

HDMI VGA DP Signal Decentralized Wall Extender

Model: PANIO HVD

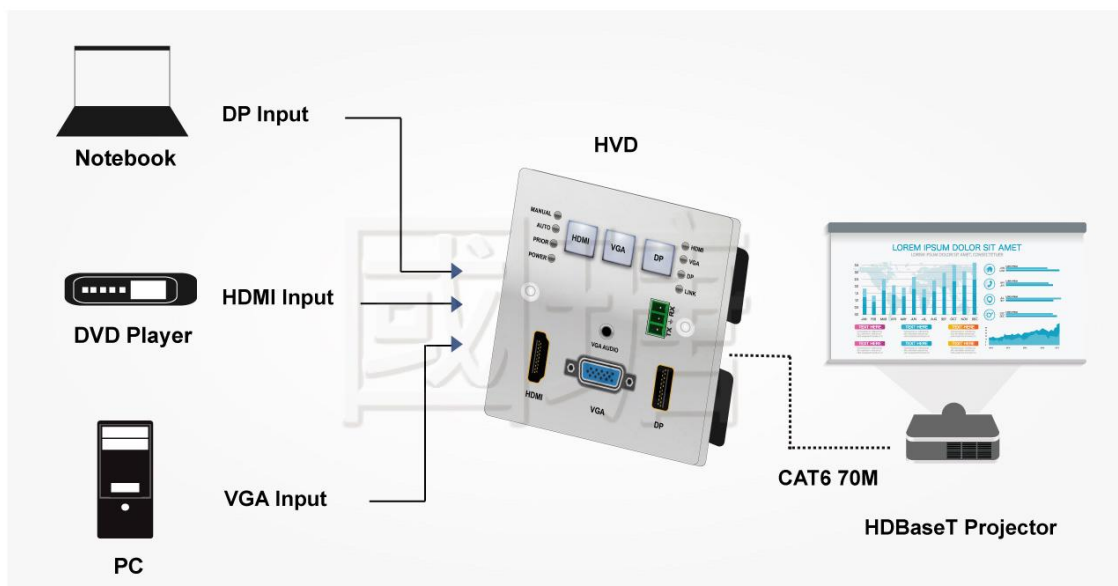
1. Product Overview

The HVD is an advanced signal decentralized wall extender engineered for flexible and long-distance audio-visual transmission. It integrates HDMI, VGA+3.5mm, and DP input interfaces, enabling seamless extension of high-definition signals to remote display devices via a single Cat6 network cable. Supporting a maximum resolution of 4K@30Hz and 1080P@60Hz, it delivers clear, uncompressed image quality with no mosaic distortion. Equipped with RS-232 control functionality and POC (Power over Cable) unilateral power supply, this pure hardware device features plug-and-play operation (no additional software required) and a sleek, wall-mountable design that hides cables for a neat installation. Compliant with HDMI 1.4b and HDCP 1.4 standards, it is ideal for commercial display systems, conference rooms, lecture halls, retail environments, and any scenario requiring long-distance, multi-interface signal extension.

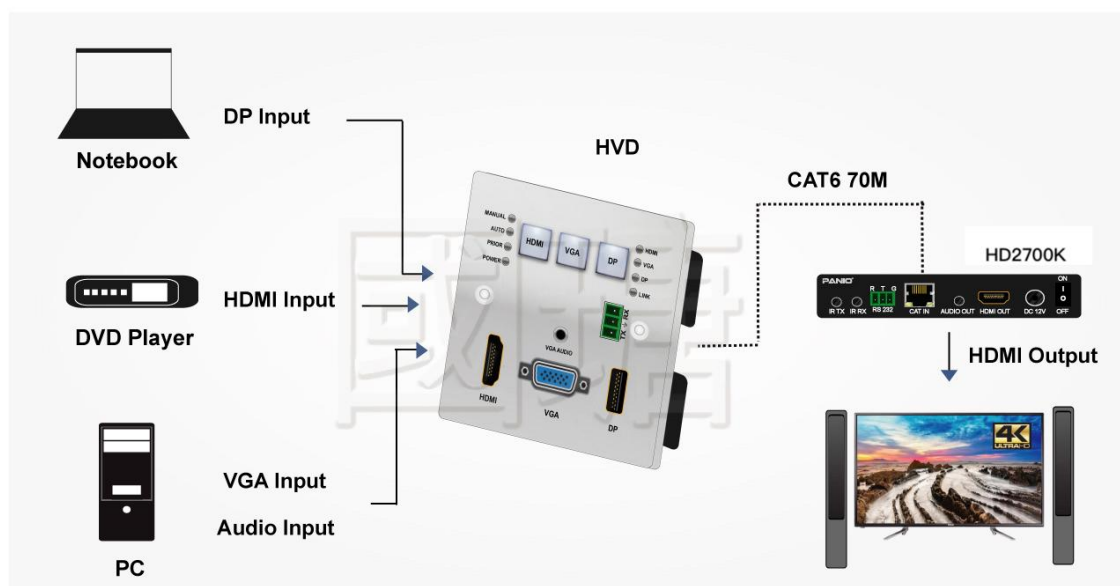
2. Key Features

- **Multi-Interface Input Flexibility:** Built-in HDMI, VGA+3.5mm audio, and DP input ports, supporting seamless connection to a wide range of signal sources such as notebooks, PCs, DVD players, and set-top boxes.
- **4K Ultra HD & Long-Distance Transmission:** Supports up to 4K@30Hz (3840×2160) and 1080P@60Hz resolutions. Transmits 1080P signals up to 70 meters and 4K signals up to 35 meters via Cat6 network cables, meeting long-distance deployment needs.
- **Clear & Uncompressed Signal Quality:** Adopts pure hardware design to ensure lossless signal transmission, delivering sharp, vivid images without compression artifacts or mosaic issues.
- **Dual Control Modes:** Supports panel key switching for intuitive operation and RS-232 port control for centralized management, enabling convenient signal adjustment and system integration.
- **POC Unilateral Power Supply:** Features Power over Cable technology, allowing unilateral power supply to simplify wiring and reduce installation complexity.
- **Sleek & Space-Saving Design:** Wall-mountable with a compact 86×86×38mm form factor. All connecting cables are hidden behind the panel, ensuring a clean and professional appearance.
- **Wide Compatibility:** Compliant with HDMI 1.4b and HDCP 1.4 standards. Directly compatible with PANIO GMS series matrix switchers (no additional receiver required) and works with most modern display devices.

Diagram



With Extender



3. Technical Specifications

Model Name	HDMI VGA DP Signal Decentralized Wall Extender (HVD)
Compliant Standards	HDMI 1.4b, HDCP 1.4
Video Specifications	Resolution: 4K@30Hz (3840×2160), 1080P@60Hz Signal Transmission Rate: 10.2Gbps Image Quality: Uncompressed, no mosaic distortion

Audio Support	Integrated VGA+3.5mm audio input for synchronized audio transmission
Port Configuration	Input: 1×HDMI, 1×VGA (with 3.5mm audio), 1×DP, 1×RS-232 (control port)Output: 1×RJ-45 (HDBaseT, for Cat6 network cable connection to remote receiver)
Transmission Distance	1080P@60Hz: Up to 70m (using Cat6 network cable)4K@30Hz: Up to 35m (using Cat6 network cable)HDMI Cable Length Limit: Max 5m for input/output connections (certified 4K cables recommended)
Power Requirements	Input: DC 12V/1.5A (original certified adapter included)Power Supply Mode: POC (Power over Cable) unilateral power supply supported
Physical Dimensions	86mm (Length) × 86mm (Width) × 38mm (Height) (wall-mountable, space-saving)
Weight	190g (lightweight for easy installation)
Housing Design	Sleek panel design, cable-hiding structure for neat deployment

4. Important Installation Notes

1. Use **Cat6 full 8-core network cables** for signal transmission. Do not use network switches, as this may cause signal loss or instability.
2. To ensure optimal signal quality, use certified 4K HDMI cables for input/output connections and adhere to the 5m cable length limit for HDMI links.
3. Only use the original DC 12V/1.5A power adapter provided with the device. Non-compliant adapters may result in power instability, equipment damage, or safety hazards.
4. For compatibility with other devices (excluding PANIO GMS series matrix switchers), contact PANIO technical support in advance to avoid incompatibility issues.
5. The device is designed for wall-mounted installation. Ensure the mounting surface is stable and that cables are properly routed to avoid damage or signal interference.
6. When using RS-232 control, ensure correct wiring of the control code to achieve seamless centralized management.
7. Avoid installing the device in environments with excessive dust, moisture, high temperature, or strong electromagnetic interference, as this may affect performance and durability.

5. Package Contents

Item	Quantity
HVD Transmitter	1 unit
DC 12V/1.5A Power Adapter	1 piece
User Manual	1 piece

6. Function Description

Label	Name	Function Description
1	POWER LED	Illuminates when the device is powered on (indicates normal power supply via adapter or POC).
2	INPUT SELECTOR (HDMI/VGA/DP)	Panel keys to manually switch between HDMI, VGA, and DP input sources.
3	PRIOR/AUTO Switch	Toggles between priority and automatic input selection modes for flexible signal switching.
4	HDMI Input	Connects to HDMI signal sources (e.g., DVD players, set-top boxes).
5	VGA Input + 3.5mm Audio	Connects to VGA signal sources (e.g., old PCs) with synchronized audio input.
6	DP Input	Connects to DP signal sources (e.g., notebooks, high-end PCs).
7	RS-232 Port	Transmits control codes for centralized system management.
8	RJ-45 Output (HDBaseT)	Connects to Cat6 network cable for long-distance signal transmission to remote receivers.
9	DC 12V Port	Power input interface, connects to the provided 12V/1.5A adapter (supports POC unilateral power supply).

7. Frequently Asked Questions

① Q: What scenarios is the HVD suitable for?

A: It is ideal for commercial display systems, conference rooms, lecture halls, retail digital signs, educational institutions, and any environment requiring long-distance transmission of HDMI/VGA/DP signals with a neat, wall-mounted installation.

② Q: What cables are required for proper operation?

A: - Signal transmission: Cat6 full 8-core network cable (max 70m for 1080P, 35m for 4K).

- Input connections: Certified 4K HDMI/VGA/DP cables (max 5m length).
- Do not use network switches—direct Cat6 connection between transmitter and receiver is required.

③ Q: Can the HVD work with non-PANIO devices?

A: It is directly compatible with PANIO GMS series matrix switchers. For other third-party devices, please contact PANIO technical support in advance to confirm compatibility and avoid operational issues.

④ Q: Does the device require software installation?

A: No— it features a pure hardware design for plug-and-play operation. Simply connect the signal sources, network cable, and power supply to start using.

8. Safety Instructions

- **Electric Shock Prevention:** Do not disassemble the device. The internal circuitry contains dangerous voltages that may cause severe electric shock. For maintenance or repairs, contact qualified professional service personnel.
- **Operation Safety:** Disconnect the power adapter before connecting or disconnecting cables (including input/output, network, and control cables) to avoid electric shock or equipment damage.
- **Cleaning & Maintenance:** Use a dry, soft cloth to clean the device. Do not use liquid cleaners or abrasive materials, as they may damage the panel or internal components.
- **Environment Requirements:** Avoid installing the device in humid, dusty, or high-temperature environments. Ensure proper ventilation to prevent overheating and ensure stable operation.