

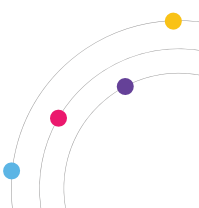


Overview

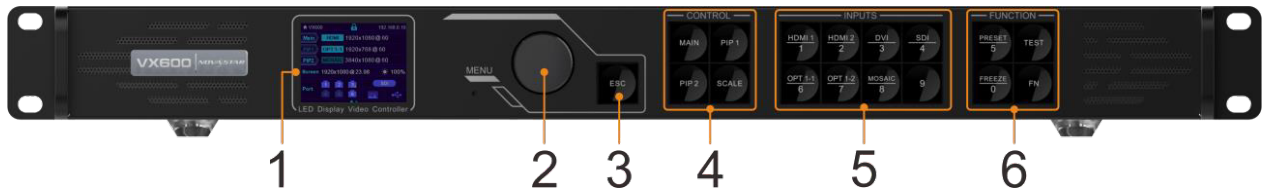
The VX600 is NovaStar's new all-in-one controller that integrates video processing and video control into one box. It features 6 Ethernet ports and supports video controller, fiber converter and Bypass working modes. A VX600 unit can drive up to 3.9 million pixels, with the maximum output width and height up to 10,240 pixels and 8192 pixels respectively, which is ideal for ultra-wide and ultra-high LED screens. The VX600 is capable of receiving a variety of video signals and processing high-resolution images. In addition, the device features stepless output scaling, low latency, pixel-level brightness and chroma calibration and more, to present you with an excellent image display experience. What's more, the VX600 can work with NovaStar's supreme software NovaLCT and V-Can to greatly facilitate your infield operations and control, such as screen configuration, Ethernet port backup settings, layer management, preset management and firmware update. Thanks to its powerful video processing and sending capabilities and other outstanding features, the VX600 can be widely used in applications such as medium and high-end rental, stage control systems and fine-pitch LED screens.

Features

- HDMI 1.3, DVI (IN/LOOP), 3G-SDI (IN/LOOP), and 10G optical fiber input support
- Six Gigabit Ethernet outputs with up to 3.9 million pixel loading capacity
- Maximum output resolution of 10,240 pixels in width and 8,192 pixels in height
- Dual fiber outputs for Ethernet output duplication or backup redundancy
- HDMI 1.3 monitoring output for real-time display preview
- Self-adaptive OPT1 port configurable as video input or sending output
- HDMI-embedded audio input and audio output via multifunction card
- Ultra-low latency processing down to 20 scan lines in bypass mode
- Support for up to three adjustable video layers
- Internal or external Genlock synchronization for cascaded systems
- SuperView III processing with stepless scaling and free input cropping
- One-button full-screen display and instant image scaling
- Support for up to 10 user-defined presets with one-key recall
- Redundancy support across devices, Ethernet ports, and input sources
- Mosaic input support via dual 2K × 1K @ 60 Hz sources
- Support for cascading up to four units for large-scale image mosaics
- Three operating modes: video controller, fiber converter, and bypass
- Full color adjustment including brightness, contrast, saturation, hue, and gamma
- Pixel-level brightness and chroma calibration via NovaLCT
- Device control via V-Can, NovaLCT, or front-panel interface



Appearance | Front Panel



| No. | Area | Function |
|-----|---------------------------|---|
| 1 | LCD screen | Display the device status, menus, submenus and messages. |
| 2 | Knob | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Open or close a layer (main layer and PIP layers), and show the layer status. Status LEDs: <ul style="list-style-type: none"> On (blue): The layer is opened. |
| | | <ul style="list-style-type: none"> Flashing (blue): The layer is being edited. On (white): The layer is closed. <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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.

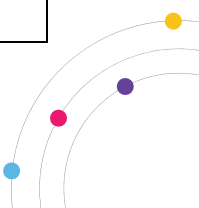
Appearance | Rear Panel



Input Connectors

| Connector | Qty | Description |
|-----------|-----|---|
| 3G-SDI | 1 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • Max. input resolution: 1920×1200@60Hz • HDCP 1.4 compliant • Custom resolutions supported <ul style="list-style-type: none"> – 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 |

| | | <ul style="list-style-type: none"> • DOES NOT support interlaced signal inputs | | |
|--|--|---|--|--|
| DVI | 1 | <ul style="list-style-type: none"> • Max. input resolution: 1920×1200@60Hz • HDCP 1.4 compliant • Custom resolutions supported <ul style="list-style-type: none"> – 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 | <p>Gigabit Ethernet ports</p> <ul style="list-style-type: none"> • Max. loading capacity: 3.9 million pixels • Max. width: 10,240 pixels • Max. height: 8192 pixels <p>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.</p> <p>Status LEDs:</p> <ul style="list-style-type: none"> • The top left one indicates the connection status. <ul style="list-style-type: none"> – 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. <ul style="list-style-type: none"> – 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 | <ul style="list-style-type: none"> • Support monitor and video output modes. • The output resolution is adjustable. | | |
| Optical Fiber Ports | | | | |
| Connector | Qty | Description | | |
| OPT | 2 | <ul style="list-style-type: none"> • OPT 1: Self-adaptive, either for video input or for output <ul style="list-style-type: none"> – 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. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Single mode OPT module description:</p> <ul style="list-style-type: none"> • Hot swappable • Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s • Wavelength: 1310 nm </td> <td style="width: 50%; vertical-align: top;"> <p>OPT fiber selection:</p> <ul style="list-style-type: none"> • Model: OS1/OS2 • Transmission mode: Single-mode twin-core • Cable diameter: 9/125 μm </td> </tr> </table> | <p>Single mode OPT module description:</p> <ul style="list-style-type: none"> • Hot swappable • Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s • Wavelength: 1310 nm | <p>OPT fiber selection:</p> <ul style="list-style-type: none"> • Model: OS1/OS2 • Transmission mode: Single-mode twin-core • Cable diameter: 9/125 μm |
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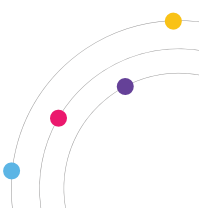
| | | | |
|--|--|--|--|
| | | <ul style="list-style-type: none"> • Transmission distance: 10 km | <ul style="list-style-type: none"> • Connector type: LC • Insertion loss: ≤ 0.3 dB • Return loss: ≥ 45 dB |
| | | <p>Multi-mode OPT module description:</p> <ul style="list-style-type: none"> • Hot swappable • Transmission rate: 9.95 Gbit/s to 11.3 Gbit/s • Wavelength: 850 nm • Transmission distance: 300 m | <p>OPT fiber selection:</p> <ul style="list-style-type: none"> • 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

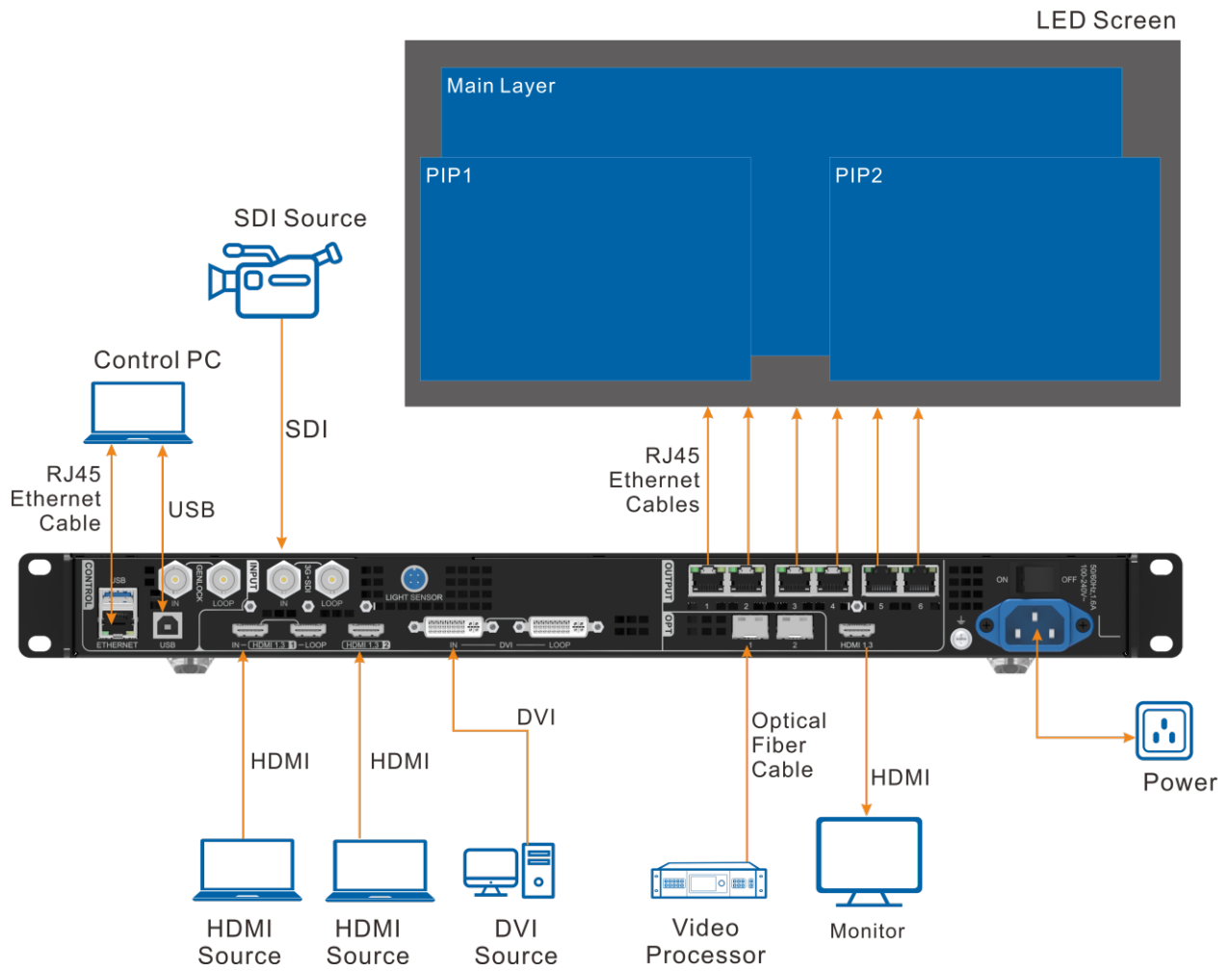
| Connector | Qty | Description |
|-----------------|-----|--|
| ETHERNET | 1 | <p>Connect to the control PC or router.</p> <p>Status LEDs:</p> <ul style="list-style-type: none"> • The top left one indicates the connection status. <ul style="list-style-type: none"> – On: The port is well connected. – 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. <ul style="list-style-type: none"> – On: The Ethernet cable is short-circuited. – Flashing: The communication is good and data is being transmitted. – Off: No data transmission |
| USB | 2 | <ul style="list-style-type: none"> • USB 2.0 (Type-B): <ul style="list-style-type: none"> – Connect to the control PC. – Input connector for device cascading • USB 2.0 (Type-A): Output connector for device cascading |
| GENLOCK IN-LOOP | 1 | <p>Connect to an external sync signal.</p> <ul style="list-style-type: none"> • IN: Accept the sync signal. • LOOP: Loop through the sync signal. |
| LIGHT SENSOR | 1 | <p>Connect to a light sensor to collect the ambient brightness, allowing for automatic screen brightness adjustment.</p> |

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.



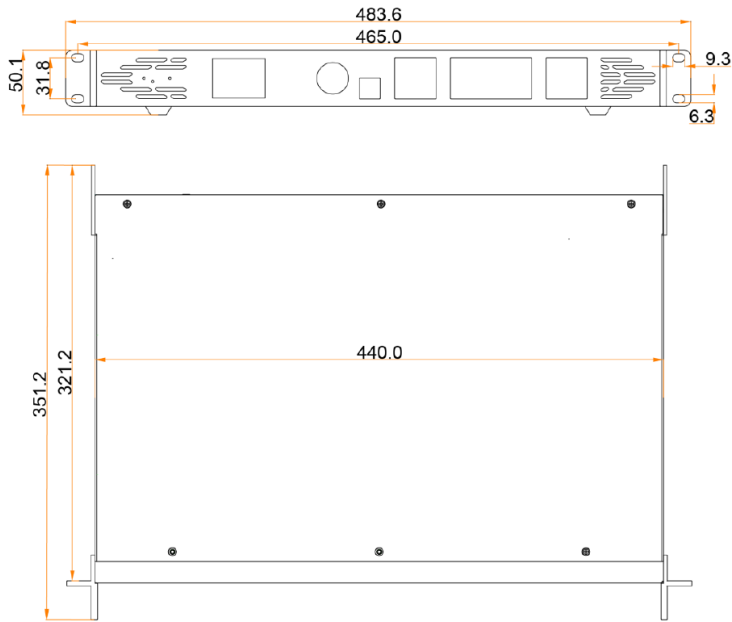
Applications



Dimensions

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

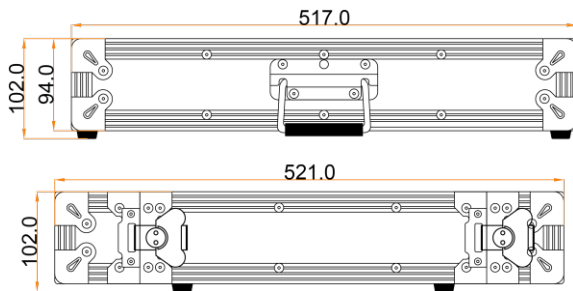
Device



Tolerance: ± 0.3 Unit: mm

Packaging

Flight Case



Tolerance: ± 5 Unit: mm

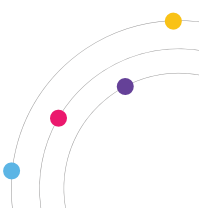
Note:

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 |
|--|--|---------------|---------------------------|
| <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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.

