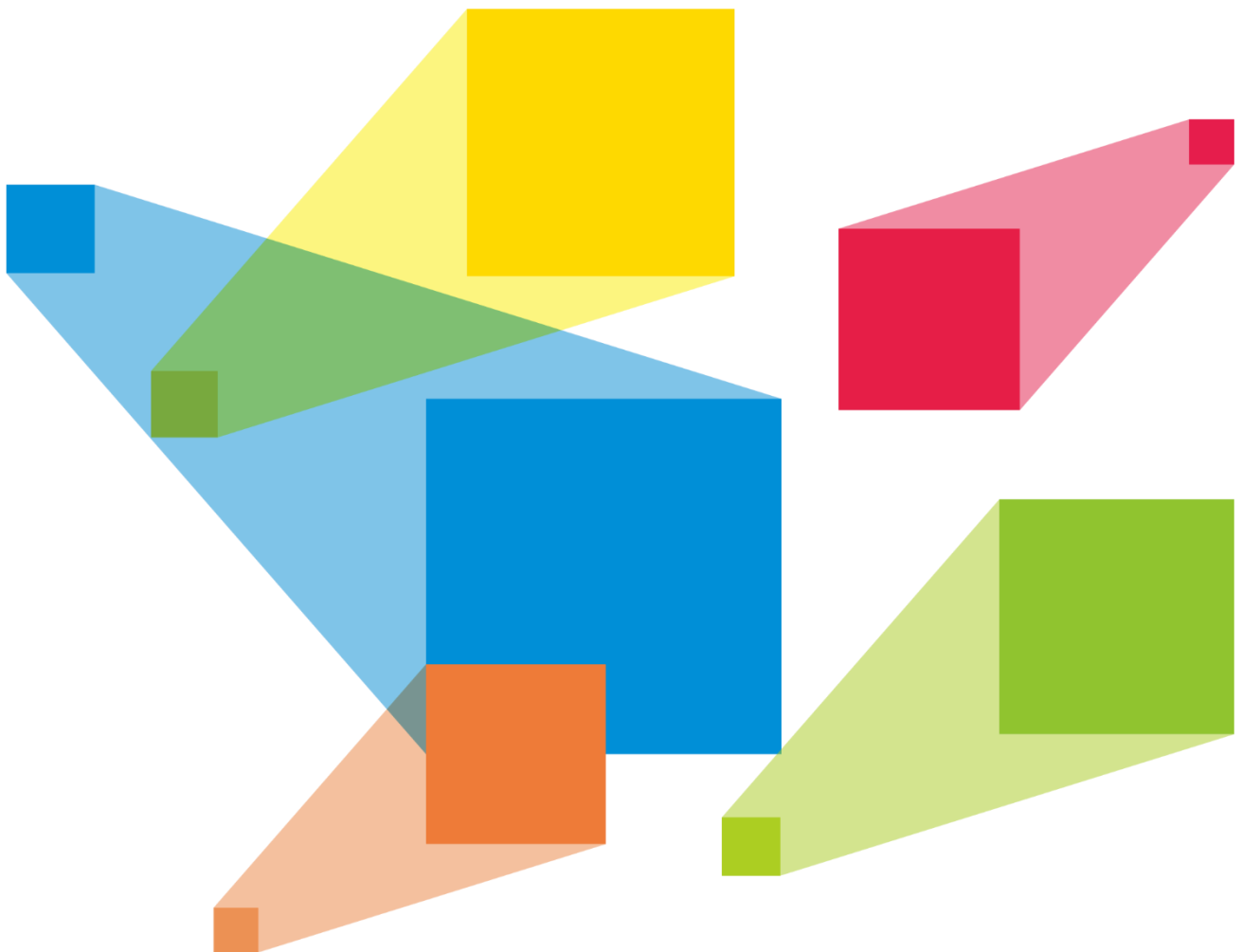# VC6

All-in-One Controller

Specifications

Introduction

The VC6 is NovaStar's new all-in-one controller that integrates video processing and video control into one box. It features 6 Ethernet ports. A VC6 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 on-site extra-wide and extra-high LED screen control applications.

The VC6 is capable of receiving a variety of video signals and processing high-resolution images. Furthermore, the device features stepless output scaling, OSD, low latency, pixel-level brightness and chroma calibration and more, to present you with an excellent image display experience.

Thanks to its powerful video processing and sending capabilities and other outstanding features, the VC6 can be widely used in fixed LED screen applications.

Features

- Input connectors
  - 2x HDMI 1.3
  - 1x DVI
  - 1x 3G-SDI (IN+LOOP, optional)
- Output connectors
  - 6x Gigabit Ethernet ports

    A single device unit drives up to 3.9 million pixels, with a maximum width of 10,240 pixels and a maximum height of 8192 pixels.
  - 1x HDMI 1.3

    For monitoring or video output
- Audio input and output
  - Audio input accompanied with HDMI input source
  - 3.5 mm independent audio input and output
  - Audio output via a multifunction card
- As low as 1-frame latency

  Reduce the delay from the input to receiving card to 1 frame when the low latency and synchronization functions are both turned on.
- 3x layers
  - Adjustable layer size and position
  - Adjustable layer priority

- 1x OSD
  - Each preset supports one OSD image.
  - Up to 8 OSD images can be imported and saved.
  - Max. OSD image resolution: 3.9 million pixels, with the maximum width and height up to 10,240 pixels and 8192 pixels respectively
  - Adjustable OSD image priority
- Powerful video processing
  - Based on SuperView III image quality processing technologies to provide stepless output scaling.
  - One-click full screen display
  - Free input cropping
- Color adjustment

  Supports input color management, including brightness, saturation, contrast and hue.
- Easy preset saving and loading

  Up to 10 user-defined presets supported
- Hot backup
  - Backup between devices
  - Backup between Ethernet ports
- Output synchronization

Use an internal input source as the sync source to make the output images of all the device in synchronous display.

- Pixel level brightness and chroma calibration

Work with NovaLCT and NovaStar calibration software to support brightness and chroma

calibration on each LED, which can effectively remove color discrepancies and greatly improve LED display brightness and chroma consistency, allowing for better image quality.

Appearance

Front Panel

Button	Description
Power switch	Power on or power off the device.
LCD screen	Display the device status, menus, submenus and messages.
Knob	• Rotate the knob to select a menu item or adjust the parameter value. • Press the knob to confirm the setting or operation.
ESC button	Exit the current menu or cancel an operation.

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.
	  – 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.

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.
	  – On (blue): An input source is accessed.
	  – Flashing (blue): The input source is not accessed but used by the layer.

Button	Description
	− On (white): The input source is not accessed or the input source is abnormal.
Shortcut function buttons	• PRESET: Access the preset settings menu. • FN: A customizable button

## Rear Panel

| Input Connectors		
Connector	**Qty**	**Description**
3G-SDI	1	An optional connector • 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 output supported

HDMI 1.3	2	• Max. input resolution: 1920×1200@60Hz
		• HDCP 1.4 compliant
		• Custom resolutions supported
		   − Max. width: 3840 pixels (3840×648@60Hz)
		   − Max. height: 2784 pixels (800×2784@60Hz)
		   − 600×3840@60Hz (forced)
		• DOES NOT support interlaced signal inputs

DVI	1	• Max. input resolution: 1920×1200@60Hz
		• HDCP 1.4 compliant
		• Custom resolutions supported
		   − Max. width: 3840 pixels (3840×648@60Hz)
		   − Max. height: 2784 pixels (800×2784@60Hz)
		   − 600×3840@60Hz (forced)
		• DOES NOT support interlaced signal inputs

AUDIO	1	3.5 mm audio input connector

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.
AUDIO	1	3.5 mm audio output connector
Control Connectors		
Connector	**Qty**	**Description**

ETHERNET	1	Connect to the control PC and update the firmware program in V-Can.
		
		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

Applications
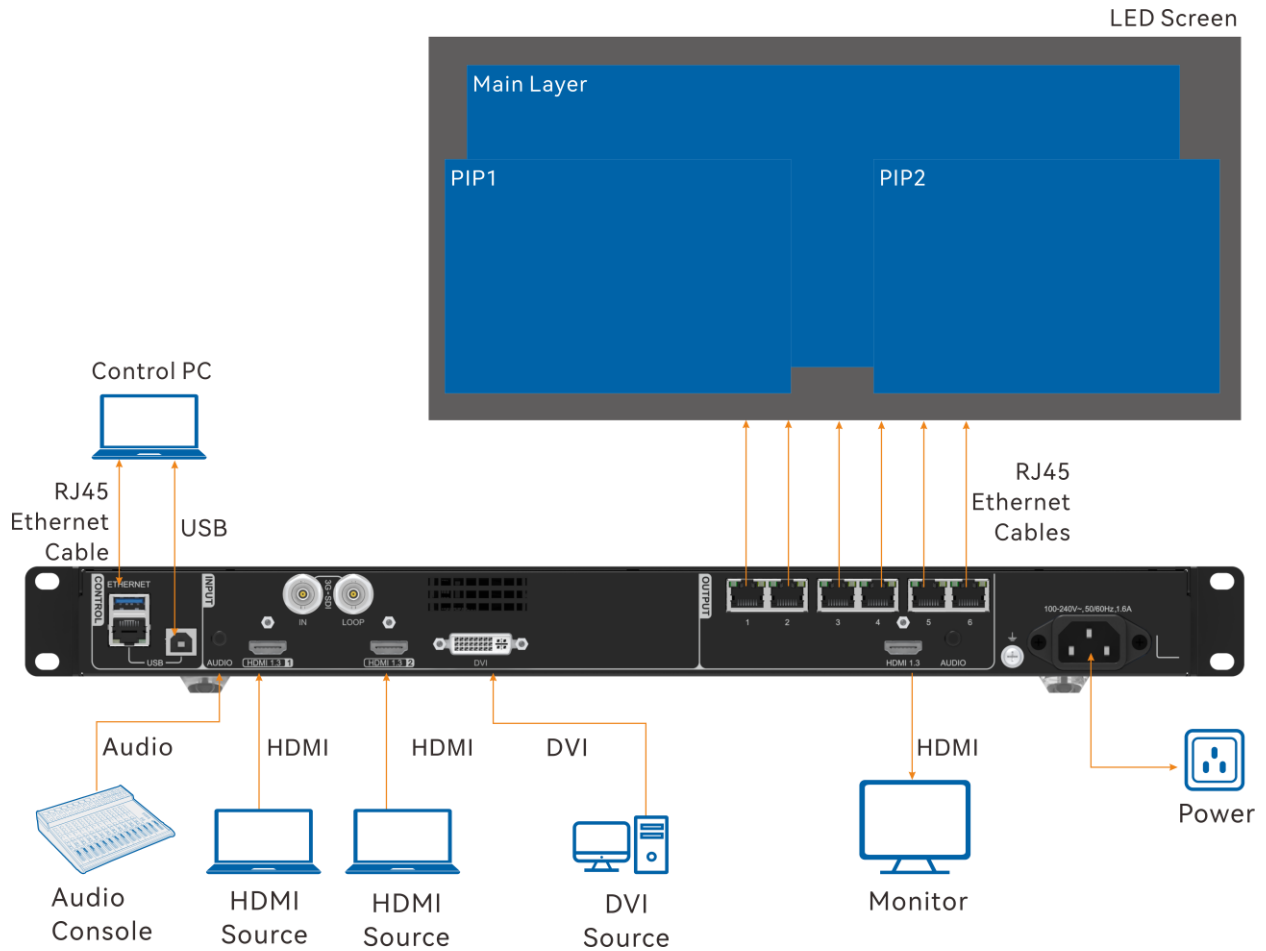
Dimensions
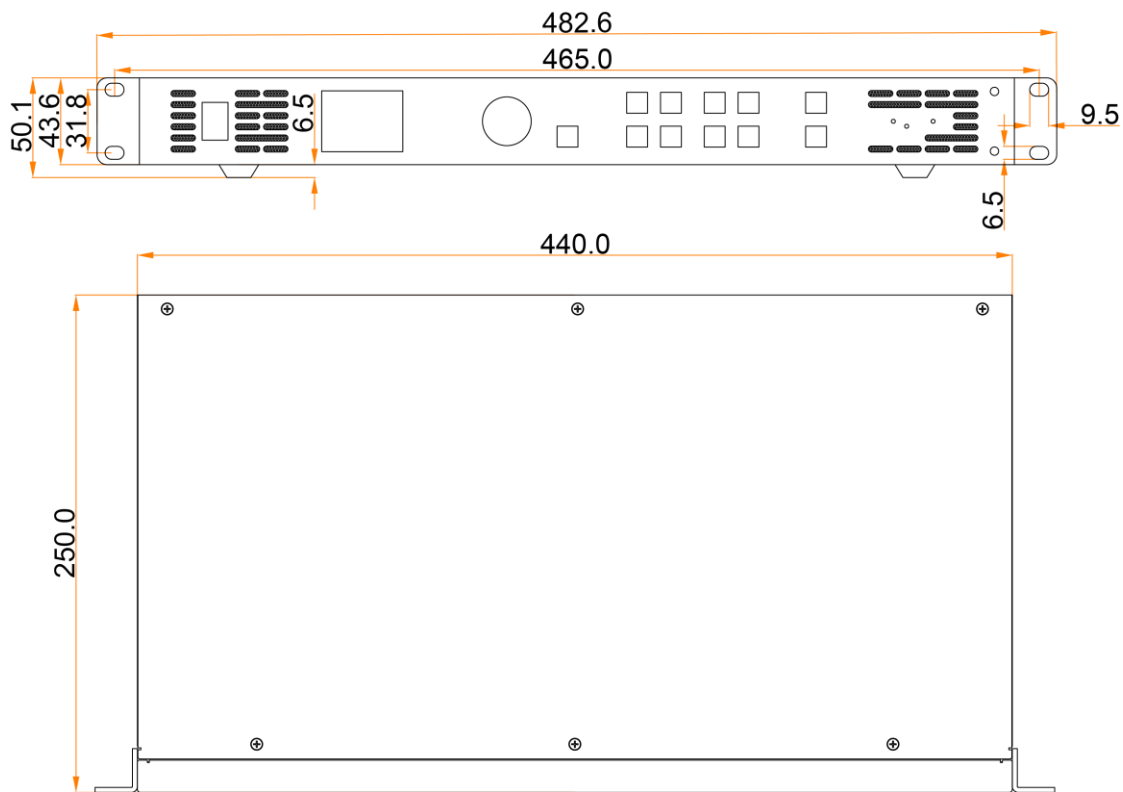
Tolerance: ±0.3   Unit: mm

Specifications

Overall Specifications		
Electrical Specifications	Power connector	100–240V~, 50/60Hz, 1.6A
	Power consumption	28 W
Operating Environment	Temperature	0℃ to 50℃
	Humidity	20% RH to 90% RH, non-condensing
Storage Environment	Temperature	−20℃ to +70℃
	Humidity	10% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	482.6 mm × 250.0 mm × 50.1 mm
	Net weight	4 kg
	Gross weight	6.3 kg

Overall Specifications		
Packing Information	Accessories	1x Power cord 1x USB cable 1x DVI cable 1x HDMI cable 1x Certificate of Approval
	Packing box	550 mm × 175 mm × 400 mm
Noise Level (typical at 25℃/77℉)		45 dB (A)

Video Source Feature

Input Connectors	Bit Depth		Max. Input Resolution
• HDMI 1.3 • DVI (HDMI 1.3)	8bit	RGB4:4:4	1920×1200@60Hz (Standard) 3840×648@60Hz (Custom)
		YCbCr4:4:4	
		YCbCr4:2:2	
		YCbCr4:2:0	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.		

Official website
www.novastar.tech

Technical support
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