



Matrox® **Maevox™ Series**

Firmware Updater

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Overview

The Matrox MaeveX Series Firmware Updater enables you to update the firmware of your Matrox MaeveX 6100 Series and MaeveX 5100 Series products, and to use a custom splash screen for your MaeveX Series products.



Note: Your Matrox MaeveX Series product may ship with an older firmware version. Before using your MaeveX Series product, you must update the firmware version installed on your devices to use the version of your deployed release. All MaeveX Series devices on a MaeveX network must use the same version of the firmware package. The version of your firmware package must match the version of your PowerStream Plus software package. For more information, see [“Match software and firmware versions”](#), page 5.

Supported operating systems

The Matrox MaeveX Firmware Updater supports the following operating systems:

- Windows® Server® 2022
- Windows® Server® 2019
- Windows® 11 (64-bit)
- Windows® 10 (64-bit)

Supported MaeveX hardware

The Matrox MaeveX Firmware Updater supports the following MaeveX hardware:

MaeveX 6100 Series

- MaeveX 6152 decoder
- MaeveX 6152 encoder
- MaeveX 6122 encoder
- MaeveX 6100 encoder

MaeveX 5100 Series

- MaeveX 5150 encoder
- MaeveX 5150 decoder

Obtaining the Matrox Maeve Series firmware updater package

- Matrox makes the latest firmware and updater package for your Maeve Series products available on the Matrox web site (www.matrox.com/maevexsw).
- Download the latest firmware package and extract the files to a local folder on your system (for example, C:\MaeveFirmwarePack).

Updating your Matrox MaeveX Series firmware

Before you update your firmware

Before you update the firmware on your MaeveX Series devices, read the following guidelines:

- Make sure you have at least 1 GB of free disk space available.
- To avoid possible problems with your MaeveX Series devices, we recommend running only one instance of the MaeveX Series firmware updater on your network at a time.
- 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 an established 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 PowerStream Plus).
- 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 MaeveX Series User Guide.
- Stop all encoding and decoding processes on your MaeveX Series devices.

Match software and firmware versions

- Make sure you're running the latest version of the Matrox MaeveX Series Firmware Updater to update all of your MaeveX devices to the latest version of the MaeveX firmware from the same firmware package. All MaeveX devices must use the *same version* of the firmware package.
- Make sure to also update your PowerStream Plus Software to the same version. The version of your firmware package must match the version of your PowerStream Plus software package. If not, your device may be listed as **Undetected** (black).

Updating your Matrox Maeve Series firmware

1 Run the Maeve Firmware Updater

Browse to the folder containing the extracted files, then run the *FirmwareUpdater.exe* file. This opens the Maeve Firmware Updater.

2 Search for available Maeve Series devices

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

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



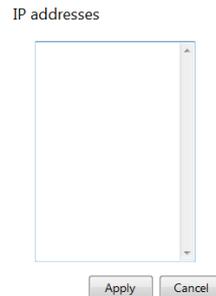
Manual detection – If devices aren't automatically detected, you can manually locate one or more Maeve devices using their IP address. To manually locate the devices, select **Manual detection**, then enter the IPv4, IPv6, or DNS address of each Maeve device you want to locate. **Note:** IPv6 is not applicable for the Maeve 5100 Series.



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

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

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



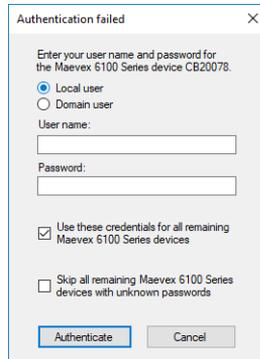
To stop searching for devices, click **Stop**. To resume searching for devices, click **Search** again.

3 Authenticate the devices found

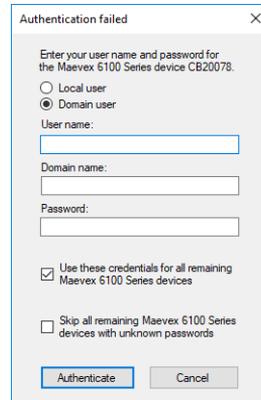
If you provided a password for your Maevox Series devices, you may be prompted to authenticate the devices found.

a Maevox 6100 Series – If you're prompted, enter your credentials for the Maevox devices found:

- **Local user** – Enter your user name and password.
- **Domain user** – Enter your user name, the domain name of the server, and your network password.

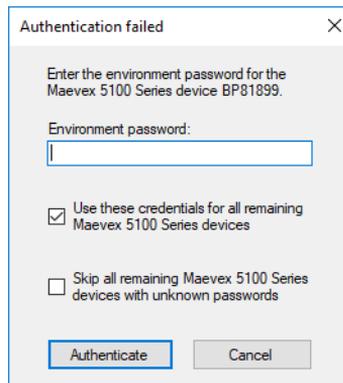


Local user



Domain user

Maevox 5100 Series – If you're prompted, enter the **Environment password** for the Maevox devices found.



b Set up your credentials:

- If you're updating multiple Maevox Series devices, enable the **Use these credentials for all remaining Maevox Series devices** check box.

- If you don't know the password of some of the Maevox Series devices on your network, enable **Skip all remaining Maevox Series devices with unknown passwords**. Enabling this option ignores the Maevox Series devices that don't use any of the passwords already entered. Any skipped devices won't be available for update.

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



Note: If the configuration of your Maevox Series device was reset, the password of your device was reset and the device will be detected as having no password. In this case, you'll be prompted to include that device in the list of devices to update. Clicking **Yes** updates the firmware of devices that don't have a password.



4 Select the devices to update

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

You can only select devices for which you have been authenticated. Boxes for these devices have a green status bar. Boxes for devices that are **View only** have an orange status bar.

To change the sort order of the device tiles, right-click the device list box, select **Sort by** and the sorting order to use. To deselect all items, right-click the device list box and select **Unselect all devices**.

5 Enable update options

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

6 Update the firmware

When you're done adding Maevox Series devices to the list of devices you want to update, click **Update**.

Updating devices may take up to 20 minutes. For more information on the process of a firmware update, click **Show log** () at the bottom of the program window.

Maevox 5100 Series – If you're updating a Maevox 5100 Series device and the firmware update is suddenly interrupted (for example, in the event of a network interruption or system crash), the device may not be fully updated and will continue to run in maintenance mode. To recover and resume the update, re-launch the firmware updater.

Store a certificate file on the device for IEEE 802.1X EAP-TLS

The 802.1X is a standard used to control access to a network for devices and PCs. MaeveX uses the EAP-TLS protocol used by 802.1X to securely identify a device prior to its authorization to join the network

To enable using your device on a 802.1X EAP-TLS network, you need to first upload a certificate file to the device using the firmware updater on a regular network (without any 802.1X authentication). This step is required for the EAP-TLS protocol to work.



Note: You can upload the same certificate to multiple devices. However, if separate certificates are required for the devices, you must configure each device individually.

Make sure the certificate file is named *eaptls_cert.pem* and placed in the firmware update package. For more information, see “Certificate file”, page 10.



Note: When running the firmware updater, ensure the **Reset configuration** option is *not selected*.

During the firmware update process, the following progress status message will display: *Updating “EAP TLS certificate”*.

The firmware updater will verify the *eaptls_cert.pem* file for structural compliance and deploy it to the right location for the selected devices.



Note: If the content in the *eaptls_cert.pem* file doesn’t meet the requirements, the following message displays: “EAP TLS CERTIFICATE: file *eaptls_cert.pem* is invalid or corrupt”. If this happens, verify the structure and the contents of the file.

Configure the device for deployment on a 802.1X EAP-TLS network

Prior to joining the 802.1X network, the device has no IP address assigned to it. PowerStream Plus allows the administrator to configure a device to use 802.1X EAP-TLS for its network on-boarding.

- 1 Deploy the MaeveX device on a regular network without any 802.1X authentication.
- 2 Using the firmware updater, store the certificate file on the device (needs to be done by the administrator). For more information, see “Store a certificate file on the device for IEEE 802.1X EAP-TLS”, page 9.
- 3 From PowerStream Plus, enable 802.1X EAP-TLS and configure the appropriate settings in the **Network** page of the device settings. That is, select the **Enable EAP-TLS** option and choose the **EAPOL version** from the drop-down list (these have to be done by the administrator). The EAPOL version information will be provided along with the

certificates by your IT department (in charge of the network where 802.1X is used). For more information, refer to the **IEEE 802.1X EAP-TLS** section in the *Matrox PowerStream Plus User Guide* document.



Note: The **Enable EAP-TLS** option will not be available if the necessary certificates are not stored on the device.

- 4 You can then disconnect the device from the normal network and connect it to an 802.1x network. Once connected, it will obtain an IP address.



Note: A device not properly configured for 802.1X EAP-TLS will be unable to obtain an IP address when it is connected to a 802.1X EAP-TLS network and hence will not be visible on the network. When the feature is disabled, the device will disappear from the network. In this case, you must connect the device to a network without 802.1X authentication, correctly configure the device as described above, then re-connect the device to the 802.1X network.



Note: For PowerStream Plus to work on a 802.1X EAP-TLS network, the host PC on Windows 10 must be properly configured to work on the 802.1X EAP-TLS network. For more information, contact Matrox support.

Uninstall the certificates

To uninstall the certificates from the device, you need to do a configuration reset which will reboot the device and put back its factory default settings. To do a configuration reset, 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.

Certificate file

The certificate file *must* be named *eaptls_cert.pem* and contain the following elements:

- A certificate to identify the device. This certificate will be used by the 802.1X authentication server to authenticate the device.
- The private key associated with the device certificate.

- The public certificate identifying the certificate authority (CA) used to sign the 802.1X authentication server (for example, a server running a software supporting the RADIUS protocol). This certificate is used by the device to verify the authenticity of the 802.1X authentication server, preventing hostile attacks. .



Note: Certificates that are linked to the DNS name of a device are supported. This allows you to deploy the same certificate on multiple devices if the certificate uses a wild card. For example, *maevex*.matrox.com*.



Note: You can get all the details that are required to be contained in the certificate file from your IT department.

Using a custom splash screen

The Firmware Updater enables you to use a custom splash screen for your Maevox Series products with output support.

- 1 Browse to the folder containing the extracted files.
- 2 Replace the image file:
 - **Maevox 5150 devices** – Replace the *Encoder.bmp* and *Decoder.bmp* files in the folder with your own BMP file. The image must use a resolution of 720 x 480, 24 bpp. The new image files must be BMP format and must be named *Encoder.bmp* and *Decoder.bmp*.
 - **Maevox 6152 and 6122 encoder devices** – Replace the *ssimage.ppm* file in the folder with your own image file. The image must use a resolution of 1280 x 720, 24 bpp. The new image file can be, in order of priority, PPM (ASCII), BMP, JPG, or PNG format and must be named *ssimage* with the correct file name extension. The firmware updater uses the first image file found, in order of priority.
 - **Maevox 6152 decoder devices** – Replace the *ssimagedec.png* file in the folder with your own image file. The image must use a resolution of 1280 x 720, 24 bpp.
- 3 Run the *FirmwareUpdater.exe* file.
- 4 Update the firmware of your devices (see [“Updating your Matrox Maevox Series firmware”](#)).

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/en/video.

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/en/video/support.

Information we need

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

- Matrox product serial number, model number, and firmware revision.
- Audio/video source device brand and model name. If applicable, the computer and graphics card brand and model name, with the system BIOS and graphics driver versions, as well as the operating system and service pack versions.
- Brand and model name of the monitor or monitors.
- Operating system, version, and service pack for the control system as well as the PowerStream Plus version used.

Firmware package

A more recent firmware package may support more features and may offer increased capabilities. To obtain the latest firmware package, see the Matrox web site (www.matrox.com/maevexsw).

View your warranty information

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

View the third-party software notices

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