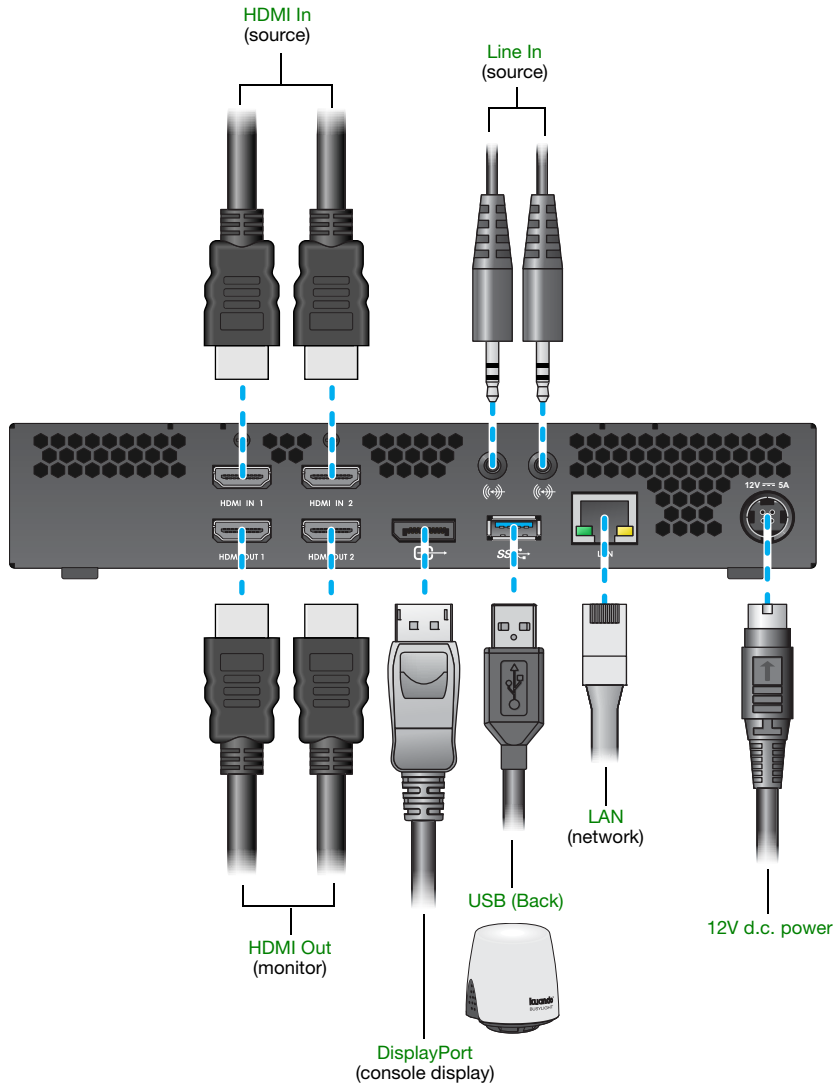
Description of supported connections

| Connector	Description
12V d.c. power	Connect the 12V d.c.power supply included with your product to this connector. While the 12V d.c. power supply is connected to the device and electrical socket, the power LED (⏻) is active (not black). For more information on LEDs, see "Description of status LEDs", page 19.
Control buttons	Use these buttons to manually control the recording process. For more information, see "Starting a recording manually", page 36.
DisplayPort	**Optional** – Connect a DisplayPort monitor to this connector to use as a console display. You can use a console display to preview your video source and what's being recorded. **Note:** Your DisplayPort monitor must support a resolution of 1280 × 720. For more information, see "Notes and limitations", page 47.
Headphone	**Optional** – Connect your headphones to this jack.
HDMI In	Connect your camera or video source to this connector. **Note:** To connect to this connector, you need a shielded HDMI cable or certified high-speed HDMI cable.
HDMI Out	**Optional** – Connect a digital monitor to this connector. **Note:** To connect to this connector, you need a shielded HDMI cable.
LAN	Connect a network cable to this connector.
Line In	**Optional** – Connect the analog audio output of your video source to this jack.
Microphone	**Optional** – Connect your microphone to this jack. **Note:** Audio priority is given to the microphone connector. For more information, see "No audio", page 42.
Power button	Use the power button (⏻) to power your device on or off. For more information, Powering your device on and off.
USB (Front) **USB (Back)**	▪ **Optional** – Connect your Kuando™ Busylight UC Omega device either to the **USB 2.0** connector (front) or to the **USB 3.0** connector (back) on your Maevex device. ▪ **Optional** – Connect a USB to serial adapter to connect your RS232 device to your remote recorder unit. For more information on enabling RS232, see "Advanced settings", page 27. ▪ **Optional** – Connect your external storage device to copy your last recorded session to a USB flash drive. For more information, see "Advanced settings", page 27.

Step-by-step connection setup

This section guides you through the step-by-step connection setup of your Maevex 6020 remote recorder.

1   Connect your camera

Connect your camera to the **HDMI In 1** connector on your remote recorder unit.
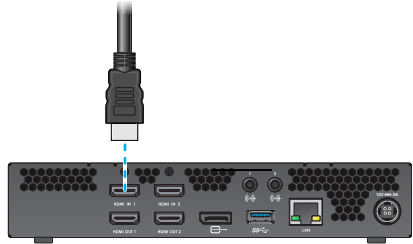
2   Connect your video source

If you're using a video source (such as a laptop), connect your video source to the **HDMI In 2** connector on your remote recorder unit.
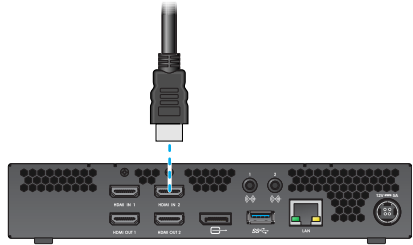
3   Connect your monitor

Connect the monitor cable to the **HDMI Out 1** connector on your remote recorder unit.

If you're connecting a second monitor, connect the monitor cable to the **HDMI Out 2** connector on your remote recorder unit.

If your monitor doesn't support HDMI output, use an HDMI adapter to connect your monitor to your remote recorder unit.
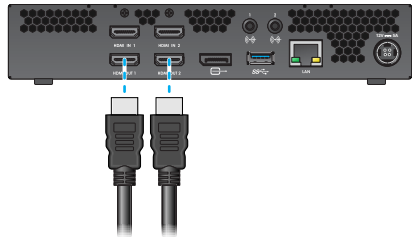
4 Connect your console display (optional)

If you're connecting a console display to your unit, connect the monitor cable to the **DisplayPort** connector on your remote recorder unit.
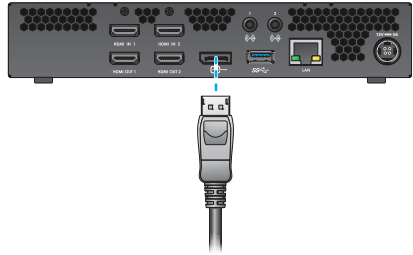
i **Note:** The DisplayPort console display connector is automatically disabled if no console display is connected. To make sure your display console is properly detected, connect your console display *before* turning on your device.

5 Connect your USB device (optional)

If you're connecting a USB device to your unit (for example, a Kuando™ Busylight UC Omega device or external storage device), connect the USB cable to the **USB (Back)** connector on your remote recorder unit.
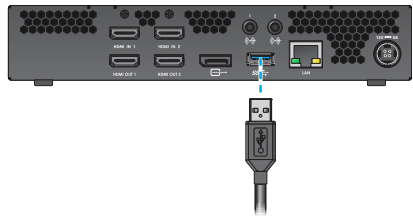
If you need to connect an RS232 controller device, use a USB to serial adapter to connect your RS232 device to your remote recorder unit.

6 Connect to your network

Connect a network cable to the **LAN** connector on your remote recorder unit.
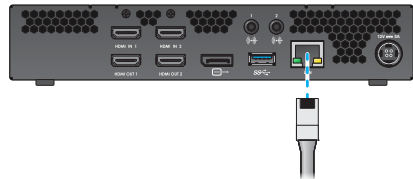
7 Connect your analog audio input (optional)

Connect the analog audio output of your video source to the **Line In** ( ) connector on your remote recorder unit.
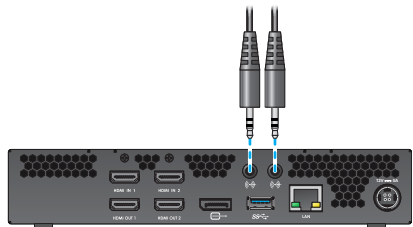
8 Connect your USB device (optional)

If you're connecting a USB device to your unit (for example, a Kuando™ Busylight UC Omega device or external storage device), connect the USB cable to the **USB (Front)** connector on your remote recorder unit.

If you need to connect an RS232 controller device, use a USB to serial adapter to connect your RS232 device to your remote recorder unit.
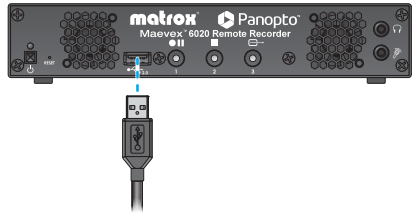
9 Connect your headphone or microphone (optional)

Connect your heaphone to the **Headphone** (🎧) connector on your remote recorder unit.

Connect your microphone to the **Mircrophone** (🎤) connector on your remote recorder unit.

> ℹ️ **Note:** Audio priority is given to the microphone connector. For more information on audio priority, .

10 Connect your power supply

Connect your power supply included with your product to the **12V DC** connector on your remote recorder unit. While the 12V DC power supply is connected to the unit and electrical socket, the power LED (⏻) is active (not black).

For more information on LEDs, .

WARNING: To avoid damaging the power connector on your unit or on your power cable when unplugging a unit, firmly hold the power connector, pull back the connector on the cable, then carefully remove the power cable.
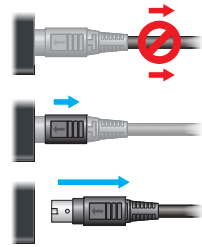
Powering your device on and off

To power on or off your device, press the (⏻) button on your device.

After connecting your Maevex remote recorder, validate your connection setup (see "Validating your Maevex setup", page 19).

More information

After connecting your Matrox device, turn on your device (see "Powering your device on and off", page 18). We recommend you validate your connection setup and network discovery before you continue (see "Validating your Maevex setup", page 19).

After validating Maevex setup, install and configure your Matrox software (see "Configuring your Maevex remote recorder", page 21).

Validating your Maevex setup

After connecting your Maevex devices, we recommend you validate your connection setup and network discovery before you continue.

Connection checklist

After connecting your Maevex device, we recommend you validate your audio and video connections before you continue:

☐ **Audio connection** – Connect headphones to the **Headphone** jack on your remote recorder.

☐ **Video connection** – Connect a console display to the **DisplayPort** connector on your remote recorder.

Description of status LEDs

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

LED color	Maevex 6020 remote recorder
No LED (black)	Device isn't powered.
Green (solid)	Device is active.
Green (standby)	Device has been turned off but is still powered.
Green (slow blink)	Device is rebooting.
Green (fast blink)	Configuration reset in progress.
Amber (solid)	Device is in maintenance mode.
Amber (slow blink)	Device is restarting and is in maintenance mode.
Amber (fast blink)	Device is updating the firmware.
Red (solid)	Device has detected a fatal error. Try powering your device off and on (see "Powering your device on and off", page 18). If, after restarting your device, the LED is still red, contact your vendor for technical support (see "Customer support", page 52).

Network connector

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

Network activity   Network presence
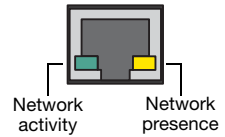
LED color	LAN (Network activity)	LAN (Network presence)
No LED (black)	No network activity detected.	Transmitting at 1 Gbps.
Green (fast blink)	Network activity detected.	—
Amber (solid)	—	Transmitting at 100 Mbps.

Validating network discovery

Maevex 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. For more information, contact your network administrator.

Multiple subnet support

Maevex devices that are in the same subnet are detected through the UPnP (Universal Plug and Play) protocol. If your devices are in different network subnets, you need to validate network discovery in each subnet separately. For more information on using different subnets, contact your network administrator.

After validating your connection setup, configure and update your Matrox Maevex remote recorder (see "Using your configuration and firmware utility", page 25).

Configuring your Maevex remote recorder

This section describes how to configure and update your Matrox Maevex remote recorder.

Before you begin

- Make sure you connect your product *before* configuring it. For more information on connecting your product, see "Connecting your Maevex remote recorder", page 12.

- You may need administrator rights to install or uninstall certain software. For more information, see Windows documentation or contact your system administrator.

- Make sure you have an NTP (Network Time Protocol) server. For more information, contact your network administrator.

- Make sure you have a Panopto account. For more information, contact your Panopto administrator.

- **Windows Server 2019, Windows Server 2016, and Windows Server 2008 R2** – Make sure the SSDP Discovery service, network discovery, and file sharing options are enabled.

- Make sure you're using the *Matrox Maevex 6020 Configuration and Firmware Utility* on a system that's running Microsoft® Windows®.

- Make sure you have a recorder registration key from Panopto. For more information, see "Obtaining a registration key for your remote recorders", page 22.

Assigning an IP address or a host name

To locate a remote recorder, Matrox software uses the device IP addresss through UPnP or the host name through a DNS server. For more information on which network protocol you should use contact your network administrator.

Obtaining a registration key for your remote recorders

To configure your remote recorder, you need a registration key from Panopto:

1 Sign in to the Panopto server as an administrator.

2 Click **System → ☎ Remote Recorders → Manage registration keys → Create a new registration key**.

3 Take note of your registration key. The same registration key can be used for multiple recorders.

Downloading your Matrox Maevex 6020 Configuration and Firmware Utility

Matrox makes the latest software available on the Matrox web site (www.matrox.com/en/video/apps/drivers).

Running your configuration and firmware utility

Run the *MVX-6020_Setup-FW_Util.msi* program locally (not over a network) on a system running Microsoft® Windows® and follow the on-screen instructions.

This installs the *Matrox Maevex 6020 Configuration and Firmware Utility*.

Understanding your configuration and firmware utility

Your Matrox Maevex 6020 configuration and firmware utility guides you through the steps to *enter a device password* for (step 1), *search* for (step 2), and *configure and update* (step 3) your Maevex 6020 devices.
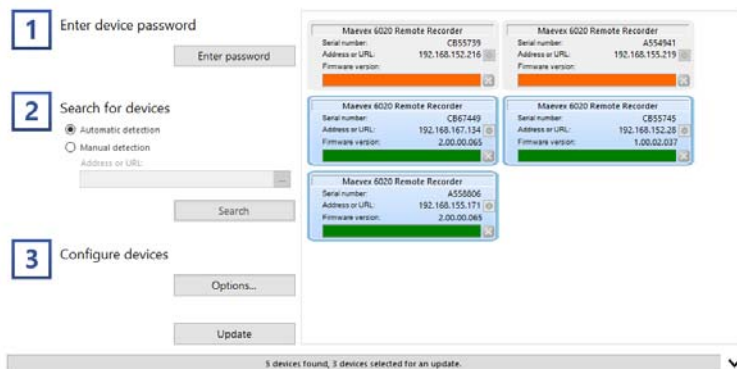
Configuration overview

To configure your devices:

1 **Enter device password** – Enter a password for your Maevex devices (see "Enter device password", page 25).

2 **Search for devices** – Search for the Maevex devices to configure and update by selecting **Automatic detection** or **Manual detection** (see "Search for devices", page 26).

3 **Configure devices** – Configure your device settings (such as your Panopto™ account, your proxy server, and the date and time settings of your Maevex devices), and update the firmware of your devices (see "Configure devices", page 27).

⚠ **WARNING:** For your configuration settings to be properly applied, you must **Update** your devices (complete step 3).

Understanding your device tile

The tile provides the following information about your device.
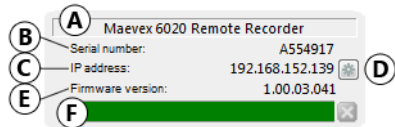
A	Device name.
B	Device serial number or the Panopto friendly name.
C	IP address.
D	Device properties. For more information, see "Understanding the device properties of your remote recorder", page 32.
E	Firmware version.
F	Device status. For more information, see "Understanding your device status", page 23.

Understanding your device status

Depending on the status of a device, the color of the status bar changes:

Detected (Green)	Device is detected and firmware is up to date.
Updating (Yellow)	Device update in progress.

View only (Orange)	Device information can be viewed, but not modified. (Device isn't detected, device is locked or unauthorized, or the firmware is out of date.) For more information, see "Using your configuration and firmware utility", page 25.
Error detected (Grey)	Device has encountered an error. The status and information of the device can't be updated. To fix this, try rebooting your device.
Update failed (Red)	Device update has failed. To fix this, try rebooting your device.
Undetected (Black)	Device can't be detected. When a device is no longer detected, the tile lists the last known IP address of that device. To fix this, review your settings and search for your devices again.

Managing your device tiles

To access the shortcut menu, right-click your device tile. The menu items include:

Sort by	Sort the device tiles listed by **Product name**, **Serial number**, **IP address**, and **Updated status**.
Unselect all devices	Unselect all the devices listed.

Progress update

To see the progress of your device search or update, click the **Show log** (⌄) icon at the bottom of the program window.

Starting the configuration

For more information on configuring your remote recorder, see "Using your configuration and firmware utility", page 25.

Using your configuration and firmware utility

This section describes how to use your configuration and firmware utility.
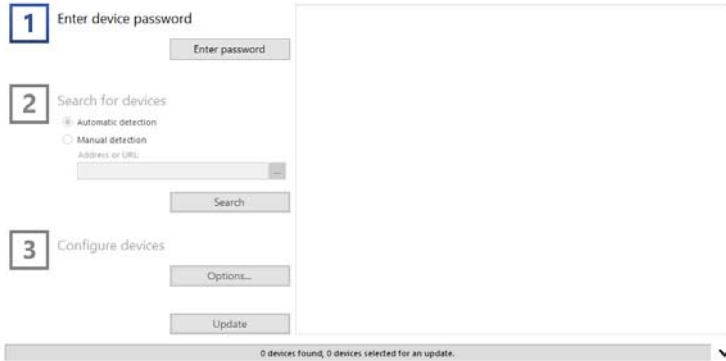
1 Enter device password

Enter a password for your Maevex devices. This prevents unauthorized users from making changes to your device.

Enter password

Click **Enter password** to assign a password to your devices. When you're done, click **OK**.

> ⓘ Note: *We strongly recommend you take note of the password entered.* This password is stored on your devices at the first configuration and firmware update. You will need this password to update or change the configuration of your device.
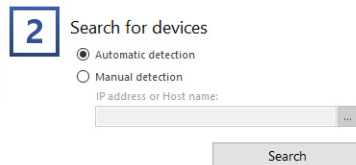
2 Search for devices

Search for the Maevex devices to configure and update by selecting **Automatic detection** or **Manual detection**.

Automatic detection

To search for the Maevex devices on your subnet, select **Automatic detection**.

To start searching for devices, click **Search**.
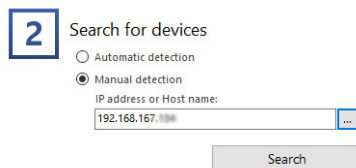
Manual detection

If devices aren't automatically detected, you can manually locate one or more Maevex devices using their IP address or host name. To manually locate the devices, select **Manual detection**, and then enter the IP address or DNS host name of each Maevex device you want to locate.

If you're entering multiple addresses, separate each address with a space. (You can also enter the IP addresses or host names by clicking the browse button (...) and entering one IP address or host name per line.)

When you're done, click **Apply**. To discard the last changes made, click **Cancel**.

To start searching for devices, click **Search**.

Stopping the search

Searching for the Maevex devices on your network may take a few minutes. Once your device or devices are located, you can stop the search. To stop searching for devices, click **Stop**. To resume searching for devices, click **Search** again.

Authenticate the devices found

If a device has a different password (from the password entered in Step 1), you will be prompted to authenticate the devices found.

If prompted, enter the **Password** for the devices found, then click **Authenticate**.

> ⓘ **Note:** If you enter the old password to authenticate your device, you will be able to take control of the device and the device will be updated with the password you entered in step 1. The old device password will then become invalid. If you do not want to update the device password (for example, if the device belongs to someone else), click **Cancel** instead of **Authenticate**.

3 Configure devices

Enter your Panopto™ account information, and configure the **Advanced settings** (such as your proxy server, and the date and time settings) of your Maevex devices.

To configure your devices, click the **Options** button.

Panopto account

Enter your Panopto account information (**Site name** and **Recorder registration key**).

Date and time

The default NTP server name is *time.matrox.com*. If you have your own NTP server, enter the name of your server.

Advanced settings

To view and edit your advanced settings (such as network and serial port settings), click **Advanced settings**.

Network configuration   If your Maevex devices are behind a proxy server, you must set a proxy.

Enable the **Set a proxy** option, then enter the proxy settings (**Server**, **Port**, **User name**, and **Password**) for your system.

For more information, contact your network administrator.

Audio   You can adjust the volume on your HDMI inputs, Line In, Headphone, and Microphone connections. This determines the audio level of your recording from the respective inputs.

Color settings for indicator light   You can adjust the color of your Kuando Busylight to indicate the various states of your remote recorder (**Recording**, **Paused**, and **Error**). You can also adjust the **Brightness** level of your light.

Manual control options

- **Lock power button** – Lock (disable) the power button on the Maevex device to prevent users from pressing the button and shutting down the device.

- **Lock recording button (no manual recording)** – Lock (disable) the record button on the Maevex device to prevent users from pressing the button and starting a recording. For more information on using the record button on your device, see "Starting a recording manually", page 36.

- **Enable alternate API enabled recording commands** – Enable alternate recording commands through the Maevex REST API or the RS232 serial connection. To select this option you must first lock the recording button. When you select this option, you'll have to specify your Panopto credentials and serial port settings.

- **Panopto credentials** – Enter your Panopto account credentials to enable an RS232 (or serial) connection.

- **Serial port** – Enable an RS232 (or serial) connection. To enable RS232, first enter your Panopto account credentials (User name and Password), then specify the following serial port settings:

  - **Baud rate** – The speed, in bits per seconds (or baud), used for the RS232 connection.

  - **Data bits** – The number of bits per block of data transmitted.

- **Stop bits** – The number of bits used to identify the end of a data block.

- **Parity** – The type of parity bits used for the data transmitted.

- **Flow control** – The signal type used to pause and resume data transmission.

Proxy stream options

■ **Enable proxy streams** – This option is disabled by default. When disabled (checkbox is not selected), the other options are greyed out. Select the checkbox to enable proxy streams for remote monitoring. The proxy stream addresses will be displayed in the Maevex 6020 Configuration and Firmware Utility. (You can also find the proxy stream addresses under **Management Links** in the **Configuration** tab of the remote recorder on the Panopto web page.) Streaming starts when the first connection is made. The video for the proxy stream is at a low resolution (lowest level of the quality ladder is used). RTSP proxy streams are available for the primary and the secondary video streams, as well as for the audio of the primary stream.

> ⓘ **Note:** Before enabling proxy streams, make sure you have the necessary bandwidth for the recording uploads and the proxy streaming to occur simultaneously.

- **Disable uploads during streaming** – Select this option to disable asynchronous uploads to the Panopto server of the recorded content while the proxy stream is in use. Recorded content is stored in the local memory buffer in the meantime.

- **Scheme** - Select from **Unicast**, **Multicast**, and **Interleaved** routing schemes. The default is **Unicast**.

- **BasePort** - Applicable for **Multicast** only. For **Multicast** schemes, you can enter a base port between 1026 and 65526. If you enter 0 while in **Multicast**, the base port is chosen automatically.

- **RTSPPort** - The value can be from 1 to 65535. The default value is 554.

Other options

- **Copy last recorded session to USB** – Enable this to copy the last recorded session from the internal SSD to a USB flash drive. To start copying the session, connect a USB flash drive to a USB connector on your Maevex device.

> ⚠️ **WARNING:** While the session is copying, the **Record/Pause** (● ‖) control button LED continues to blink red. ***Don't remove the USB flash drive while the Record/Pause control button LED is blinking red.*** The LED stops blinking when the copy is completed (for a long session, this may take a while). When the LED stops blinking, it's safe to remove the USB drive.
>
> Disconnecting the USB flash device while the copy is in progress will cause the mount process to remain in an invalid state, and subsequent attempts to copy to USB may not work. If this happens, we recommend rebooting your Maevex device. For more information, see "Powering your device on and off", page 18.

Copy last recorded session to USB – More information

- Before copying to USB, make sure your USB flash drive is formatted to NTFS. Also, make sure that the USB drive has enough free space.

- Before starting a new copy, disconnect the USB flash drive used for the last session (if still connected), then reconnect the USB drive to start copying a new session.

- Only the highest quality version of the recording (highest resolution and bit rate) is copied.

To apply your changes, click **OK**. To discard the last changes made, click **Cancel**.

Updating your devices

Select the devices whose firmware and / or configuration you want to update. If the utility detects a device that has an older firmware version, that device is automatically selected to be updated.

You can only select devices that have been authenticated (see "Authenticate the devices found", page 26). Authenticated devices have a green status bar. Devices that haven't been authenticated have an orange status bar.

To update the firmware of your selected devices and apply any changes made to their configuration, click **Update**. Wait while the devices are being updated (up to 10 minutes).

Verifying your Panopto settings

1 Sign in to the Panopto server as an administrator.

2 Click **System → 🖥 Remote Recorders**, then configure your remote recorder settings.

For more information, go to http://support.panopto.com and search for remote recorder configuration and quality settings.

More information

For more information on accessing and modifying the advanced settings of your remote recorder, see "Understanding the device properties of your remote recorder", page 32.

After configuring your Maevex remote recorder, you can start recording (see "Managing your recordings", page 36).

Understanding the device properties of your remote recorder

This section describes how to access the device properties of your Maevex remote recorder.

Accessing your device properties

To access additional properties, settings, and information for your device:

1 From the list of detected Maevex 6020 devices, select the tile of the device you want to modify.

2 Click the **Properties** button ( ) next to the **IP address**.
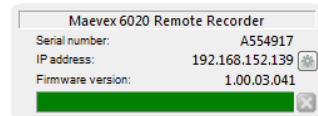
General

This provides general information (such as serial number and version) specific to your Maevex 6020 hardware.

This also enables you to download your device logs, get your upload activity summary, and format the local SSD memory buffer.

Getting your device logs

The device logs contain information on your Maevex 6020 device. This information is useful for troubleshooting purposes.

To download the logs for your device, click **Get the device logs**.

Erasing your device logs

Erase the log files created for your Maevex 6020 device.
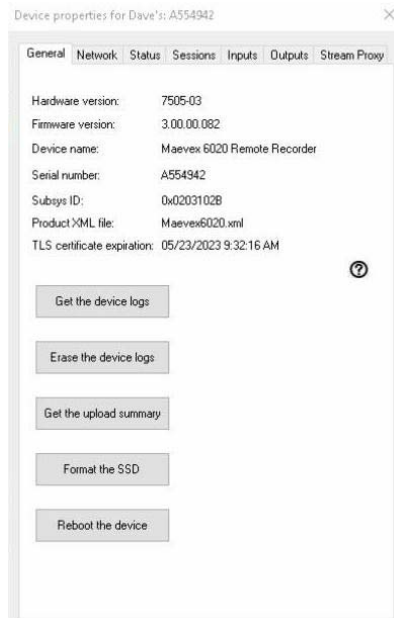
Getting your upload summary

The upload summary provides information on all upload activity to the Panopto server from the previous days.

To save the summary of your upload activity, click **Get the upload summary**. You'll be prompted to choose a destination folder for your file.

Formatting your SSD

To format the internal solid state drive (SSD) on your device, click **Format the SSD**.

⚠️ **WARNING:** Formatting the SSD permanently erases all recordings from this device. Any recordings that haven't been uploaded to the Panopto server will be lost. For more information, see "Understanding the local storage of recorded sessions", page 39.

Rebooting your device

To reboot your remote recorder, click **Reboot the device**.

Network

This contains the network settings for the connection and IP address of your Maevex remote recorder. By default, your Matrox device is configured to use a **Dynamic IP address (DHCP)**.

To manually assign a static IP address to your Maevex device:

1 Select **Static IP address**, then specify the **IPv4 address**, **IPv4 netmask**, **IPv4 gateway**, and **DNS servers** for your Maevex device.

2 When you're done, click **Apply**.

For your devices to be detected, you may need to search for the devices again.

More information on network settings

- **IPv4 address** – An IP address between 192.168.0.0 and 192.168.255.255 (recommended). Also, we recommend you assign an IP address within the subnet of your network.

- **IPv4 netmask** – The subnet mask defining group of IP addresses in your subnet. By default, the subnet mask is 255.255.255.0.

- **IPv4 gateway** – The gateway is often the same as your IP address, but the last byte may be 0 or 1.

- **DNS servers** – The address of your DNS (Domain Name System) server or servers. If you're entering multiple addresses, separate each address with a space.

For more information on assigning a static IP address, contact your network administrator.

Status

This provides the status information (such as network information, device temperature, and disk usage) of your Maevex remote recorder. It also provides information on the recording sessions scheduled on the Panopto server.

The status information is automatically updated every five (5) seconds.

Sessions

This provides information (such as file size and upload status) on the current recording sessions.

To view the current media files, click **Show**.

Inputs

This provides the status information of the input devices connected to your Maevex remote recorder. This also enables you to select the **Quality ladder** level (1 to 4) for the connected device.

Outputs

This provides the status information of the output devices connected to your Maevex remote recorder.

Stream proxy

This provides the RTSP proxy stream addresses for the primary and secondary streams.
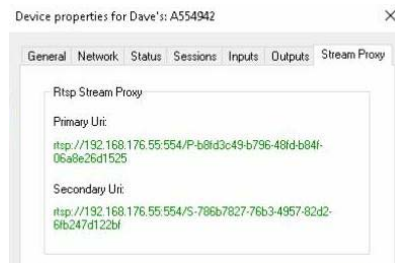
Managing your recordings

Starting a recording manually

> **Note:** To schedule a recording or manage live streaming, see your Panopto documentation.

Your Maevex device enables you to manually start a recording. Use the three (3) buttons on the front of the device to manually control the recording process.

Button	Description
● ❚❚ **Record/Pause**	▪ **Record** – To start a recording, press this button. When the recording starts, the button LED turns solid red. While the recorded session is copying to USB, the button LED turns fast blinking red. ▪ **Pause/Unpause** – To pause or unpause a recording, press this button again. When the recording is paused, the button LED turns blinking red.
■ **Stop**	Press this to stop a recording that was started using the **Record** button.
⊝→ **Preview**	Press this to cycle through the preview modes. The preview modes enable you to view what's being recorded, your video source, or both. For more information, see "Choosing a preview mode", page 37.

Locking the record button

You can use the *Configuration and Firmware Utility* to lock the **Record** button on your Maevex device. Locking the record button prevents users from recording manually. For more information, see "Configure devices", page 27.

Scheduled recording rules

Scheduling a recording through Panopto software affects the functionality of the recording buttons on your Maevex device:

Up to 15 minutes before the start of a scheduled recording	Only the **Pause** and **Stop** buttons work.
At the start of a scheduled recording	If a scheduled session is running, the current manual recording is stopped.
During a scheduled recording (session is running)	Only the **Pause** button works.

Choosing a preview mode

Your Matrox device supports the following three preview modes.

Primary preview   The primary preview enables you to view what's being recorded.

Secondary preview   The secondary preview enables you to view your video source information (for example, a slideshow or video).

Side-by-side preview   The side-by-side preview enables you to view both the primary preview and secondary preview in a side-by-side view.

Viewing your device status information

When you cycle through the preview modes, certain status information may appear on your preview screen, such as the:

- **Preview mode selected** – Indicates if the primary, secondary, or side-by-side preview mode is selected ().

- **Serial number and IP address of the device** – Identifies the device by its serial number and IP address.

- **Recording notification** – The recording status of **Ready**, **Recording**, or **Pause** appears at the bottom with its icon.

- **Recording timer** – The timer of the recording session. The timer starts at 00:00:00 when the recording session begins. The clocks continues to run when the recording session is paused. The recording timer disappears when the recording stops.

ⓘ **Note:** This information is displayed when the recording state is **Recording** or **Paused**. This information may not appear if your local preview monitor's native resolution is less than 1680 x 1050.

- **Volume meter** – Indicates the audio level of the output (Left and Right channels separately).

- **Internal SSD space used** – Indicates the amount of space used by the device's internal Solid State Drive (SSD). If the internal buffer space is low or full, see "Internal SSD buffer space is low or full", page 43.

- **Connection status** – Provides information on the registration and connection of your device to the Panopto server:

No IP address	Remote recorder IP address not available.
No site access	Unable to reach the Panopto server.
Recorder connected	Remote recorder is connected to the Panopto server.
Recorder connection failed	Connection to the Panopto server has failed.
Recorder not configured	Invalid Panopto account information. No site name and/or recorder registration key.
Recorder registration failed	Maevex remote recorder registration has failed. Make sure you're using the latest software version, your proxy is properly configured (if applicable), and your Panopto account information (site name and registration key) are correct. If the problem persists, contact your technical support representative.
Recorder unexpected connection error	Unknown connection error has occurred.
RTMP bandwidth failure	Remote recorder is connected to the Panopto server but encountering bandwidth issues with active RTMP sessions.

Understanding the local storage of recorded sessions

Your Maevex 6020 device has an internal 128 GB SSD hard drive that's used as a local buffer for recording. Recordings on the local buffer are discarded only once they're successfully uploaded to the Panopto server or until memory space is required by a new recording session. The recording buffer of the local SSD hard drive has a capacity of approximately 16 hours (before upload to the Panopto server).

While recording to the local SSD memory buffer without live RTMP streaming (webcast), your Maevex device simultaneously uploads the recording to the Panopto server. This allows the upload to be completed shortly after the recording session ends (usually a couple of minutes). If **Disable uploads during streaming** is enabled under **Advanced settings → Proxy stream options**, the recorded content is stored in the local SSD memory buffer and not uploaded to the Panopto server until the stream is stopped on the decoder that is viewing the proxy streams.

If your Maevex device is configured to simultaneously record and live stream (RTMP webcast), all upload processes (of current and/or previous unfinished sessions) are paused. This maximizes network bandwidth availability for the current live RTMP stream and avoids overloading the network with simultaneous upload data transfers. A device resumes unfinished upload processes as soon as live RTMP streaming tasks are completed.

Maximum bit rates

The following are the maximum bit rates for upload when recording or live streaming for given Panopto quality settings.

- **Recordings *without* live RTMP streams** – The recording is simultaneously uploaded to the Panopto server at the rate possible given the available bandwidth. If full bandwidth is available, the impact on the SSD buffer is negligible. Also, your recordings will be complete and available within a few minutes from the end of the session.

- **Recordings *with* live RTMP streams** – The recording isn't simultaneously uploaded to the Panopto server to minimize the bandwidth needed by the system for upload. In this case, the recording will upload to the Panopto server after the session is complete, unless another recording with live stream starts before the upload of the previous recording is complete.

Panopto quality level*	Recording bit rate†	Optional RTMP live streaming bit rate
1080p	13 Mb/s	6.7 Mb/s
Ultra	6.4 Mb/s	3.2 Mb/s
High	4.5 Mb/s	2.1 Mb/s
Standard	2.6 Mb/s	1.2 Mb/s

Panopto quality level*	Recording bit rate†	Optional RTMP live streaming bit rate
Basic	1 Mb/s	0.7 Mb/s

* Quality levels and bit rates are defined by the Panopto server settings and are subject to change.
† Includes multiple downscaled recordings.

Depending on your source resolutions, the maximum bit rate may be less than those listed.

If RTMP live streaming is enabled, it is recommended to make sure the required network bandwidth is available at all times, and to configure the network for prioritized packet transmission.

Managing your sessions on the Panopto server

Use Panopto software to create, schedule, and manage your recording sessions. For more information, see your Panopto documentation.

Troubleshooting

What to do if you have a problem

If you experience problems with your Matrox product:

- Make sure your Matrox device is properly connected, you're using the correct connectors, and that all connectors are properly fastened.

- Make sure you have administrator rights on the system you want to use. For more information, see Windows documentation.

- Verify the LEDs on your Maevex device (see "Description of status LEDs", page 19).

- Review the status information of your Maevex device (see "Viewing your device status information", page 37).

- Try rebooting your device (see "Powering your device on and off", page 18). If rebooting your device doesn't work, you may need to perform a configuration reset of your device (see "Resetting your device", page 43).

If your problem persists, contact Matrox. For more information, see "Customer support", page 52.

Common problems and solutions

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

Problem   **Maevex device can't connect to Panopto video platform**

Cause   Your Panopto user credentials are incorrect.

Solution   Contact your Panopto administrator to verify the user credentials for your Panopto account.

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

Solution   Make sure your firewall is properly configured to allow the necessary communication between your Maevex devices and the various networked components. For more information, see "Appendix A – Firewall requirements", page 49.

Problem   **Maevex device not discovered on the network**

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

Solution   Verify the status information of your Matrox product (see "Validating your Maevex setup", page 19 or see "Viewing your device status information", page 37).

Cause   **Windows Server 2019/2016/2008 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 Maevex devices.

Solution   Make sure your firewall is properly configured to allow the necessary communication between your Maevex devices and the various networked components. For more information, see "Appendix A – Firewall requirements", page 49.

Problem   **No audio**
                      (Can't capture or play back audio)

Cause   Your audio capture settings may be disabled or not properly selected.

Solution   Verify your audio **Capture** settings through Panopto software. Make sure you enable your primary audio source (**Audio 1** or **Audio 2**). Depending on your settings, audio priority is given to the connectors in the following order:

Audio 1	▪ Microphone ▪ Line In 1 ▪ HDMI In 1
Audio 2	▪ Microphone ▪ Line In 2 ▪ HDMI In 2

For more information, see your Panopto software and documentation.

Problem	**Internal SSD buffer space is low or full**
Cause	The primary and/or secondary video quality settings are set to **1080p** (maximum value), with a target resolution of 1920 × 1080 60 fps.
Solution	The recording buffer of the device's internal SSD has a capacity of approximately 16 hours (before upload to the Panopto server). To increase the total recording time, try reducing your video quality settings through Panopto software. For example, using **Ultra** quality settings increases the total recording time to 34 hours, and using **High** quality settings increases the total recording time to 48 hours. For more information on adjusting video quality settings, see your Panopto documentation.

Problem	**RTMP bandwidth failure** **(When using maximum video quality settings)**
Cause	There may not be enough network bandwidth available for the RTMP stream (this could be due to momentary network overload).
Solution	Make sure your network and network equipment support the bandwidth required for your session at all times. For more information, .

Resetting your device

In some cases, you may need to perform a *configuration reset* of your Maevex 6020 device.

⚠️ **WARNING:** A configuration reset restores the default settings of your Maevex 6020 device. This *resets all* of your device settings, including the IP configuration and password.

To restore the default settings of your Maevex 6020 device, press and hold the **Reset** button on your device with the tip of a paper clip for *5 seconds* (until the LED turns fast blinking green).

This reboots your device and restores the default settings of your device.

Product information

Specifications

	Maevex 6020 remote recorder
Product type	Standalone appliance
Form factor	1 RU, half width
System memory	2 GB
Video input connectors	2× HDMI Type A (with 16-bit stereo L-PCM audio) Gain: -60 dB to +6 dB (default is 0 dB)
Video output connectors	2× HDMI Type A (with 16-bit stereo L-PCM audio), and 1× DisplayPort (for console display)
Audio input connector (analog)	2× mini-stereo jacks
Audio output connector (headphone)	1× mini-stereo jack
Microphone input connector	1× mini-stereo jack
Networking interface	RJ45 Gigabit Ethernet
USB ports*	1× USB 2.0 (front), 1× USB 3.0 (back)
Supported resolutions (input and output)	Maximum 1920 × 1080 @ 60 Hz
Video encoding	H.264/MPEG-4 Part 10 (AVC), 4:2:0 (8-bit)
Streaming protocols	RTMP, RTMPS, RTSP (proxy stream only)
Command protocols	UPnP, HTTP, HTTPS
Streaming to Panopto cloud	Up to 2× 1920 × 1080 RTMP live streams
Target total RTMP streaming bit rate	1.2 Mbps (Quality: Standard) / 6.7 Mbps (Quality: 1080p)
Target total recording bit rate (all resolutions)	2.5 Mbps (Quality: Standard) / 13 Mbps (Quality: 1080p)
Recording resolutions	Maximum 1920 × 1080 (2 native and up to 5 downscaled versions)
Recording format	Fragmented MP4 (fMP4)
Recording location	Panopto server (128 GB temporary local SSD buffer)
Power connector	DIN 4-pin female
Power consumption†	38W Typical: 35W
Regulatory compliance	Class A: CE, FCC, ICES-3, KC, RCM, VCCI

* Support for USB devices including Kuando Busylight, external storage devices, and serial to USB adapters.
† Excluding power drawn by external USB devices.

Analog audio

Line In connector	Full-scale input voltage: 1 V_{RMS} (0 dBV) Impedance: 14.3k Ohms (gain = 0 dB) Gain: -60 dB to +6 dB (default is 0 dB)
Headphone connector	Full-scale output voltage: 1.2 Vrms (1.6 dBV) Driver strength: 32 mW into 32 Ohms Gain: -74 dB to 0 dB (default is 0 dB)
Microphone connector	Full-scale input voltage: 1 Vrms (0 dBV) Impedance: 15k Ohms (gain = 0 dB), 5k Ohms (gain >= 10 dB) Gain: -74 dB to +41 dB (default is 0 dB) DC bias voltage: 2.5V

External power supply

Input a.c. voltage range	100V to 240V a.c.
Input frequency	50 to 60 Hz
Input connector	IEC 60320-C14
Output voltage	12V d.c.
Output current	5A
Output connector	DIN 4-pin male with lock
Output power	60W
Average active efficiency @ 230V AC, 50 Hz	88.9%
Efficiency at low load (10%) @ 230V AC, 50 Hz	83.8%
No-load power consumption @ 230V AC, 50 Hz	0.10W

Product dimensions

Length	21.7 cm (8.53 inches)
Width/Depth	4.3 cm (1.68 inches)
Height	19.1 cm (7.52 inches)

Environmental

Temperature, operational	0 to 45 ºC (32 to 113 ºF)
Temperature, non-operational storage and transportation	-40 to 70 ºC (-40 to 158 ºF)
Humidity, operational (indoor)	20% to 80% (non-condensing)
Humidity, non-operational storage and transportation	5% to 95% (non-condensing)
Atmospheric pressure, operational	660hPa (3,000 meters / 9,842 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)

Supported standards

HDMI compatible	✓
DVI 1.0 compatible (using HDMI to DVI-D adapter)	✓
EDID (Extended Display Identification Data) 1.3 and VESA E-EDID Standard Release A, Revision 1	✓
USB 2.0 compatible	✓
USB 3.0 compatible	✓
VESA DisplayPort Standard, version 1.1	✓

Notes and limitations

■ The DisplayPort console display connector is automatically disabled if no console display is connected. To make sure your display console is properly detected, connect your console display *before* turning on your device.

■ Depending on the console display connected, certain limitations may occur (for example, poor image quality or black borders around the screen). Also, for the boot-up screen to appear properly, your DisplayPort monitor must support a resolution of 1280×720. A minimum resolution of 1024 x 768 is required for the overlaid device status information to appear properly with no overlaps between them.

■ The Maevex 6020 Remote Recorder in conjunction with the Panopto cloud server implement a degree of resiliency to source signal video mode changes. However, multiple signal interruptions or changes during a recording session lead to fragmentation of the recording and may result in significantly longer processing time on the Panopto server, RTMP live stream reconnection issues, and in the worst case, recording failures after a number of segmentations. In case source signal video mode changes are unavoidable in a deployed environment, we recommend using a reputable scaler between the source equipment and the Maevex 6020 Remote Recorder device to maintain a single output resolution and timing which will eliminate fragmentation and any negative effects. Source signal video mode changes (and resultant segmentation) typically occurs in the following situations:

▪ Source system boot or reboot

▪ Source switching between various power management states (standby, sleep, hibernate, etc.)

- Source screen saver activation / deactivation

- Source switching between windowed (desktop) and full-screen application modes (i.e. PowerPoint presentation mode)

- HDMI input cable disconnect / reconnect

- Source signal change due to use of third-party HDMI switcher device (where the switcher does not maintain a constant output signal)

- Source HDMI audio sampling frequency changes

Appendix A – Firewall requirements

The following are the firewall requirements for your Maevex device and configuration utility.

Maevex 6020 Configuration and Firmware Utility

The following are the firewall requirements for a system running the Matrox Maevex Configuration and Firmware Utility.

Network Port	Type	Inbound	Outbound	Functionality
20,21	TCP	—	✓	**FTP**: Firmware file transfer to the Maevex 6020 device(s).
80	TCP	—	✓	**HTTP**: Authentication and commands between the Maevex 6020 Configuration and Firmware Utility and Maevex 6020 device(s).
443	TCP	—	✓	**HTTPS**: Authentication and commands between the Maevex 6020 Configuration and Firmware Utility and Maevex 6020 device(s).
1900	UDP	✓	✓	**UPnP**: Microsoft SSDP for discovery of UPnP devices.

Maevex 6020 devices

The following are the requirements for a network firewall present on a network with a Maevex environment.

Network Port	Type	Inbound	Outbound	Functionality
20,21	TCP	✓	—	**FTP**: Firmware file transfer to the Maevex 6020 device(s).
80	TCP	✓	—	**HTTP**: Authentication and commands between the Maevex 6020 Configuration and Firmware Utility and Maevex 6020 device(s).
123	UDP	✓	✓	**NTP**: Network Time Protocol.
161 (optional)	UDP	✓	✓	**SNMP**: Network management (public community string).
443	TCP	✓	—	**HTTPS**: Authentication and commands between the Maevex 6020 Configuration and Firmware Utility and Maevex 6020 device(s).
443	TCP	—	✓	**HTTPS**: Authentication and commands between the Maevex 6020 device and the Panopto server.
1900	UDP	✓	✓	**UPnP**: Microsoft SSDP for discovery of UPnP devices.
1935 (optional)	TCP	—	✓	**RTMP/RTMPS**: Live Streaming to the Panopto server.
554 (optional, configurable)	TCP	✓	✓	**RTSP**: Proxy streaming for remote monitoring.

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.

You may need to add rules to your Windows Firewall settings. For more information on accessing and adding rules to your Windows Firewall settings, see your Windows documentation.

Appendix B – Providing adequate airflow to your Maevex device

Because your 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 around your device, and 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 46.

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 web site at www.matrox.com/video.

View your warranty information

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

View the third party software notices

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

Register your Matrox product

Please register online (www.matrox.com/en/video/apps/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.

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.

(English) Innovation, Science and Economic Development Canada

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) Innovation, Sciences et Développement économique Canada

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VCCI Compliance Statement

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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 EN55032/CISPR32 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 EN55032/CISPR32 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 EN55032/CISPR32 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 elativamente ai dispositivi digitali di Classe A. Sono stati provati e sono risultati conformi alle norme EN55032/CISPR32 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 EN55032/CISPR32 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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