

Matrox® Release Notes

Matrox® Maevox™ 5100 Series and Maevox™ 6100 Series

Software version 3.00.01

20247-401-0301
January 7, 2021

www.matrox.com/video

matrox®

Overview

This document describes the current release of the Matrox MaeveX 6100 Series and MaeveX 5100 Series hardware, and the PowerStream Plus software. Matrox provides these notes to describe new features, bug fixes, and improvements to the MaeveX hardware and the PowerStream Plus software.

What's new in this release

- **PowerStream Plus** – Changes were made to the preset configurations for some Content Delivery Networks (CDNs):
 - Updated preset configuration for Wowza CDN
 - Removed preset configuration for LiveScale CDN
- **MaeveX 6100 Series Encoders** – Upgraded RTMP protocol for compatibility with Periscope CDN.
- **MaeveX 6100 Series Encoders and Decoders** – Security enhancements were made for RTSP and SRT streams.
- **MaeveX 5150 Encoder** – Manual addition of a folder name to the RTSP stream address is no longer necessary for compatibility with decoders.

First-time installation of PowerStream Plus

If you're installing Matrox PowerStream Plus software for the first time, PowerStream Plus automatically detects the MaeveX devices that are on the same subnet as PowerStream Plus, and adds them to your environment. You'll need to manually add any devices that remain undetected.

For more information, see the Matrox PowerStream Plus user guide. Matrox makes the latest PowerStream Plus software and firmware available on the Matrox web site (www.matrox.com/maevexsw).

Upgrading from an older version of Matrox PowerStream (1.0x) or PowerStream Plus (2.0x) software

If you're currently using Matrox PowerStream and corresponding firmware package, and you want to upgrade to a recent version of PowerStream Plus software and corresponding firmware package, do the following:

- 1 Install the latest firmware package for your Matrox MaeveX 6100 Series and 5100 Series devices. (Make sure the firmware package version you're

installing corresponds to the PowerStream Plus software you're planning to install.)

- 2 Install the latest version of Matrox PowerStream Plus software.
- 3 Remove the older (previously installed) version of Matrox PowerStream software.

PowerStream Plus automatically detects the Maevox devices that are on the same subnet as PowerStream Plus, and adds them to your environment. You'll need to manually add any devices that remain undetected.

For more information, see the Matrox PowerStream Plus user guide. Matrox makes the latest PowerStream Plus software and firmware package available on the Matrox web site (www.matrox.com/maevexsw).

Downgrading your PowerStream Plus version

Note: This is not applicable to the use and control of the Maevox 6152 decoder.

- If a password that's longer than 8 characters is set, older PowerStream or PowerStream Plus versions (previous to 2.01.03) won't be able to authenticate these devices. Before downgrading your version of PowerStream Plus software, we recommend first changing the password to set a password that's between 6 and 8 characters long. For more information on changing passwords, see the Matrox Maevox User Guide.
- If downgrading PowerStream Plus software to 2.00 (not recommended), certain user settings related to version 2.00 (like the device tile organization) won't be automatically restored. For more instructions on downgrading, contact Matrox Technical Support.

Downgrading to an older version of the firmware

- Firmware downgrading is limited to version 2.02.01.017 (which also supports the TLS1.2 protocol). To downgrade to an older firmware version (which uses the TLS1.0 protocol), downgrade first to version 2.02.01.017, and then downgrade further. **Note:** This is not applicable to the Maevox 6152 decoder.
- **Maevox 6100 Series Encoders** – Firmware downgrading to version 2.02.01.017 is supported *only* from the default IP mode **IPv4 and IPv6** and from **IPv4**. Downgrading from **IPv6** isn't supported, because the 2.02 release supports only IPv4.

Notes and limitations

Maevox 6100 Series Encoders

- Following an input signal interruption or switching, the **Continue streaming on signal loss** feature requires that the input signal recover without an A/V mode or signal frequency change. In the event of an input mode change, the outgoing stream will be torn down and regenerated, resulting in a decoder disconnect and reconnect event.
- Can't record to an IPv6 link-local address. [1791]¹
- HLS has a limited and fixed list of frame sizes. For more information, contact your Matrox representative [1691].
- RTMP push streaming to Wowza® Cloud is supported only with no authentication.
- Depending on the analog audio input voltage level from the analog audio source, clipping (audio distortion) may occur in the stream and headphone out, especially at higher or maximum (6dB) audio input level setting from PowerStream Plus. To avoid this, reduce the analog audio level from the source, from PowerStream Plus, or from both.
- Recording to extFS (ext2/3/4), NTFS, and FAT32 drives is supported (exFAT-formatted drives aren't supported).
- Before recording to a networked shared drive or folder, make sure you have the appropriate user rights and credentials to do so. Different operating systems have different ways to share folders, so make sure the share is set up accordingly (for example, some Windows operating systems require a user name and password setup for the share folder to be accessible).
- HDCP (High-Bandwidth Digital Content Protection) is not supported in this release.
- **Windows Server 2019, Windows Server 2016, and Windows 2008 R2** – Windows Server operating systems disable the SSDP Discovery service by default. For your devices to be automatically detected on your subnet, this service needs to be enabled. For more information on enabling this service, see Windows documentation.
- Multicast streaming requires networking hardware that supports multicast and is properly configured for multicasting. Otherwise, only unicast streaming will be supported.

¹ Tracking reference number

- Switching between dynamic and static IP addresses isn't supported while encoding or decoding. Before you change the IP address, make sure you stop encoding or decoding.
- If you're using PowerStream Plus software to set a static IP address, make sure the IP address you want to set isn't already allocated to another device on the network.
- When the **Optimized for Desktop** encoding mode is selected, for best performance, we recommend to simultaneously also set the encoding option to **VBR** (Variable Bit Rate). Using the **Optimized for Desktop** encoding mode with the **CBR** (Constant Bit Rate) encoding option may result in skipped frames on the decoder in case a very high target bit rate is set.
- Stop all streams before updating the firmware on an encoder. Otherwise, a Maevox 6152 decoder may not show the streams in the **Streams list**, or may not identify it as a stream coming from a Maevox encoder (**Maevox source** may not appear beside the stream name). If this happens, first disable (stop) then enable (restart) the inputs on the encoder. If applicable, also update (resave) the encoder configuration for future use.
- Due to the security enhancements in the 3.00.01 software release, RTSP and SRT streams with authentication that were created with previous software releases are not forward compatible so they will not be recognized, and must be recreated as new custom streams with their stream credentials re-entered. We recommend that you delete previously used authenticated RTSP and SRT streams prior to updating the software and the firmware. Similarly, if you are downgrading to older software releases, authenticated streams created using the 3.00.01 software release will not be recognized so they should be deleted and recreated.
- **Maevox 6150/6120** – While recording to local or network storage, no warning appears if device is full or near full. Make sure there's enough available space on the destination device (USB-based storage or network-based storage) before starting to record. If the last recorded file is larger than the available space, the file won't be able to close, and the recorded data will be lost.
- **Maevox 6150/6120** – After connecting a new local DisplayPort console display, the Maevox device must be rebooted for the DisplayPort output to be enabled.
- **Maevox 6150/6120** – If the resolution of DisplayPort console output is higher than Full HD (determined by the connected monitor's preferred resolution), the preview content frame rate will be limited to 15 fps. This limitation has no impact on the streamed or recorded frame rate.
- **Maevox 6150/6120** – To be able to record to **LAN2**, make sure to specify a unique IP address for your LAN2 recording destination. Depending on the IP

address of the recording destination, the data will be sent on the **LAN1** or **LAN2** output.

- **Maevox 6150/6120** – The control buttons (on the front on the device) assigned for the start/stop functionality of the recording can control only manual recording. Stopping a scheduled recording must be done through PowerStream Plus. To stop a scheduled recording, access PowerStream Plus software, then disable the **Scheduled recording** option.
- **Maevox 6150/6120** – The maximum scaling and compositing capability of the device is 2x 4kp60 (or equivalent) input or output surfaces. This includes compositing and scaling for the streaming and recording processes, and also for the local DisplayPort console output (if enabled). In case of overload, frame drop and/or image flicker may occur. This can be avoided by reducing the number of compositing and scaling processes (this includes the DisplayPort console output if enabled, especially in quadrant-mode), or the frame rates, or the highest resolutions at play (input or output).

Maevox 6152 Decoder

- 4Kp60 in YUV 4:4:4 pixel format can only be transferred to HDMI Outputs 1 and 3 (HDMI Outputs 2 and 4 remain unused in this case).
- HDMI Output pixel format is always RGB 4:4:4 24-bit (8-bit/color) in this release.
- Interlaced output modes are not supported.
- HDCP (High-Bandwidth Digital Content Protection) is not supported in this release.
- USB, RS232, and microphone ports are not supported in this release.
- It is highly recommended to maintain all processing under 100% at all times. The **CPU**, **Video decoding**, and **Video processing** percentages are displayed in the telemetry section of the information dashboard in PowerStream Plus. Do not overload the processing capacity of the device when decoding, compositing, scaling, or otherwise transforming multiple streams.
- When a saved configuration is loaded, if one of the streams referenced is no longer valid, there is no indication that this stream is not valid. Only a black window is displayed when trying to use it. To remove this invalid stream from the current configuration, delete it from each panel (stream display area), or, in the case of a custom stream, delete it from the **Streams list**. [2334]
- When a device configuration reset is done (press and hold the reset button with a paper clip for over 5 seconds), the settings of custom streams are not deleted since they are stored by PowerStream Plus and not on the device itself. However, stream settings stored on the device will be lost. (A 'custom

stream' is a manually entered stream, as opposed to a stream that is automatically detected by the device.) [2337]

- Due to the security enhancements in the 3.00.01 software release, RTSP and SRT streams with authentication that were created with previous software releases are not forward compatible so they will not be recognized, and must be recreated as new custom streams with their stream credentials re-entered. We recommend that you delete previously used authenticated RTSP and SRT streams prior to updating the software and the firmware. Similarly, if you are downgrading to older software releases, authenticated streams created using the 3.00.01 software release will not be recognized so they should be deleted and recreated.

Maevox 5100 Series

- This firmware package includes firmware version 1.05.09.001 for Maevox 5100 Series devices.
- **PowerStream Plus** – If a password that's longer than 8 characters is set for a Maevox 5150 device, older PowerStream versions (1.05.03.007 or older) won't be able to control these devices. Before downgrading from PowerStream Plus to PowerStream, we recommend first changing the password to set a shorter password (8 characters or less).
- **Windows Server 2019, Windows Server 2016, and Windows 2008 R2** – Windows Server operating systems disable the SSDP Discovery service by default. For your devices to be automatically detected on your subnet, this service needs to be enabled. For more information on enabling this service, see Windows documentation.
- Before daisy chaining your decoders, make sure each decoder is powered. This enables the decoder's internal network loop, allowing the DHCP server to allocate an IP address to the daisy-chained decoders.
- Audio distortion may occur if the analog audio input voltage level is too high. If this occurs, we recommend reducing the analog input signal voltage level from the host system (turn down the input volume).
- HDCP (High-Bandwidth Digital Content Protection) is not supported. Depending on the source system, the local output of the Maevox 5150 encoder may result in a blank screen (black) while using the confidence preview output method, or an intended distorted display (blank screen or snowy display) while using the pass through output method.
- You can't stream and record at the same time (encoder).
- If failsafe is enabled (decoder), the feature overrides source-to-destination on signal DPMS remoting.

- USB and SD® Card connectivity are not supported.
- Certain non-Matrox graphics cards may not properly support certain resolutions. For example, they don't output full-screen images in a 1920 × 1080 resolution (you can replicate this connecting your display directly to your graphics card). For information on the capabilities of your graphics card, contact your graphics hardware manufacturer.
- Your Maevox devices can only be detected on a DHCP network. To locate a Maevox device outside the DHCP subnet, first detect the Maevox device on the subnet, then set the Maevox device to a fixed IP address known to be available on the LAN outside the subnet. Remove the Maevox device from the subnet and place it in the intended location on the LAN.
- Multicast streaming requires networking hardware that supports multicast and is properly configured for IPv4 multicasting. Otherwise, only unicast streaming will be supported.
- Switching between dynamic and static IP addresses isn't supported while encoding or decoding. Before you change the IP address, make sure you stop encoding or decoding.
- If you're using PowerStream Plus software to set a static IP address, make sure the IP address you want to set isn't already allocated to another device on the network.
- When switching between the **Use pass through** and **Use confidence preview** output methods on the encoder, the source system's HDMI® digital audio may be disabled. To re-enable the HDMI digital audio, disconnect and reconnect the HDMI input cable on the Maevox encoder.
- **Windows 10/7** – If your controller system doesn't have access to a DNS server or if response from its DNS server is slow, PowerStream Plus may take a long time to start up (several minutes). To avoid this delay, configure your controller system to use a fixed IP address (such as local host – 127.0.0.1) as its DNS server.
- To ensure compatibility with auto-negotiating network switches and routers, your Maevox devices use auto-negotiation for their network speed and duplex settings. We recommend you configure the networking hardware your Maevox product is connected to so that it also auto-negotiates these settings. We also recommend you make sure the speed and duplex settings of your Maevox devices and networking hardware match. If image corruption occurs, make sure your networking hardware (and the ports connected to your Maevox devices) isn't overloaded and dropping data packets. If necessary, increase the bandwidth allocated to the ports connected to your Maevox devices, or try using different ports.

- Connecting a networked device other than a MaeveX decoder (such as a computer, networked display, etc.) to the second network port of a MaeveX decoder is currently unsupported.
- If you're using **Pass through** mode without a local monitor present, the source system may not output a valid signal, making capture impossible. To resolve this issue, we recommend trying one of the following:
 - Use **Confidence preview** mode instead of **Pass through** mode.
 - Connect a local monitor to a MaeveX encoder's local output (**HDMI OUT**) before enabling the **Pass through** mode in PowerStream Plus.
- Updating the firmware in parallel while your decoder devices are daisy chained isn't supported. Decoder devices that are daisy chained must be added to the Firmware Update Utility's list of devices to update and updated one device at a time.
- **MaeveX 5150 Decoder** – Only RTSP streams with a maximum resolution of 1920 x 1080p60 are supported. Audio encoding format must be AAC-LC. Video encoding format must be YUV 4:2:0 8-bit at a maximum bit rate of 25 Mbps (maximum supported H.264 Level is 4.2).

PowerStream Plus SDK and REST APIs

For more information on the Matrox PowerStream Plus SDK and REST APIs, or to obtain a version (Windows® or Linux®) of the SDK, contact Matrox Technical Support (www.matrox.com/en/video/forms/products/maeveX-developer-tools).

Contact us

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

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

Matrox values your business and offers professional support for your Matrox product. For more information, contact your Matrox representative or our technical support at maevexsupport@matrox.com.

Disclaimer

Information in this document may contain technical inaccuracies or typographical errors. Information may be changed or updated without notice. Matrox reserves the right to make improvements and/or changes in the products, programs and/or specifications described in this information at any time without notice. All trademarks and trade names, service marks and logos referenced herein belong to their respective owners.

HDMI is a registered trademark of HDMI Licensing, LLC in the United States and/or other countries.

Linux is a registered trademark of Linus Torvald in the United States and in other countries.

Microsoft, Windows, and Active Directory are registered trademarks of Microsoft Corporation in the United States and/or other countries.

SD, SDHC and SDXC Logos are trademarks of SD-3C, LLC.

Twitch is a trademark of Twitch Interactive, Inc.

Vimeo is a trademark of Vimeo, LLC.

VLC is a trademark owned by VideoLAN.

Wowza is a registered trademark of Wowza Media Systems, LLC in the United States and/or other countries.

Copyright 2021 Matrox is a trademark of Matrox Electronic Systems Ltd. All rights reserved.

Matrox Graphics Inc.

1055 Saint Regis Boulevard
Dorval, Quebec, Canada
H9P 2T4

video@matrox.com
www.matrox.com/video

(514) 822-6000

matrox[®]