



ALL-IN-ONE CONTROLLER

Catalogue



1 Introduction

The VP10HD-J is a TWT new all-in-one controller that features excellent video processing capabilities, sending card functions and LED screen configurations. The VP10HD-J provides a variety of video input connectors, supporting full HD 4K×2K@60Hz image processing and sending capabilities. Besides, VP10HD-J supports 8K×1K@60Hz ultra-high resolution settings.

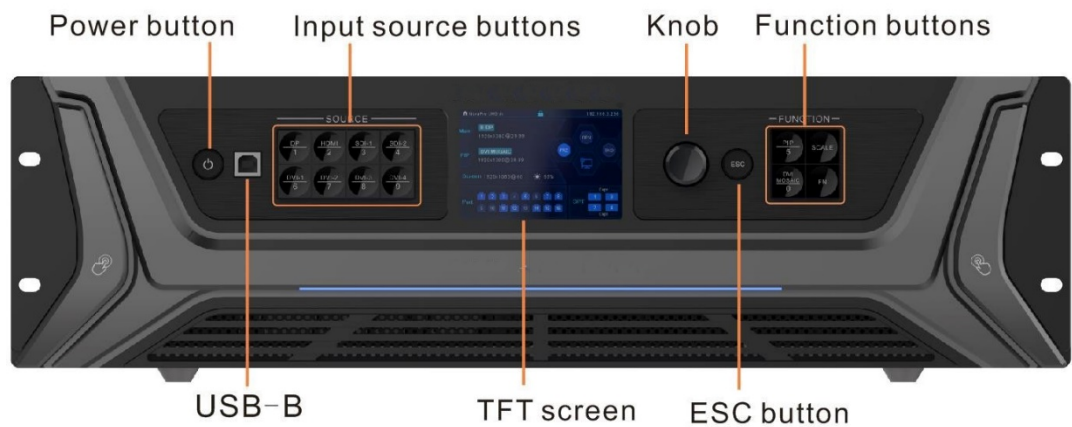
The VP10HD-J can send the processed video to the LED screen via Neutrik Ethernet ports and optical fiber ports. Thanks to its powerful video processing capabilities and sending functions, the VP10HD-J is well suited for stage control systems, conference sites, activities, exhibition sites and other high-end rental applications as well as fine-pitch LED displays.

2 Features

- A variety of inputs and outputs
Provides 1 × DP 1.2, 4 × DVI, 1 × HDMI 2.0 with loop output and 2 × 12G-SDI with loop output.
- More output connectors, larger loading capacity
Provides 16 × Neutrik Ethernet output and 4 × optical fiber output, with loading capacity up to 10,400,000 pixels.
The maximum width is 16K and maximum height is 8K.
- 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, 29.97 and 59.94.
- Low-latency output
Reduces the latency from sending card to receiving card by 2 frames when the device is used together with TWT 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 VP10HD-J units can load a super-large screen.
- 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.

3 Appearance

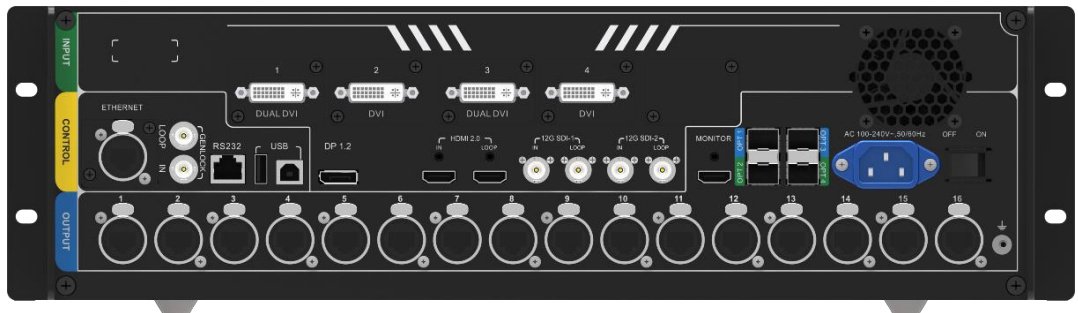
Front Panel



Button	Description
Power button	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Input source switching buttons Press the button to switch the input source for the main layer, and hold down the button to switch the input source for the PIP. Button indicators are used to indicate the working status of the input source signal. <ul style="list-style-type: none"> 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	<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, 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	<ul style="list-style-type: none"> • PIP: Enable/Disable PIP. • SCALE: Enable/Disable full screen function for main layer. • DVI MOSAIC: Switch to DVI mosaic input source. Press it to switch the input source of main layer, while hold it down to switch the input source of PIP. Main layer and PIP can be set according to your preference. • FN: This is a custom function button. The function can be customized to Synchronization, Freeze, Black Out, Test Pattern, Quick Configuration, Image Quality and Preset Settings. It is Synchronization by default.

Rear Panel



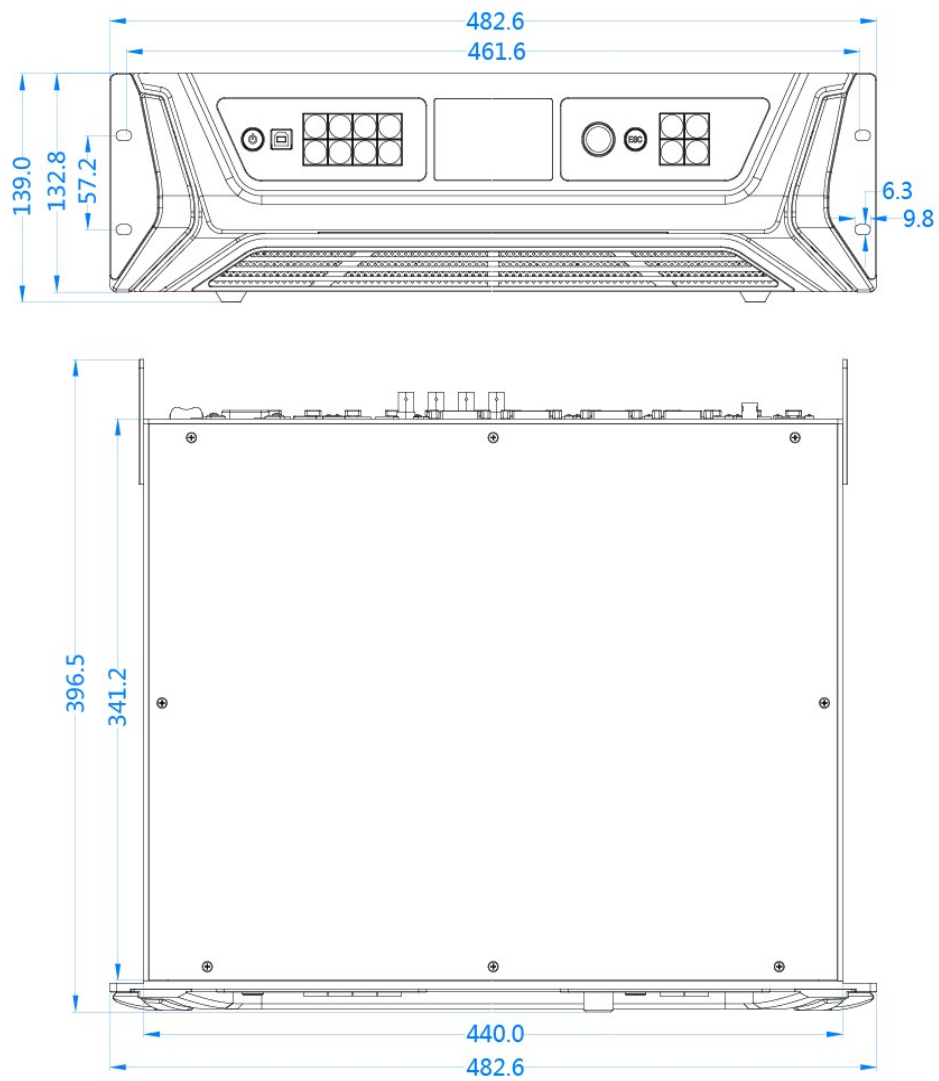
Input		
Connector	Quantity	Description
DVI	4	<ul style="list-style-type: none"> • Four DVIs are all single-link DVI connectors by default. <ul style="list-style-type: none"> – 4 × DVI inputs – Each DVI: Input resolution up to 1920×1200@60Hz, downward compatible – 4 DVI input sources constitute 1 input source (DVI MOSAIC). – Standard resolutions supported

		<ul style="list-style-type: none"> • In dual-link mode <ul style="list-style-type: none"> – 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 – Standard resolutions supported
12G-SDI	2	<ul style="list-style-type: none"> • Input resolution up to 4096×2160@60Hz, downward compatible • Standard resolutions unsupported
DP 1.2	1	<ul style="list-style-type: none"> • Input resolution up to 3840×2160 @60Hz, downward compatible • HDCP 1.3 compliant • Standard resolutions supported
HDMI 2.0	1	<ul style="list-style-type: none"> • Input resolution up to 3840×2160 @60Hz, downward compatible • HDCP 1.4 • EDID management • Standard resolutions supported
Output		
Connector	Quantity	Description
Ethernet port	16	<ul style="list-style-type: none"> • 16 × Neutrik Gigabit Ethernet output connectors, allowing for a loading capacity of up to 10,400,000 pixels • Maximum loading capacity: Max. width: 16K, max. height: 8K • Maximum loading capacity of a single Ethernet port: <ul style="list-style-type: none"> – 8-bit input source: 650,000 pixels – 10-bit/12-bit input source: 320,000 pixels
OPT 1-4	4	<p>10G optical connectors</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 serves as the hot backup for OPT 1. • OPT 4 serves as the hot backup for OPT 2.

HDMI 2.0 LOOP	1	<ul style="list-style-type: none"> • HDMI loop output connector • Only 1 level of device cascading supported • HDCP 1.4 • EDID management
12G-SDI LOOP	2	SDI loop output connectors
MONITOR	1	<ul style="list-style-type: none"> • HDMI connector for output monitoring

		<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Connect to the PC for device control. • Used as the input connector to connect a VP10HD-J unit for image mosaic
USB (Type-A)	1	Used as the output connector to connect a VP10HD-J unit for image mosaic
GENLOCK IN-LOOP	1	Connect to a synchronization signal to synchronize all the connected VP10HD-J units.
RS232	1	Connect to the control device.

4 Dimensions



Unit: mm

5 Specifications

Overall Specifications	
Type	Description
Power connector	AC100-240V~, 50/60Hz
Operating temperature	0°C-50°C
Dimensions	482.6 mm × 396.5 mm × 139.0 mm
Overall power consumption	70 W
Net weight	6.3 kg
Packing dimensions	615.0 mm × 290.0 mm × 525.0 mm

6 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	3840×2160@60Hz
		YCbCr4:2:2	3840×2160@60Hz
		YCbCr4:2:0	Unsupported
	10 bit	RGB4:4:4	1920×1080@60Hz
		YCbCr4:4:4	1920×1080@60Hz
		YCbCr4:2:2	3840×2160@60Hz
		YCbCr4:2:0	Unsupported
	12 bit	RGB4:4:4	1920×1080@60Hz
		YCbCr4:4:4	1920×1080@60Hz
		YCbCr4:2:2	3840×2160@60Hz
		YCbCr4:2:0	Unsupported
S-DVI	8 bit	RGB4:4:4	1920×1080@60Hz
D-DVI	8 bit	RGB4:4:4	3840×1080@60Hz
SDI	<ul style="list-style-type: none"> • Max. input resolution: 4096×2160@60Hz • Input resolution and bit depth settings unsupported 		



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