



APOHDSI-EYE

1080P HD-SDI ANALOGUE CAMERA

User's Manual

V1.0 11 / 2013

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Welcome

Thank you for purchasing our **1080P HD-SDI ANALOGUE CAMERA**.

This user's manual is designed to be a reference tool for the installation and operation of your system.

Here you can find information about the corresponding analogue camera's features and functions, as well as a detailed installation method.

Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1 . Electrical safety

- All installation and operation here should conform to your local electrical safety codes.
- The power supply shall conform to the requirement in the SELV (Safety Extra Low Voltage) and must make sure that the limited power source is rated 12V DC.

Please note: Do not connect two power supplying sources to the device at the same time; it may result in device damage!

- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.
- We are not liable for any problems caused by unauthorized modification or attempted repair.

2 . Transportation Security

- Please ensure that the product does not endure heavy stresses, violent vibration or contact with water during transportation, storage and installation.
- Please use the original packing material (or the material of the same quality) if you need to return it to vendor.

3 . Installation

- Do not apply power to the product before completing installation.
- Do not put object(s) on the product.
- Please install a proper power cut-off device during the installation connection.

4 . Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers. We are not liable for any problems caused by unauthorised modifications or attempted repair.

5. Environment

- This product should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.
- Please keep it away from environments that contain electromagnetic radiation or objects that produce it.
- Please keep sound ventilation around the device at all times.
- Do not allow the water and other liquid to penetrate into the device if casing has been compromised. This series product complies with the IP66 standard specified in the Degrees of Protection Provided by Enclosure.
- Ensure lightning surge protection is in place to make sure you fully protect camera circuitry from electrical overload.

- Please make sure the CCD (CMOS) component is away from the radiation of the laser beam device. Otherwise it may result in CCD (CMOS) optical component damage.
- It is recommended that the grounding studs of the product should be grounded, so to further enhance the reliability of the camera.

6. Daily Maintenance

- Please shut down the device and then unplug the power cable before you begin any maintenance work.
- Do not touch the CCD (CMOS) optic component. Please use an air jet to clean the dust off the lens surface. You can use the dry cloth with some alcohol or mild detergent to clear if necessary.
- When the camera is not in use please put the dustproof cap to protect the CCD (CMOS) component.
- Do not use volatile solvent such as the benzene, paint thinner or detergent with the ability to abrade surfaces. It may result in lens damage or adversely affect the device's performance.

7. Accessories

Always use all the accessories recommended by manufacturer.

Before installation, please open the package and check that all the components are included. Contact your local retailer/vendor ASAP if something is missing.

8. Box Contents:

Accessory Name	Amount
Camera Unit	1
User's Manual	1
Installation Accessories Bag	1
CD	1

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1 General Introduction

1.1 Overview

This type of camera conforms to the HD-SDI specifications. It supports high speed video signal, which means there is almost no delay in the transmission. The HD-SDI interface uses the coaxial cable to transmit video signals and uses the BNC port as the cable standard.

The main benefit to this camera is its ability to record in 1080P HD definition, providing excellent quality video imagery to monitor. It also uses DC 12V for a power supply and you can use an inbuilt OSD button function to adjust internal camera settings.

1.2 Features

Data Transmission	<ul style="list-style-type: none">● Coaxial cable.● Use the BNC port as the cable standard.
Peripheral Equipment	<ul style="list-style-type: none">● Support peripheral equipment connections via the RS485 port.● Supports various peripheral device control protocols. .
Power	<ul style="list-style-type: none">● External power adapter. Supports a DC 12V power supply.
Assistant Function	<ul style="list-style-type: none">● Day/Night mode auto switch (ICR switch.)● Supports OSD button function.● Supports 1080P@25fps, 1080P@30fps, 720P@25fps, 720P@30fps, 720P@50fps, 720P@60fps.● Supports WDR (Wide Dynamic Range).● Supports anti-flicker.● Supports HLC (Highlight Compensation).● Backlight compensation: auto screen split to allow backlight compensation to adjust the brightness.

1.3 Specifications

1.3.1 Performance

Please refer to the following sheet for digital camera performance specification:

Model		APOHDSDI-EYE
Parameter		
System	Main Processor	High performance processor
Video Parameters	Image Sensor	1/3-inch CMOS
	Pixel	1920(H)*1080(V)
	Day/Night	Support day/night mode switch and IR-CUT at the same time.
	Gain Control	Fixed/Auto
	White Balance	Manual/Auto/Day/Night
	Exposure	Manual/Auto PAL: It ranges from 1/3 to 1/10000. NTSC: It ranges from 1/4 to 1/10000.
	Video Frame Rate	Conform to the SDI specifications SMPT274/292 protocol
	Video Bit Rate	PAL: 1920*1080@25fps, 1280*720@25 fps, 1280*720@50 fps; NTSC: 1920*1080@30fps, 1280*720@30 fps, 1280*720@60 fps
	Mirror	Support mirror and flip
	Aux Function	Support WDR, HLC, BLC, anti-flicker, low motion blur, low noise, 3D NR, motion detect, privacy mask
	Image	Support parameter setup such as brightness, contrast.
	Video Information	OSD menu
	Lens Interface	M12 lens, 6mm (3.6mm optional)
AUX Interface	Video Output	1-channel HD-SDI output
	RS485 Port	May set image and OSD.
General Parameters	Power	Support DC 12V power
	Power Consumption	Max: 5W
	IR	20m
	Protective Level	IP66
	Working Temperature	-10°C~+60°C
	Working Humidify	≤95%
	Dimensions (Unit: mm)	Φ 113×86
	Weight	280g (without packaging)
	Installation	Wall-mount, ceiling

2 Framework

2.1 Multiple-function Combination Cable

You can refer to the following diagram for multiple-function combination cable information. See Figure 2-1.

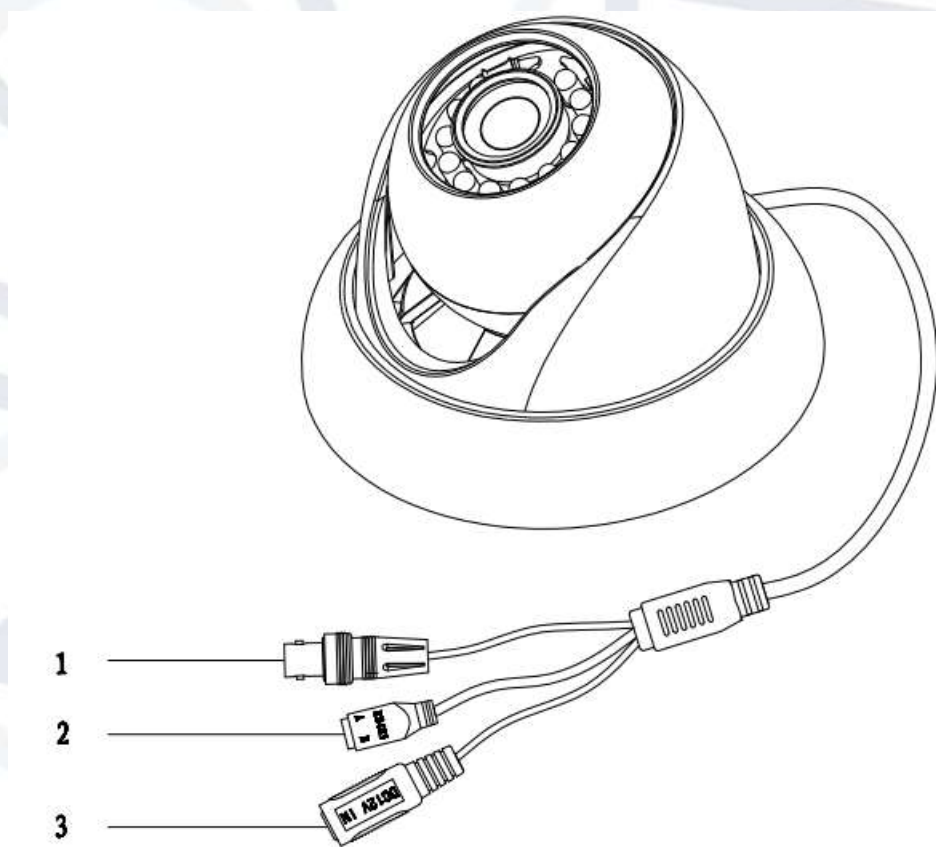


Figure 2-1 Multiple-function combination cable

Please refer to the following sheet for detailed information:

SN	Port Name	Function	Note
1	HD-SDI	SDI output	Sends SDI video stream conforming to the HD-SDI standard.
2	RS485	RS485 port	RS485 port. Controls the 485 configuration tool to set image.
3	DC 12V	Power input port	Power port. Input DC 12V.

2.2 Dimension

Please refer to the following two figures for dimension information. The units are in mm. See Figure 2-2 and Figure 2-3.

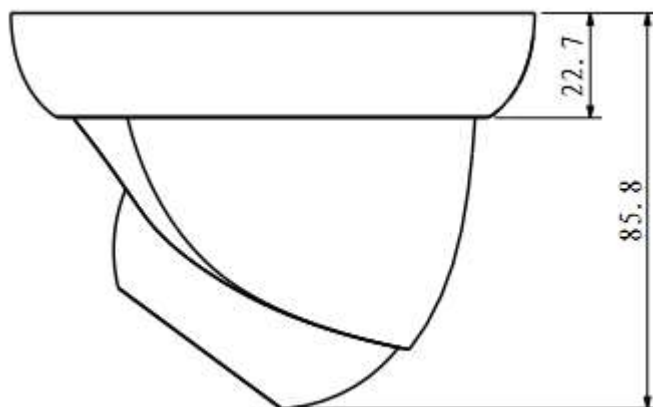


Figure 2-2 Dimension illustration 1

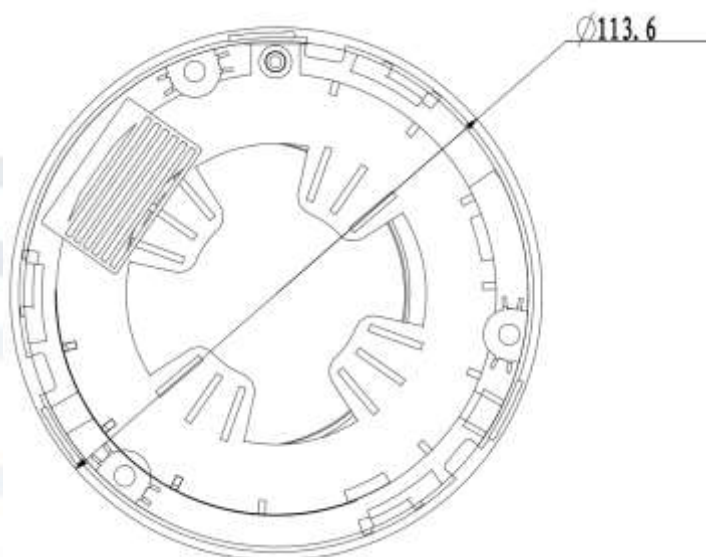


Figure 2-3 Dimension illustration 2

3 Installation

IMPORTANT: Before the installation, please make sure the installation surface can sustain at least 3X weight of the bracket and the camera.

3.1 Device Installation

Please follow the steps listed below to install the device. Please refer to Figure 3-1 for reference.

STEP 1: Turn the decoration ring clockwise to remove it from the snap joints.

STEP 2: Please take the installation position map, in the accessories bag, and then paste it on to the ceiling or the wall according to your monitor area requirements. Draw and then drill three plastic expansion bolts holes in the installation surface and then insert three expansion bolts in the holes. Secure these three bolts firmly. Please draw the cable out from the cable exit when you install the device.

STEP 3: Adjust the device installation pedestal to the proper position and then line up the three screw holes in the device pedestal to the three plastic expansion bolt holes in the installation position. Put the three self-tapping screws in the three plastic expansion bolts firmly. Loosen the M3X8 cross recessed pan head slot screw, of the pedestal, to unfasten the preforming (**do not completely remove, just loosen**). Adjust the lens to the proper monitor angle and then use the original preforming to turn the M3X8 cross recessed pan head slot screw back tightly.

STEP4: Line up the three spigots of the decoration ring to the jags, from the bottom to the top and then turn clockwise until you hear the click sound. The installation is now complete.

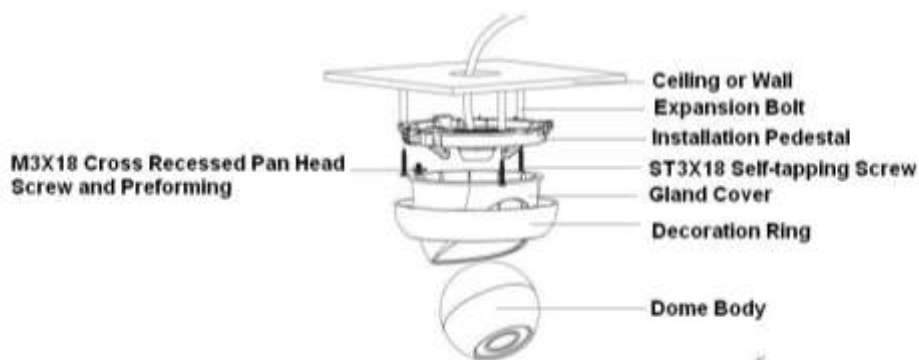


Figure 3-1 Device installation illustration 1

Important

Please pay attention to the dome camera's lens direction when you are installing. Please refer to the following figure for detailed information. See Figure 3-2.

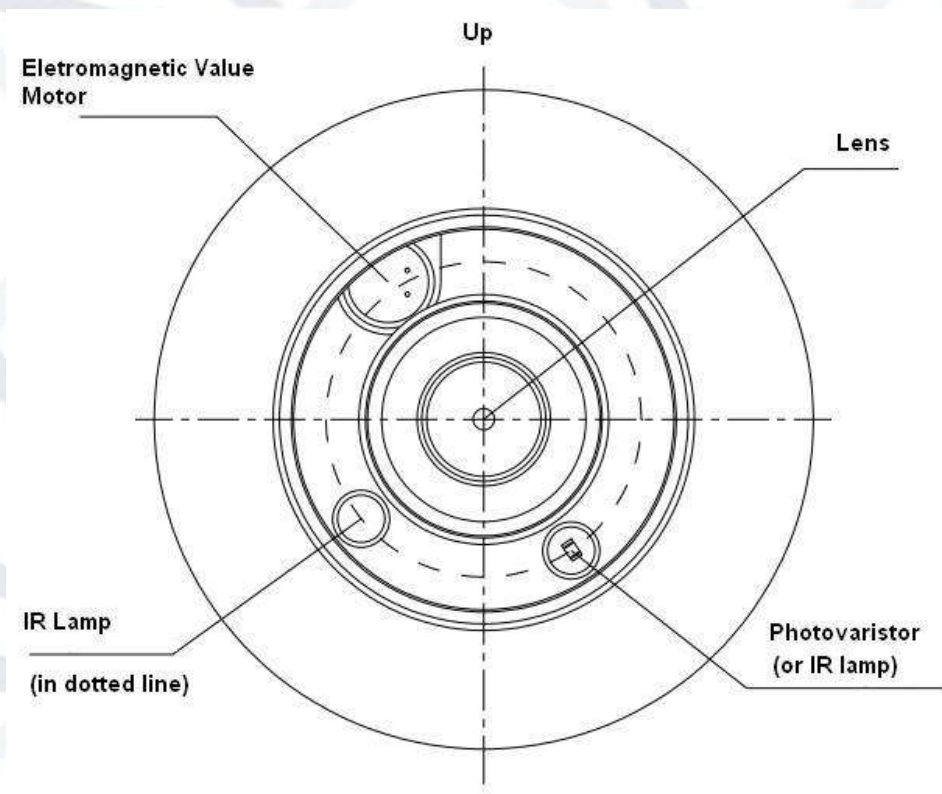


Figure 3-2 Device installation illustration 2

Note

This series product supports two cable exits. One is from the bottom and the other is from the side. Please refer to the following figure for cable exit from the side information.

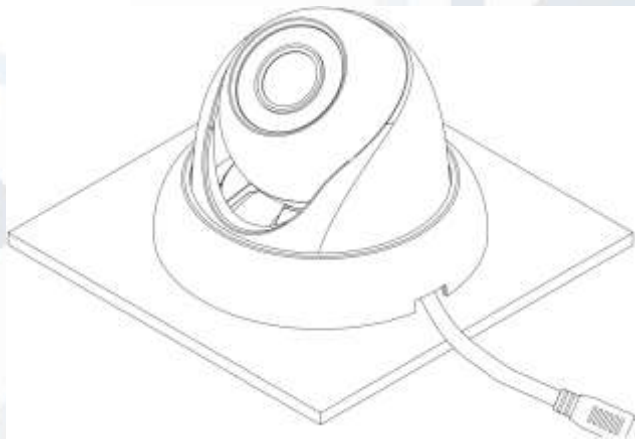


Figure 3-3 Device installation illustration 3

Please earth the GND port of the device to enhance the device reliability. The GND port is near the cable exit port on the rear of the dome. The GND uses the M2X5 pan screw.

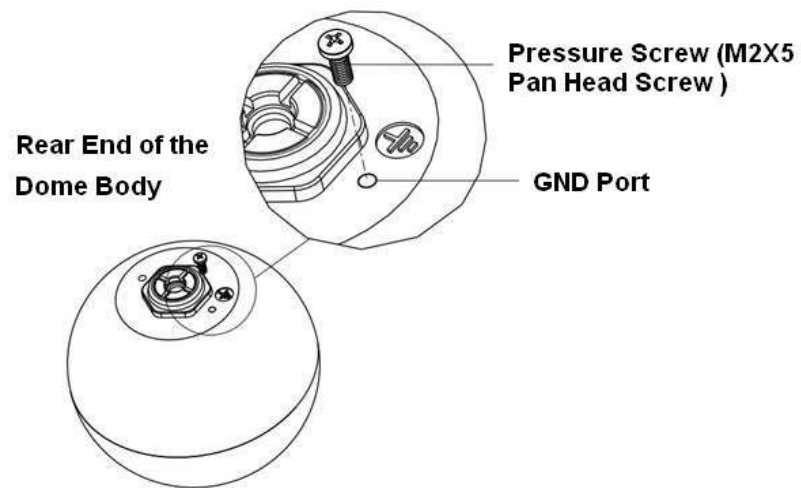


Figure 3-4 Device installation illustration 4

4 OSD Setup Menu

The OSD setup interface is shown in Figure 4-1.



Figure 4-1 OSD setup

Please see the table below for more information about the options and modes to choose from within the OSD setup menus:

Parameter				Note
Lens				Mode: manual
Exposure	Exposure	Auto		-
		Low noise	Gain Max	0~ 100
			Gain Min	0~ 100
		Low Motion Blur	Shutter Max	P: 0~ 40ms N: 0~ 33ms
			Shutter Min	P: 0~ 40ms N: 0~ 33ms
		Manual	Shutter	1/100000,1、 10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/120, 1/100, 1/60, 1/50, 1/30, 1/25, 1/15, 1/12, 1/10, 1/8, 1/6, 1/5, 1/4, 1/3, custom
			Shutter Max	0~ 300ms
			Shutter Min	0~ 300ms
			Gain Max	0~ 100
			Gain Min	0~ 100

	Anti-flicker（outdoor, 50HZ, 60HZ）		<ul style="list-style-type: none">50HZ: 1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/100, 1/50, 1/25, 1/12, 1/10, 1/6, 1/5, 1/4, 1/360HZ: 1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/120, 1/60, 1/30, 1/15, 1/12, 1/8, 1/6, 1/4, custom <p>Note: 50HZ and 60HZ modes have different exposure levels without low motion blur or low noise.</p>
	BLC	BLC	BLC/WDR/HLC Note: You can enable only one mode at once. 0 means off.
		BLC	On, off
		WDR	0~ 100
		HLC	0~ 100 Note: Only auto exposure and outdoor anti-flicker have this function.
White Balance	White Balance		Auto/Manual/Day/Night
	Blue		0~ 100
	Red		0~ 100
Day&Night			Auto/BW/color
Advanced	Camera Name		Input up to 22 characters.
	Mirror	Mirror	On, off
		Flip	On, off
	Motion	Motion	On, off
		Area Sel	0 ~3
		Area State	On, off
		Sensitivity	0 ~ 100
		Threshold	0 ~ 100
		Area Setup	Position, size Note: Adjust position and size via arrow key.
		Default	Area 30, display off, sensitivity 50
	Privacy Mask	Privacy Mask	On, off
		Area Sel	0 ~ 7
		Area State	On, off
		Area Setup	Position, size Note: Adjust position and size via arrow key.
		Default	Display off
	Language		English
	COM Setup	Address	1~ 254
Baudrate		115200, 38400, 9600, 2400	
Apply		Click on Apply when you modified setup.	
Image	3DNR		0~ 100
	Sharpness		0~ 100
	Brightness		0~ 100
	Contrast		0~ 100
	Saturation		0~ 100
	Video		1080P@25, 1080P@30, 720P@25, 720P@30, 720P@50, 720P@60
Default			Except video and language, restore all default.

5 FAQ

Bug	Solution / Reason
I cannot boot up the device or operate it properly.	Please click the RESET button for at least five seconds to restore factory default setup.
The water has leaked into the camera casing	<ul style="list-style-type: none"> ● The unauthorised front or rear cap removal may result in water leaking into the camera housing. ● The glass front cap has sustained a heavy knock or strike. ● The waterproof plug of the rear cap has come loose.
IR video is poor.	<ul style="list-style-type: none"> ● The Incorrect supply power has been used. The IR light cannot provide illumination up to its maximum level. ● The object being monitored/focused upon is out of the IR distance range. ● IR-CUT does not turn to the night mode. The front end photosensitive chip cannot sense the IR light.
I cannot upgrade the device via network.	When network upgrade operation has failed, you can use port 3800 to continue upgrade.
I cannot login to the client-end or the WEB online service.	<ul style="list-style-type: none"> ● The Active X control is blocked. ● The display card version needs to be DX8.1 or higher. ● Network connection error has occurred. ● Invalid network setup. ● Invalid user name or password.
I cannot play the download file.	<ul style="list-style-type: none"> ● There is no video player installed. ● There is no DX8.1 or higher installed.
To guarantee setup update once you have completed it	After you have modified setup, please reboot the device via the software to make sure the setup has been updated to the storage medium.
Power adapter	<ul style="list-style-type: none"> ● The general power adapter can only work reliably within the temperature range of between 0°C to 40 °C. If the power supply is being operated outside this temperature range then this may result in an unstable power supply being provided to the camera. ● Please replace with an industrial-grade power adapter if you are using it in a harsh environment.

Note

- This user's manual is for reference only. Slight differences may be found in user interface.
- All the designs and software here are subject to change without prior written notice.

For more information about our IP Cameras and other available cameras, NVRs & accessories, please visit our website:

www.adata.co.uk

Alternatively scan this QR code with your smart phone to be directed instantly to our website:

