

# Tenveo VHD-H Series

AI Tracking PTZ Cameras with 1080P to 4K Clarity



**AI**  
Auto Tracking

**1080P**  
60FPS

**4K**

**USB 3.0**  
**+HDMI**

**Wide**  
**Compatibility**

Tenveo VHD-H Series PTZ cameras are built around a high-performance 1/2.8-inch SONY CMOS sensor, delivering exceptional Full HD 1080P at 60 fps—with VHD3H-4K model further supporting stunning 4K video at 30 fps. Engineered with superior optical zoom and wide dynamic range, VHD-H Series ensures vivid image quality even in challenging lighting, including low light and high-contrast scenes. This series also incorporates a highly efficient motor system, enabling smooth, silent, and precise PTZ movements. Equipped with both USB 3.0 and HDMI outputs, Tenveo VHD-H Series seamlessly integrates with a wide range of video platforms, making it an ideal solution for lectures, video conferencing, online education, and live streaming.

## AI-Powered Smart Tracking

Powered by advanced AI, VHD-H Series automatically keeps the subject in perfect focus. Its Auto Framing mode intuitively adapts to individuals or groups, while Presenter Tracking ensures the speaker remains centered and smoothly followed—all without manual intervention.



## Various Optical Zoom Lenses: 3x/12x/20x

With 3x, 12x, and 20x optical zoom options, Tenveo VHD-H Series provides unrivaled flexibility to adapt to any application scenario by delivering close-up shots with excellent detail.



## Dual Output: USB 3.0 + HDMI

Designed for seamless integration, VHD-H Series connects directly to Zoom, Teams, Webex, and other UVC-compatible platforms via USB 3.0, while its HDMI output ensures ultra-low-latency transmission of uncompressed video for pristine image quality.



## Superb Image Quality, from 1080P to 4K

Leveraging a 1/2.8" Sony CMOS sensor, Tenveo VHD-H Series ensures high-resolution video for every need—from fluid 1080P to stunning 4K clarity in the VHD3H-4K model—making it suited for a wide range of professional applications.



## Advanced Image Processing

Supporting H.264, H.265, MJPEG, and YUY2 video compression formats, along with high SNR performance, VHD-H Series ensures smooth and clear motion video even under low-bandwidth conditions.

## Smooth, Silent & Precise PTZ Control

Featuring a high-performance motor system, Tenveo VHD-H Series enables silent and precise pan/tilt movement across a full 350° horizontal and 180° vertical range, ensuring comprehensive coverage for any shooting scenario.



| Model No.               | VHD3H-4k  | VHD3H   | VHD12H           | VHD20H           |
|-------------------------|---|---|------------------|------------------|
| Sensor                  | Sony 1/2.8" CMOS  |   |                  |                  |
| Effective Pixels        | 8.29 mega pixel   | 2.07 mega pixel   |                  |                  |
| Zoom                    | 3x optical zoom   | 3x optical zoom   | 12x optical zoom | 20x optical zoom |
| Lens                    | f=3mm-9mm   | f=3mm-9mm   | f=3.4mm~40.9mm   | f=4.72mm-94.4mm  |
| Aperture                | F2.5-F3.4   | F2.5-F3.4   | F1.8-F3.0        | F1.8-3.9         |
| Horizontal Angle        | 83.0°~32.0°   | 83.0°~32.0°   | 67.5°~7.6°       | 54.8°~3.59°      |
| Vertical Angle          | 51.0°~20.0°   | 51.0°~20.0°   | 40.18°~4.34°     | 31.5°~2.03°      |
| Diagonal Angle          | 93.0°~39.4°   | 93.0°~39.4°   | 75.4°~8.76°      | 62.0°~4.1°       |
| Video Output            | HDMI: 4KP@30/25fps,2KP@60,<br>1080P@60/59.94/50/30/29.97/25fps,<br>720P@60/59.94/50/30<br>USB3.0:<br>H.264/H.265/MJPG: max to 2160P@30fps<br>NV12/YUY2: max to 896P@30fps | HDMI: 1920*1080P@60/59.94/50/30/29.97/25fps,<br>1280*720P@60/59.94/50/30<br>USB3.0:<br>H.264/H.265/MJPG: max to 1080P@60fps<br>NV12/YUY2: max to 896P@60fps |                  |                  |
| Video Encoding Format   | H.264, H.265, MJPEG, YUY2   |   |                  |                  |
| Backlight Compensation  | Support   |   |                  |                  |
| AI Support              | Yes   |   |                  |                  |
| AI Mode                 | Auto Framing/Presenter Tracking   |   |                  |                  |
| SNR                     | ≥50dp   |   |                  |                  |
| Focus                   | Auto / Manual   |   |                  |                  |
| Digital Noise Reduction | 2D & 3D Noise Reduction   |   |                  |                  |
| Exposure                | Auto / Manual   |   |                  |                  |
| Digital Zoom            | 4X  |   | 8X               |                  |
| I / O Interface         |   |   |                  |                  |
| Video Interfaces        | HDMI, USB3.0  |   |                  |                  |
| LAN                     | /   |   |                  |                  |
| Video Stream            | /   |   |                  |                  |
| Main Stream Resolution  | /   |   |                  |                  |
| Sub Stream Resolution   | /   |   |                  |                  |
| Network Protocol        | /   |   |                  |                  |
| Control Protocol        | VISCA/Pelco-D/Pelco-P; Baud Rate: 2400/4800/9600/38400  |   |                  |                  |
| Control Interface       | RS232(input/output), RS485,USB3.0 (UVC1.1)  |   |                  |                  |
| PTZ Parameter           |   |   |                  |                  |
| Horizontal Rotation     | 350° (±175°) 0.1°/s ~ 100°/s  |   |                  |                  |
| Vertical Rotation       | 180° (±90°) 0.1°/s ~ 80°/s  |   |                  |                  |
| Preset Number           | User can set up to 255 presets (10 presets by IR remote)  |   |                  |                  |
| General Parameter       |   |   |                  |                  |
| Operation Systems       | Windows 10, Windows 11 or higher; Android, Mac OS™ 10.10 or higher, Linux (Required to support UVC.)  |   |                  |                  |
| Input Voltage           | DC 12V  |   |                  |                  |
| Input Current           | 2.0A (Max.)   |   |                  |                  |
| Power Consumption       | 24W (Max.)  |   |                  |                  |
| Store Temperature       | -20°C to 60°C   |   |                  |                  |
| Store Humidity          | 20% ~ 90% RH  |   |                  |                  |
| Working Temperature     | 0°C to 40°C   |   |                  |                  |
| Working Humidity        | 20% ~ 80% RH  |   |                  |                  |
| Dimension (W*H*D)       | 166*165*170mm/ 285*217*197mm (before/ after packing)  |   |                  |                  |
| N.W. / G.W.             | 1.6kg/ 2.8kg (Net/ Gross weight)  |   |                  |                  |

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