COEX - VMP

V1.5.0

Release Notes

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1 Update Instructions

1.1 Upgrade Steps

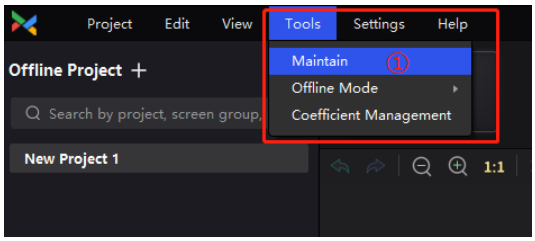
VMP V1.5.0 must be paired with LED display controller V1.5.0. Follow these steps to upgrade:

- First, upgrade VMP to V1.5.0. Then, using VMP, upgrade the controller to V1.5.0.
- For certain controller versions, updates to V1.5.0 cannot be performed directly and must be conducted sequentially. The update steps are as follows:

Product	Product Model	Update Steps
Software	VMP	Direct update to V1.5.0 is supported.
LED Display Controller	MX6000 Pro	Direct update to V1.5.0 is supported.
	MX2000 Pro	
	MX40 Pro	1. Before updating to V1.5.0, the firmware must be at V1.2.3 or later. 2. If the firmware is an earlier version than V1.2.3, first update to V1.2.3 using VMP (V1.2.3). 3. For systems running version B14, use VMP (V1.2.3) to update the controller to V1.0.0, and then proceed to update to V1.2.3.
	MX30	1. Before updating to V1.5.0, the firmware must be at V1.1.0 or later. 2. If the firmware is an earlier version than V1.1.0, first update to V1.1.0 using VMP (V1.2.3).
	MX20	Direct update to V1.5.0 is supported.
	KU20	1. Before updating to V1.5.0, the firmware must be at V1.2.1 or later. 2. If the firmware is an earlier version than V1.2.1, first update to V1.2.1 using VMP (V1.2.3).
	CX40 Pro	1. Before updating to V1.5.0, the firmware must be at V1.1.0 or later. 2. If the firmware is an earlier version than V1.1.0, first update to V1.1.0 using VMP (V1.2.3). 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

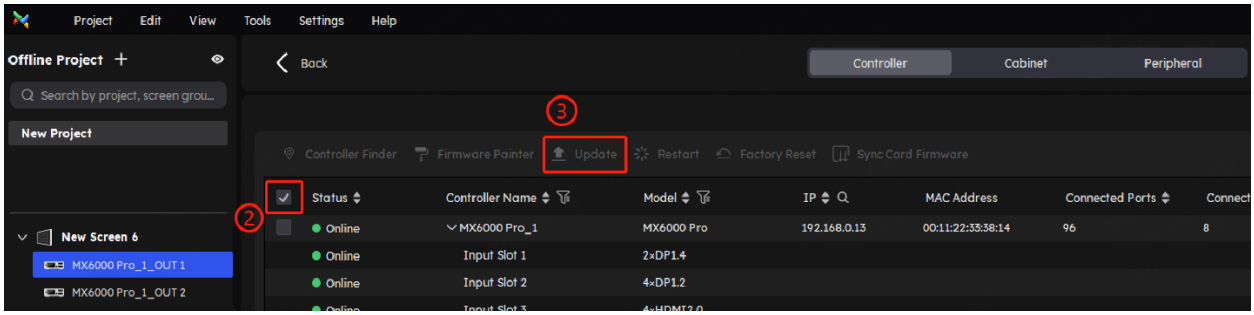
Step 1 From the menu bar, choose **Tools** > **Maintain**.



Step 2 On the **Controller** page, select the target controller.

Step 3 Click **Update** to update the controller's firmware by downloading from the cloud or uploading a local file.

- Select the **Cloud** tab to view the latest version release notes and click **Update** to download and automatically install the package.
- Choose the **Local** tab, click **Upload File**, and select either a firmware file (.img) or a compressed file (.zip) from the pop-up folder. Verify the file name and version number, then click **OK** to proceed with the update.



Note:

- When updating the firmware, it's recommended to use a wired network connection between the PC and the controller. If you need to update via the cloud, ensure the PC is connected to the Internet.
- All the devices of a screen must be upgraded at the same time.
- V1.5.0 controllers introduced support for the YCbCr 4:2:0 format, resulting in changes to the EDID compared to V1.4.0. When upgrading from an earlier version to V1.5.0, if the controller was previously outputting a non-recommended resolution (for instance, the recommended resolution is 1920×1080@60Hz, but the graphics card was forced to output 3840×2160@30Hz), after the upgrade, the output resolution might revert to the recommended 1920×1080@60Hz. In such cases, users may need to force the resolution back to 3840×2160@30Hz. It is advised before upgrading that users with NVIDIA A or P series professional graphics cards use EDID locking or mosaic settings to prevent resolution errors after the upgrade.
- When upgrading card-based controllers (MX6000 Pro and MX2000 Pro), all of the cards must be upgraded 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 upgraded together.

1.3 Special Note

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

Starting from COEX V1.5.0, Calcube2.X calibration software is no longer supported. Please use the official version of the CC3 software for screen calibration. Additionally, certain new or optimized features require upgrading the firmware of both the controllers and receiving cards.

You can download the latest product user manual, firmware package, and CC3 at NovaStar official website: https://www.novastar.tech/downloads

2 Version Introduction

2.1 Release Notes

VMP V1.5.0 includes several new features including 7-color multi-batch adjustment, cabinet topology duplication, SPDIF audio output, peripheral maintenance, and checking for new updates. Additionally, this version optimizes monitoring, calibration coefficient management, cabinet maintenance, ST 2110, and project/screen group management, along with other enhancements and bug fixes.

2.2 Compatible Product

Product	Model
Controller	MX6000 Pro, MX2000 Pro, MX40 Pro, MX30, MX20, KU20, CX40 Pro
Input Card	MX_4×HDMI 2.0, MX_2×HDMI 2.1, MX_4×DP 1.2, MX_2× DP 1.4, MX_1× DP 1.4+1×HDMI 2.1, MX_4×12G-SDI, MX_1×ST 2110 (25G), MX_2×ST 2110 (25G), MX_1×ST 2110 (100G), MX_1× DP 1.4 (8K@60Hz)
Output Card	MX_4×10G_Fiber, MX_1×40G_Fiber
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
Screen monitoring	• Monitor overall screen operating status. • Display classified alarms with possible causes and actions. • New monitoring options include: cabinet temperature, module temperature, receiving card PHY temperature, module voltage, module flat cable, cabinet humidity, cabinet power, cabinet smoke, and input source monitoring. • Support manual diagnostics or create diagnostic schedules and view diagnosis reports. • Set monitoring schedules. • Receive alarm notifications via email.
7-color Multi-batch Adjustment	Support for 7-color multi-batch adjustment. Reset coefficients for both single-color and 7-color adjustments.
SPDIF Audio Output	Select a single input source as the audio output.
Check for Updates	• Supports automatic detection of new versions of VMP and the controller, and notifies the user accordingly. • Supports online updates for VMP and controllers.
Calibration Coefficient Management	• Batch upload of cabinet/module calibration coefficient files with auto ID matching. • Manage changes to factory calibration coefficients with License applications. Coefficients can be saved to module flash memory only within license validity.
ST 2110	Set parameters for NMOS registration mode, PTP and FEC; export SDP files.
Project/Screen Group Management	Support batch adjustment of parameters, display control, and preset switching for project/screen groups.
Cabinet Topology Duplication	Allows topology duplication via keyboard shortcuts or right-click menu.
Cabinet Maintenance	New topology view.
Peripheral Maintenance	Firmware updates for multifunction cards and EMT200 Pro emitter.

Note:

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

3.1 Monitoring

Reason for Optimization

Through intelligent real-time monitoring and remote alerts, it enables quick fault detection and reduces maintenance costs.

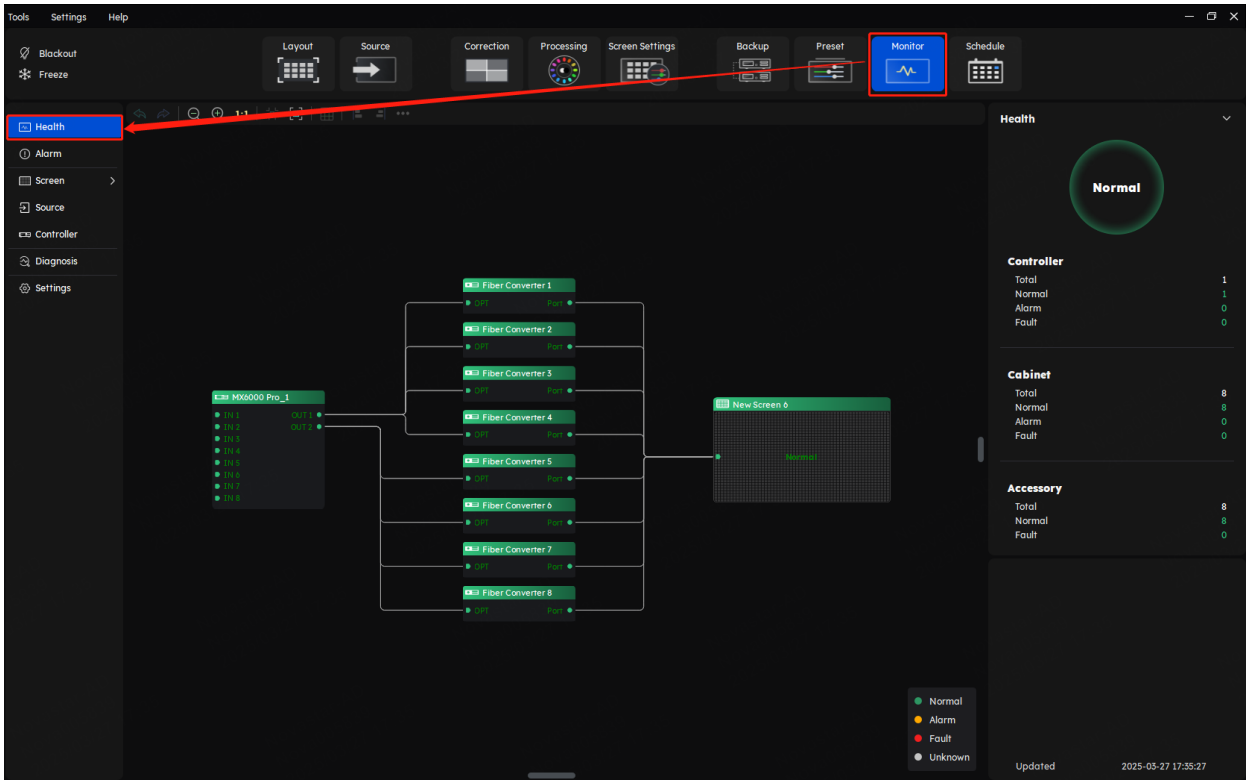
Ensures stable screen operation and minimizes hardware wear during major events.

Optimization Details

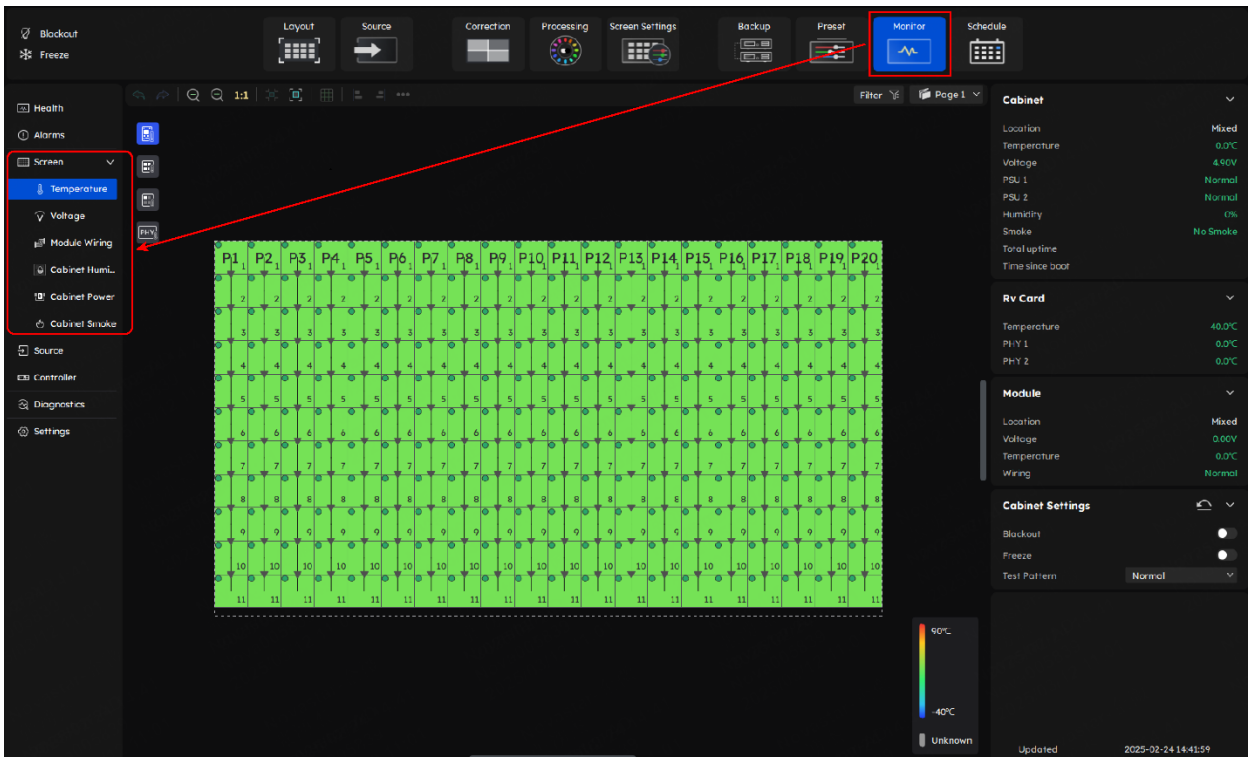
- Monitor overall screen operating status.
- New monitoring options include: cabinet temperature, module temperature, receiving card PHY temperature, module voltage, module flat cable, cabinet humidity, cabinet power, cabinet smoke, and input source monitoring.
- Support manual diagnostics or create diagnostic schedules and view diagnosis reports.
- Set monitoring schedules.
- Receive alarm notifications via email.

VMP Screenshot

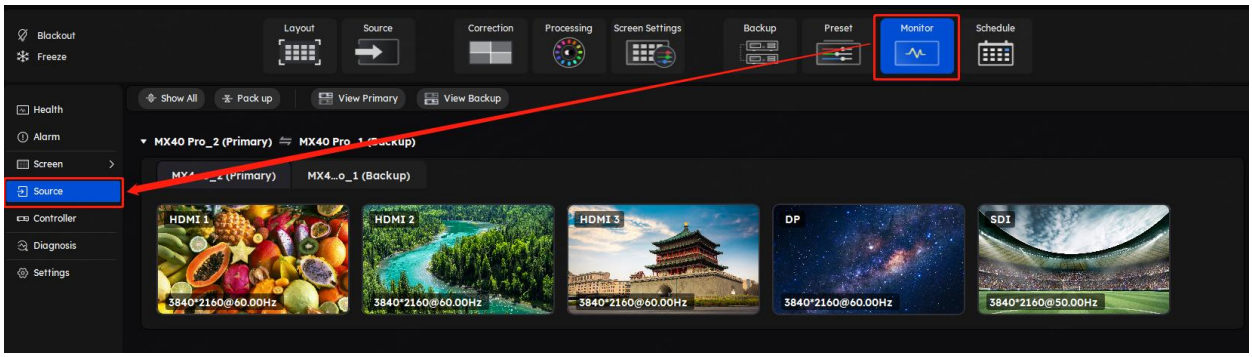
- Health



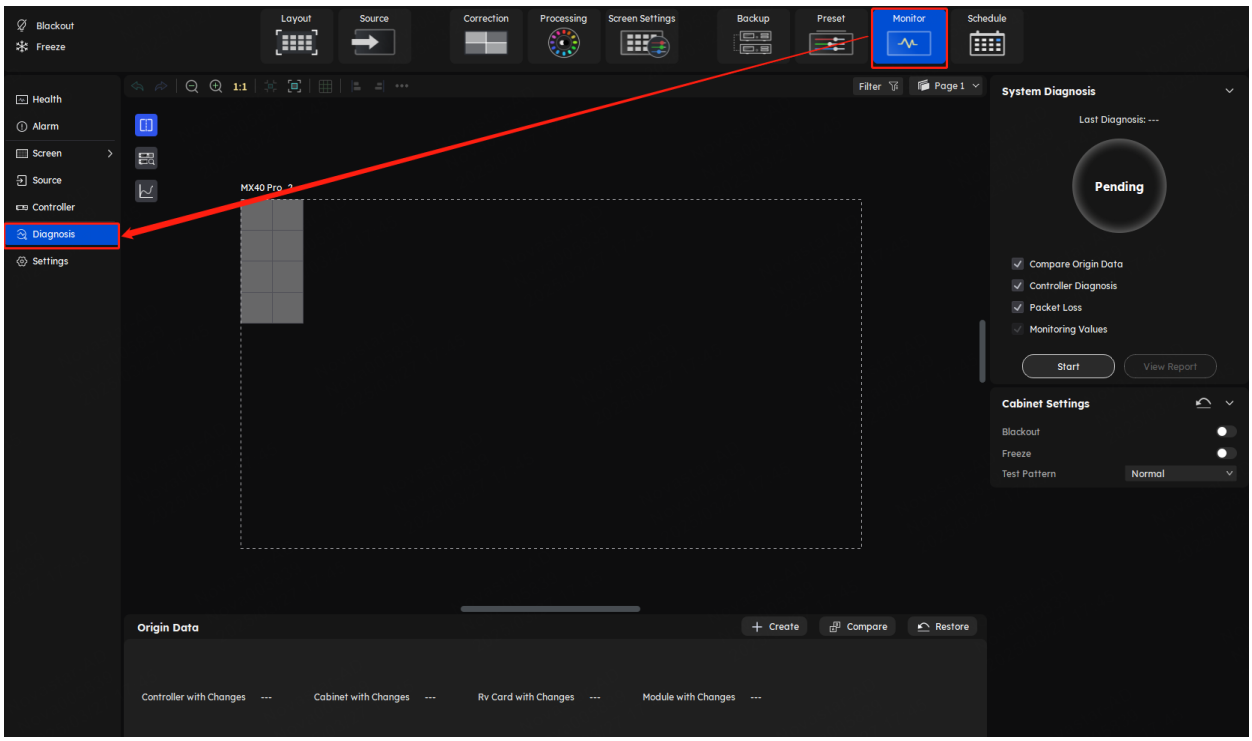
- Screen Monitoring



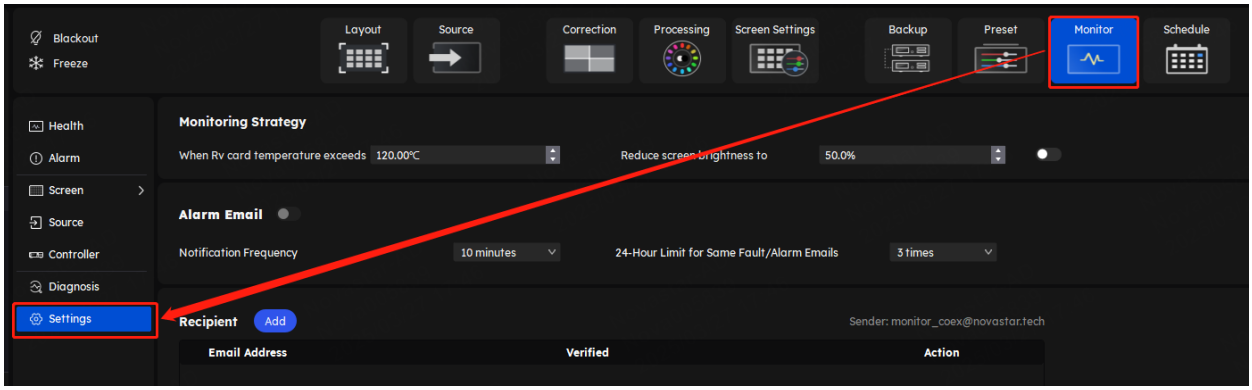
- Input Source Monitoring



- Diagnostic



- Monitoring Schedule & Email Notification



3.2 7-color Multi-batch Adjustment

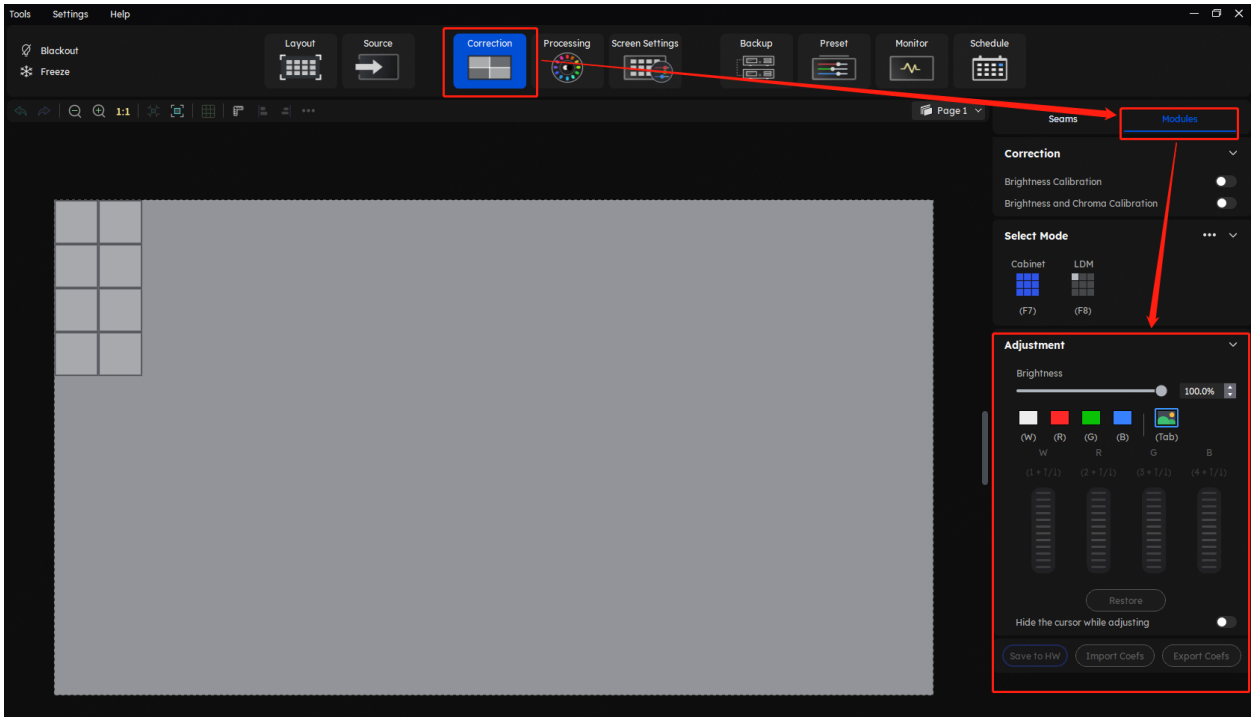
Reason for Optimization

By optimizing the coupling between multi-batch coefficients, it improves adjustment efficiency and reduces trial-and-error time.

Optimization Details

Support for 7-color multi-batch adjustment. Reset coefficients for both single-color and 7-color adjustments.

VMP Screenshot



3.3 SPDIF Audio Output

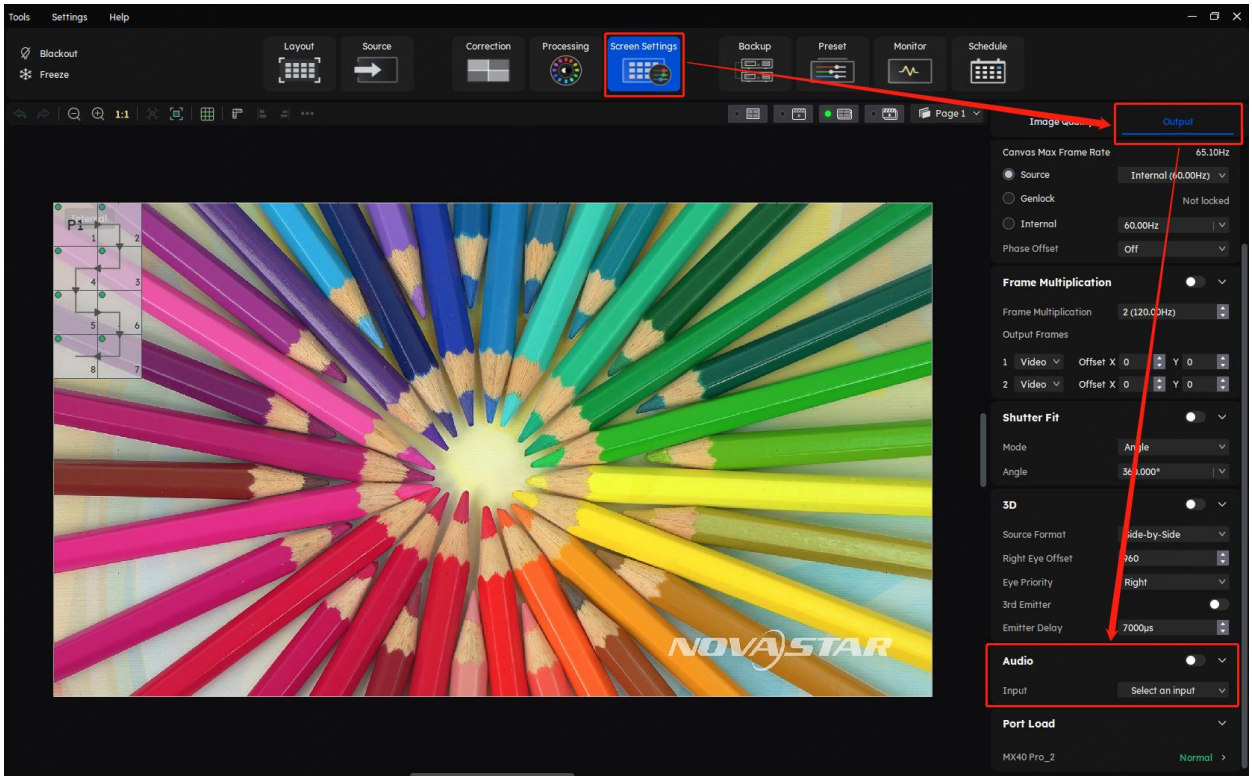
Reason for Optimization

Supports connecting with digital audio devices via the SPDIF interface to meet specific audio output needs.

Optimization Details

Select a single input source as the audio output.

VMP Screenshot



3.4 Check for Updates

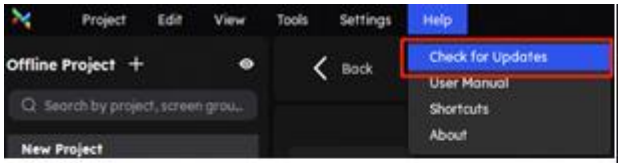
Reason for Optimization

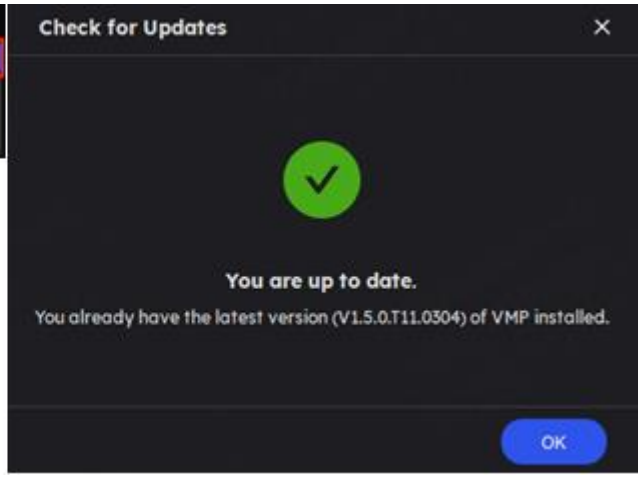
When the computer is connected to the Internet, VMP automatically pushes new version information, highlights key updates, and completes the download and installation process with one click.

Optimization Details

- Supports automatic detection of new versions of VMP and the controller, and notifies the user accordingly.
- Supports online updates for VMP and controllers.

VMP Screenshot





3.5 Calibration Coefficient Management

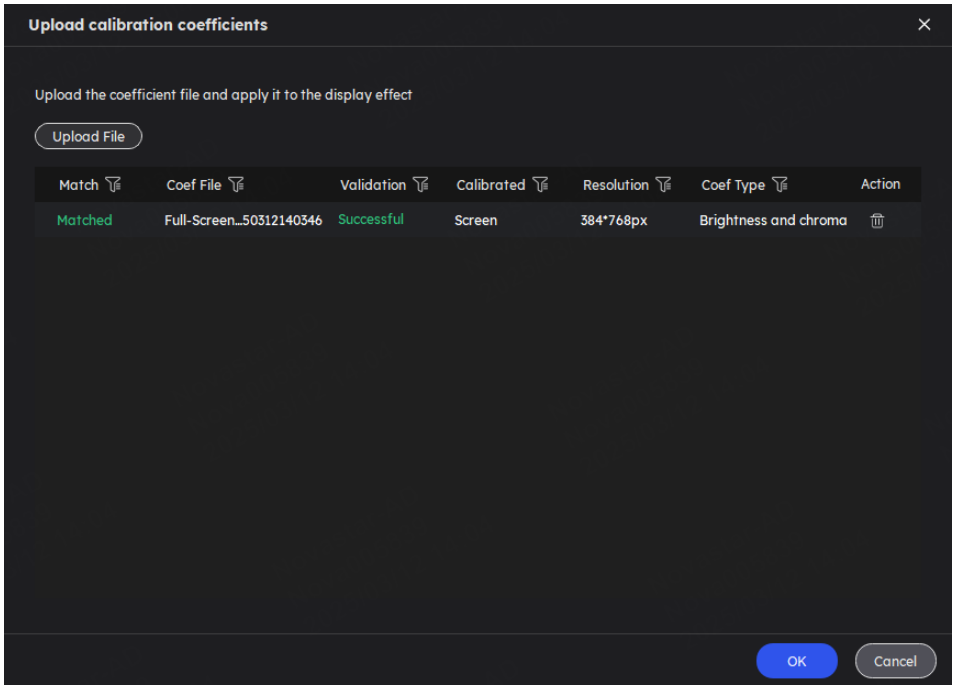
Reason for Optimization

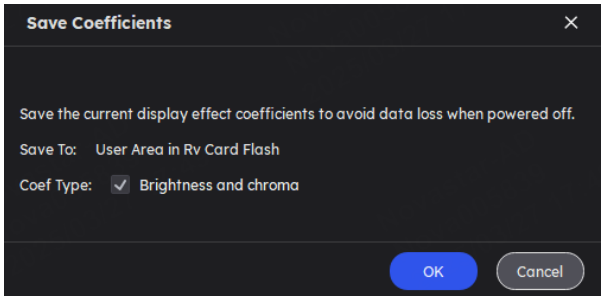
Optimizes the upload process and establishes a tiered control mechanism for calibration coefficient management. This enhances efficiency while minimizing the risk of display errors from on-site mistakes.

Optimization Details

- Batch upload of cabinet/module calibration coefficient files with auto ID matching.
- Control changes to factory calibration coefficients by applying for a License (see VMP User Manual). Coefficients can only be saved to module flash memory during the license's valid period.

VMP Screenshot





3.6 ST 2110

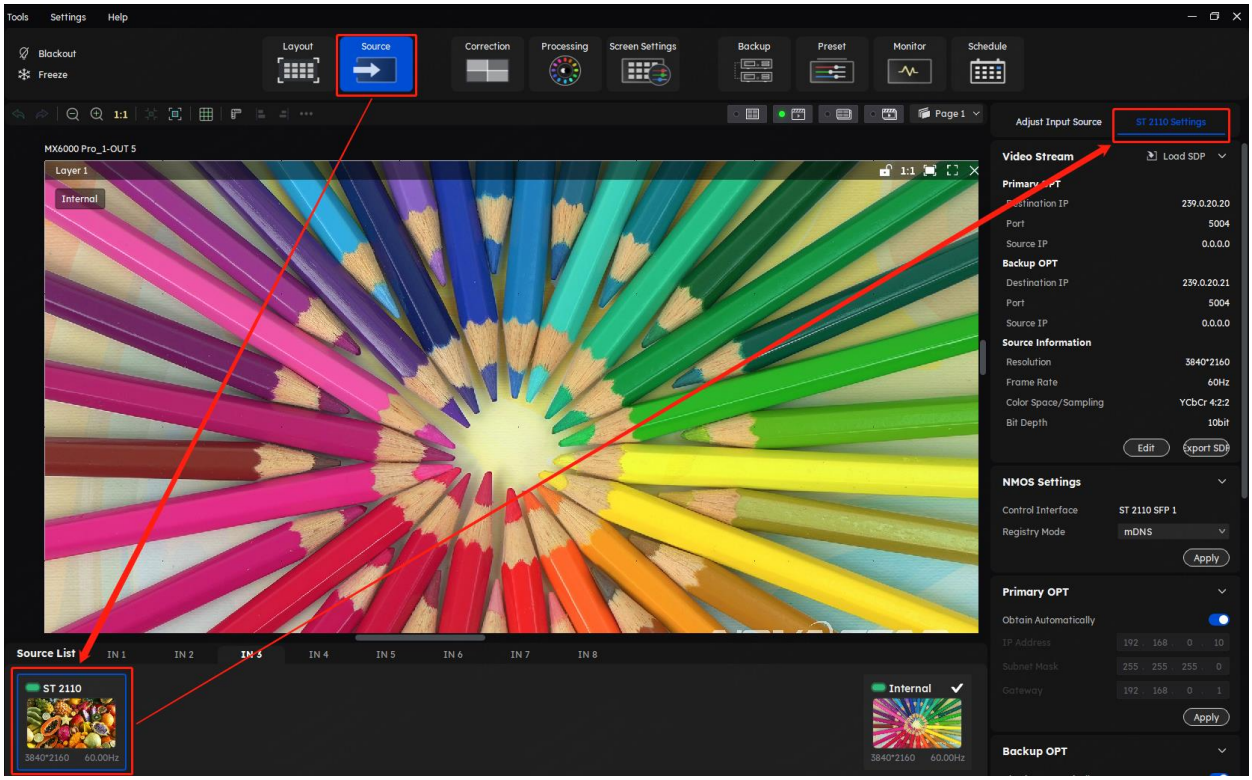
Reason for Optimization

- Supports one-click generation of standardized description files for direct third-party parsing.
- Introduces a unicast registration mode to meet application needs in complex network environments.

Optimization Details

Set parameters for NMOS registration mode, PTP and FEC; export SDP files.

VMP Screenshot



3.7 Project/Screen Group Management

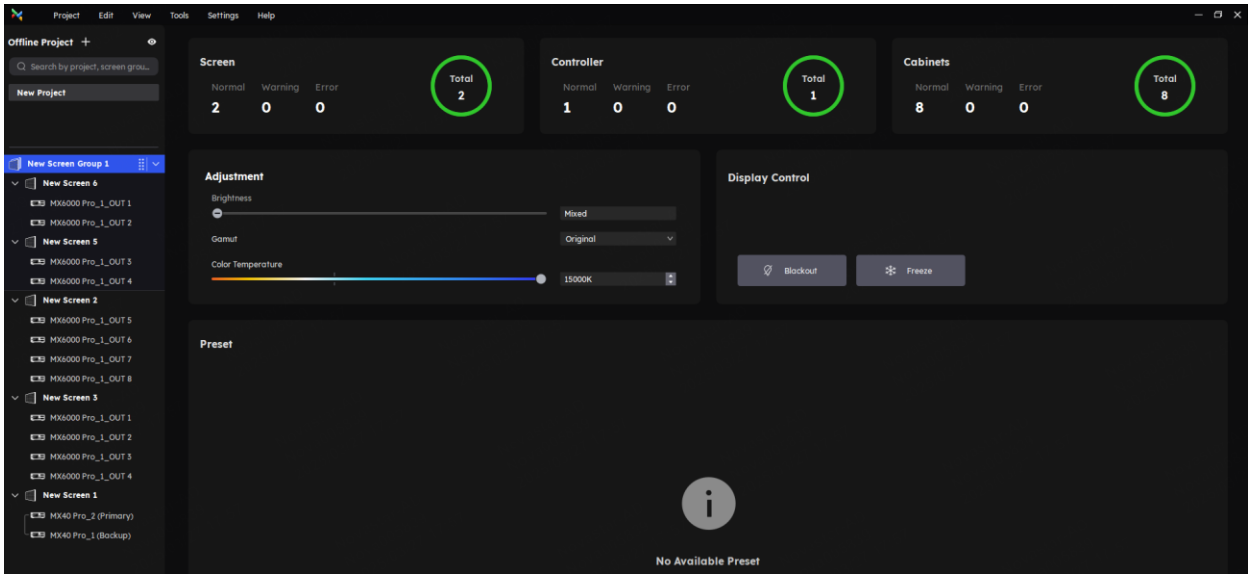
Reason for Optimization

Supports batch parameter adjustments across screens, addressing multi-screen coordination challenges.

Optimization Details

Support batch adjustment of parameters, display control, and preset switching for project/screen groups.

VMP Screenshot



3.8 Cabinet Topology Duplication

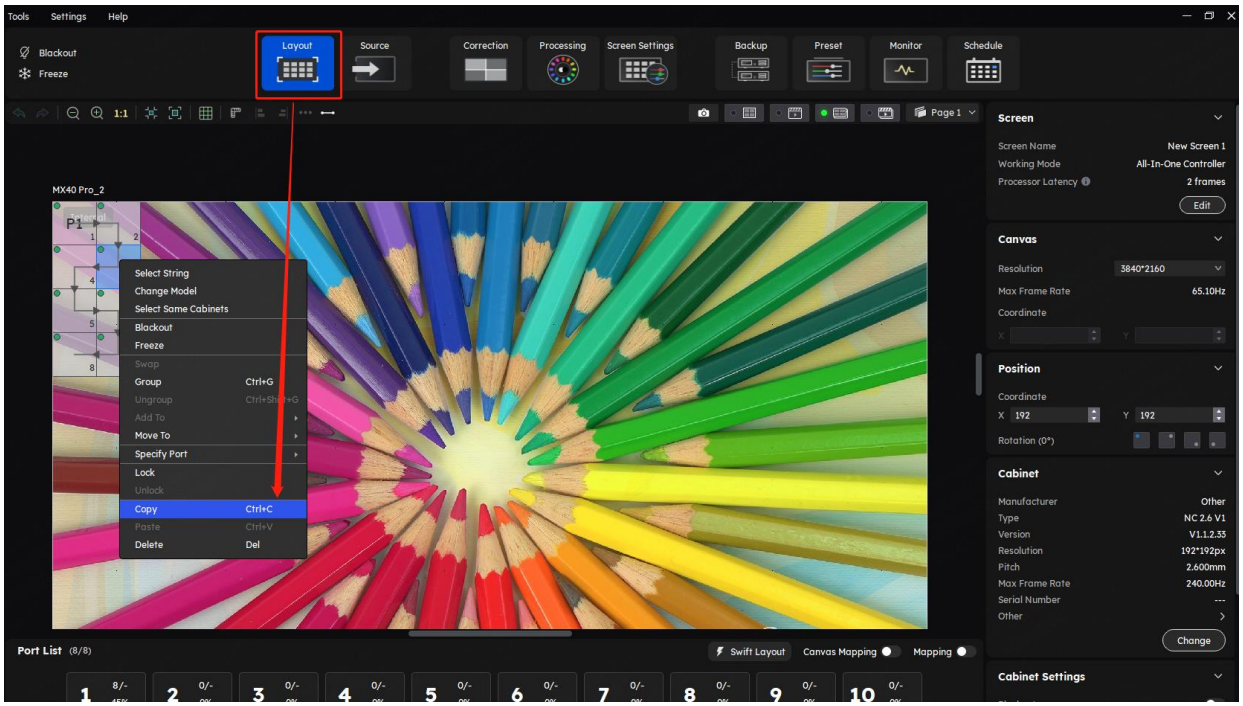
Reason for Optimization

Enables quick reuse of screen configurations in large projects, allowing fast duplication without repeated setup across multiple screens on-site.

Optimization Details

Allows topology duplication via keyboard shortcuts or right-click menu.

VMP Screenshot



3.9 Cabinet Maintenance

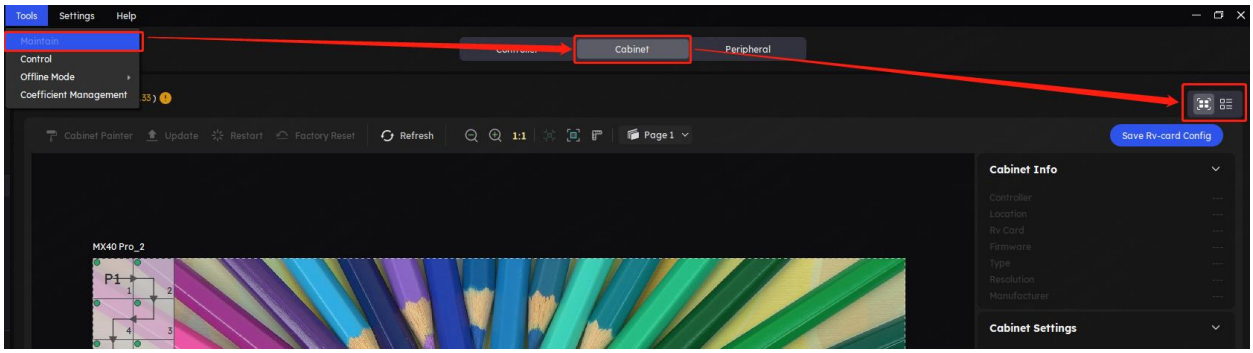
Reason for Optimization

Enables easy identification of cabinets.

Optimization Details

New topology view in cabinet maintenance interface.

VMP Screenshot



3.10 Peripheral Maintenance

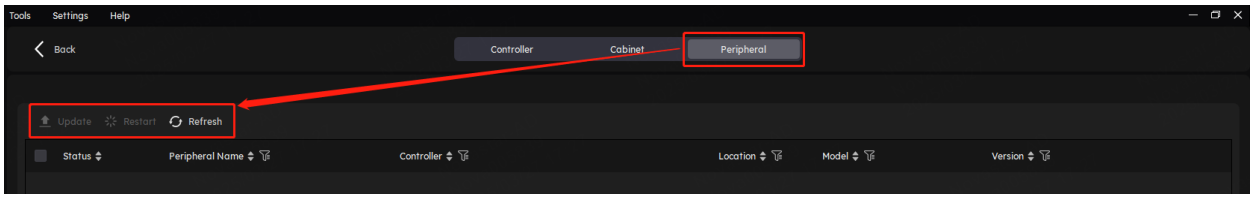
Reason for Optimization

- Enables unified management of firmware versions for various peripheral devices.
- Supports batch updates for multiple devices at once.

Optimization Details

Firmware updates for multifunction cards, EMT200 and EMT200 Pro emitters.

VMP Screenshot



4 Other Optimizations

Name	Description
UI Upgrade	The VMP interface has been redesigned to be more flat and minimalist, with

Name	Description
	clearer and smarter interface logic, and significantly enhanced visual distinction.
Cabinet Factory Reset	Allows the user-adjustable receiving card parameters to be reset to default values.
Art-Net	Allows for setting of the start address.
Thermal Compensation	Thermal compensation 3.0 only supports automatic adjustment.
Manual Cabinet Topology Adjustment	Manual cabinet topology adjustment for connecting unconnected cabinets or modifying/deleting existing connections.
Brightness Limit	Allows manual setting of the brightness limit.
Brightness Component	Supports adjustment of RGBW brightness components.
Color Space/Sampling	Supports YCbCr 4:2:0 color space/sampling.
Controller Firmware Update	Supports formatting multiple controllers of the same model but different firmware versions to a unified version.
Controller Identify	Customizable background color for controller identify.
Coordinates Ruler	Option to show or hide the coordinates ruler.
Video on Top	Introduces a new view with video on top and cabinets underneath, allowing for layer adjustments within this view.
Add Controller	Supports adding controllers to the device list via IP address.
Offline Mode	• Supports adding more than 25 controllers. • A single Ethernet port can load over 32 cabinets, up to 512. • Allows mixed use of cabinets of the same model but different sizes under a single Ethernet port. When overwriting, it follows the specifications of the selected cabinet.
Multi-Mode	Allows switching between multiple modes on the same screen when the receiving card model and multi-mode data (including receiving card parameters and mode list) are the same.

5 Bug Fixes

1. Fixed the issue preventing NCP updates on certain custom receiving cards.
2. Fixed the issue with uploading calibration databases that have Chinese characters in their names.
3. Fixed the issue where VMP wouldn't start when the OS language was set to certain languages.

4. Fixed the inability of the shutter fit function to recognize NCP adaptive frame rate 3.0.
5. Fixed the occasional lack of notifications in the editing area when an external source in sync settings is selected and then disconnected.
6. Fixed rare crashes and freezes.
7. Fixed ineffective color temperature adjustments and the grayed-out color gamut dropdown during backup verification after device backup.

6 Known Issues

1. When using extended displays with inconsistent resolutions, VMP may show interface display issues. Setting the same scaling ratio and restarting VMP can resolve this.
2. On the **Monitor** > **Health** interface, some scenarios have overlapping cards and wiring.
3. Changing the resolution after opening VMP might lead to interface issues, which can be resolved by restarting VMP.

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