



NovaPro UHD All-in-One Controller

V1.0.0 NS160000303



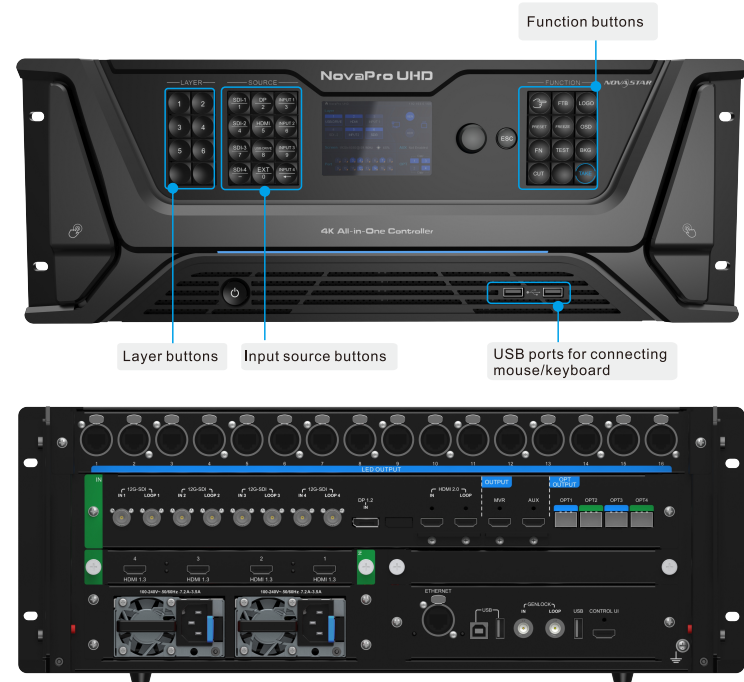
Quick Start Guide

1 Introduction

The NovaPro UHD is a new all-in-one controller developed by NovaStar. By integrating video processing, video control and LED screen configuration functions into one controller, this product is capable of receiving a variety of video signals, processing and sending images of resolutions up to ultra HD 4K×2K@60Hz.

With the built-in Master VI smart platform, the NovaPro UHD supports layer creation, property settings, and screen configuration via simple mouse, keyboard, and monitor operations.

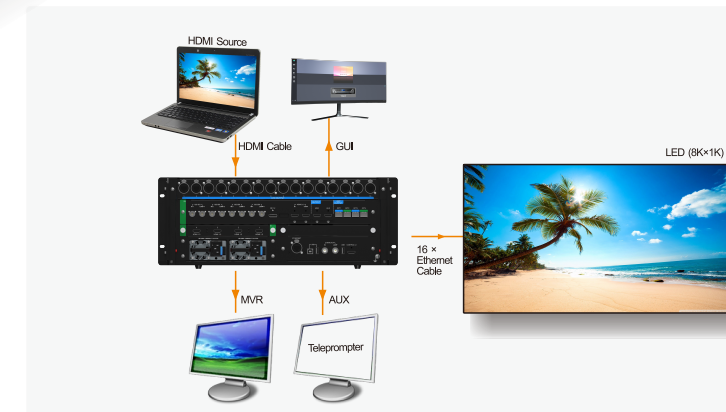
The NovaPro UHD supports sending of processed video to LED display through Neutrik Ethernet ports or fiber optical connectors. With powerful video processing and sending capabilities, this product is well suited for high-end rental applications, stage control systems, and fine-pitch LED displays.



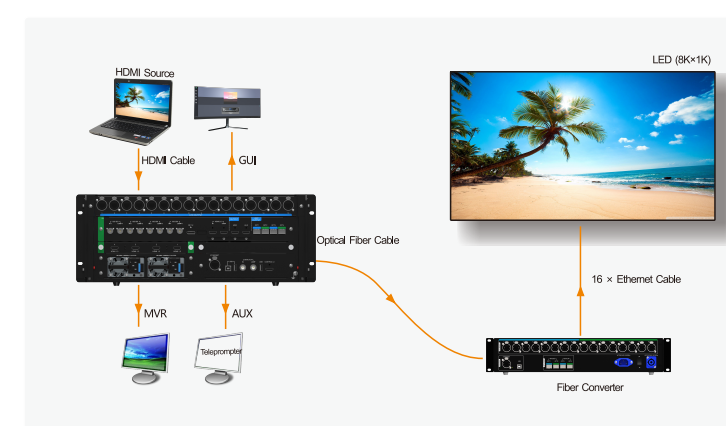
Input		
Connector	Qty	Description
12G-SDI	4	Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G) and ST-292 (HD) input signals. Input resolutions up to 4K×2K@60Hz and downward compatible Supports 12G-SDI loop output
DP 1.2	1	Input resolution up to 4K×2K@60Hz (8K×1K@60Hz) and downward compatible, HDCP 1.3 compliant Does not support interlaced signal inputs
HDMI 2.0	1	Input resolution up to 4K×2K@60Hz (8K×1K@60Hz) and downward compatible, HDCP 1.4 and HDCP 2.2 compliant, loop output Does not support interlaced signal inputs.
HDMI 1.3	4	4 × HDMI 1.3: Each with resolution up to 1920×1080@60Hz Can be changed to D_4 × DVI input card The default option is D_4 × HDMI input card Supports HDCP 1.3 Supports interlaced signal inputs
Output		
Connector	Qty	Description
Ethernet port	16	Neutrik Gigabit Ethernet outputs
OPT 1-4	4	4 × 10G fiber optical output connectors with copy and hot backup modes <ul style="list-style-type: none"> • OPT 1 transmits data of Ethernet ports 1-8 • OPT 2 transmits data of Ethernet ports 9-16 • OPT 3 is the copy/hot backup channel for OPT 1 • OPT 4 is the copy/hot backup channel for OPT 2
MVR	1	HDMI 1.3 connector, used as monitoring connector of MultiViewer to monitor input source, PVM, PGM or perform mixed preview
AUX	1	HDMI 1.3 connector, used as auxiliary output connector for connecting an auxiliary device, such as a teleprompter
Control		
Connector	Qty	Description
ETHERNET	1	Connect to the PC for communication or connect to the network.
USB	3	1 × USB-B: Connect to the PC for device debugging. 2 × USB-A: <ul style="list-style-type: none"> • Insert a USB drive to perform system update. • Connect a mouse or keyboard. • Output connector for device cascading.
GENLOCK IN-LOOP	1	Connect a synchronization signal source to synchronize the cascaded devices.
CONTROL UI	1	Connect to a monitor for human-machine interaction,

2 Applications

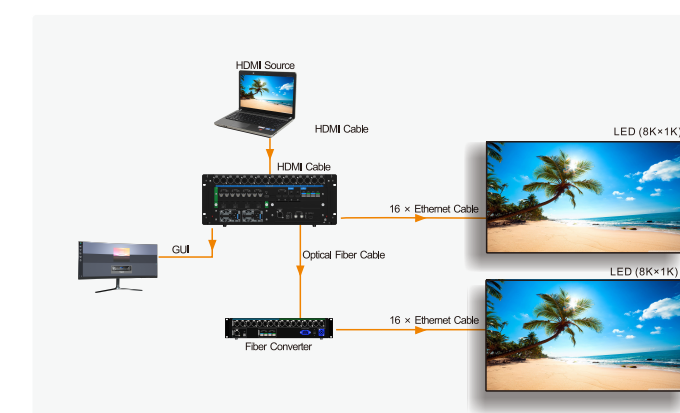
1 NovaPro UHD unit for image mosaic



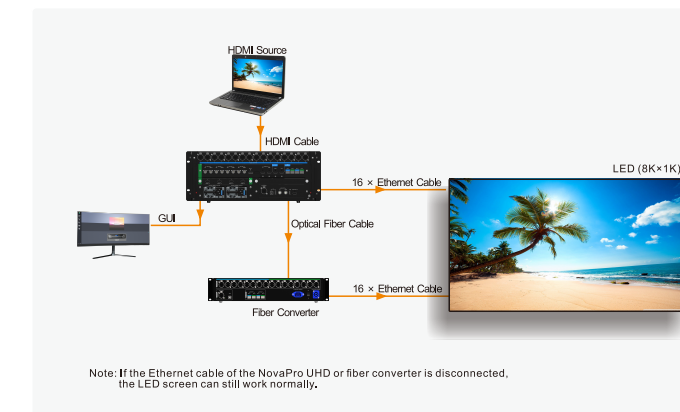
Remote Transmission – 1 NovaPro UHD unit only



Remote Transmission – 1 NovaPro UHD unit for copy output mode



Remote Transmission – 1 NovaPro UHD unit for hot backup output mode



Note: If the Ethernet cable of the NovaPro UHD or fiber converter is disconnected, the LED screen can still work normally.

3 Operations

Basic operations of the NovaPro UHD includes configuring screens, adding layers and selecting input sources.

Quick Configuration

Preconditions

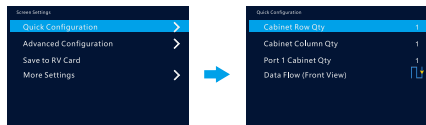
- LED screen must be a regular screen.
- Cabinets of the screen must be regular cabinets with the same resolution.
- The flowing data flow settings are supported. During data flow settings, you must ensure that the physical connection of each port is along the same direction and downward to next one.



- During data flow settings, you must ensure that the Ethernet Port 1 is at the beginning position of the whole physical connection.

Procedure

- Power on the LED screen.
- On the home screen, press the knob to enter the main menu screen. Then rotate the knob to choose **Screen Settings > Quick Configuration** to enter the quick configuration screen.
- Set **Cabinet Row Qty** and **Cabinet Column Qty** according to the actual row and column quantities of the cabinets.



- Rotate the knob to select **Port 1 Cabinet Qty** to set the quantity of the cabinets loaded by Ethernet port 1.

Note

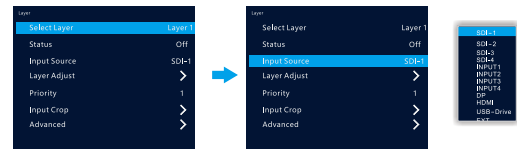
The quantities of the cabinets loaded by Ethernet ports 1-15 must be the same. The quantity of the cabinets loaded by Ethernet port 16 should be no greater than that loaded by Ethernet ports 1-15. The quantity of cabinets loaded by each Ethernet port must be an integer multiple of Cabinet Row Qty or Cabinet Column Qty of the screen.

- Rotate the knob to select **Data Flow (Front View)** and press it, then select an appropriate physical connection mode of the cabinets. During data flow settings, you can view the real-time effects of different data flow settings on LED display by rotating the knob. When you are satisfied with the LED display image, press the knob to save the settings; when you are not satisfied, press **ESC** button to exit the current operation and the settings will not be saved.

- Press **ESC** button to exit the quick configuration screen.
- Rotate the knob to select **Save to RV Card** and press the knob to send and save the screen configuration file to the hardware.

Adding Layers

- Rotate the knob to choose **Layer Settings > Layer > Select Layer > Layer 1** to add the current layer.
- Rotate the knob to choose **Status > On** to enable the layer 1.
- Rotate the knob to select **Input Source** and select the desired input source based on your actual needs.



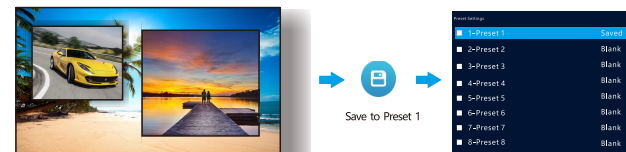
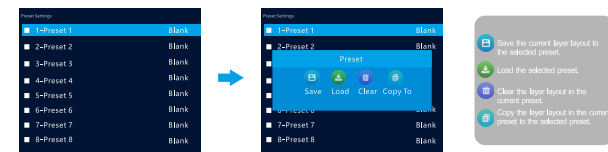
After a layer is added successfully, the size and input source of the layer on the LED screen are shown in below.



Preset Settings

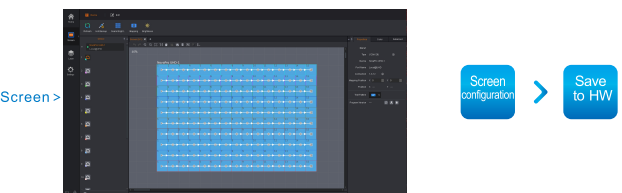
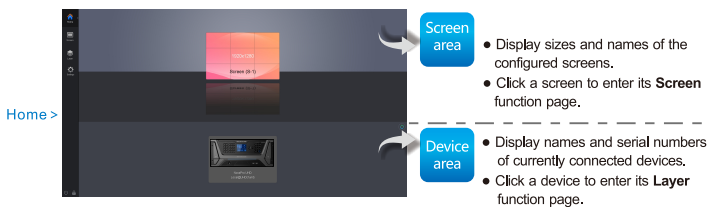
The NovaPro UHD supports 16 presets. You can save the current layer layout to a preset and load the preset as needed.

- Rotate the knob to choose **Preset Settings > Preset 1**. Then the **Preset** window appears.
- Rotate the knob to select **Save, Load, Clear and Copy To**.



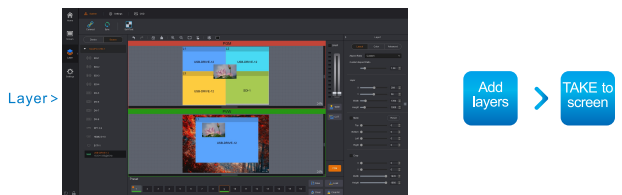
4 Master VI Operations

You can use the embedded Master VI by connecting the GUI connector on the device rear panel or installing the software on your PC.



- Perform smart screen configurations.

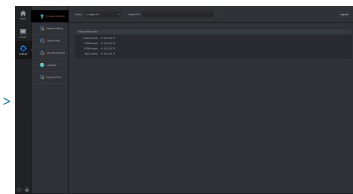
- On the Edit tab page, select the Ethernet ports under Device.
- Choose **Edit > Cabinet Management** and add a single cabinet or a batch of cabinets to the edit area.
- Choose **Edit > Cabinet Connection** to connect the added cabinets.
- Click the **Send** button on the tool bar to send current configurations to the receiving card.
- Click the **Save to HW** button on the tool bar to save current configurations to the receiving card.



- Perform layer configurations for video sources.

- Click an input source and drag it to the edit area to add its corresponding layer. Drag the layer corner to resize it.
- Change the layer parameters on the right properties pane, such as cropping and mask.
- Click the **Take** button or move the T-bar to send the PVW images to the screen.

Settings >



Factory reset Reset the device data to the factory defaults as required. Select either to save the IP or save both the IP and EDID during reset.

User management Set the administrator password for user permission control.

5 Specifications

Overall Specifications		
Connector	Qty	Description
Power connector	2	100-240V~.50/60Hz, 7.2A-3.5A, Dual power supply design
Power consumption		180 W
Operating temperature		-10°C - 60°C
Operating humidity		0% RH - 80% RH
Storage humidity		0%RH - 95%RH
Dimensions		4U standard chassis
Net weight		21 kg

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