Matrox® Release Notes

Matrox® Maevex™ 5100 Series and Maevex™ 6100 Series

Software version 3.02.00

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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

All Maevex 6100 Series Encoders and Decoder

- Added support for the 802.1X EAP-TLS protocol. This requires customer's (your) own certificate to be loaded on the device using the Maevex Firmware Updater before enabling this capability in PowerStream Plus. For more information, please refer to the Matrox PowerStream Plus User Guide document.

- Security and vulnerability maintenance have been made with added support for updated libraries.

- PowerStream Plus support has been added for the Windows 11 and Windows Server 2022 operating systems.

- Added support for new hardware components, which maintain the same fit, form, and function as current products. This allows us to mitigate the effects of the current global electronics component shortages. Maevex products with new hardware components will have the "2" suffix added in their part numbers (P/N).

All Maevex 6100 Series Encoders

- IGMPv3 support has been added.

Maevex 6152 Decoder

- General scaling and compositing optimizations have been made (for decoded stream frame rates less than 60 fps).

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 document. 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 corresponding version of the Matrox PowerStream Plus software.

3 Remove the older (previously installed) version of the Matrox PowerStream software.

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 package available on the Matrox web site (www.matrox.com/maevexsw).

Downgrading your PowerStream Plus version

Note: Your PowerStream Plus software version must match the firmware package version installed on your Maevex devices. Mixed firmware package and PowerStream Plus software versions are not supported.

Maevex 6100 and 6150 encoders

■ 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 Maevex User Guide.

■ If downgrading PowerStream Plus software to version 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.

Maevex 6152 Decoder

- Software downgrading is limited to version 3.00.01.005 (first release).

- Software downgrading from release 3.02 is not supported on products with new hardware components (P/Ns with the suffix "2" added).

Maevex 6122 and 6152 Encoders

- Software downgrading is limited to version 3.01.00.229 (first release).

- Software downgrading from release 3.02 is not supported on products with new hardware components (P/Ns with the suffix "2" added).

Downgrading to an older version of the firmware

Maevex 6100, 6120, and 6150 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.

- 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.

Maevex 6152 Decoder

- Firmware downgrading is limited to version 3.00.01.005 (first release).

- Firmware downgrading from release 3.02 is not supported on products with new hardware components (P/Ns with the suffix "2" added).

Maevex 6122 and 6152 Encoders

- Firmware downgrading is limited to version 3.01.00.229 (first release).

- Firmware downgrading from release 3.02 is not supported on products with new hardware components (P/Ns with the suffix "2" added).

Notes and limitations

PowerStreamPlus and/or all Maevex 6100 Series Encoders & Decoder

- The 802.1X EAP-TLS client-provided certificate must be loaded onto the devices using the firmware updater **prior to** enabling the 802.1X EAP-TLS

feature in PowerStream Plus for the respective devices. Otherwise, the option to enable it will be greyed out and inaccessible. [3478][1].

■ The firmware updater's **Reset Configuration** option will delete non-Matrox custom certificates (for example, your 802.1X EAP-TLS certificate) from the Maevex devices when they are rebooted at the end of the firmware update process. Do **not** check this option when using a modified firmware package that also loads your EAP-TLS certificate onto your Maevex devices. [3475, 3476]

■ In order to stream HLS with HTTPS encryption, make sure to enable the HTTPS port 443 in your networking environment and through any firewalls. For more information, please refer to the **Maevex devices** section of the Firewall requirements appendix in the PowerStream Plus User Guide.

■ HDMI CEC (Consumer Electronics Control), HDR, and 3D modes are currently not supported.

■ Wake-on-LAN (WOL) through PowerStream Plus is not supported for devices using DNS host names. [3218]

■ 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 the Windows documentations.

■ Switching between dynamic and static IP addresses isn't supported while encoding or decoding. Before you change the IP address, make sure you stop the encoding or decoding processes.

■ 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.

Maevex 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]

■ HLS has a limited and fixed list of pre-defined frame sizes. For more information, contact your Matrox representative [1691].

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[1] Tracking reference number

- 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.

- Interlaced streaming is not supported. (Interlaced input signal will be converted to progressive before encoding.)

- 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).

- It is recommended to stop all streams before updating the firmware on an encoder. If not, first disable (stop) then enable (restart) the inputs on the encoder. If applicable, also update (resave) the encoder configuration for future use.

- RTSP and SRT streams with authentication created with prior software releases are not forward or backward compatible and will not be recognized. They must be recreated as new custom streams and their stream credentials re-entered. We recommend that you delete previously used authenticated RTSP and SRT streams prior to saving an encoder configuration and prior to updating your software and firmware.

Maevex 6100 / 6150 / 6120 Encoders

- Capture, encoding, and streaming of protected content (HDCP over HDMI) is not supported.

Maevex 6100 Series Encoder Appliances

- 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 recorded data will be lost.

- After connecting a new local DisplayPort console display, the Maevex device must be rebooted for the DisplayPort output to be enabled.

- If the resolution on the DisplayPort preview output is higher than Full HD (determined by the connected monitor's preferred resolution), the preview frame rate will be limited to 15 fps. This is done independently from the streamed or recorded frame rates, which will remain unaffected.

■ 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.

■ The control buttons (on the front of 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.

■ The maximum scaling and compositing capability of the device is 4x 4k30 or 2x 4k60 (or equivalent). This includes compositing and scaling for the purpose of streaming or recording, and for monitoring through the local DisplayPort preview output (if enabled). The **Continue streaming on signal loss** option, if enabled, also relies on the compositing engine. In case of processing overload, frame drop and/or image flicker may occur. This can be avoided by using configurations that limit the number of simultaneous compositing and scaling processes, or by reducing the frame rates or the highest resolutions being used. [2833]

> **Note**: In particular, the DisplayPort preview output, if enabled in quadrant-view, will consume a non-negligible amount of scaling and compositing processing power that should be accounted for. [2727, 3174]

Maevex 6152 and 6122 Encoders

■ If protected content support is enabled in PowerStream Plus, the respective devices will protect all their outgoing streams, which can only be decoded and displayed by Maevex 6152 decoders that are also enabled for protected content support. Protocols that can carry protected content are restricted to RTSP and RTP only. The local DisplayPort monitoring output, as well as the recording function will be inaccessible (unsupported) in this mode. A warning message will be displayed if any of these options are in use and have to be disabled before enabling protected content support. [3235]

■ Streamed protected content can be displayed on a maximum of 32 remote displays (or less if HDMI repeater or splitter devices are used to connect the displays to the Maevex 6152 decoder devices) but may be limited based on the source's capabilities and limitations.

■ Streaming over WAN of HDCP protected content is not supported. [3110]

■ When protected content is enabled, on rare occasions, some HDCP displays or sources may not reinitialize properly after disconnecting and reconnecting the display device or following the reboot of a Maevex encoder device, resulting in a black or snowy pass-through display and/or stream. If this occurs, power cycle your display, or disconnect and reconnect your HDMI cables, or reboot your Maevex device again. [3372, 3378]

- If HDMI EDID pass-through is disabled in PowerStream Plus, with or without a local display being connected, the Maevex device may not detect the HDMI source following a reboot. If this occurs, disconnect and reconnect the HDMI cable from the source, or enable EDID pass-through and reboot your Maevex device. [3290]

Maevex 6152 Decoder

- If protected content support is enabled in PowerStream Plus on a given device:

    - All HDMI outputs will be HDCP protected and non-HDCP display devices will not receive any signal.

    - The decoder will decode protected streams originating from Maevex 6152 and 6122 encoders enabled for protected content support, as well as unprotected streams from any Maevex or compatible third-party encoders.

    - If any protected source content is mapped to be displayed on a 33rd display device, the corresponding decoder will stop decoding this content and will replace it with a black surface if used on any of its outputs (or with the failsafe content if failsafe is enabled). Other decoders already decoding the same content will not be affected.

    - With an HDCP2.x display connected to either HDMI Out 1 or HDMI Out 3 of your Maevex decoder device, any configuration change on any of the 4 outputs (decoded stream switching or output mode change) will result in a momentary flicker on ALL outputs. [3286]

- If protected content support is disabled on a given decoder (turned Off in PowerStream Plus), the Maevex decoder will **not** decode any streams originating from Maevex 6152 or 6122 encoders with protected content support enabled.

- HDMI Output pixel format is always RGB 4:4:4 24-bit (8-bit/color) in this release.

- Interlaced stream or failsafe content decoding, as well as interlaced HDMI output modes are not supported. [3287]

- Microphone input is not supported in this release.

- If a saved configuration is loaded and some of the streams are no longer valid (no longer exist), the corresponding output surface will remain black. 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 (by pressing and holding 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]

- When Maevex 6100 Series encoders are configured to use the **Optimized for desktop** encoding mode, PowerStream Plus may intermittently show the Maevex 6152 decoder warning: "*The source is running under its target frame rate*". This is normal behavior considering the variable frame rate nature of this encoding mode. [3259]

- Authenticated stream credential information (such as password and passphrase) are not saved into the decoder configuration files. Authenticated RTSP and SRT streams have to be manually added to the stream list and remapped by dragging and dropping them onto the desired output surface. Reloading previously saved decoder configurations that contain an authenticated stream is not supported and would result in a red decoder device tile in PowerStream Plus. It is recommended to remove streams with authentication prior to saving any decoder configuration for later use. [3217]

- Only NTFS-formatted external USB drives are supported. [3293]

- The Messaging Overlay System supports text messages of maximum 1000 characters at a font size up to 256, or a maximum of 250 characters at a font size of 512. [3169]

- If protected content is streamed through the LAN2 network port of a Maevex 6152 or 6122 encoder device, the stream will not appear on the Maevex 6152 decoder's auto-generated list of available streams. A corresponding custom stream needs to be created and the stream URL added manually on the decoder side in order to decode the protected stream. [3281]

Maevex 5100 Series

- This firmware package includes firmware version 1.05.09.001 for Maevex 5100 Series devices.

- Firmware upgrading to version 3.02 release directly is only supported from version 2.03 or more recent firmware releases. When you would like to upgrade from version 2.02 (or older) firmware releases, we recommend that you first upgrade to the version 3.00 or 3.01 release (that also includes the latest Maevex 5100 series firmware version 1.05.09.001), then upgrade to the version 3.02 release.

- **PowerStream Plus** – If a password that's longer than 8 characters is set for a Maevex 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).

- 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.

- 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 Maevex devices can only be detected on a DHCP network. To locate a Maevex device outside the DHCP subnet, first detect the Maevex device on the subnet, then set the Maevex device to a fixed IP address known to be available on the LAN outside the subnet. Remove the Maevex 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.

- 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 Maevex encoder.

- To ensure compatibility with auto-negotiating network switches and routers, your Maevex devices use auto-negotiation for their network speed and duplex settings. We recommend you configure the networking hardware your Maevex 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

Maevex devices and networking hardware match. If image corruption occurs, make sure your networking hardware (and the ports connected to your Maevex devices) isn't overloaded and dropping data packets. If necessary, increase the bandwidth allocated to the ports connected to your Maevex 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 the **Confidence preview** mode instead of the **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).

Maevex SDK (PowerStream Plus DotNet, RS-232, and REST APIs)

For more information on the Matrox Maevex SDK including PowerStream Plus DotNet API, RS-232 API, and REST APIs, or to obtain a copy of the SDK, contact Matrox Technical Support (www.matrox.com/en/video/forms/products/maevex-developer-tools).

Contact us

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