

NovaPro UHD

All in One Controller

V1.0.0

NS160100280



Specifications

Overview

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 and 8K×1K@60Hz, and provides a maximum loading capacity of 8.8 million pixels.

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

The NovaPro UHD can send the 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.

Features

- A variety of input connectors: 4 × 12G-SDI connectors with loop output functions, 1 × HDMI 2.0 with loop output function, and 1 × DP 1.2
- 1 × replaceable input card with four connectors
Input card can be DVI or HDMI (default) card.
- 16 × Neutrik Ethernet ports and 4 × optical fiber output connectors
The loading capacity can be up to 8.8 million pixels
- 6 × layers, 1 × OSD, 1 × LOGO, and 1 × BKG
- 2 × layers up to 4K×2K, 4 × layers up to 2K×1K
Layer scaling supported
- OSD supports 4K×2K resolution, cropping, opacity, dynamic/static images and position settings.
- Layer opacity adjustment, irregular layers, layer mask, and layer copying, mirroring and flipping supported
- Layer priority adjustment by z-order
- Up to 8K output width or height of a single device
- MultiViewer settings
Set to monitor input sources, PWW, PGM, or perform mixed monitoring.
- 16 × Neutrik Ethernet outputs, 4 × 10G fiber optical outputs with copy and hot backup modes
- Quick and advanced screen configurations
- With the built-in smart platform Master VI, LED screen configuration and layer configuration can be easily performed via the connected mouse, keyboard and monitor.
- 10-bit processing of the input source
- HDR function to make images finer and smoother
- Low-latency output
Approximately 3-frame delay from the input to receiving card
- Remote data transmission via a Gigabit Ethernet port or fiber optical connector

Appearance

Front Panel



Button	Function
Power button	<p>This is the power button of the device.</p> <ul style="list-style-type: none"> • Press it to power on the device. • Hold it down to power off or restart the device.
Layer buttons	<p>These are the shortcut buttons for layer operations.</p> <ul style="list-style-type: none"> • Press a button to quickly create a layer. • Blue: The layer is open, and the input source is accessed normally. • White: The layer is open, but the input source is not accessed. • Off: The layer is not added. • When a layer is opened, hold down the layer button to close the layer. • Flashing: The layer is being edited. • Blue, flashing: An input source is accessed to the layer and the input source is normal. • White, flashing: No input source is accessed to the layer or the input source is abnormal.
Input source buttons	<p>Indicate the status of the input source. Press a button to quickly select an input source.</p> <ul style="list-style-type: none"> • Blue: The input source is accessed and in normal use. • White: The input source is accessed but not in use. • Off: The input source is not accessed or used. • When the indicators of all the buttons with numbers are blue, these buttons can be used to enter numbers.
TFT screen	Display current device status and settings menu.
Knob	<ul style="list-style-type: none"> • On the home screen, press the knob to enter the operation menu screen. • On the operation menu screen, rotate the knob to select a menu item, and press the knob to confirm the selection or enter the submenu. • When a menu item with parameters is selected, rotate the knob to adjust the parameters. Please note that after adjustment, you need to press the knob again to confirm the adjustment.
Function buttons	<p>Navigation button: Hold it down to enter or exit quick navigation screen. By rotating the knob, you can quickly get started with NovaPro UHD.</p> <ul style="list-style-type: none"> • FTB: Set LED to black screen. • LOGO: Enter LOGO settings menu. • PRESET: Enter preset menu. • FREEZE: Freeze the PGM screen. • OSD: Enter OSD settings menu. • FN: Custom function button • TEST: Enter test pattern menu. • BKG: Enter BKG settings menu. • TAKE: Press the button to switch PVW to PGM with the transition effect set previously. A total of 16 transition effects are supported. • CUT: Press the button to switch PVW directly to PGM.
ESC button	Press the button to exit the current menu or cancel the operation.
USB ports	<ul style="list-style-type: none"> • 2 × USB ports • Insert a USB drive to perform system update.

Button	Function
	<ul style="list-style-type: none"> Connect a mouse or keyboard.

Rear Panel



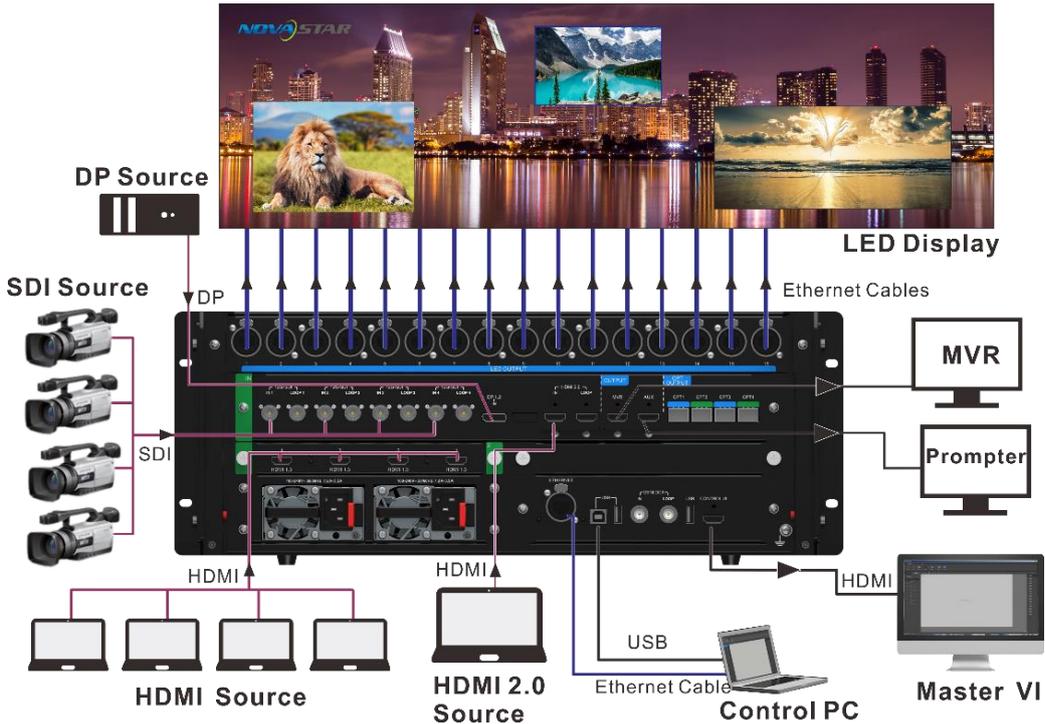
Note:

The NovaPro UHD supports replacement of input card. HDMI input card is the default configuration. If you need to change other input cards, please purchase and replace the input card yourself.

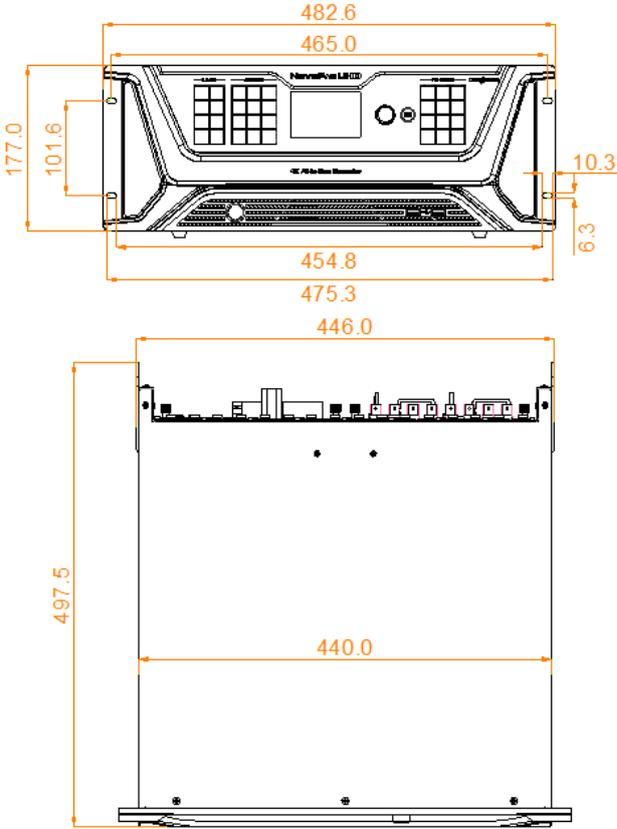
Input		
Connector	Quantity	Description
12G-SDI	4	<p>Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G) and ST-292 (HD) input signals.</p> <p>Input resolutions up to 4Kx2K@60Hz and downward compatible</p> <p>Supports 12G-SDI loop output.</p> <p>Note:</p> <ul style="list-style-type: none"> When the input source is a 12G-SDI signal, it is recommended you use CANARE / L-4.5CHD+ / UHDTV-SDI SDI cables and the cable length should be less than 50 m. 12G-SDI connectors 1, 2 and 3 do not support deinterlaced function, but connector 4 supports the function.
DP 1.2	1	<p>Input resolutions up to 4Kx2K@60Hz (8Kx1K@60Hz) and downward compatible</p> <p>Supports HDCP 1.3.</p> <p>Does not support interlaced signal inputs.</p>
HDMI 2.0	1	<p>Input resolutions up to 4Kx2K@60Hz (8Kx1K@60Hz) and downward compatible</p> <p>Supports HDCP 1.4 and HDCP 2.2.</p> <p>Does not support interlaced signal inputs.</p> <p>Supports HDMI 2.0 loop output.</p>
HDMI 1.3	4	<p>D_4xHDMI 1.3 input card by default</p> <p>Supports input resolutions up to 1920x1080@60Hz.</p> <p>Supports HDCP 1.3.</p>

		<p>Supports interlaced signal inputs.</p> <p>The HDMI input card can be changed to other input cards, such as D_4xDVI input card and D_4xDP 1.1 input card.</p>
Output		
Connector	Quantity	Description
Ethernet port	16	<p>Neutrik Ethernet output ports</p> <ul style="list-style-type: none"> • Maximum loading capacity: 8.8 million pixels • Maximum width: 8192 pixels • Maximum height: 8192 pixels
OPT 1- 4	4	<p>10G fiber optical output connectors with backup and redundancy modes</p> <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 or Ethernet ports 1–8. • OPT 4 is the copy/hot backup channel for OPT 2 or Ethernet ports 9–16.
MVR	1	<ul style="list-style-type: none"> • HDMI 1.4 connector, used as monitoring connector of Multiviewer to monitor input source, PVM, PGM or perform mixed monitoring
AUX	1	<ul style="list-style-type: none"> • HDMI 1.4 connector, used as auxiliary output connector for connecting an auxiliary device, such as a teleprompter
Control		
Connector	Quantity	Description
ETHERNET	1	For PC communication or network connection
USB	1	<ul style="list-style-type: none"> • USB (Type-B): Connect to the PC for device debugging. • USB (Type-A): A reserved port
GENLOCK IN - LOOP	1	Connect a synchronization signal source to synchronize the cascaded devices.
USB	1	<ul style="list-style-type: none"> • Insert a USB drive to perform system update. • Connect a mouse or keyboard.
CONTROL UI	1	Connect to a monitor for human-machine interaction.

Applications



Dimensions



Unit: mm

Specifications

Overall Specifications		
Electrical Specifications	Power connector	AC100-240VAC~, 50/60Hz, power backup design
	Power consumption	180 W
Operating Environment	Operating temperature	-10°C to +60°C
	Operating Humidity	0% RH to 80% RH
	Storage Humidity	0% RH to 95% RH
Physical Specifications	Dimensions	482.6 mm × 177 mm × 497.5 mm 4U standard chassis
	Net weight	21 kg
	Gross weight	42 kg
Packing Information	Accessories	<ul style="list-style-type: none"> • 6 × power cords • 1 × USB drive (16GB) • 1 × DVI cable • 1 × USB cable • 1 × HDMI cable • 1 × DP cable • 1 × Mini DP to DP cable • 1 × Custom Letter • 1 × Quick Start Guide • 1 × Packing List • 1 × Safety Manual • 46 × Silicone dustproof plugs
	Flight case	523 mm × 265 mm × 700 mm
Certifications		FCC, IC, EMC, UL/CUL, CB, CE, ROHS 10, EAC
Noise Level (typical at 25°C/77°F)		57 dB(A)

Video Source Features

Input Connector	Color Depth		Max. Input Resolution
<ul style="list-style-type: none"> • HDMI 2.0 • DP 1.2 	8 bit	RGB4:4:4	3840×2160@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
		YCbCr4:2:0	
	10 bit	RGB4:4:4	

Input Connector	Color Depth		Max. Input Resolution
		YCbCr4:4:4	1920x1080@60Hz
		YCbCr4:2:2	3840x2160@60Hz
		YCbCr4:2:0	Unsupported
	12 bit	RGB4:4:4	1920x1080@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	3840x2160@60Hz
		YCbCr4:2:0	Unsupported
	HDMI 1.3	8 bit	RGB4:4:4
YCbCr4:4:4			1920x1080@60Hz
YCbCr4:2:2			
10 bit		RGB4:4:4	1920x1080@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
12 bit		RGB4:4:4	1920x1080@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
12G-SDI	<ul style="list-style-type: none"> • Maximum input resolution: 4096x2160@60Hz • Input resolution and bit depth settings unsupported • Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G) and ST-292 (HD) input signals 		

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