灰度科技
HUIDU TECHNOLOGY

# PRODUCT SPECIFICATION

All-in-one LED Controller

**HD-VP8**

V1.1

**Update history:**

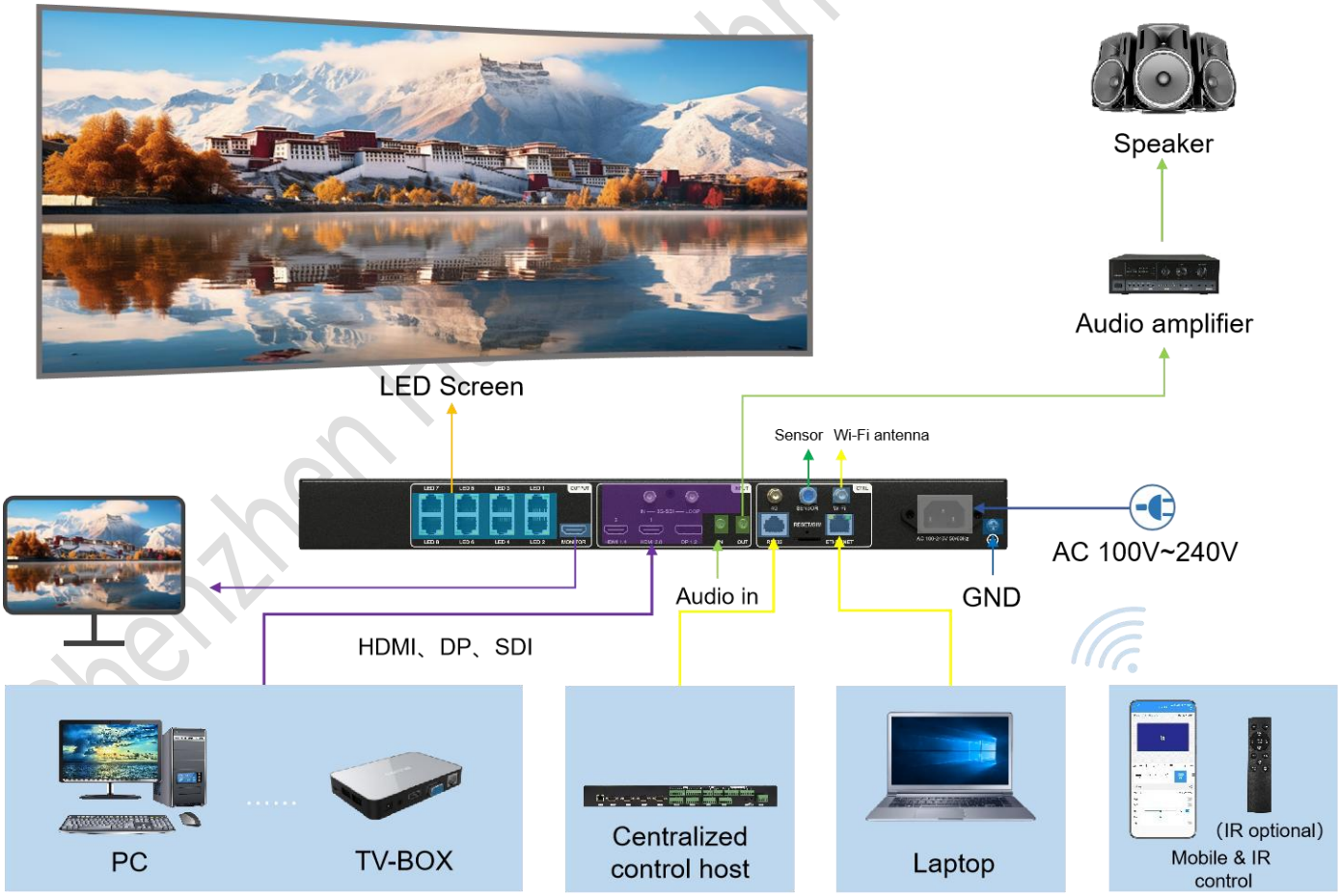
| Release version | Release time | Release Notes |
|---|---|---|
| V1.0 | Jul 3, 2027 | First release |
| V1.1 | Aug 3, 2027 | Modify the description related to OSD functions |

Shenzhen Huidu Technology Co., Ltd.

# 1. System Overview

HD-VP6 is a 2-in-1 video processor, integrating traditional video processor and 8-channel Gigabit Ethernet port output.It not only simplifies the on-site environment construction, but also improves the reliability of the product. It supports 4- channel synchronous signal input and can be used in various occasions that require synchronous playback, such as hotels, shopping malls, conference rooms, exhibitions, studios, etc. In addition, the device also supports point-to-point input/output, allowing the LED display to display clearer images.

# 2. Connection Diagram



# 3. Product Features

**Input**

- Supports maximum 4096×2160@60Hz synchronized signal input;
- Supports 1-way DP1.2, 1-way HDMI2.0, 1-way HDMI1.4,1-way 3G-SDI（IN&LOOP, optional）, multi-channel video signal switching at will;
- Supports 1-way USB 3.0 port and supports mixed playback of images and videos;
- Supports 1 TRS 3.5mm standard dual-channel audio input and HDMI/DP audio input.
- Supports one sensor input port for connecting an external light sensor.

**Output**

- Comes standard with 8-channel Gigabit network port and direct cascade receiver card;
- Maximum control of 5.2 million pixels, horizontal maximum support for 16,000 pixels, vertical maximum support for 8,000 pixels;
- 1-way HDMI output port, for displaying the monitor feed;
- Supports two-screen layout and maximum 2×4K size window;
- 1-way TRS 3.5mm standard dual-channel audio output.

**Features**

- Supports arbitrary overlapping of network ports and non-rectangular loading;
- Supports network port backup;
- Video signal arbitrary switching, cropping, scaling;

Shenzhen Huidu Technology Co., Ltd.

- Supports brightness and colour temperature adjustment, as well as button lock functionality;
- Supports adjustment of contrast, saturation, hue and sharpness;
- Support 256 scene presets and call;
- Supports large-screen OSD functions: scrolling text (horizontal, vertical), weather forecast, clock, etc., with configurable scrolling text parameters;
- Support RS232/RS485 serial port protocol control, docking center control equipment;
- Supports LAN port communication debugging;
- Support Wi-Fi Station mode, AP mode,;
- Supports cell phone APP wireless control;
- Supports EDID import and export;
- Supports SDI (optional);
- Supports 4G modules and 4G antennas (optional);
- Supports infrared remote control (optional).

Shenzhen Huidu Technology Co., Ltd.

# 4. Appearance Description

**Front panel:**




| Key Description | | |
|---|---|---|
| **No.** | **Button** | **Description** |
| 1 | Power switch | Controls AC power input |
| 2 | LCD DISPLAY | Debugging display menus, screen parameters and other information |
| 3 | IR | Receive infrared remote control |
| 4 | MENU KNOB | Press the knob to enter a sub-menu or to confirm a selection |
| 5 | BACK | Exit key /Back key |
| 6 | WIN1 | Selection of opened screen windows / Play a programme file from a U-Disk<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |
| | WIN2 | Selection of opened screen windows<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |
| | HDMI 1 | Select HDMI 1 signal to play / Pause or play content from a U-Disk |

Shenzhen Huidu Technology Co., Ltd.

| | | |
|---|---|---|
| | | Function key: key multiplexing function for digital selection, generally used when setting resolution |
| | HDMI 2 (SDI) | Select HDMI 2 (SDI) signal to play / Play the next programme file on the U-Disk<br>Function key: key multiplexing function for digital selection, generally used when setting resolution<br>HDMI2/SDI button is a toggle; when the input source is HDMI2, pressing the button again switches to SDI |
| | DP | Select DP signal playback<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |
| | U-DISK | Select U-Disk signal playback<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |
| | BRIGHT | Quickly recall the brightness setting button |
| | MODE | Quickly call up the preset mode recall menu<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |
| | FREEZE | One-touch freeze button<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |

Shenzhen Huidu Technology Co., Ltd.

| | | |
|---|---|---|
| | BLACK | One Touch Black Screen Button<br>Function key: key multiplexing function for digital selection, generally used when setting resolution |

**Input interface**

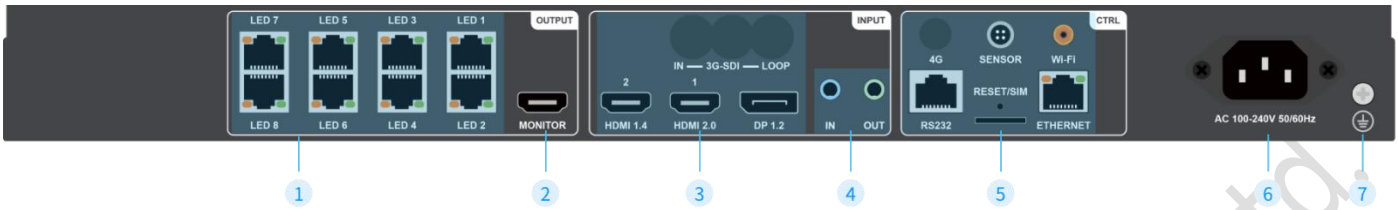
| No. | Interface name | Quantity | Description |
|---|---|---|---|
| 7 | U-DISK | 1 | USB 3.0 input port, supports FAT32, NTFS and exFAT file systems on USB drives<br>Supports playback of videos and images from a USB flash drive<br>Video file formats: mp4, avi, mpg, mkv, mov, vob and rmvb<br>Video decoding specifications: MPEG-1/2, MPEG-4, H.264/AVC, MVC, H.265/HEVC, Google VP8, Google VP9, H.263, VC-1, Motion JPEG<br>Image file formats: JPG, JPEG, GIF, PNG and BMP<br>Video resolution: Maximum supported resolution 4096×2160@60Hz<br>Image resolution: Maximum supported resolution 4096×2160@60Hz |

**Control Interface**

| No. | Interface name | Quantity | Description |
|---|---|---|---|
| 8 | USB-B | 1 | Connect to a computer for device debugging |

Shenzhen Huidu Technology Co., Ltd.

**Rear panel:**




| **Output Interface** | | | |
|---|---|---|---|
| **No.** | **Interface name** | **Quantity** | **Description** |
| 1 | Gigabit Ethernet | 8 | For use with cascaded receiver cards; each network port supports the transmission of 650,000 pixels; LED 1 supports connection to Multifunction Card 1 |
| 2 | MONITOR | 1 | HDMI 1.3 output port<br>Connector type: HDMI-A<br>Used for monitor output; the output resolution is fixed at 1920 ×1080@60Hz<br>Does not support audio output |
| **Input Interface** | | | |
| **No.** | **Interface name** | **Quantity** | **Description** |
| 3 | DP1.2 | 1 | DP input interface<br>Interface type: DP<br>Signal standard: DP 1.2 Backward Compatibility<br>Resolution: VESA standard, ≥720×480@60Hz, ≤4096× |

Shenzhen Huidu Technology Co., Ltd.

| | | | |
|---|---|---|---|
| | | | 2160@60Hz<br>Support color space: RGB4:4:4/YCbCr4:4:4<br>Support color depth: 8bit/10bit<br>Support limit width: 4096 Limit height: 4096<br>Supports accompanying audio |
| | HDMI1 | 1 | HDMI 2.0 input interface × 1<br>Interface type: HDMI-A<br>Signal standard: HDMI 2.0 backward compatible<br>Resolution: VESA standard, ≥800×600@60Hz, ≤4096×2160@60Hz<br>Support color space: RGB4:4:4/YCbCr4:4:4<br>Support color depth: 8bit/10bit<br>Support limit width: 4096 Limit height: 4096<br>Supports accompanying audio |
| | HDMI2 | 1 | Interface type: HDMI-A<br>Signal standard: HDMI 1.4 backward compatible<br>Resolution: VESA standard, ≥800×600@60Hz, ≤4096 × 2160@30Hz<br>Support color space: RGB4:4:4/YCbCr4:4:4<br>Support color depth: 8bit/10bit<br>Support limit width: 4096 Limit height: 4096 |

Shenzhen Huidu Technology Co., Ltd.

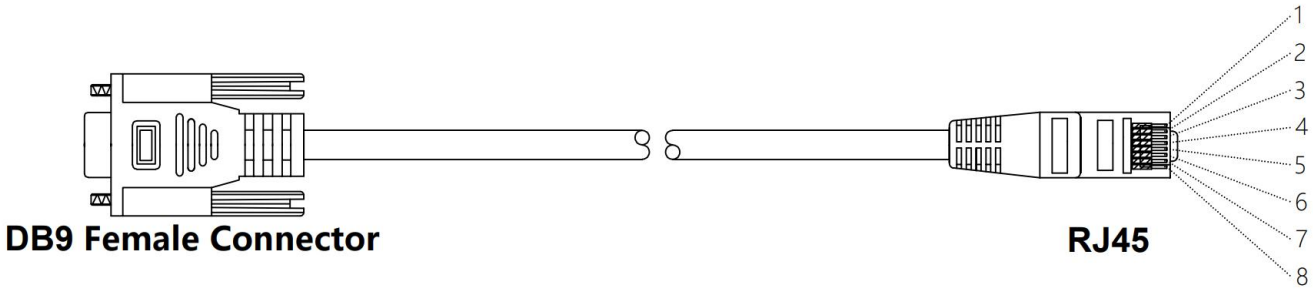
| | | | |
|---|---|---|---|
| | | | Supports accompanying audio |
| | 3G-SDI IN | 1 | 3G-SDI input interface (optional)<br>Interface type: BNC<br>Signal standards: SD-SDI, HD-SDI, 3G-SDI<br>Resolution: VESA standard, ≤1920×1080@60Hz |
| | 3G-SDI LOOP | 1 | SDI Signal Loop-Out Interface (optional)<br>Connector type: BNC<br>Signal standards: SD-SDI, HD-SDI, 3G-SDI<br>Resolution: VESA standard, ≤1920×1080@60Hz |
| 4 | AUDIO IN | 1 | TRS 3.5mm dual channel audio input interface |
| | AUDIO OUT | 1 | TRS 3.5mm stereo audio output jack<br>Connects to an audio amplifier for high-power external sound reproduction |
| **Control interface** | | | |
| **No.** | **Interface name** | **Quantity** | **Description** |
| 5 | 4G | 1 | Connect the 4G antenna |
| | SENSOR | 1 | Supports the S107 external light sensor (optional) |
| | Wi-Fi antenna interface | 1 | Connect a Wi-Fi antenna to enhance Wi-Fi signal |
| | RS232 | 1 | RJ45 interface, connected to the central control device |

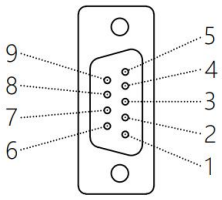
Shenzhen Huidu Technology Co., Ltd.

| | | | |
|---|---|---|---|
| | RESET | 1 | Supports factory reset |
| | SIM | 1 | Micro SIM card slot, providing 4G connectivity for remote control |
| | ETHERNET | 1 | Connect to the local area network for device debugging |
| **Power supply** | | | |
| **No.** | **Interface name** | **Quantity** | **Description** |
| 6 | Power supply | 1 | AC 100~240V 50/60Hz |
| 7 | Grounding interface | 1 | Anti-static/leakage protection, personal safety and equipment normal operation |

Shenzhen Huidu Technology Co., Ltd.

* The RJ 45 to DB9 cable diagram is as follows. It is optional. If you need it, please contact Huidu sales or technical support in advance.

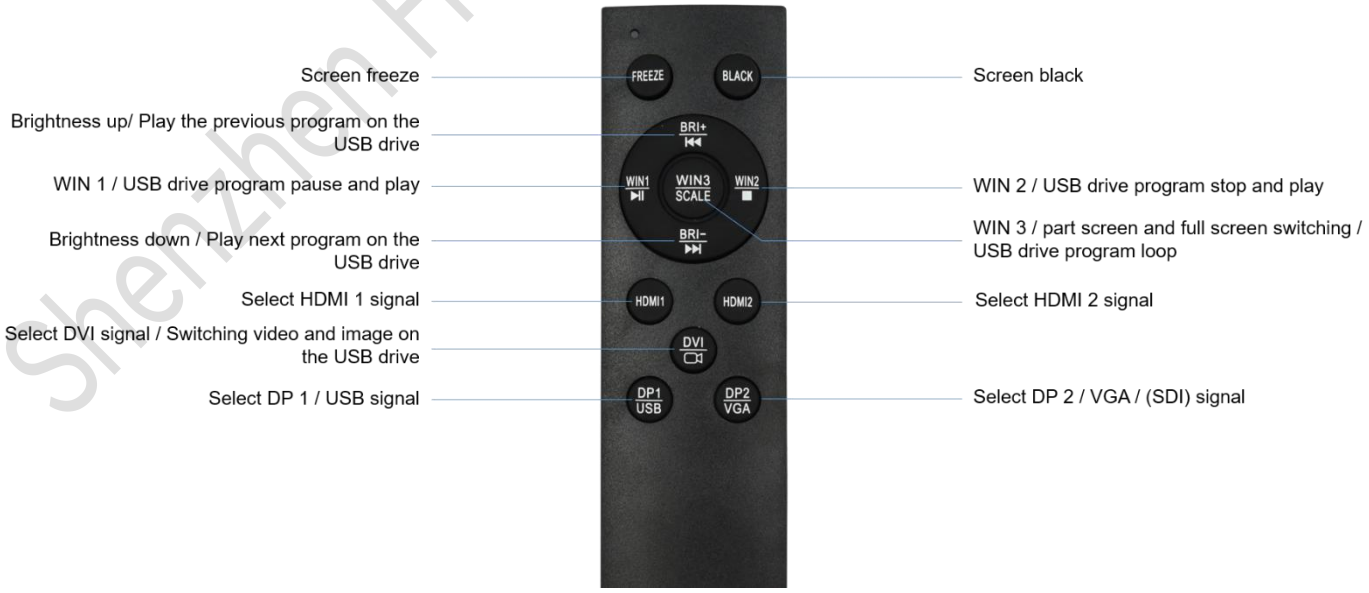



**Line Ordering:**

| DB9 female connector | RJ45 connector |
|---|---|
| 2-RX | TX-1(Red) |
| 3-TX | RX-2(Blue) |
| 5-GND | GND-3(Black) |

* The schematic diagram of the remote control is as follows. It is optional. If you need it, please contact Huidu sales or technical support in advance.




Shenzhen Huidu Tech

# 5. Basic Parameters

**1. Product Specifications:**

| Parameters | | Parameter Value |
|---|---|---|
| Chassis specifications | | 1U Standard |
| Electrical Specifications | Power supply | AC 100 ~ 240V 50/60Hz |
| | Power consumption | 50W |
| Work Environment | Working temperature (℃) | -20 ℃ ~55 ℃ |
| | Working humidity (RH) | 20%RH~90%RH (no condensation) |
| Storage Environment | Storage temperature (℃) | -20 ℃ ~60 ℃ |
| | Storage humidity (RH) | 10%RH~95%RH (no condensation) |
| Equipment Specifications | Size | W×H×D/482mm×44mm×240mm |
| | Net weight | 3.10KG |
| Packing specifications | Packing size | W×H×D/ 515mm×82mm×355mm |
| | Packing weight | 4.15KG |
| Packing List | HD-VP8 | 1PCS |
| | USB cable | 1PCS |
| | HDMI cable | 1PCS |
| | Wi-Fi Antenna | 1PCS |
| | Power cord | 1PCS |
| | Certificate | 1PCS |

Shenzhen Huidu Technology Co., Ltd.

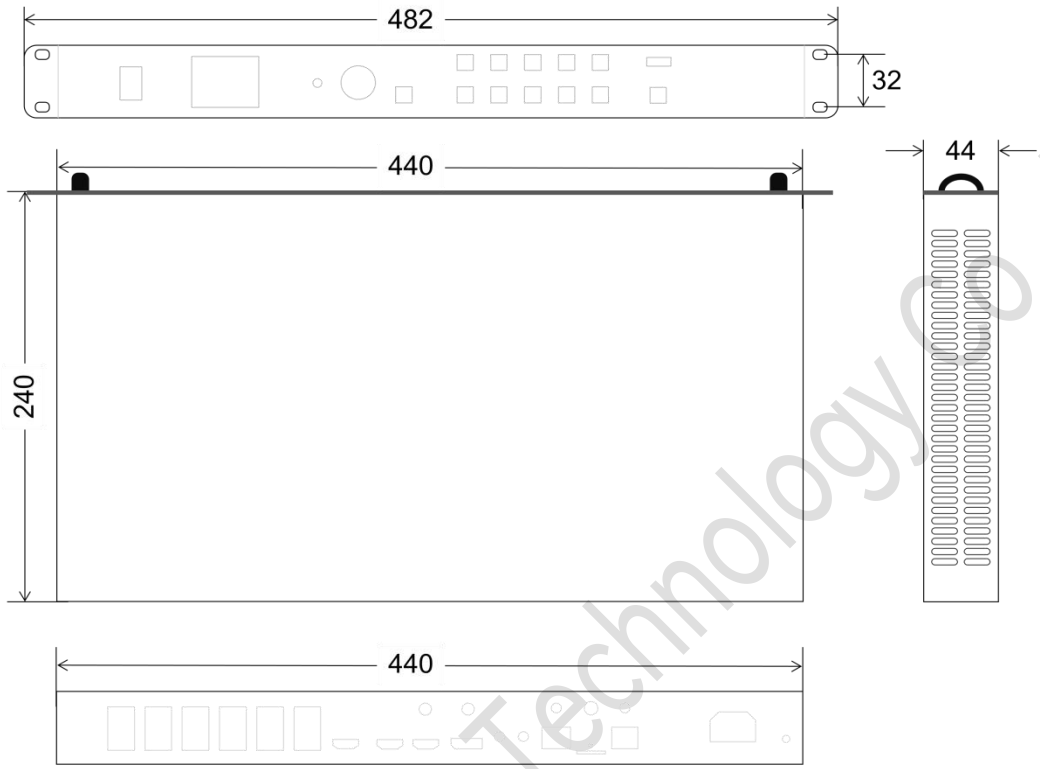
**2. Options list:**

| Optional features/accessories | Description |
|---|---|
| 3G-SDI module | 3G-SDI Input/Output Interface<br>Connector type: BNC<br>Signal standards: SD-SDI, HD-SDI, 3G-SDI<br>Resolution: VESA standard, ≤1920×1080@60Hz |
| 4G module/4G antenna | Remote control |
| Light sensor | Connects to the LED display control system, enabling the brightness of the LED display to adjust in response to changes in ambient light levels |
| Infrared remote control | Switch input sources, switch between screens, adjust brightness, one-touch screen blackout/freeze |

Shenzhen Huidu Technology Co., Ltd.

# 6. Product Dimensions

Unit：mm




**Illustrate:**

Copyright © 2026 Shenzhen Huidu Technology Co., Ltd.
Without the authorization of Shenzhen Huidu Technology Co., Ltd., no organization or individual may imitate, copy, modify or translate part or all of the contents of this specification.

Due to factors such as production batches, production processes, and functional upgrades, our company will appropriately adjust and revise relevant pictures, text descriptions, product parameters, and other related content. In the event of the above circumstances, no further notice will be given. The product pictures in the specification are for reference only. Please refer to the actual product.

The font used in this document is HarmonyOS Sans.

Shenzhen Huidu Technology Co., Ltd.