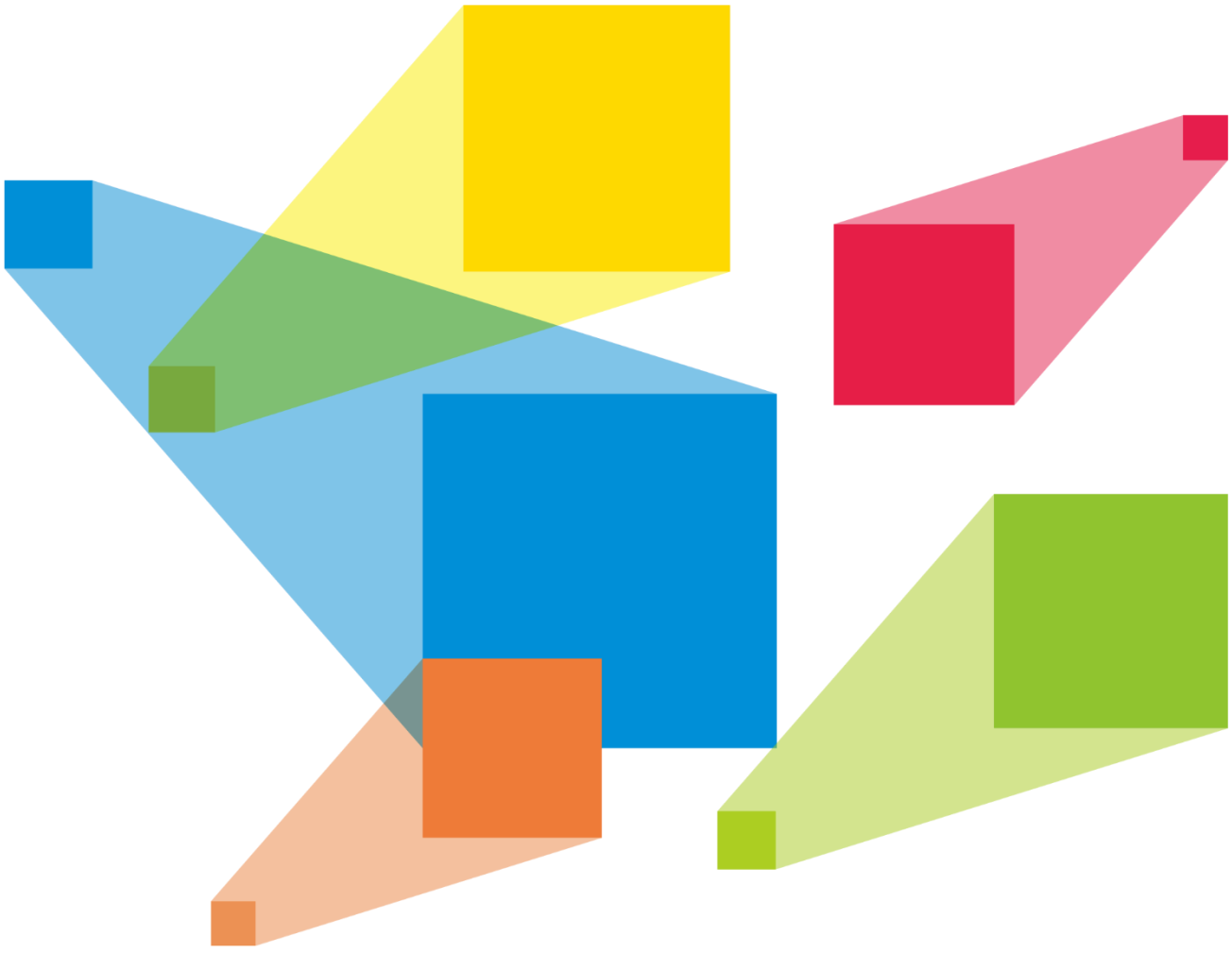
NovaPro UHD Jr

All-in-One Controller



Specifications

Change History

Version	Release Date	Description
V1.2.0	2021-06-01	Changed some components on the rear panel.
V1.1.3	2021-01-20	Optimized the description.
V1.1.2	2020-04-09	Added the descriptions for the HDCP version and deinterlacing signal support of the input connectors.
V1.1.1	2019-10-30	Increased the version number only.
V1.1.0	2019-10-09	**New features**: • Added the third layer (PIP2). • Added the description for optical fiber port and Ethernet port statuses displayed on home screen. • Added the description for 3D function. **Changes**: • HDMI supported HDCP 2.2. **Deletes**: • Deleted the descriptions for Transition Effect and Effect Duration in Display Control.
V1.0.1	2019-07-10	Added the description of HDMI LOOP supporting only 1 level of device cascading.
V1.0.0	2019-06-06	First release

Overview

The NovaPro UHD Jr is NovaStar's new all-in-one controller that features excellent video processing capabilities, sending card functions and LED screen configuration. The NovaPro UHD Jr provides a variety of video input connectors, supporting full HD 4K×2K@60Hz image processing and sending capabilities. Additionally, the NovaPro UHD Jr supports 8K×1K@60Hz ultra-high resolution.

With the help of smart control software V-Can from Novastar, the NovaPro UHD Jr can enable richer image mosaic effects and faster and easier operations.

The NovaPro UHD Jr can send the processed video to the LED screen via Neutrik Ethernet ports and optical fiber ports. Thanks to its powerful video processing capabilities and sending functions, the NovaPro UHD Jr is well suited for stage control systems, conference sites, activities, exhibition sites and other high-end rental applications as well as fine-pitch LED displays.

Certifications

CE, FCC, UL and CB

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.

Features

- A variety of inputs and outputs

  Provides 1x DP 1.2, 4x DVI, 1x HDMI 2.0 with loop through and 2x 12G-SDI with loop through.

- More output connectors, larger loading capacity

  Provides 16x Neutrik Ethernet output and 4x optical fiber output, with loading capacity up to 10,400,000 pixels.

The maximum width is 16K and maximum height is 8K.

- 3D mode

  Turning on 3D mode will halve the device output capacity.

- 3 layers

  Supports one main layer and two PIPs, with adjustable layer priority.

- DVI mosaic

  An input source can be made up of at most 4 DVI input sources.

- HDR output

  Greatly enhances display image quality, providing more clear and vivid image.

- Decimal frame rates

  The supported frame rates are 23.98 Hz, 29.97 Hz, 47.95 Hz, 59.94 Hz, 71.93 Hz and 119.88 Hz.

- Low-latency output

  Realize 2 frame delay from sending card to receiving card when the device is used together with NovaStar Armor series receiving cards (A8/A8s/A9s/A10s Plus).

- Customized BKG settings

  Supports pure color and image BKGs.

- Personalized image scaling

  Supports 3 kinds of image scaling modes: full screen, pixel to pixel, custom.

- Capture function

  Captures input source image which can be used as a BKG image.

- Image mosaic

  Up to 4 NovaPro UHD Jr units can be connected to load a super-large screen when used with the video distributor.

- V-Can (smart control software from NovaStar) control supported

- Up to 10 presets

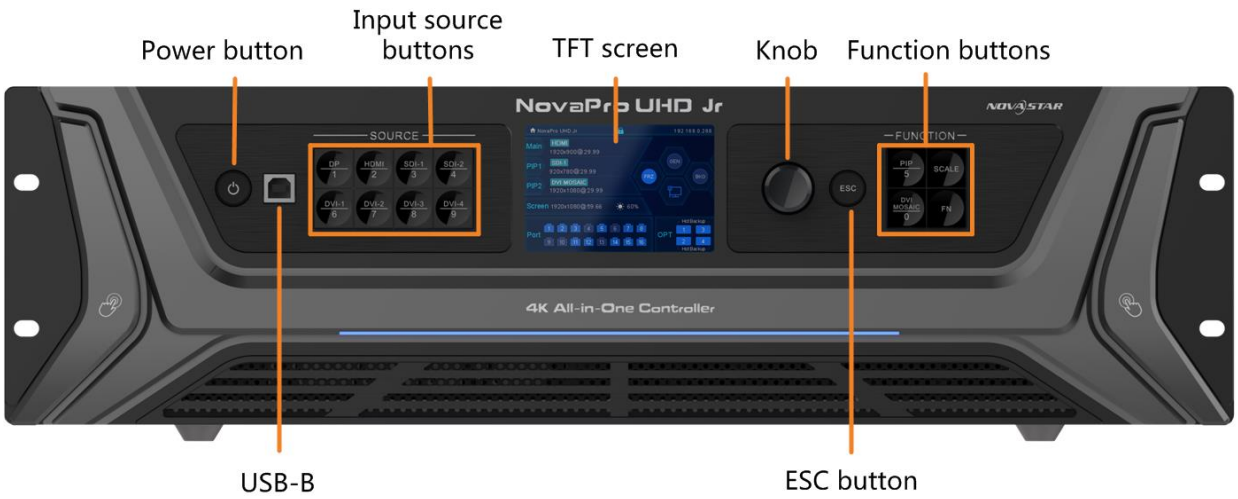
  At most 10 user presets can be created and saved as templates which can be used directly and conveniently.

- EDID management supported

  Supports custom EDID and standard EDID.

Appearance

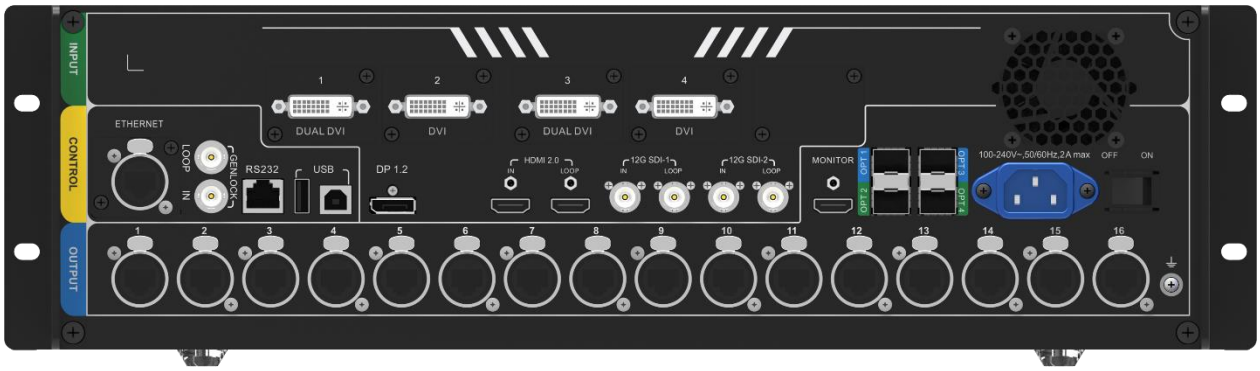
Front Panel



Button	Description
Power button	• Power on: Press the button to power on the device. • Power off: Hold down the button to pop up a dialog box, then rotate the knob to select **Yes** and press the knob to power off the device.
USB-B	For PC connection for debugging
Input source buttons	• Input source switching buttons. Press the button to switch the input source for the main layer.

	• Button indicators are used to indicate the working status of the input source signal. – White, always on: Input source is not used, and no input signal is accessed. – Blue, fast flashing: Input source is used, but no input signal is accessed. – Blue, slow flashing: Input source is not used, but input signal is accessed. – Blue, always on: Input source is used, and input signal is accessed.
TFT screen	Display the current device status and settings menu.
Knob	• 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, you can rotate the knob to adjust the parameters. Please note that after adjustment, you need to press the knob again to confirm the adjustment.
ESC button	Press the button to exit the current menu or cancel the operation.
Function buttons	• **PIP**: Enter the layer settings screen. • **SCALE**: Enable/Disable the scaling function of bottom layer. • **DVI MOSAIC**: Switch to DVI mosaic input source. Press it to switch the input source of main layer. • **FN**: This is a custom function button. The function can be customized to Synchronization, Preset Settings, Freeze, Black Out, Quick Configuration, Test Pattern, Image Quality and Main Layer. It is set to Synchronization by default.

Rear Panel

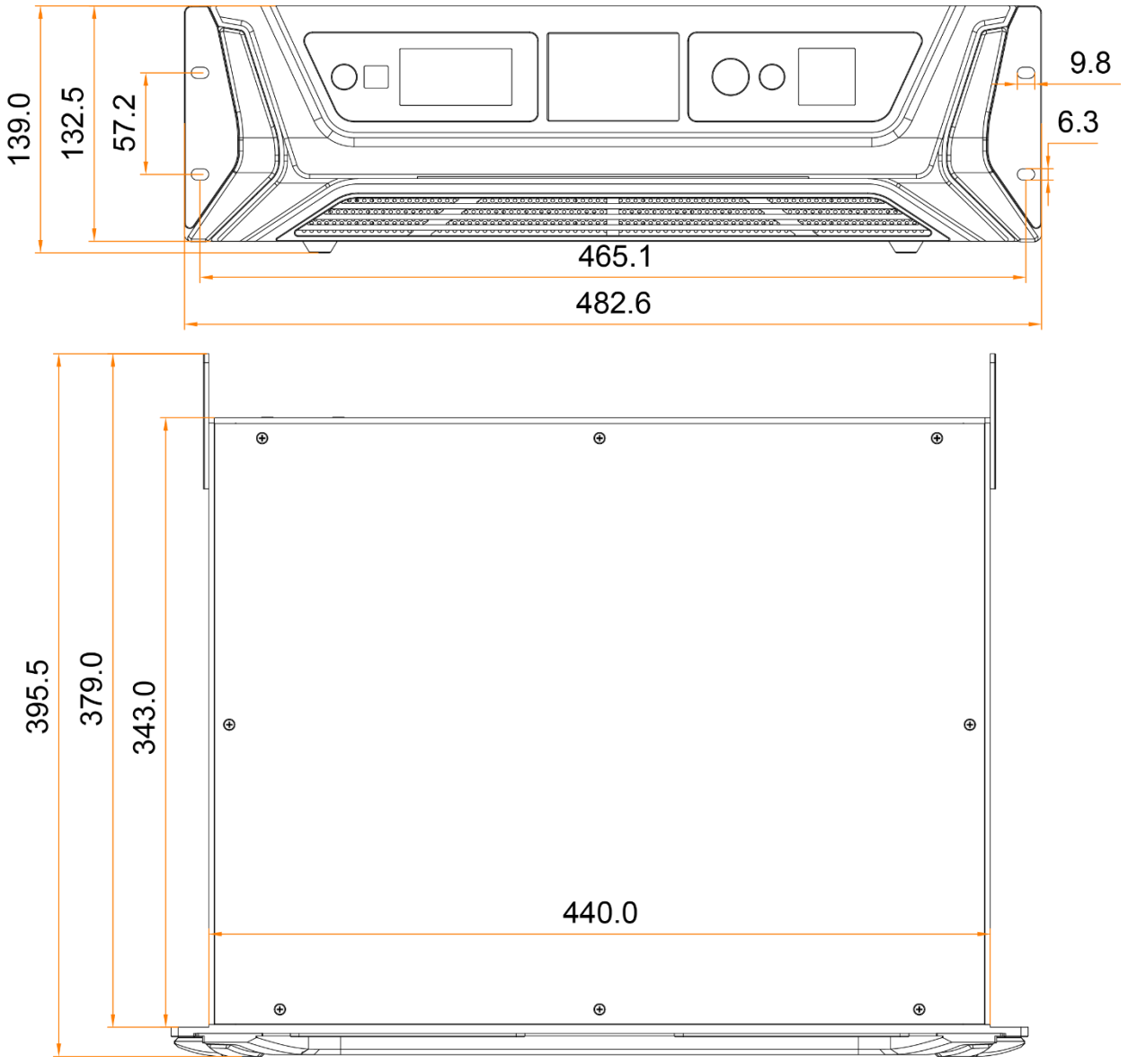


Input		
Connector	**Quantity**	**Description**
DVI	4	• Four DVIs are all single-link DVI connectors by default. – 4x DVI inputs – Each DVI: Input resolution up to 2048×1152@60Hz, downward compatible – 4 DVI input sources constitute 1 input source (DVI MOSAIC). – Max. width: 3840 pixels. Max. height: 3840 pixels • In dual-link mode. – DVI 1 and DVI 3 are dual-link DVI connectors while DVI 2 and DVI 4 are unavailable. – DVI 1/DVI 3: Input resolution up to 3840×1080@60Hz, downward compatible. – 2 DVI input sources constitute 1 input source (DVI MOSAIC).

		– Max. width: 3840 pixels. Max. height: 3840 pixels • Supports input resolution settings. • HDCP 1.4 compliant • Does not support interlaced signal inputs.
12G-SDI	2	• Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G) and ST-292 (HD) standard video inputs. • Input resolution up to 4096×2160@60Hz, downward compatible • Supports interlaced signal inputs. • Does not support input resolution and bit depth settings. • Maximum resolution supported: Max. width: 8192 pixels. Max. height: 8192 pixels
DP 1.2	1	• Input resolution up to 3840×2160@60Hz, downward compatible • HDCP 1.3 compliant • Supports input resolution settings. • Maximum resolution supported: Max. width: 8192 pixels. Max. height: 8192 pixels • Does not support interlaced signal inputs.
HDMI 2.0	1	• Input resolution up to 3840×2160 @60Hz, downward compatible • HDCP 2.2 compliant • Supports input resolution settings. • Maximum resolution supported: Max. width: 8192 pixels. Max. height: 8192 pixels • Does not support interlaced signal inputs.
Output		
Connector	**Quantity**	**Description**
Ethernet port	16	• 16x Neutrik Gigabit Ethernet output connectors, allowing for a loading capacity of up to 10,400,000 pixels. • Maximum loading capacity: Max. width: 16384 pixels, max. height: 8192 pixels • Maximum loading capacity of a single Ethernet port: – 8-bit input source: 650,000 pixels. – 10-bit/12-bit input source: 320,000 pixels.
OPT 1–4	4	10G optical connectors Copy and hot backup modes are available when four OPT ports are all used for output. • OPT 1 transmits data of Ethernet ports 1–8. • OPT 2 transmits data of Ethernet ports 9–16. • OPT 3 serves as the copy/hot backup for OPT 1. • OPT 4 serves as the copy/hot backup for OPT 2.
HDMI 2.0 LOOP	1	• HDMI loop output Only 1 level of device cascading supported • HDCP 2.2 compliant • EDID management supported

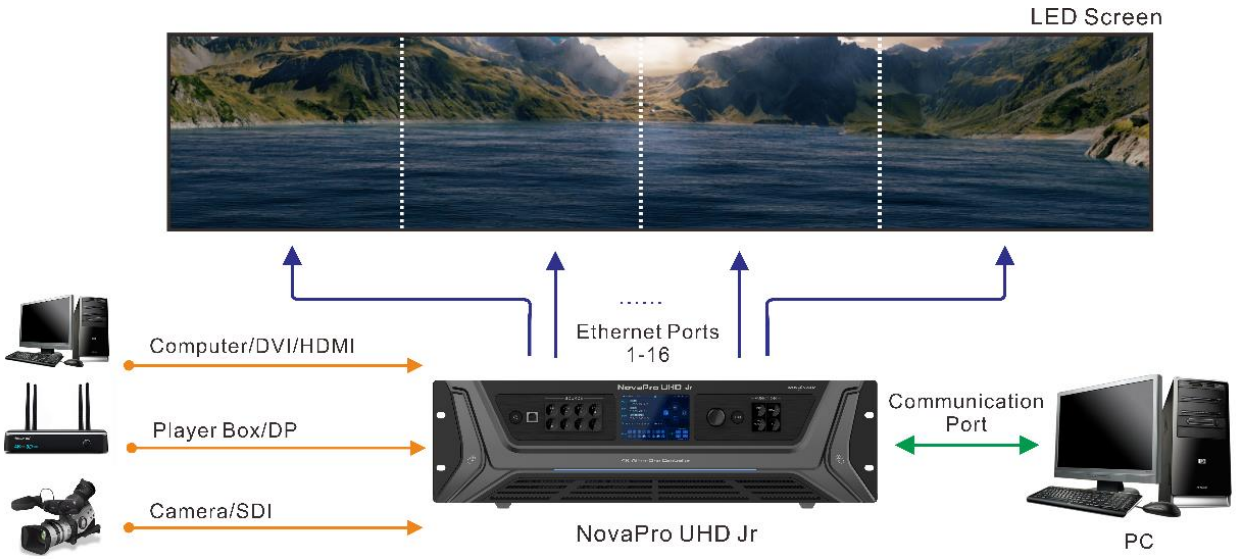
12G-SDI LOOP	2	SDI loop output
MONITOR	1	• An HDMI connector dedicated for output monitoring • Resolution up to 1920×1080@60Hz
Control		
Connector	**Quantity**	**Description**
ETHERNET	1	Connect to the PC for communication, or connect to the Web for device control.
USB (Type-B)	1	• Connect to the PC for device control. • Used as the input connector to connect a NovaPro UHD Jr unit for image mosaic
USB (Type-A)	1	Used as the output connector to connect a NovaPro UHD Jr unit for image mosaic
GENLOCK IN-LOOP	1	Connect to a synchronization signal to synchronize all the connected NovaPro UHD Jr units.
RS232	1	Connect to the central control device.

Dimensions



Tolerance: ±0.3 Unit: mm

Applications



Specifications

Electrical Specifications	Power connector	100-240V~, 50/60Hz, 2A max
	Power consumption	70 W
Working Environment	Temperature	0°C to +45°C
	Humidity	0% RH to 80% RH, non-condensing
Storage Environment	Temperature	–10°C to +60°C
	Humidity	0% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	482.6 mm × 395.5 mm × 139.0 mm
	Net weight	6.3 kg
	Gross weight	13 kg
Packing Information	Packing box	604mm × 524mm × 291mm
	Carrying case	595mm × 275mm × 500mm
	Accessories	1x Power cable (EU) 1x Power cable (US) 1x Power cable (UK) 1x Cat5e cable 1x USB cable 1x DVI cable 1x HDMI cable 1x DP cable 1x Quick Start Guide 1x Packing List 1x Customer Letter

		4x Silicone dust plugs
Noise Level (typical at 25°C /77°F)		46 dB(A)

Video Source Features

Input Connector	Color Depth		Max. Input Resolution
HDMI 2.0 DP 1.2	8-bit	RGB 4:4:4	3840×2160@60Hz
		YCbCr 4:4:4	3840×2160@60Hz
		YCbCr 4:2:2	3840×2160@60Hz
		YCbCr 4:2:0	Unsupported
	10-bit	RGB 4:4:4	3840×1080@60Hz
		YCbCr 4:4:4	3840×1080@60Hz
		YCbCr 4:2:2	3840×2160@60Hz
		YCbCr 4:2:0	Unsupported
	12-bit	RGB 4:4:4	3840×1080@60Hz
		YCbCr 4:4:4	3840×1080@60Hz
		YCbCr 4:2:2	3840×2160@60Hz
		YCbCr 4:2:0	Unsupported
S-DVI	8-bit	RGB 4:4:4	1920×1080@60Hz
D-DVI	8-bit	RGB 4:4:4	3840×1080@60Hz
SDI	• Max. input resolution: 4096×2160@60Hz • Does not support input resolution and bit depth settings. • Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G) and ST-292 (HD) video inputs.		

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Statement

Thank you for choosing NovaStar's product. This document is intended to help you understand and use the product. For accuracy and reliability, NovaStar may make improvements and/or changes to this document at any time and without notice. If you experience any problems in use or have any suggestions, please contact us via the contact information given in this document. We will do our best to solve any issues, as well as evaluate and implement any suggestions.