# **APOHDSDI-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<br>Transmission    | <ul> <li>Coaxial cable.</li> <li>Use the BNC port as the cable standard.</li> </ul>  |  |  |  |  |
|-------------------------|--|--|--|--|--|
| Peripheral<br>Equipment | Support peripheral equipment connections via the RS485 port.<br>Supports various peripheral device control protocols   |  |  |  |  |
| Power                   | • External power adapter. Supports a DC 12V power supply.  |  |  |  |  |
| Assistant<br>Function   | <ul> <li>Day/Night mode auto switch (ICR switch.)</li> <li>Supports OSD button function.</li> <li>Supports 1080P@25fps, 1080P@30fps, 720P@25fps, 720P@30fps, 720P@50fps, 720P@60fps.</li> <li>Supports WDR (Wide Dynamic Range).</li> <li>Supports anti-flicker.</li> <li>Supports HLC (Highlight Compensation).</li> <li>Backlight compensation: auto screen split to allow backlight compensation to adjust the brightness.</li> </ul> |  |  |  |  |

## 1.3 Specifications

## 1.3.1 Performance

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

| Model<br>Parameter |                          | APOHDSDI-EYE   |  |  |  |
|--------------------|--------------------------|--|--|--|--|
| System             | Main<br>Processor        | High performance processor   |  |  |  |
| ≤ Image Sensor     |                          | 1/3-inch CMOS  |  |  |  |
| dec                | Pixel                    | 1920(H)*1080(V)  |  |  |  |
| P                  | Day/Night                | Support day/night mode switch and IR-CUT at the same time.   |  |  |  |
| arar               | Gain Control             | Fixed/Auto   |  |  |  |
| net                | White Balance            | Manual/Auto/Day/Night  |  |  |  |
| ers                | Exposure                 | Manual/Auto<br>PAL: It ranges from 1/3 to 1/10000.<br>NTSC: It ranges from 1/4 to 1/10000.                         |  |  |  |
|                    | Video Frame<br>Rate      | Conform to the SDI specifications SMPT274/292 protocol   |  |  |  |
|                    | Video Bit Rate           | PAL: 1920*1080@25fps, 1280*720@25 fps, 1280*720@50 fps;<br>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<br>Information     | OSD menu   |  |  |  |
| Lens Interface     |                          | M12 lens, 6mm (3.6mm optional)   |  |  |  |
| AUX<br>Interfa     | Video Output             | 1-channel HD-SDI output  |  |  |  |
| ace                | RS485 Port               | May set image and OSD.   |  |  |  |
|                    | Power                    | Support DC 12V power   |  |  |  |
| Gene               | Power<br>Consumption     | Max: 5W  |  |  |  |
| ra                 | IR                       | 20m  |  |  |  |
| Parar              | Protective<br>Level      | IP66   |  |  |  |
| neter              | Working<br>Temperature   | -10°C~+60°C  |  |  |  |
| S                  | Working<br>Humidify      | ≪95%   |  |  |  |
|                    | Dimensions<br>(Unit: mm) | Ф <b>113</b> ×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 2-3 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.

M3X18 Cross Recessed Pan Head Screw and Preforming Decoration Ring Dome Body

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.



## 4 OSD Setup Menu

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

| > Lens        |          |  |
|---------------|----------|--|
| Exposure      | 4        |  |
| White Balance | Auto     |  |
| Day&Night     | Auto     |  |
| Advanced      | 4        |  |
| lmage         | <b>_</b> |  |
| Reset         |          |  |
| Exit          |          |  |
|               |          |  |

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<br>Lens |          |                       |                | Note  |  |
|-------------------|----------|-----------------------|----------------|---|--|
|                   |          |                       |                | Mode: manual  |  |
|                   |          | Auto                  |                | · //  |  |
|                   |          | Low<br>noise          | Gain Max       | 0~ 100  |  |
|                   |          |                       | Gain Min       | 0~ 100  |  |
|                   |          | Low<br>Motion<br>Blur | Shutter        | P: 0~ 40ms  |  |
| 11                |          |                       | Max            | N: 0~ 33ms  |  |
|                   | Exposure |                       | Shutter        | P: 0~ 40ms  |  |
|                   |          |                       | Min            | N: 0~ 33ms  |  |
| Exposure          |          | Manual                | Shutter        | 1/100000,1、10000, 1/4000, 1/2000, 1/1000, 1/500,<br>1/250, 1/120, 1/100, 1/60, 1/50, 1/30, 1/25, 1/15, 1/12,<br>1/10, 1/8, 1/6, 1/5, 1/4, 1/3, custom |  |
|                   |          |                       | Shutter<br>Max | 0~ 300ms  |  |
|                   |          |                       | Shutter<br>Min | 0~ 300ms  |  |
|                   |          |                       | Gain Max       | 0~ 100  |  |
|                   |          |                       | Gain Min       | 0~ 100  |  |

| Anti-flicker (outdoor, 50HZ, 60HZ)         • 50H2: 1/10000, 1/2000, 1/2000, 1/1000, 1/500, 1/250, 1/1250, 1/100, 1/50, 1/250, 1/120, 1/15, 1/12, 1/18, 1/6, 1/4, 1/250, 1/100, 1/50, 1/250, 1/120, 1/15, 1/12, 1/18, 1/6, 1/4, custom           Anti-flicker (outdoor, 50HZ, 60HZ)         • 60HZ: 1/10000, 1/2000, 1/2000, 1/1000, 1/250, 1/120, 1/15, 1/12, 1/18, 1/6, 1/4, custom           Note:         • 60HZ: 1/10000, 1/2000, 1/1000, 1/200, 1/250, 1/120, 1/160, 1/30, 1/15, 1/12, 1/18, 1/6, 1/4, custom           Note:         • 60HZ: 0.00, 1/2000, 1/2000, 1/1000, 1/200, 1/200, 1/1000, 1/200, 1/200, 1/200, 1/100, 1/200, 1/200, 1/100, 1/200, 1/200, 1/100, 1/200, 1/200, 1/200, 1/100, 1/200, 1/200, 1/200, 1/100, 1/200, 1/200, 1/100, 1/200, 1/200, 1/200, 1/100, 1/2 |            |                 |                       |   |
|---|------------|-----------------|-----------------------|---|
| Advanced         Privacy<br>Privacy<br>Mask         Mirror         Input up to 22 characters.<br>On, off           Advanced         Mirror         Mirror         On, off           Privacy<br>Mask         Area Sel         0 - 300           Advanced         Privacy<br>Privacy<br>Mask         Mirror           Advanced         Motion         On, off           Privacy<br>Mask         Privacy<br>Area Sel         O - 100           Advanced         Mirror         On, off           Privacy<br>Mask         Mirror         On, off           Advanced         Area Sel         0 - 30           Advanced         Area Sel         0 - 100           Area Sel         0 - 3         Area Sel           Advanced         Area Sel         0 - 100           Area Sel         0 - 100         Area Sel           Area Sel         0 - 3         Area Sel           Area Sel         0 - 3         Area Sel           Area Sel         0 - 7         Area 30, display off, sensitivity 50           Privacy<br>Mask         Area Sel         0 - 7           Area Sel         0 - 7         Area 30, display off, sensitivity 50           Privacy Mask         On, off         Area 30, display off, sensitivity 50           Privacy Ma   |            | Anti-flicker    | (outdoor, 50HZ, 60HZ) | <ul> <li>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, 1/3</li> <li>60HZ: 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, output</li> </ul> |
| BLC         BLC         Dote:<br>You can enable only one mode at once. 0 means off.<br>You can enable only one mode at once. 0 means off.<br>You can enable only one mode at once. 0 means off.           BLC         On, off         0 - 100           White         BLC         On - 100           HLC         Only auto exposure and outdoor anti-flicker have this<br>function.           White         Blue         0 - 100           Balance         Auto/Manual/Day/Night           Blance         0 - 100           Red         0 - 100           Day&Night         Auto/BW/color           Mirror         Input up to 22 characters.           Mirror         Flip         On, off           Area State         0 - 3           Area State         0 - 00           Threshold         0 - 100           Threshold         0 - 100           Threshold         0 - 100           Privacy         Area State         On, off           Area State         On, off           Privacy         Area State         On, off           Area Setup         Note:         Aglust position and size via arrow key.           Perivacy         Area Setup         Note:           Area Setup         Note:         Aglust position and size via arro   |            |                 |                       | Note:<br>50HZ and 60HZ modes have different exposure levels<br>without low motion blur or low noise.  |
| BLC         On, off           White         BLC         0 - 100           White         0 - 100         Note:           Blue         0 - 100         Note:           Motion         Multional exposure and outdoor anti-flicker have this function.           White         Blue         0 - 100           Blue         0 - 100         Note:           Red         0 - 100         0           Day&Night         Earna Name         Input up to 22 characters.           Mirror         Mirror         On, off           Mirror         Motion         On, off           Area Sel         0 - 100           Sensitivity         0 - 100           Threshold         0 - 100           Threshold         0 - 100           Area Sel         0 - 3           Area Setup         Note: Adjust position and size via arrow key.           Privacy Mask         On, off           Area Setup         Note: Adjust position and size via arrow key.           Privacy Mask         On, off           Area Setup         Note:           Mask         Area Setup           Privacy Mask         On, off           Area Setup         Ox 100 <t< td=""><td></td><td colspan="2">BLC</td><td>BLC/WDR/HLC<br/>Note:<br/>You can enable only one mode at once. 0 means off.</td></t<>   |            | BLC             |                       | BLC/WDR/HLC<br>Note:<br>You can enable only one mode at once. 0 means off.  |
| BLC         WDR         0~100           Note:         Only auto exposure and outdoor anti-flicker have this function.         Note:           White Balance         Auto/Manual/Day/Night         Incrition.           Blue         0~100         O-100           Day8Night         0~100         O-100           Camera Name         Input up to 22 characters.         Input up to 22 characters.           Mirror         Flip         On, off           Area Sel         0~3         Area Sel           Motion         On, off         Area Sel           Area Setup         Note: Adjust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Area Setup         Note: Adjust position and size via arrow key.           Privacy         Area Setup         Note: Adjust position and size via arrow key.           Perivacy         Area Setup         Note: Adjust position and size via arrow key.           Privacy         Area Setup         Note: Adjust position and size via arrow key.           Position, size         Note:         Adjust position and size via arrow key.           Default         Display off         Display off           Language         English         0~ 100           Sharpness   |            |                 | BLC                   | On, off   |
| White<br>Balance         White Balance         Outo/Manual/Day/Night           Blue         0-100           Day&Night         0-100           Camera Name         Input up to 22 characters.           Mirror         Mirror           Mirror         On, off           Area State         On, off           Area State         On, off           Motion         On, off           Area State         On, off           Motion         On, off           Area State         On, off           Motion         On, off           Area State         On, off   |            | BLC             | WDR                   | 0~ 100  |
| White Balance         Auto/Manual/Day/Night           Blue         0~100           Red         0~100           Day8Night         Auto/Manual/Day/Night           Mirror         Input up to 22 characters.           Mirror         Mirror           Mirror         On, off           Advanced         Motion           Motion         On, off           Area State         On, off           Area Setup         Position, size           Note: Adjust position and size via arrow key.         Default           Area Setup         Note: Adjust position and size via arrow key.           Default         Area State         On, off           Area Setup         Note: Adjust position and size via arrow key.         Privacy Mask           Area Setup         Note:         Advanced         Area Setup           Privacy Mask         On, off         Area Setup         Note:           Area Setup         Note:         Advanced         Area Setup         Note:           Area Setup         Note:         Advanced         <   |            |                 | HLC                   | 0~ 100<br>Note:<br>Only auto exposure and outdoor anti-flicker have this<br>function  |
| White<br>Balance         Milling Database         Automatical Day/Night           Blue         0~100           Red         0~100           Day&Night         Auto/BW/color           Camera Name         Input up to 22 characters.           Mirror         Flip           Mirror         On, off           Area Set         0~3           Area State         On, off           Motion         Sensitivity         0~100           Threshold         0~100           Area Setup         Note: Adjust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Area Setup         Note: Adjust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Area Setup         Note: Adjust position and size via arrow key.           Default         Area 30, display off         Area Setup           Note:         Default         Display off           Language         English         Adjust position and size via arrow key.           Default         Display off         English           COM         Address         1~254           Setup         Baudrate         115200, 38400, 9600, 2400  |            | White Balar     |                       | Auto/Manual/Day/Night   |
| Balance         Dive         Do-100           Red         0~100         Auto/BW/color           Day&Night         Camera Name         Input up to 22 characters.           Mirror         Mirror         On, off           Mirror         Flip         On, off           Auto/BW/color         Mirror         On, off           Area Sel         0~3         Area Sel           Area State         On, off         Sensitivity           Or 100         Threshold         0~100           Area Setup         Position, size         Note: Adjust position and size via arrow key.           Default         Area Sol         0~7           Area Setup         Position, size         Privacy Mask           Area Setup         Note:         Adjust position and size via arrow key.           Default         Area Setup         Note:           Adjust position and size via arrow key.         Default         Display off           Language         English         COM         Address           COM         Address         1~254         Setup           Sharpness         0~100         Sharpness         0~100           Brightness         0~100         Sharpness         0~100   | White      | Plue            | ice                   |   |
| Day&Night         0 - 100           Day&Night         Auto/BW/color           Input up to 22 characters.         Input up to 22 characters.           Mirror         Mirror         On, off           Flip         On, off           Area Sel         0 ~3           Area State         On, off           Motion         Area State         On, off           Motion         Area State         On, off           Area Setup         Position, size         Area Setup           Note: Adjust position and size via arrow key.         Default         Area 30, display off, sensitivity 50           Privacy Mask         On, off         Area Setup         Note:           Area Setup         Note: Adjust position and size via arrow key.         Area Setup           Privacy Mask         On, off         Area Setup         Note:           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off         Default         Display off           Language         English         Address         1 ~ 254           Setup         Address         1 ~ 254         Setup         Apply           Sharpness         0~ 100         O         0~ 100 <t< td=""><td>Balance</td><td>Dide</td><td></td><td>0~ 100</td></t<>  | Balance    | Dide            |                       | 0~ 100  |
| DayaNight         Auto/Bw/color           Imput up to 22 characters.         Input up to 22 characters.           Mirror         Mirror         On, off           Area Sel         0 ~3           Area State         On, off           Motion         Xerea State           Area Setup         Note: Adjust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Privacy Mask         On, off           Area Setup         Note: Adjust position and size via arrow key.           Privacy         Area Setate         On, off           Area Setup         Note: Adjust position and size via arrow key.           Privacy         Area Setate         On, off           Area Setup         Note: Adjust position and size via arrow key.         Area Setate           Privacy         Area Setate         On off         Area Setate           Privacy         Baudrate         115200, 38400, 9600, 2400         Adjust position and size via arrow key.           Default         Default         Display off         English           Language         English         Colo         Apply           COM         Baudrate         115200, 38400, 9600, 2400           Sharpness         0 ~  | Davighting | Reu             |                       |   |
| Advanced         Input up to 22 characters.           Mirror         Mirror         On, off           Flip         On, off           Area Sel         0 ~3           Area State         On, off           Sensitivity         0 ~ 100           Threshold         0 ~ 100           Area Setup         Position, size           Note:         Area State           Default         Area 30, display off, sensitivity 50           Privacy         Area Setup           Note:         Adjust position and size via arrow key.           Privacy         Area Setup           Area Setup         0 ~ 7           Area State         On, off           Area Setup         Note:           Area Setup         Area Setup           Area Setup         0 ~ 7           Area Setup         Area Setup           Area Setup         Area Setup           Area Setup         Adjust position and size via arrow key.           Default         Display off           Language         English           COM         Address         1 ~ 254           Baudrate         115200, 38400, 9600, 2400           Sharpness         0 ~ 100  | Day&Night  |                 |                       | Auto/Bvv/color  |
| Mirror         Mirror         On, off           Flip         On, off           Motion         On, off           Area Sel         0 ~3           Area State         On, off           Sensitivity         0 ~ 100           Threshold         0 ~ 100           Area Setup         Position, size           Note:         Adust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Area Setup         On, off           Area Setup         Note:         Adjust position and size via arrow key.           Privacy         Area Setup         On, off           Area Setup         On, off         Area 30, display off, sensitivity 50           Privacy         Area Setup         On, off           Area Setup         On, off         Area Setup           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off         Display off           Language         English         Address           COM         Address         1~ 254           Baudrate         115200, 38400, 9600, 2400           Sharpness         0~ 100           Brightness  |            | Camera Na       | me                    | Input up to 22 characters.  |
| Advanced         Flip         On, off           Area Sel         0 ~3         Area State         On, off           Area State         On, off         Sensitivity         0 ~ 100           Threshold         0 ~ 100         Area State         On, off           Area State         On, off         Sensitivity         0 ~ 100           Area Setup         Position, size         Note: Adjust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Area Setup         Note: Adjust position and size via arrow key.           Area Setup         On, off         Area Setup           Privacy         Area Setup         On, off           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off         Adjust position and size via arrow key.           Default         Display off         English           COM         Address         1 ~ 254           Baudrate         115200, 38400, 9600, 2400           Setup         Apply         Click on Apply when you modified setup.           Sharpness         0~ 100         O~ 100           Saturation         0~ 100         Video         1080P@30, 720P@30, 720P@30, 720P@30, 72  |            | Mirror          | Mirror                | On, off   |
| Advanced         Motion         Motion         On, off           Area Sel         0~3   |            | WIITOT          | Flip                  | On, off   |
| Advanced         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         Area Setup         Note: Adjust position and size via arrow key.           Privacy         Area Setate         0 ~ 7           Area Setup         0 ~ 7         Area Setate           Privacy         Area State         On, off           Area Setup         Position, size         Note:           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off         English           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off         Baudrate           1 ~ 254         Baudrate         115200, 38400, 9600, 2400           Setup         Apply         Click on Apply when you modified setup.           Sharpness         0~ 100         0~ 100           Brightness         0~ 100         1580P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@260  |            |                 | Motion                | On, off   |
| Advanced         Area State         On, off           Advanced         Sensitivity         0 ~ 100           Area Setup         Position, size           Note: Adjust position and size via arrow key.           Default         Area 30, display off, sensitivity 50           Privacy         Area Sel         0 ~ 7           Area Setup         Note:         Age a State           Privacy         Area Sel         0 ~ 7           Area Setup         Note:         Age a State           Privacy         Area Setup         Position, size           Mask         Area Setup         Note:           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off           Language         English           COM         Address         1~ 254           Baudrate         115200, 38400, 9600, 2400           Setup         Apply         Click on Apply when you modified setup.           Sharpness         0~ 100         Sharpness           Brightness         0~ 100         Contrast           Video         Video         Video   |            |                 | Area Sel              | 0~3   |
| Motion         Sensitivity         0 ~ 100           Advanced         Area Setup         Position, size           Note: Adjust position and size via arrow key.         Default         Area 30, display off, sensitivity 50           Privacy         Mask         On, off         Area Sel         0 ~ 7           Area Setup         Note:         Ange a Sel         0 ~ 7           Area Setup         Note:         Area Sel         0 ~ 7           Area Setup         Note:         Ange a Setup         Note:           Mask         Area Setup         Position, size         Note:           Area Setup         Note:         Adjust position and size via arrow key.         Default           Default         Display off         English         English           Language         English         Mask         1 ~ 254           Baudrate         115200, 38400, 9600, 2400         Mask           Setup         Apply         Click on Apply when you modified setup.           Sharpness         0 ~ 100         N         0 ~ 100           Brightness         0 ~ 100         Contrast         0 ~ 100           Stuartion         0 ~ 100         N         N           Video         Video         1080P@25, 1080P@   |            | Motion          | Area State            | On, off   |
| Advanced         Threshold         0 ~ 100           Advanced         Area Setup         Position, size<br>Note: Adjust position and size via arrow key.           Pefault         Area 30, display off, sensitivity 50           Privacy         Area Setup         On, off           Area Sel         0 ~ 7           Area State         On, off           Privacy         Area Setup         Position, size           Mask         Area Setup         Note:           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off         Display off           Language         English         Address           Language         English         Address           Setup         Address         1~ 254           Baudrate         115200, 38400, 9600, 2400           Apply         Click on Apply when you modified setup.           O~ 100         Sharpness         0~ 100           Brightness         0~ 100         0~ 100           Saturation         0~ 100         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@30, 720P@25, 720P@30, 720P@50, 720P@50, 720P@60   |            |                 | Sensitivity           | 0 ~ 100   |
| Advanced         Area Setup         Position, size<br>Note: Adjust position and size via arrow key.           Advanced         Default         Area 30, display off, sensitivity 50           Privacy         Privacy Mask         On, off           Area Sel         0 ~ 7           Area State         On, off           Privacy         Area Setup         Position, size           Mask         Area Setup         Position, size           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off           Language         English           COM         Address         1~ 254           Baudrate         115200, 38400, 9600, 2400           Apply         Click on Apply when you modified setup.           Sharpness         0~ 100           Brightness         0~ 100           Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60   |            |                 | Threshold             | 0~100   |
| Advanced         Area Setup         Note: Adjust position and size via arrow key.           Advanced         Default         Area 30, display off, sensitivity 50           Privacy Mask         On, off           Area Sel         0 ~ 7           Area State         On, off           Privacy Mask         Position, size           Mask         Position, size           Area Setup         Note:           Adjust position and size via arrow key.           Default         Display off           Language         English           COM         Address         1~ 254           Baudrate         115200, 38400, 9600, 2400           Setup         Apply         Click on Apply when you modified setup.           Sharpness         0~ 100           Brightness         0~ 100           Saturation         0~ 100           Video         Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60  |            |                 |                       | Position, size  |
| Advanced         Default         Area 30, display off, sensitivity 50           Privacy         Privacy Mask         On, off           Area Sel         0 ~ 7           Area State         On, off           Privacy         Area Setup         Position, size           Area Setup         Note:         Adjust position and size via arrow key.           Default         Display off           Language         English           COM         Baudrate         115200, 38400, 9600, 2400           Setup         Apply         Click on Apply when you modified setup.           Sharpness         0~ 100         Sharpness           Brightness         0~ 100         Saturation           Video         Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60  |            |                 | Area Setup            | Note: Adjust position and size via arrow key.   |
| Advanced       Privacy Mask       On, off         Area Sel       0 ~ 7         Area State       On, off         Privacy       Area Setup       Position, size         Mask       Area Setup       Note:         Adjust position and size via arrow key.       Default       Display off         Language       English         COM       Address       1~ 254         Baudrate       115200, 38400, 9600, 2400         Setup       Apply       Click on Apply when you modified setup.         Mask       0~ 100         Sharpness       0~ 100         Brightness       0~ 100         Saturation       0~ 100         Video       1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60  |            |                 | Default               | Area 30 display off sensitivity 50  |
| Image     Area Sel     0 ~ 7       Area Sel     0 ~ 7       Area State     On, off       Position, size     Note:       Area Setup     Note:       Area Setup     Note:       Adjust position and size via arrow key.     Default       Default     Display off       Language     English       COM     Address       Setup     Address       Baudrate     115200, 38400, 9600, 2400       Apply     Click on Apply when you modified setup.       3DNR     0~ 100       Sharpness     0~ 100       Brightness     0~ 100       Saturation     0~ 100       Video     1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@60  | Advanced   | Privacy<br>Mask | Privacy Mask          | On off  |
| Privacy<br>Mask     Area State     On, off       Position, size<br>Note:     Position, size<br>Note:     Position and size via arrow key.       Default     Display off       Language     English       COM<br>Setup     Address     1~254       Baudrate     115200, 38400, 9600, 2400       Apply     Click on Apply when you modified setup.       3DNR     0~100       Sharpness     0~100       Brightness     0~100       Saturation     0~100       Video     1080P@25, 1080P@30, 720P@25, 720P@30,<br>720P@60  |            |                 | Area Sel              |   |
| Privacy<br>Mask     Area State     On, on       Area Setup     Position, size<br>Note:<br>Adjust position and size via arrow key.       Default     Display off       Language     English       COM<br>Setup     Address     1~ 254       Baudrate     115200, 38400, 9600, 2400       Setup     Apply     Click on Apply when you modified setup.       Sharpness     0~ 100       Sharpness     0~ 100       Staturation     0~ 100       Video     1080P@25, 1080P@30, 720P@25, 720P@30,<br>720P@50, 720P@60  |            |                 | Area State            |   |
| Mask     Area Setup     Note:<br>Adjust position and size via arrow key.       Default     Display off       Language     English       COM     Address     1~ 254       Baudrate     115200, 38400, 9600, 2400       Setup     Apply     Click on Apply when you modified setup.       Sharpness     0~ 100       Brightness     0~ 100       Saturation     0~ 100       Video     1080P@25, 1080P@30, 720P@25, 720P@30, 720P@30, 720P@60   |            |                 | Alea State            |   |
| Image     Adjust position and size via arrow key.       Adjust position and size via arrow key.       Default     Display off       Language     English       COM     Address     1~254       Baudrate     115200, 38400, 9600, 2400       Setup     Apply     Click on Apply when you modified setup.       3DNR     0~100       Sharpness     0~100       Brightness     0~100       Saturation     0~100       Video     Video       Video     1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@60  |            |                 | Area Satur            | Noto:   |
| Image     Address     1~254       COM     Address     1~254       Baudrate     115200, 38400, 9600, 2400       Setup     Apply     Click on Apply when you modified setup.       3DNR     0~100       Sharpness     0~100       Brightness     0~100       Saturation     0~100       Video     0~100       Video     1080P@25, 1080P@30, 720P@25, 720P@30, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60   |            |                 | Alea Setup            | Adjust position and size via arrow key  |
| Language         English           COM         Address         1~254           Baudrate         115200, 38400, 9600, 2400           Setup         Baudrate         115200, 38400, 9600, 2400           Apply         Click on Apply when you modified setup.           0~100         Sharpness         0~100           Brightness         0~100         0~100           Saturation         0~100         0~100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60   |            |                 | Default               | Display off   |
| Language         English           COM         Address         1~254           Baudrate         115200, 38400, 9600, 2400           Apply         Click on Apply when you modified setup.           Apply         Click on Apply when you modified setup.           Sharpness         0~100           Brightness         0~100           Contrast         0~100           Saturation         0~100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60  |            | Delauit         |                       | Display Oli   |
| COM<br>Setup         Address         1~254           Baudrate         115200, 38400, 9600, 2400           Apply         Click on Apply when you modified setup.           O~ 100         Sharpness           Sharpness         0~ 100           Brightness         0~ 100           Contrast         0~ 100           Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@60   |            | Language        | Address               |   |
| Setup         Baudrate         115200, 38400, 9600, 2400           Apply         Click on Apply when you modified setup.           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@30, 720P@25, 720P@30, 720P@50, 720P@60   |            | COM             | Address               | 1~ 254  |
| Image         3DNR         0~ 100           Brightness         0~ 100           Contrast         0~ 100           Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60   |            | Setup           | Baudrate              | 115200, 38400, 9600, 2400   |
| 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@30, 720P@260  |            |                 | Арріу                 | Click on Apply when you modified setup.   |
| Sharpness         0~ 100           Brightness         0~ 100           Contrast         0~ 100           Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@25, 720P@30, 720P@50, 720P@60   |            | 3DNR            |                       | 0~ 100  |
| Brightness         0~ 100           Contrast         0~ 100           Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@30, 720P@50, 720P@60   |            | Sharpness       |                       | 0~ 100  |
| Image         Contrast         0~ 100           Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@50, 720P@60  |            | Brightness      |                       | 0~ 100  |
| Saturation         0~ 100           Video         1080P@25, 1080P@30, 720P@25, 720P@30, 720P@50, 720P@60  | Image      | Contrast        |                       | 0~ 100  |
| Video 1080P@25, 1080P@30, 720P@25, 720P@30, 720P@50, 720P@60  |            | Saturation      | AL NO.                | 0~ 100  |
|   |            | Video           |                       | 1080P@25, 1080P@30, 720P@25, 720P@30,<br>720P@50, 720P@60   |
| Default Except video and language, restore all default.   | Default    |                 |                       | Except video and language, restore all default.   |

## 5 FAQ

| Bug  | Solution / Reason   |  |  |
|--|---|--|--|
| I cannot boot up<br>the device or<br>operate it properly.            | Please click the RESET button for at least five seconds to restore factory default setup.   |  |  |
| The water has<br>leaked into the<br>camera casing                    | <ul> <li>The unauthorised front or rear cap removal many result in water leaking into the camera housing.</li> <li>The glass front cap has sustained a heavy knock or strike.</li> <li>The waterproof plug of the rear cap has come loose.</li> </ul>   |  |  |
| IR video is poor.  | <ul> <li>The Incorrect supply power has been used. The IR light cannot provide illumination up to its maximum level.</li> <li>The object being monitored/focused upon is out of the IR distance range.</li> <li>IR-CUT does not turn to the night mode. The front end photosensitive chip cannot sense the IR light.</li> </ul>   |  |  |
| I cannot upgrade<br>the device via<br>network.                       | When network upgrade operation has failed, you can use port 3800 to continue upgrade.   |  |  |
| I cannot login to<br>the client-end or<br>the WEB online<br>service. | <ul> <li>The Active X control is blocked.</li> <li>The display card version needs to be DX8.1 or higher.</li> <li>Network connection error has occurred.</li> <li>Invalid network setup.</li> <li>Invalid user name or password.</li> </ul>   |  |  |
| I cannot play the download file.                                     | <ul><li>There is no video player installed.</li><li>There is no DX8.1 or higher installed.</li></ul>  |  |  |
| To guarantee<br>setup update once<br>you have<br>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> <li>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.</li> <li>Please replace with an industrial-grade power adapter if you are using it in a harsh environment.</li> </ul> |  |  |

#### 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:

