

# DH-HAC-ME1509H-T-PV

## 5MP Smart Dual Light TiOC HDCVI Two-way Talk Fixed-focal Eyeball Camera



### Series Overview

The Active Deterrence Series offers a multi-dimensional system that links surveillance videos to alarms, audio prompts and various types of information to assist with verifying potential risks. Cameras in this series actively warn off intruders with light and sound, while keeping you up to date of events in real-time through alarm-over-coax and its live view.

### Functions

#### Smart Dual Light

With its smart dual light mechanism, the camera automatically turns on the white light when Perimeter Protection/SMD Plus function of AI XVR detects a target in the rule area to capture clear, vivid images. When the target leaves the rule area, the camera automatically switches over from the white light to the IR light to significantly reduce light pollution.

#### Protection Against Red-Blue Light Interference

Leveraging smart exposure technology, the camera uses the CMOS image sensor to exercise time-sharing control over image capture and the red and blue lights to eliminate interference by switching off the lights when pictures are being taken.

#### Active Deterrence (Red-Blue Light)

Designed with active deterrence technology, the camera turns on a siren and a red-blue light that flashes in intervals to deter and warn off intruders. The siren has customizable settings.

#### Wide Dynamic Range

With its advanced Wide Dynamic Range technology (WDR), the camera captures highly detailed images and produces high-definition recordings in high-contrast lighting conditions, and in scenes with backlighting or shadows.

#### Two-way Talk

With its built-in high-sensitivity microphone and high-power speaker, the camera realizes two-way talk through the mobile app.

\*We recommend the coaxial cables be within 250 meters.

\* The parameters and datasheets below can only be applied to ME1509-S2 series.

Intelligent Voice Alarm function which can be used with Scheduled AI of AI XVR is only available for TiOC 2.0 camera.

\* In order to use the 5MP 16:9 and the Smart Dual Light HDCVI camera, the firmware of XVR must be upgraded to V4.001.0000004.1.R.220323 or later version.

- Max 25 fps@5 MP (16:9 video output)
- 120 dB true WDR, 3D NR
- Smart Dual Light
- Protection Against Red-Blue Light Interference
- Active deterrence with red blue light, siren and alarm out interface.
- 40 m illumination distance
- Super Adapt
- Two-way Talk
- 3.6 mm fixed lens (2.8 mm optional)
- CVI/CVBS/AHD/TVI switchable
- IP67, 12 VDC



#### Broadcast-quality Audio

Audio signal transmission over coaxial cables is supported by the HDCVI camera. It adopts a unique audio processing and transmission technology that restores source audio and eliminates noise, ensuring the quality and reliability of the audio information that is collected. This becomes important for video surveillance applications that use audio information as a type of supplementary evidence.

#### Advanced 3DNR

Dahua's advanced 3DNR technology reduces image noise with little to no impact on image sharpness, especially in poor lighting conditions. It detects the noise, and compares the sequential frames to effectively reduce the noise. It also makes efficient use of bandwidth, saving on storage space.

#### Super Adapt

With its intelligent algorithm, the camera automatically adjusts its parameters to provide optimal performance and vivid images.

#### Protection (IP67, Wide Voltage)

IP67: The camera passed a series of rigorous dust and immersion tests. Its enclosure is both dust-proof and waterproof, and can function normally while being immersed in 1 m deep water for up to 30 minutes. Wide voltage: The camera has  $\pm 30\%$  input voltage tolerance (for some power supplies) and a wide voltage range, making it suitable for a variety of outdoor scenarios.

Technical Specification	
Camera	
Image Sensor	5 MP CMOS
Max. Resolution	2880 (H) × 1620 (V)
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/3 s–1/100,000 s NTSC: 1/4 s–1/100,000 s
Min. Illumination	0.001 lux@F1.0 (Color, 30 IRE) 0.0001 lux@F1.0 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>65 dB
Illumination Distance	IR: 40 m (131.23 ft) Warm Light: 40 m (131.23 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	2 (Multi-core light)
Angle Adjustment	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens					
Lens Type		Fixed-focal			
Auto Focus		No			
Lens Mount		M12			
Focal Length		2.8 mm;3.6 mm			
Max. Aperture		F1.0			
Field of View		2.8 mm: H: 111°; V: 58.5°; D: 136.3° 3.6 mm: H: 91.1°; V: 48.7°; D: 107.9°			
Iris Control		Fixed			
Close Focus Distance		2.8 mm: 1.4 m (4.59 ft) 3.6 mm: 2.0 m (6.56 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	63.8 m (209.32 ft)	25.5 m (83.66 ft)	12.8 m (41.99 ft)	6.4 m (21.00 ft)
	3.6 mm	77.8 m (255.25 ft)	31.1 m (102.03 ft)	15.6 m (51.18 ft)	7.8 m (25.59 ft)
	*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.				

Video	
Video Frame Rate	CVI: PAL: 5M@25 fps; 5M@12.5 fps; 4M@25 fps; 1080p@25 fps NTSC: 5M@25 fps; 5M@10 fps; 4M@30 fps; 1080p@30 fps AHD: PAL: 4M@25 fps NTSC: 4M@30 fps TVI: PAL: 4M@25 fps NTSC: 4M@30 fps CVBS: PAL: 960H NTSC: 960H

Resolution	5M (2880 × 1620); 4M (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480)
Day/Night	Auto(ICR)/Color/B/W
BLC	BLC; HLC; WDR; HLC-Pro
WDR	120 dB
White Balance	Auto;Area white balance
Gain Control	Auto/Manual
Noise Reduction	3D NR
Illumination Mode	Smart IR&WL; WL Mode; IR Mode
Defog	Electronic defog
Digital Zoom	4×
Mirror	Yes
Privacy Masking	Off/On (8 areas, rectangle)

Active Deterrence	
Sound Warning	Audio 1: alarm Audio2: No parking here Audio3: Private land no entry. Audio4: Warning zone keep off Audio5: Welcome Volume: high/medium/low; duration: 5 s–60 s; 110 dB
Red/Blue Light Warning	Flash: 5 s–60 s; frequency: high/medium/low

Certification	
Certifications	CE-LVD: EN 62368-1; CE-EMC: EN 55032; EN 55035

Audio	
Built-in Mic	Yes
Two-way Talk	Yes (customize with the Two-way Talk Modem)
Speaker	Yes

Port	
Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port
Alarm Output	1 channel

Power	
Power Supply	12 VDC ± 30% (It is recommended to use a power adapter to supply the power for one camera)
Power Consumption	Max 10 W (12 VDC, LED on)

Environment	
Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	<95% (RH), non-condensing
Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Storage Humidity	<95% (RH), non-condensing
Protection	IP67
Anti-corrosion Level	Basic Protection

## Structure

Casing Material	Metal
Product Dimensions	Φ122.0 mm × 110.9 mm (Φ4.80" × 4.37")
Net Weight	0.71 kg (1.56 lb)
Gross Weight	0.97 kg (2.14 lb)
Installation	Wall mount; ceiling mount; vertical pole mount

## Ordering Information

Type	Model	Description
SMP Camera	DH-HAC-ME1509HP-T-PV	5MP Smart Dual Light TiOC HDCVI Two-way Talk Fixed-focal Eyeball Camera, PAL
	DH-HAC-ME1509HN-T-PV	5MP Smart Dual Light TiOC HDCVI Two-way Talk Fixed-focal Eyeball Camera, NTSC
Accessories (Optional)	PFA130-E	Junction Box
	PFB203W	Wall Mount (For use alone or with PFA152-E)
	PFA152-E	Pole Mount Bracket (For use with PFB203W)
	PFM320D	12V 2A Power Adapter
	PFM904	Integrated Mount Tester
	PFM800-4K	1-CH Passive Video Balun(We recommend the twisted pair cables be within 80 meters for this camera model)
	ARA11	Indoor Siren
	ARA16	Outdoor Siren
	PFA106	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	DH-HAC-M1	1-channel Two-way Talk Modem
	DH-HAC-M4	4-channel Two-way Talk Modem

## Accessories

Optional:



PFA130-E  
Junction Box



PFB203W  
Wall Mount (For use alone or with PFA152-E)



PFA152-E  
Pole Mount Bracket (For use with PFB203W)



PFM320D  
12V 2A Power Adapter



PFM904  
Integrated Mount Tester



PFM800-4K  
1-CH Passive Video Balun



ARA11  
Indoor Siren



ARA16  
Outdoor Siren



PFA106  
Mount Adapter



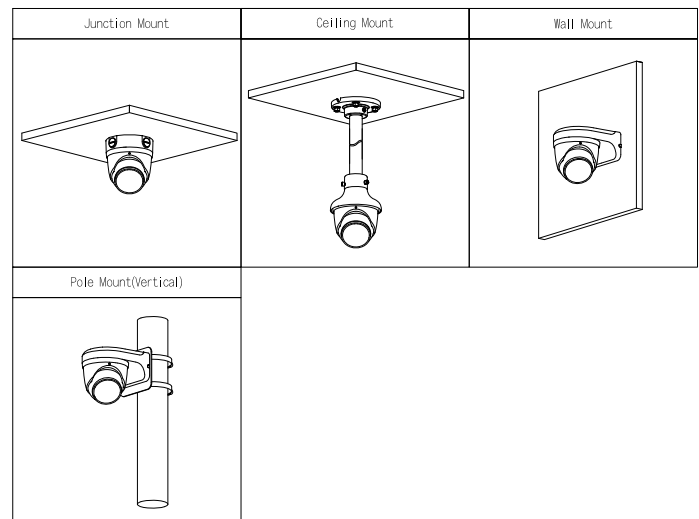
PFB220C  
Ceiling Mount Bracket



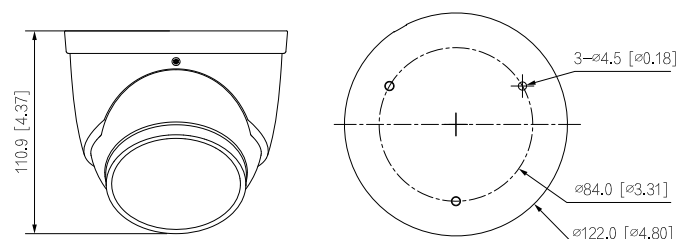
DH-HAC-M1  
1-channel Two-way Talk Modem



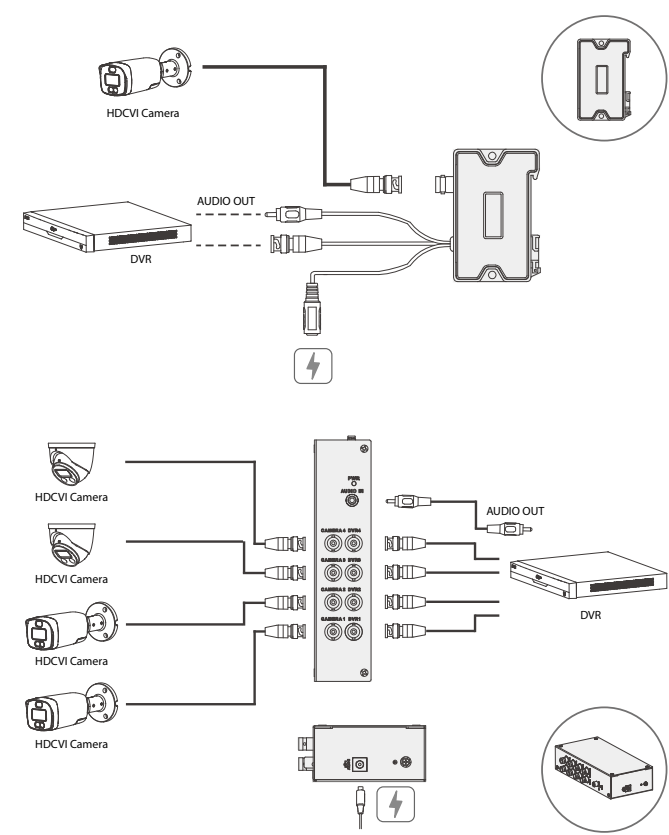
DH-HAC-M4  
4-channel Two-way Talk Modem



## Dimensions (mm[inch])



Quick Start Guide



# DH-XVR5104HS-4KL-I3

4 Channels Penta-brid 4K-N/5MP Compact 1U 1HDD WizSense Digital Video Recorder



**WizSense**

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

## Series Overview

Dahua Technology, a world-leading video-centric smart IoT solution and service provider, debuted its new XVR series, XVR5000-4KL-I3 Series featuring max.full-channel SMD Plus to benefit customers from AI upgrade (The number of channels differs depending on the model. Please refer to the specifications below for information on the number of channels.). This series has been developed to reduce false-alarm rates and the cost of human surveillance, thus bringing great value to customers in search of products with accurate human/vehicle alarm to raise the security level of various indoor and outdoor facilities.

## Functions

### Face Recognition

Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database to recognize the person identity.

\*The Face Recognition is conflicted with SMD Plus and Perimeter Protection.

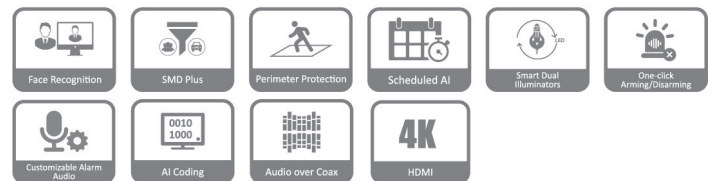
### SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

### Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improves alarm accuracy.

- H.265+/H.265 dual-stream video compression
- Supports all-channels AI Coding
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Max 8 channels IP camera inputs, each channel up to 8MP; Max 64 Mbps incoming bandwidth
- Up to 4 channels video stream (analog channel) Perimeter Protection
- Up to 4 channels video stream (analog channel) SMD Plus
- Up to 1 channel video stream (analog channel) human face recognition
- IoT & POS functionalities



### Scheduled AI

This technology allows multiple AI functions to be set for one channel based on time frames, eliminating the need to manually configure the system to switch between functions each time. Scheduled AI greatly increases efficiency and widens the number of scenarios that the device can be used in.

### Smart Dual Illuminators

With Smart Dual Illuminators technology, you can select Smart Illumination Mode for the system to automatically switch between IR mode and white light mode. It allows white light to be turned on when a target is detected by the SMD Plus/Perimeter Protection function of AI-enabled XVR. This significantly reduces light pollution at night. Together with other modes, including IR Mode and White Light Mode, the smart dual illumination technology can meet the requirements of a wide variety of scenes.

### One-click Arming/Disarming

With just one click, you can enable or disable alarm linkages to show messages, send emails, output audio alarms and more, through the mobile app and platform.

### Customizable Alarm Audio

Designed for your convenience, the TiOC alarm can be customized to meet your needs. It is flexible, allowing you to directly upload your customized audio through the mobile app and XVR.

### AI Coding

Compared with H.265/H.264, AI coding can reduce more than 50% bit rate and storage requirements without loss of decoding compatibility, providing clear human and vehicle details.

### Audio over Coax

The integrated design can reduce wiring troubles which makes it much more cost-effective and convenient for installation.

## Technical Specification

### System

Main Processor	Industrial-grade processor
Operating System	Embedded Linux
Operating Interface	Web; Local GUI

### Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	Advanced Model : 2 channels, 10 IVS for each channel General Model : 4 channels, 10 IVS for each channel
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### Face Detection

Face Attributes	Gender; age group; glasses; expressions; face mask; beard
Face Detection Performance of AI by Recorder (Number of Channels)	1 channel (up to 8 face images/s)

### Face Recognition

Face Database Capacity	Up to 10 face databases and 20,000 images.
Face Recognition Performance of AI by Recorder (Number of Channels)	1 channel

### SMD Plus

SMD Plus by Recorder	4 channels: Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change
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### Audio and Video

Analog Camera Input	4 BNC ports, CVI access by default, supports HDCVI/AHD/TVI/CVBS auto-detect
Camera Input	1. CVI: 4K, 6 MP, 5 MP, 4 MP, 1080p@25/30 fps, 720p@50/60 fps, 720p@25/30 fps. 2. TVI: 4K, 5 MP, 4 MP, 3 MP, 1080p@25/30 fps, 720p@25/30 fps. 3. AHD: 4K, 5 MP, 4 MP, 3 MP, 1080p@25/30 fps, 720p@25/30 fps.
IP Camera Input	Up to 8 channels of IPC access 4 IP channels by default + 4 channels (analog channels are converted to IP channels) incoming bandwidth: 64 Mbps, recording bandwidth: 64 Mbps and outgoing bandwidth: 64 Mbps *After IP channels are added beyond the existing channels, the AI Function (IVS, SMD, FACE) will be disabled.
Encoding Capacity	Main stream: All channel 4K@ (1 fps~7 fps); 6MP@ (1 fps~10 fps); 5MP@ (1 fps~12 fps); 4K-N, 4MP, 3MP@ (1 fps~15 fps); 4M-N, 1080p, 720p, 960H, D1, CIF@ (1 fps~25/30 fps); Sub stream: 960H@ (1 fps~15 fps); D1,CIF@ (1 fps~25/30 fps)
Dual-stream	Yes
Video Bit Rate	32 kbps~6144 kbps
Audio Sampling	8 kHz, 16 bit
Audio Bit Rate	64 kbps
Video Output	1 HDMI, 1 VGA VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720
Multi-screen Display	When IP extension mode not enabled: 1/4 When IP extension mode enabled: 1/4/8/9

Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Samsung
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### Compression Standard

Video Compression	AI Coding; H.265+; H.265; H.264+; H.264
Audio Compression	G.711a; G.711u; PCM

### Network

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; P2P
Mobile Phone Access	iOS; Android
Interoperability	ONVIF 21.12; CGI Conformant
Browser	Chrome IE9 or later Firefox
Network Mode	Single-address mode

### Recording Playback

Record Mode	General, motion detection; intelligent; alarm; POS
Recording Playback	1/4
Backup Method	USB device and network
Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)

### Alarm

General Alarm	Motion detection, video loss, tampering
Anomaly Alarm	No disk, disk error, low space, offline, ip conflict, MAC conflict
Intelligent Alarm	Face detection, face recognition, perimeter protection
Alarm Linkage	Record, snapshot (panoramic), IPC external alarm output, access controller, voice prompt, buzzer, log, preset, email

### Ports

Audio Input	1-channel RCA 4-channel BNC (Coaxial Audio)
Audio Output	1-channel RCA
Two-way Talk	Yes (share the same audio input with the first channel)
HDD Interface	1 SATA port, up to 16 TB. The maximum HDD capacity varies with environment temperature.
RS-485	1 port, for PTZ control
USB	2 USB ports (USB 2.0)
HDMI	1
VGA	1
Network Port	1 (10/100 Mbps Ethernet port, RJ-45)

### General

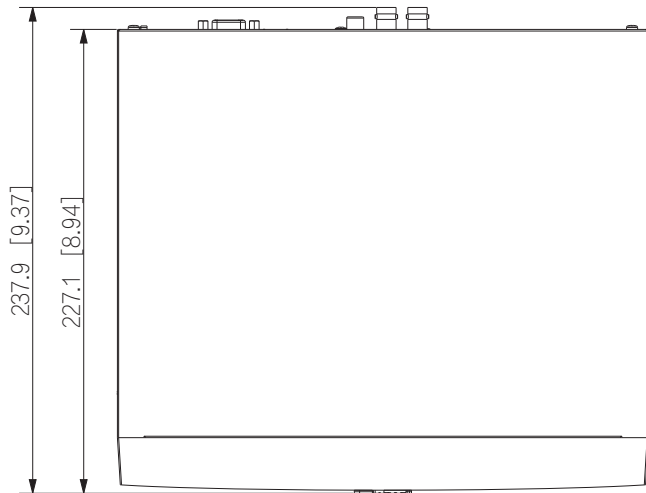
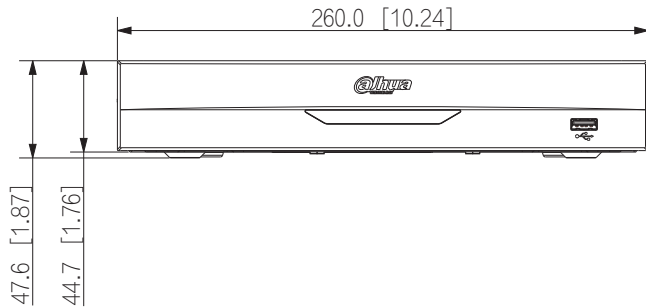
Power Supply	12 VDC, 2 A
Power Consumption	<7 W
Net Weight	0.53 kg (1.17 lb)
Gross Weight	1.07 kg (2.36 lb)
Product Dimensions	260.0 mm × 237.9 mm × 47.6 mm (10.24" × 9.37" × 1.87") (W × D × H)

Packaging Dimensions	333.0 mm × 315.0 mm × 89.0 mm (13.11" × 12.40" × 3.50") (W×D×H)
Operating Temperature	-10 °C to +55 °C (+14 °F to +131 °F)
Operating Humidity	0%–90% (RH)
Installation	Desktop
Certifications	FCC: Part 15 Subpart B CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2; EN 61000-3-3; EN 55032; EN50130; EN 55024

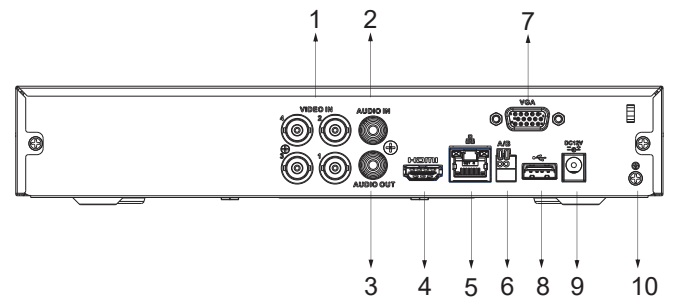
### Ordering Information

Type	Model	Description
4 Channels WizSense XVR	DH-XVR5104HS-4KL-I3	Compact 1U WizSense Digital Video Recorder

### Dimensions (mm[inch])



### Panels



- |                            |                           |
|----------------------------|---------------------------|
| 1 VIDEO IN                 | 2 AUDIO IN, RCA Connector |
| 3 AUDIO OUT, RCA Connector | 4 HDMI Port               |
| 5 Network Port             | 6 RS-485 Port             |
| 7 VGA Port                 | 8 USB Port                |
| 9 Power Input              | 10 Ground                 |