COEX - VMP

V1.5.1

Release Notes

Contents

1 Update Instructions

1.1 Update Strategy

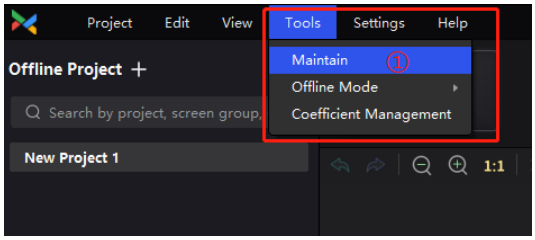
VMP V1.5.1 must be paired with LED display controller V1.5.1. Follow these steps to update:

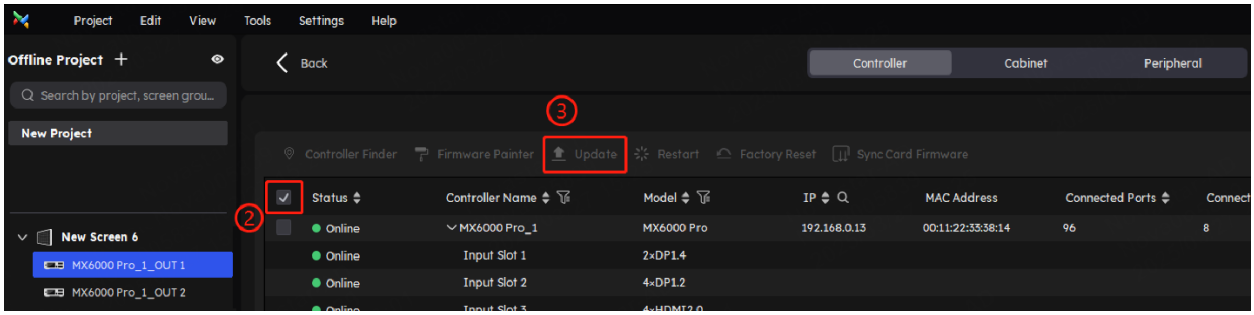
- First, update VMP to V1.5.1. Then, using VMP, update the controller to V1.5.1.
- Controllers with version V1.4.0 or later support direct updates to V1.5.1.
- Controllers prior to V1.4.0 do not support direct updates to V1.5.1. They require sequential updates, as detailed below.

Product	Product Model	Update Strategy
Software	VMP	Direct update to V1.5.1 is supported.
LED Display Controller	MX6000 Pro	1. Before updating to V1.5.1, the firmware must be at V1.4.0 or later. 2. If the firmware is an earlier version than V1.4.0, first update to V1.4.0 using VMP (V1.4.0 or later).
	MX2000 Pro	
	MX40 Pro	1. Before updating to V1.5.1, the firmware must be at V1.4.0 or later. 2. If the firmware is at V1.2.3, first update to V1.4.0 using VMP (V1.4.0 or later). 3. If the firmware is an earlier version than V1.2.3, first update to V1.2.3 using VMP (V1.2.3). Then, use VMP (V1.4.0 or later) to update the controller to V1.4.0. 4. For systems running version B14, use VMP (V1.2.3) to update the controller to V1.0.0, and then update to V1.2.3 and V1.4.0 sequentially.
	MX30	1. Before updating to V1.5.1, the firmware must be at V1.4.0 or later. 2. If the firmware version is at V1.1.0, first update to V1.4.0 using VMP (V1.4.0 or later). 3. If the firmware is an earlier version than V1.1.0, first update to V1.1.0 using VMP (V1.2.3). Then, use VMP (V1.4.0 or later) to update the controller to V1.4.0.
	MX20	1. Before updating to V1.5.1, the firmware must be at V1.4.0 or later. 2. If the firmware is an earlier version than V1.4.0, first update to V1.4.0 using VMP (V1.4.0 or later).
	KU20	1. Before updating to V1.5.1, the firmware must be at V1.4.0 or later. 2. If the firmware version is at V1.2.1, first update to V1.4.0 using VMP (V1.4.0 or later). 3. If the firmware is an earlier version than V1.2.1, first update to V1.2.1 using VMP (V1.2.3). Then, use VMP (V1.4.0 or later) to update the controller to V1.4.0.

Product	Product Model	Update Strategy
	CX40 Pro	1. Before updating to V1.5.1, the firmware must be at V1.4.0.B5 or later. 2. If the firmware version is at V1.1.0, first update to V1.4.0.B5 using VMP (V1.4.0.CTM0210 or later). Then, perform a factory reset on the controller and select **Reset all**. 3. If the firmware is an earlier version than V1.1.0, first update to V1.1.0 using VMP (V1.2.3). Then, use VMP (V1.4.0.CTM0210 or later) to update the controller to V1.4.0.B5. When updating to V1.1.0, please ensure that the receiving card CA50E is updated to V1.3.0.0 or later.

1.2 Operating Procedure





Note:

- It is recommended to perform the update using a wired network.
- All the devices of a screen must be updated at the same time.
- When updating card-based controllers (MX6000 Pro and MX2000 Pro), all the cards must be updated at the same time. If the cards span across different screens, the controllers that are under the same screen as the card must also be updated together.

1.3 Special Note

The COEX platform includes LED display controllers and receiving cards, which together constitute a complete system.

Additionally, certain new or optimized features require updating the firmware of both the controllers and receiving cards.

The latest user manuals and firmware can be found at the following website:

https://www.novastar.tech/downloads

2 Version Introduction

2.1 Release Notes

Version V1.5.1 adds support for the 8×5G_Base-T output card, MVR output card, Dynamic Booster for card-based controllers, along with other enhancements and bug fixes.

2.2 Compatible Product

Product	Model
LED Display Controller	MX6000 Pro, MX2000 Pro, MX40 Pro, MX30, MX20, KU20, CX40 Pro
Input Card	MX_4×HDMI 2.0 input card MX_2×HDMI 2.1 input card MX_4×DP 1.2 input card MX_2×DP 1.4 input card MX_4×12G-SDI input card MX_1×DP 1.4+1×HDMI 2.1 input card MX_1×ST 2110 (25G) input card MX_2×ST 2110 (25G) input card MX_1×ST 2110 (100G) input card MX_1×DP 1.4 input card (8K@60Hz)
Output Card	MX_4×10G_Fiber output card MX_1×40G_Fiber output card MX_8×5G_Base-T output card
MVR Card	MX_1×HDMI 2.0+1×12G-SDI MVR output card
Receiving Card	A10s Pro and its derivative cards, CA50E, XA50 Pro, A8s Pro and its derivative cards, A8s and its derivative cards, A8s-N, A7s Plus, A5s Plus, B6s
Fiber Converter	CVT10, CVT10 Pro, CVT8-5G
Multifunction Card	MFN300
Brightness Sensor	NS060
3D Emitter	EMT200 Pro

3 Key Features

Name	Description	Reason for Optimization
MVR	MX2000 Pro and MX6000 Pro now support the MVR function.	By supporting the MVR function, the shortcoming of full-link signal observation capabilities is completely addressed. It not only allows users to compare input sources and output effects in real time to quickly locate signal abnormalities or image quality differences, but also provides stronger operational and maintenance guarantees for high-standard scenarios such as broadcasting and studios through visual monitoring methods.
Dynamic Booster	MX2000 Pro and MX6000 Pro now support the Dynamic Booster function.	By supporting the Dynamic Booster function for card-based controllers, ordinary low-dynamic images can be reshaped into HDR-level visual effects. This technology not only accurately restores dark details and eliminates image banding caused by "low grayscale merging," but also reduces energy consumption through power scheduling, providing customers with a solution that balances ultimate image quality with green energy savings.

Note:

Some features have usage restrictions. For details, please refer to the product user manual.

3.1 MVR

Reason for Optimization

By supporting the MVR function, the shortcoming of full-link signal observation capabilities is completely addressed. It not only allows users to compare input sources and output effects in real time to quickly locate signal abnormalities or image quality differences, but also provides stronger operational and maintenance guarantees for high-standard scenarios such as broadcasting and studios through visual monitoring methods.

Optimization Details

- Add an independent MVR interface to monitor input sources and output effects simultaneously.
- Add a fixed layout template function, supporting one-click loading of output monitoring and input preview, as well as operations such as drag-and-drop replacement, deletion, clearing, and layout switching.

- Add a layout customization function. After window properties are defined, they can be saved as a template. When the template is applied, content will be automatically filled according to the properties.
- Add the Multiviewer interface resolution settings, supporting 1920×1080 and 3840×2160 (default).
- Add the UMD function, supporting on/off toggling and color customization. When enabled, it displays the source name or screen name.
- Add the border function, supporting on/off toggling, color customization, and thickness adjustment.

3.2 Dynamic Booster Supported by Card-based Controllers

Reason for Optimization

By supporting the Dynamic Booster function for card-based controllers, ordinary low-dynamic images can be reshaped into stunning HDR-level visual effects. This technology not only accurately restores dark details and eliminates image banding caused by "low grayscale merging," but also significantly reduces overall screen energy consumption through power scheduling, providing customers with a solution that balances ultimate image quality with green energy savings.

Optimization Details

- MX2000 Pro and MX6000 Pro support the Dynamic Booster function.
- Enable or disable Dynamic Booster at the screen level.
- Adjust the Dynamic Booster level at the screen level.

4 Other Optimizations

Name	Description
Controller Discovery and Maintenance in Abnormal States	When the system detects no output card or that the output card version does not match the controller firmware version, VMP still needs to maintain communication capability with the controller, supporting controller discovery and firmware update functions to ensure the controller can be managed and compatibility issues can be fixed via software.
Controller Firmware Update	Optimize the firmware update process and improve the firmware package transmission method to avoid false positive interception by some antivirus software, ensuring stable and reliable updates.

Name	Description
EOTF Low-Grayscale Compensation Optimization	After optimization, 10-bit and 12-bit start glowing step by step at 33.3% at 100% brightness.

5 Bug Fixes

- Fixed the issue where logs could not be exported to a network or shared path.
- Fixed the issue where controllers could not be discovered in offline and online modes due to port occupation.
- Fixed the issue where controllers could not be discovered in offline mode when the PC username contains special characters.
- Fixed the issue of abnormal refresh rate data displayed on the VMP interface under different frame rates.
- Fixed the occasional issue of failing to obtain latitude and longitude.
- Fixed the issue of inaccurate time zones after controller updates.
- Fixed the occasional issue of abnormal layer cropping.

6 Known Issues

- When an extended display is connected to the one displaying VMP software, and their resolutions are inconsistent, some VMP interfaces may display abnormally. Set the display scaling ratios to be consistent and then restart VMP to resolve the issue.
- On the **Monitor** > **Health** interface, connection lines overlap with the cards in certain scenarios.
- After opening the VMP software, modifying the resolution of the display showing the VMP interface may occasionally cause interface display issues. Restart VMP to resolve this issue.

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