

- Self-adaptive OPT 1 for either video input or sending card output

Thanks to the self-adaptive design, OPT 1 can be used as either an input or output connector, depending on its connected device.

- Audio input and output
 - Audio input accompanied with HDMI input source
 - Audio output via a multifunction card
 - Output volume adjustment supported

- Low latency

Reduce the delay from the input to receiving card to 20 lines when the low latency function and Bypass mode are both enabled.

- 3x layers
 - Adjustable layer size and position
 - Adjustable layer priority

- Output synchronization

An internal input source or external Genlock can be used as the sync source to ensure the output images of all cascaded units in sync.

- Powerful video processing
 - Based on SuperView III image quality processing technologies to provide stepless output scaling
 - One-click full screen display
 - Free input cropping
- Easy preset saving and loading

- Up to 10 user-defined presets supported
- Load a preset by simply pressing one button

- Multiple kinds of hot backup

- Backup between devices
- Backup between Ethernet ports
- Backup between input sources

- Mosaic input source supported

The mosaic source is composed of two sources (2K×1K@60Hz) accessed to the OPT 1.

- Up to 4 units cascaded for image mosaic

- Three working modes

- Video Controller
- Fiber Converter
- Bypass

- All-round color adjustment

Input source and LED screen color adjustment supported, including brightness, contrast, saturation, hue and Gamma

- Pixel level brightness and chroma calibration

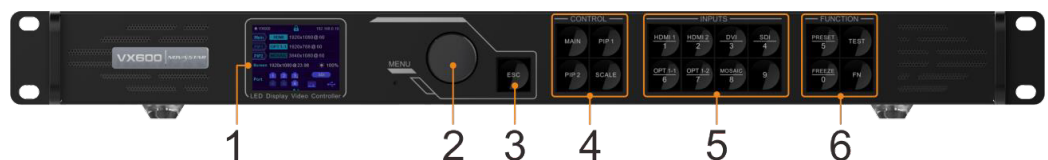
Work with NovaLCT and NovaStar calibration software to support brightness and chroma calibration on each LED, effectively removing color discrepancies and greatly improving LED display brightness and chroma consistency, allowing for better image quality.

- Multiple operation modes

Control the device as you wish via V-Can, NovaLCT or device front panel knob and buttons.

Appearance

Front Panel



No.	Area	Function
1	LCD screen	Display the device status, menus, submenus and messages.
2	Knob	• Rotate the knob to select a menu item or adjust the parameter value. • Press the knob to confirm the setting or operation.
3	ESC button	Exit the current menu or cancel an operation.
4	Control area	• Open or close a layer (main layer and PIP layers), and show the layer status. Status LEDs: – On (blue): The layer is opened.

No.	Area	Function
		- Flashing (blue): The layer is being edited. - On (white): The layer is closed. SCALE: A shortcut button for the full screen function. Press the button to make the layer of the lowest priority fill the entire screen. Status LEDs: - On (blue): Full screen scaling is turned on. - On (white): Full screen scaling is turned off.
5	Input source buttons	Show the input source status and switch the layer input source. Status LEDs: - On (blue): An input source is accessed. - Flashing (blue): The input source is not accessed but used by the layer. - On (white): The input source is not accessed or the input source is abnormal. Notes: - When a 4K video source is connected to OPT 1, OPT 1-1 has a signal but OPT 1-2 does not have a signal. - When two 2K video sources are connected to OPT 1, OPT 1-1 and OPT 1-2 both have a 2K signal.
6	Shortcut function buttons	PRESET: Access the preset settings menu. TEST: Access the test pattern menu. Freeze: Freeze the output image. FN: A customizable button

Note:

Hold down the knob and **ESC** button simultaneously for 3s or longer to lock or unlock the front panel buttons.

Rear Panel



Input Connectors		
Connector	Qty	Description
3G-SDI	1	- ST-424 (3G), ST-292 (HD) and ST-259 (SD) standard video inputs supported - Max. input resolution: 1920×1080@60Hz - Deinterlacing processing supported 3G-SDI loop through output supported - DOES NOT support input resolution and bit depth settings.
HDMI 1.3	2	- Max. input resolution: 1920×1200@60Hz - HDCP 1.4 compliant - Custom resolutions supported - Max. width: 3840 (3840×648@60Hz) - Max. height: 2784 (800×2784@60Hz) - Forced inputs supported: 600×3840@60Hz - Loop through output supported on HDMI 1.3-1

		• DOES NOT support interlaced signal inputs	
DVI	1	• Max. input resolution: 1920×1200@60Hz • HDCP 1.4 compliant • Custom resolutions supported – Max. width: 3840 (3840×648@60Hz) – Max. height: 2784 (800×2784@60Hz) – Forced inputs supported: 600×3840@60Hz • Loop through output supported • DOES NOT support interlaced signal inputs	
Output Connectors			
Connector	Qty	Description	
Ethernet ports	6	Gigabit Ethernet ports • Max. loading capacity: 3.9 million pixels • Max. width: 10,240 pixels • Max. height: 8192 pixels Ethernet ports 1 and 2 support audio output. When you use a multifunction card to parse the audio, be sure to connect the card to Ethernet port 1 or 2. Status LEDs: • The top left one indicates the connection status. – On: The port is well connected. – Flashing: The port is not well connected, such as loose connection. – Off: The port is not connected. • The top right one indicates the communication status. – On: The Ethernet cable is short-circuited. – Flashing: The communication is good and data is being transmitted. – Off: No data transmission	
HDMI 1.3	1	• Support monitor and video output modes. • The output resolution is adjustable.	
Optical Fiber Ports			
Connector	Qty	Description	
OPT	2	• OPT 1: Self-adaptive, either for video input or for output – When the device is connected with a fiber converter, the port is used as an output connector. – When the device is connected with a video processor, the port is used as an input connector. – Max. capacity: 1x 4K×1K@60Hz or 2x 2K×1K@60Hz video inputs • OPT 2: For output only, with copy and backup modes OPT 2 copies or backs up the output on 6 Ethernet ports.	
		Single mode OPT module description: • Hot swappable • Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s • Wavelength: 1310 nm	OPT fiber selection: • Model: OS1/OS2 • Transmission mode: Single-mode twin-core • Cable diameter: 9/125 μm

		• Transmission distance: 10 km	• Connector type: LC • Insertion loss: ≤ 0.3 dB • Return loss: ≥ 45 dB
		Multi-mode OPT module description: • Hot swappable • Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s • Wavelength: 850 nm • Transmission distance: 300 m	OPT fiber selection: • Model: OM3/OM4 • Transmission mode: Multi-mode twin-core • Cable diameter: 50/125 μm • Connector type: LC • Insertion loss: ≤ 0.2 dB • Return loss: ≥ 45 dB

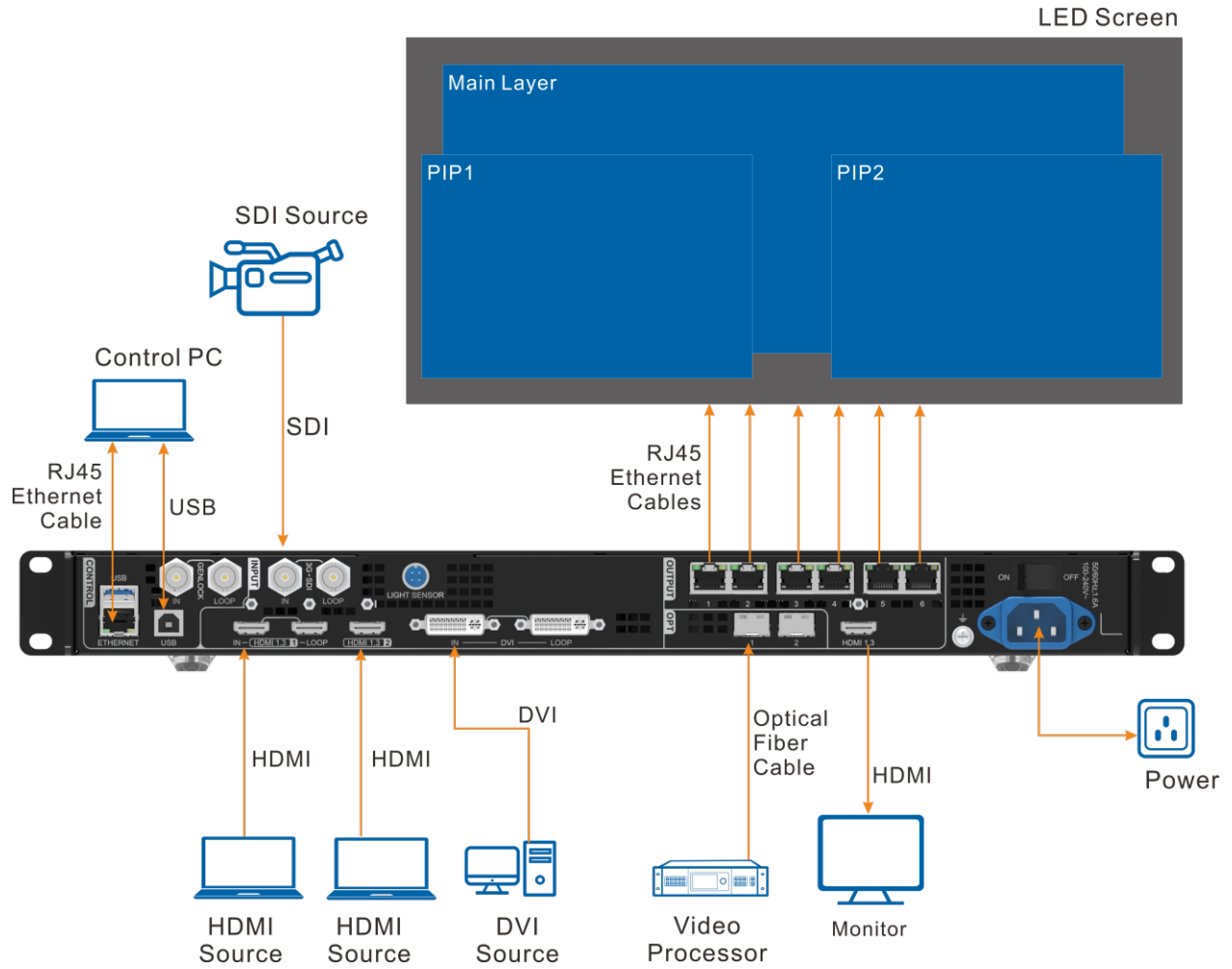
Control Connectors

Connector	Qty	Description
ETHERNET	1	Connect to the control PC or router. Status LEDs: • The top left one indicates the connection status. – On: The port is well connected. – Flashing: The port is not well connected, such as loose connection. – Off: The port is not connected. • The top right one indicates the communication status. – On: The Ethernet cable is short-circuited. – Flashing: The communication is good and data is being transmitted. – Off: No data transmission
USB	2	• USB 2.0 (Type-B): – Connect to the control PC. – Input connector for device cascading • USB 2.0 (Type-A): Output connector for device cascading
GENLOCK IN-LOOP	1	Connect to an external sync signal. • IN: Accept the sync signal. • LOOP: Loop through the sync signal.
LIGHT SENSOR	1	Connect to a light sensor to collect the ambient brightness, allowing for automatic screen brightness adjustment.

Note:

Only the main layer can use the mosaic source. When the main layer uses the mosaic source, PIP 1 and 2 cannot be opened.

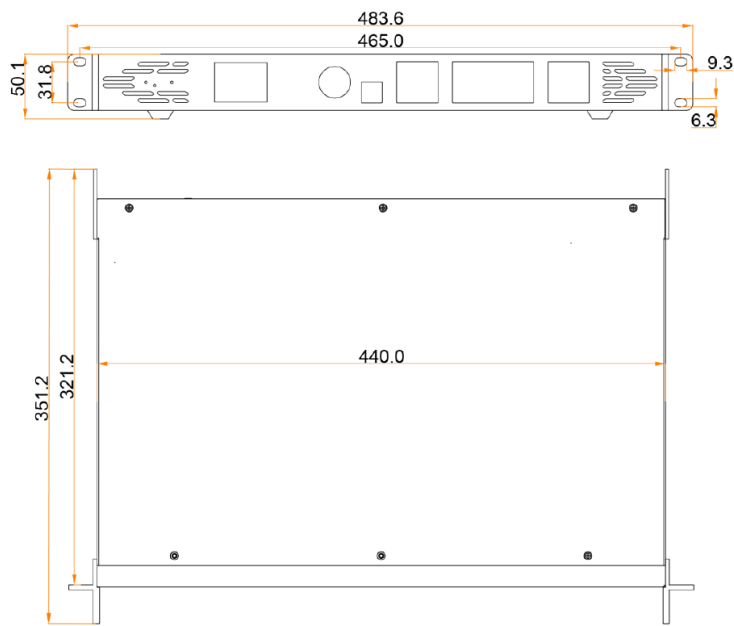
Applications



Dimensions

The VX600 provides the **flight case** or **carton** packaging. This section provides the dimensions of the device, flight case and carton, respectively.

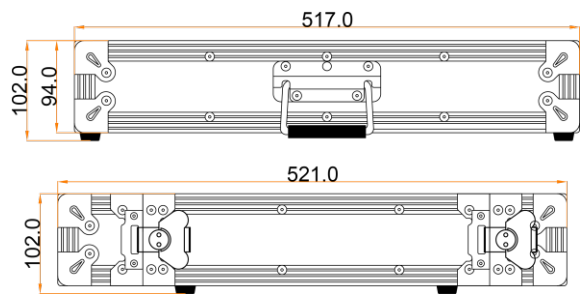
Device



Tolerance: ± 0.3 Unit: mm

Packaging

Flight Case



Tolerance: ± 5 Unit: mm

Note:

For the detailed flight case drawings, please contact NovaStar's technical support staff.

Carton



Tolerance: ± 5 Unit: mm

Specifications

Electrical Parameters	Power connector	100–240V~, 1.6A, 50/60Hz	
	Rated power consumption	28 W	
Operating Environment	Temperature	–10°C to 45°C	
	Humidity	20% RH to 90% RH, non-condensing	
Storage Environment	Temperature	–20°C to +70°C	
	Humidity	10% RH to 95% RH, non-condensing	
Physical Specifications	Dimensions	483.6 mm × 351.2 mm × 50.1 mm	
	Net weight	4 kg	
Packing Information	Accessories	Flight Case	Carton
		1x Power cord 1x HDMI to DVI cable 1x USB cable 1x Ethernet cable 1x HDMI cable 1x Quick Start Guide 1x Certificate of Approval 1x DAC cable	1x Power cord 1x HDMI to DVI cable 1x USB cable 1x Ethernet cable 1x HDMI cable 1x Quick Start Guide 1x Certificate of Approval 1x Safety Manual 1x Customer Letter
	Packing size	521.0 mm × 102.0 mm × 517.0 mm	565.0 mm × 175.0 mm × 450.0 mm
	Gross weight	10.4 kg	6.8 kg
Noise Level (typical at 25°C/77°F)		45 dB (A)	

Video Source Features

Input Connectors	Bit Depth		Max. Input Resolution
• HDMI 1.3 • DVI • OPT 1	8-bit	RGB 4:4:4	1920×1200@60Hz (Standard)
		YCbCr 4:4:4	3840×648@60Hz (Custom)
		YCbCr 4:2:2	600×3840@60Hz (Forced)
		YCbCr 4:2:0	Not supported
	10-bit		Not supported
	12-bit		Not supported
3G-SDI	• Max. input resolution: 1920×1080@60Hz • DOES NOT support input resolution and bit depth settings. • Supports ST-424 (3G), ST-292 (HD) and ST-259 (SD) standard video inputs.		

Notes and Cautions

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.

Others

This is Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.