5 MegaPixel
Color Camera

2014. MAR V2.0

User Manual

Safety Precautions

Before using the product, please ensure that you read the safety precautions described below. Always ensure that the product is used correctly.

- Use only recommended power sources.
- Do not attempt to disassemble, alter or apply heat to the product.
- Avoid dropping or subjecting the product to severe impacts.
- To avoid the risk of injury, do not touch the interior of the product if it has been dropped or otherwise damaged.
- Stop using the product immediately if it emits smoke, a strange smell, or otherwise behaves abnormally.
- Do not use organic solvents such as alcohol, benzene, or thinner to clean the product.
- Do not allow liquids or foreign objects to enter the camera.
- Do not place the camera near or in direct flame.
- Do not handle the power cord with wet hands.
- Do not use the equipment in a manner that exceeds the rated capacity of the electrical outlet or wiring accessories. Do not use if the power cord or plug are damaged, or not fully plugged into the outlet.
- Do not allow dirt or metal objects (such as pins or keys) to contact the terminals or plug.

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A. Features

- 1/3" 5 Mega Pixel Color Camera
- 2D/3D Noise Reduction (HDNR)
- Optics Double Frequency WDR(128dB)
- Digital Slow Shutter from x2 up to x512 (Max)
- Adaptive Backlight compensation function (BLC) / Anti-Headlight (HLC)
- e-PTZ (Zoom x 4)
- Privacy Mask x 8 (Color)
- Multi object tracking D-Zoom x 4
- High Contrast Images
- Ideal for Backlight Environment
- Digital Demist Process
- Intelligent IR Exposure (Smart IR)
- Color Rolling Suppression
- UTC Controller OSD Remote control

B. Specifications

|	
Video System	NTSC / PAL
Pick Up Element	1/3" 5 MegaPixel Image Sensor
Image Signal Process	Digital Signal Processor
Number OF Pixels	2592 (H) × 1920 (V)
Picture Elements	Approx. 5000K
Power Supply	DC +12V
Power Consumption	530 mA
Synchronization	Internal Synchronization
Scanning System	2 : 1 Interlace
Minimum Illumination	0.1Lux (0Lux, IR-ON)
S/N Ration	Max. 48 dB
OSD Menu	Build-in Multi-layers semi-opacity Menu Setting
Camera Title	Camera Title
Function Enable Display	Function Enable Display
Wide Dynamic Range	DWDR
Digital Slow Shutter	X2 ~ X512
Backlight compensation function	HLC / BLC / off
(AGC) Automatic Gain Control	on
(DNR) Digital noise reduction	2D / 3D-NR
Digital Demist Process	on / off / Auto
Digital Zoom	Zoom 4X

(D&N) digital day & night mode	Color / B&W /Auto-Progressive/Auto-General/External input
Motion detecting function	on / off (Multi object tracking D-Zoom x 4)
Flash suppression function	on / off
Privacy masking function	on / off (8 Editable area)
Blemish Compensation	Static & Dynamic (4096 points)
Image quality adjustment	Hue / Contract / Saturation / Sharpness
Auto white balance	AWB / ATW
Language	English / Simplified Chinese / (support multi-language)
Electronic shutter speed	Auto:1/60(50)S TO 1/100,000 S
	Manual: 1/60(50)S, FL1/120(100)S, 1/250S, 1/500S, 1/1,000S, 1/2,000S, 1/4,000S, 1/10,000S, 1/100,000S
Video signal output	1 Vp-p standard video signal output, 75 Ohms
Operation temperature	- 5°C ~ +40°C

C. OSD Operation

- **Main menu**

- **OSD Setup**
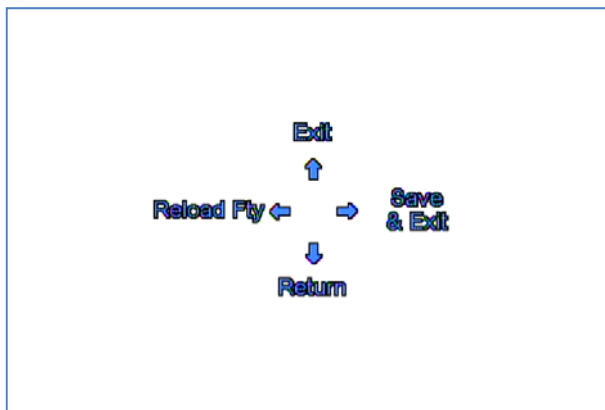
- Setup: 1.Click one time to enter the Main menu

  Click twice ($\overset{\triangle}{\circ}$ to Exit OSD menu, $\triangleleft\circ$ Reload Fty ,
  $\underset{\triangledown}{\circ}$ Return to Previous page, $\circ\triangleright$Exit & Save)

- $\overset{\triangle}{\circ}$ UP / $\underset{\triangledown}{\circ}$ Down: Selection.

- $\triangleleft\circ$ Left / $\circ\triangleright$Right: Enter & Return.

(1) AE Mode Setting
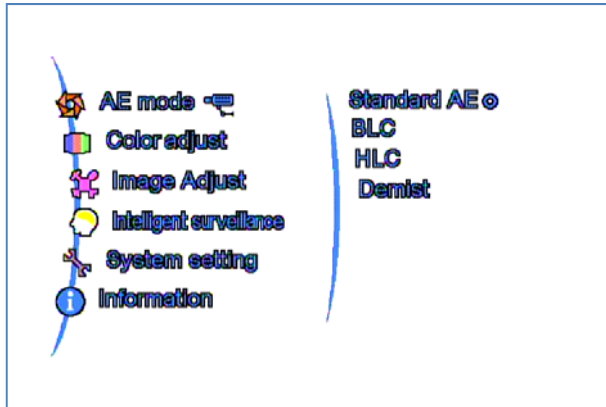
1. **Standard AE**

   Under Standard mode AE, symbol 🆂🆃🅳 will be shown on the upper left corner of Live view.
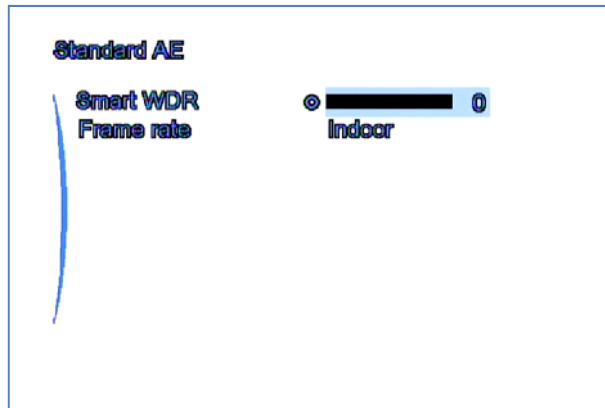
- ■ Smart WDR：Value 0~3

- ■ Frame Rate：Indoor/ Outdoor

        Standard   SWDR

2. **BLC**

Back light compensation

- ■ Level: （Auto, Low, Middle, High）
- ■ Symbol will be shown on the upper left corner of Live view.

Normal

Back light compensation

3. **HLC**

High light compensation
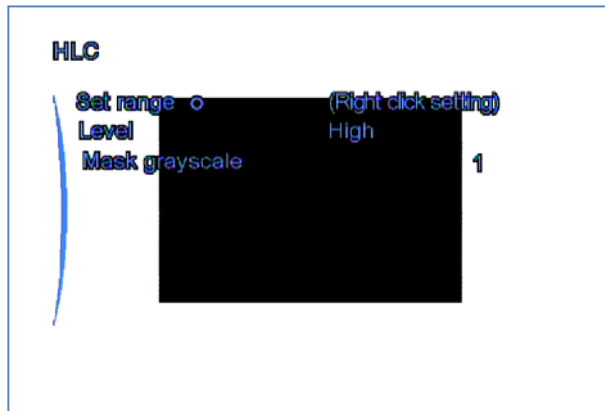
- Set Range: Click Right button to enter the menu, press SETUP button in order to set up next corner point. (in this area, any brighter light source will be blocked)

Normal   HLC on

Detection are (area marked in Red)

- Level: Low, Middle, High.

- Mask Grayscale: (Value: 1-6) Mask color set up, the color is closer to white when the value is higher.

- Symbol will be shown on the upper left corner of Live view

4. **Demist**
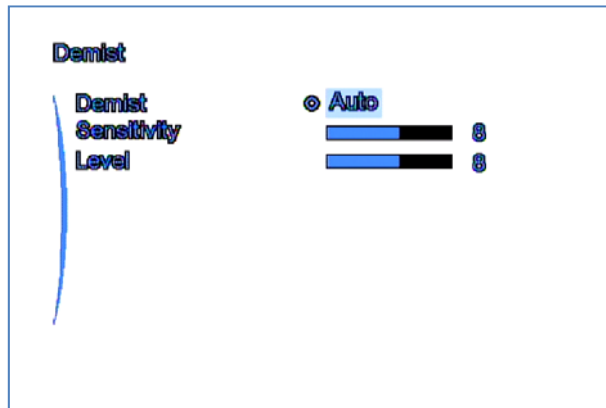
- ■ Demist: Set the level of Demist. If set Auto, the DSP will turn on/off the function and decide the level of demist (Auto, Low, Middle, High).

- ■ 3D-NR: On/Off the 3D-NR function

- ■ Symbol 🔲 will be shown on the upper left corner of Live view

Normal	Demist activated

(Heavy Fog) Demist Off

(Middle Fog) Demist Off

(LIght Fog) Demist Off
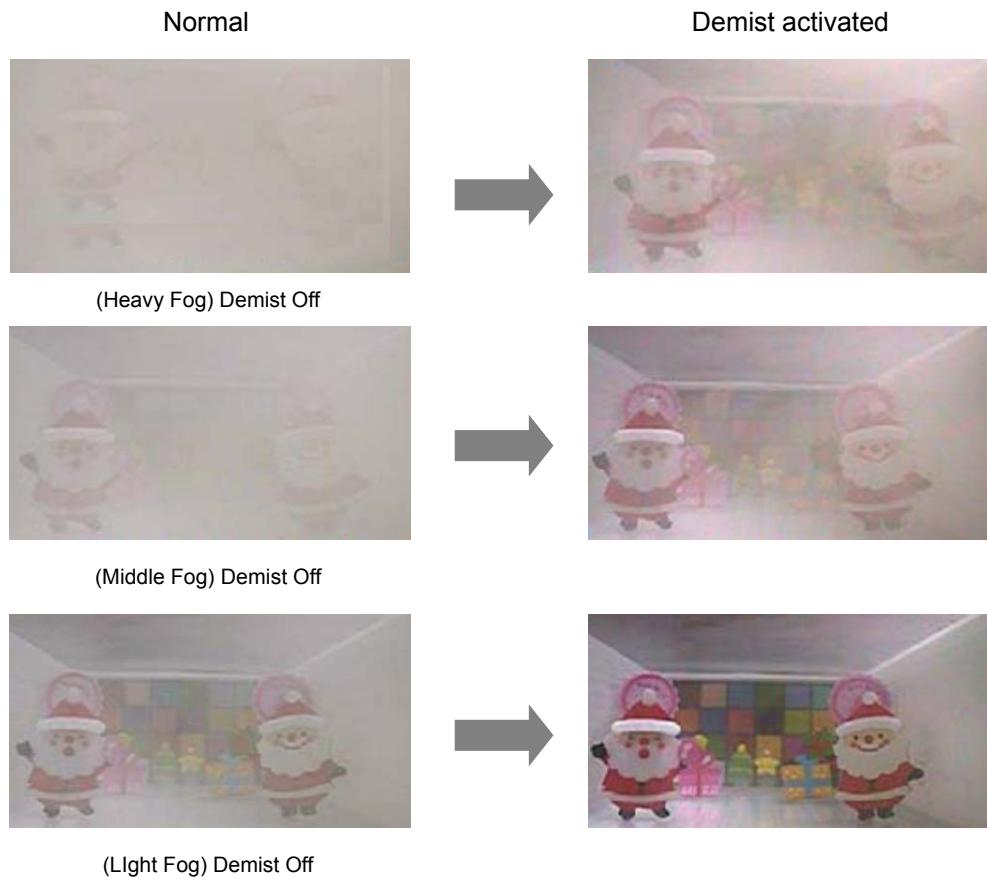
(2) Color Adjust

Color adjust settings
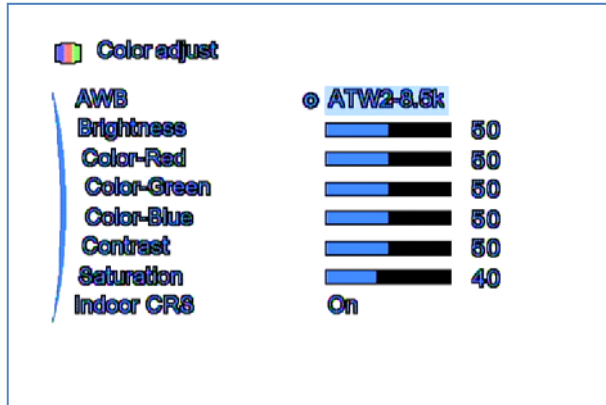
1. White Balance

   Tracking Mode 2-8.5k、Tracking Mode 2-10k

2. Brightness

   0~99

3. Color-Red

   Red (0~99)

4. Color-Green

   Green (0~99)

5. Color-Blue

   Blue (0~99)

6. Contrast

   0~99

7. Saturation

   0~99

8. CR suppress

   ON/OFF

(3)Image Adjust

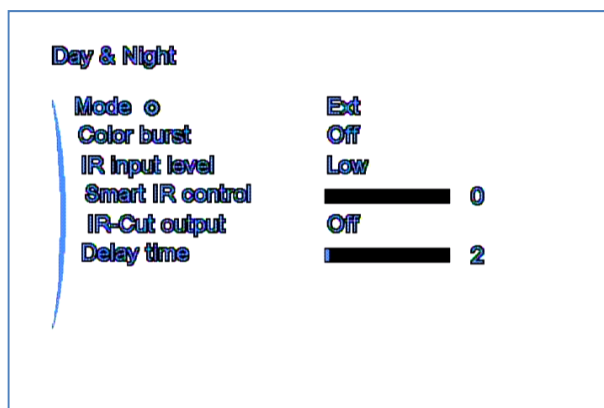Image adjust settings
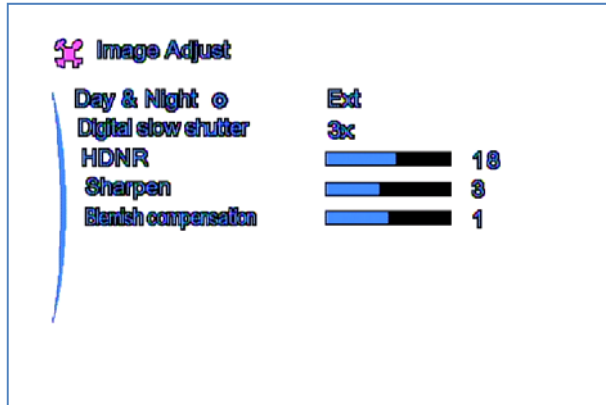
1. Day & Night
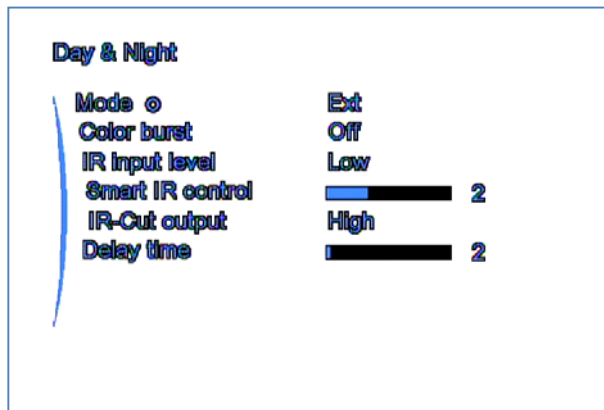
● Mode: Auto-Progressive

Like human eyes
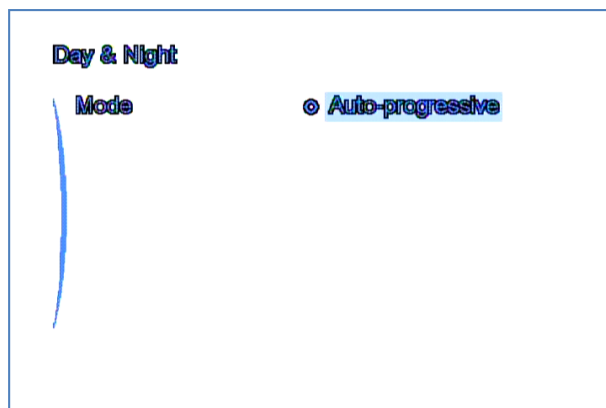
- Mode: B/W

  Change to B/W mode
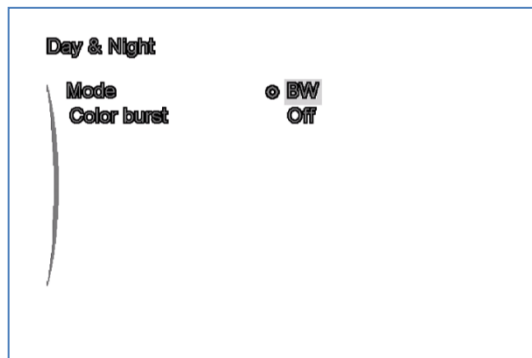
- Color burst: On/Off Color burst

- Mode: Color

  Change to Color mode.
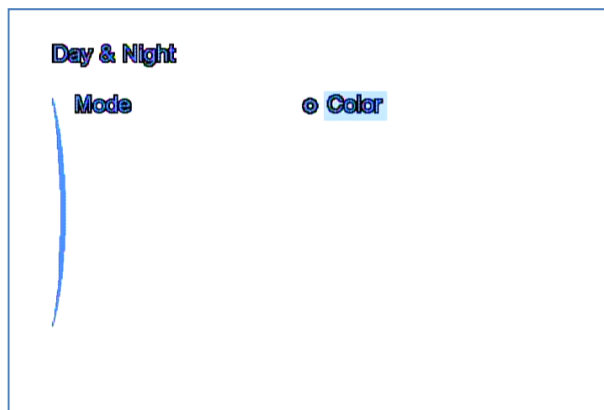
- Mode: Ext

 For external control, the input pin is the PIO 0 on the PCB board.

  i.   Color burst

       On/Off Color burst

  ii. IR Input level

Set Input level (High, Low) to make it work!

iii. Smart IR

Set 0~6 to adjust the curve of brightness to prevent overexposure/underexposure of image blocks.

iv. IR CUT Output

Via GPIO 3, output high/low level for IR-CUT use.

- Mode: Ext

When reaching assigned brightness, change to BW.
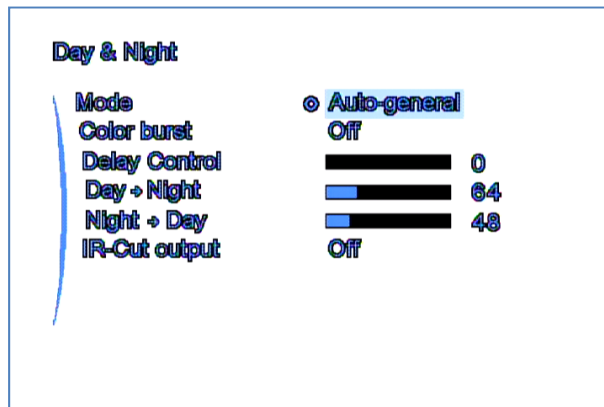
i. Color burst

On/Off Color burst

ii. Delay control

Delay time for changing Day/Night mode (0~255)

iii. Day→Night

Set the start point from Color mode to BW mode.

Day->Night value must be greater than Night->Day value.

iv. Night→Day

Set the recovery point from BW mode to Color mode.

Day->Night value must be greater than Night->Day value.

v. IR CUT Output

By GPIO 3, output high/low level for IR-CUT use. Mode (High/Low/Off)

2. Digital Slow Shutter
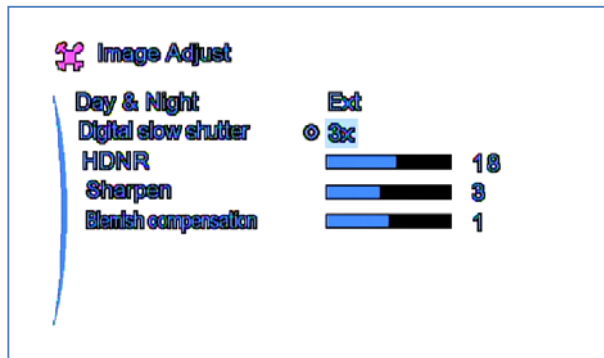
1/100000、1/10000、1/5000、1/2000、1/500、1/240、1/120、1/60、

AUTO、2x、3x、4x、5x、8x、16x、32x、64x、128x、256x、512x

To extend the photoperiod in order to enhance the sensitization. It will

help to have brighter images in a condition with lack of light.

Slow shutter OFF   Sow shutter ON

3. HDNR

HDNR (0~32)

HDNR OFF： Noisy   HDNR On/Auto Clearly

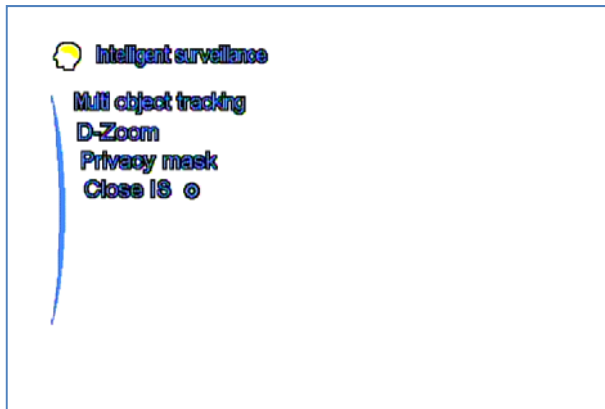4. Sharpen

0~7, The higher value, the stronger effects.

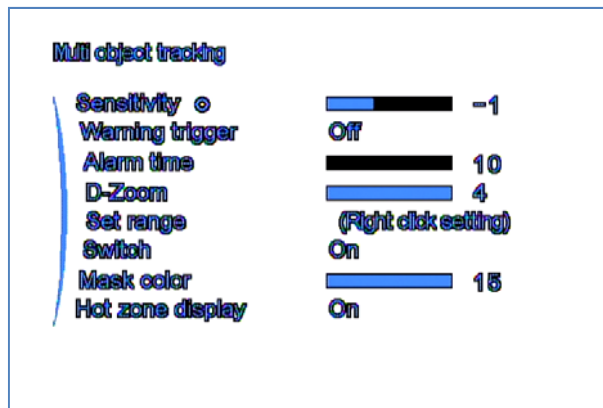5. Blemish compensation

Set the effect of compensation(0-2)

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(4) Intelligent

Intelligent surveillance setting

1. Multi object tracking

■ Sensitivity

(-4~4)

■ Warning trigger

Level: (High/Low/Off)

An alarm outputs when a motion is detected. Default output port: PIO2.

■ Alarm time

(0~3600)

■ D-Zoom

Set Zoom factor (1.0~4.0)

■ Set Range

Motion detection area set up (Click Right button to set up / click setup to remove the area and Exit).

■ Switch

ON/OFF

■ Mask Color

(0~15)

■ Hot Zone Display

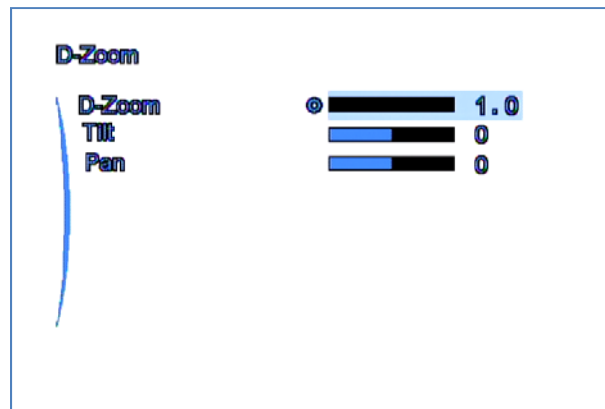ON/OFF, Symbol will be shown on the upper left corner of Live view.
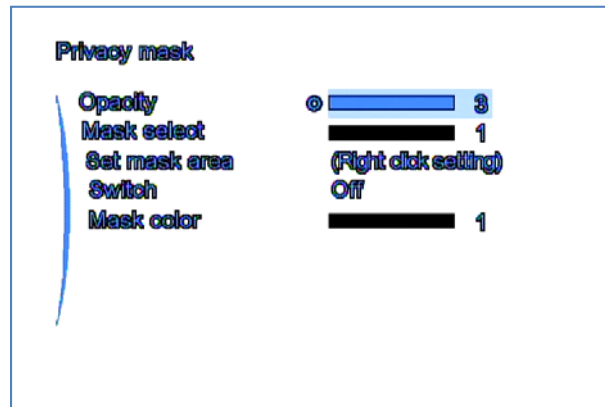

Normal   Multi object tracking On

2. D-Zoom

■ D-Zoom: Set Zoom factor(1.0~4.0)

■ Tilt: When using D-Zoom, adjust the tilt degree, value (-10~10)

■ Pan: When using D-Zoom, adjust the pan degree, value (-10～10)
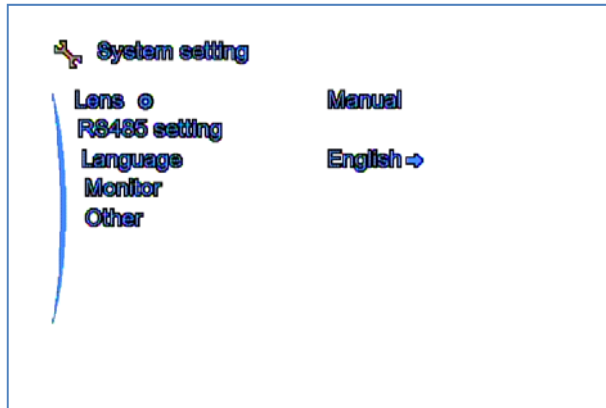
3. Privacy Mask

- Opacity

  (0~3), Mask transparency setting.

- Mask Select

  (1~8), Select and set up the mask, maximum 8.

- Set Mask Area

  Mask range set up (click Right button to set up)

- Switch

  ON/OFF

- Mask Color
  (0~65535) , Masks color setting

- Symbol will be shown on the upper left corner of Live view.

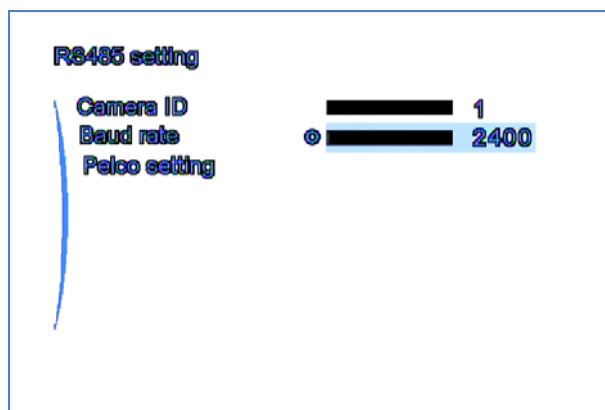4. Close IS

- Close intelligent function

(5)System setting

System setting

1. Lens

   ■ Mode: To select lens type, DC in door/ DC outdoor/ Manual.

   ■ Brightness: only be activated with DC IRIS (-50~50).

   ■ Aperture speed: only available for Lens of DC IRIS (0-7)

   ■ Type: set lens type (0~4)

2. RS485

   ■ Camera ID: Pepco ID (0~255)

   ■ Baud rate: (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800).

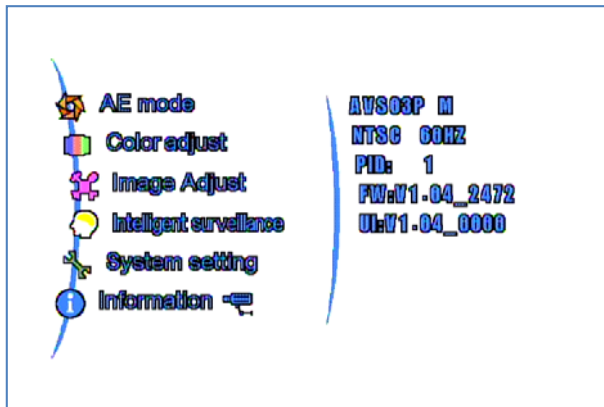3. Language switch (English, Traditional Chinese, português)

4.   Monitor selection

■   Select monitor: LCD／CRT

■   Brightness: set the brightness level(0~37)

5.   Others

■   Mirror: Horizontal/Vertical/Off
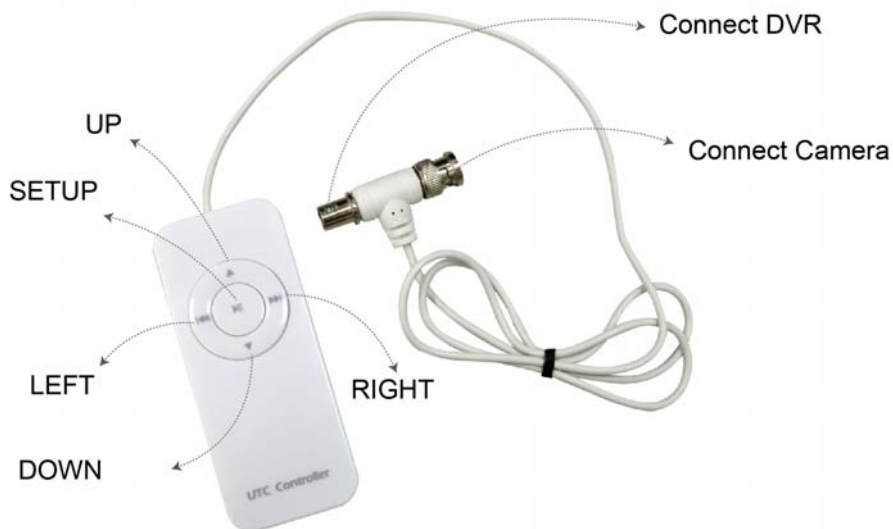
■   Show ID/Icon: OFF/ Show ID/Icon/ Show ID/ Show Icon
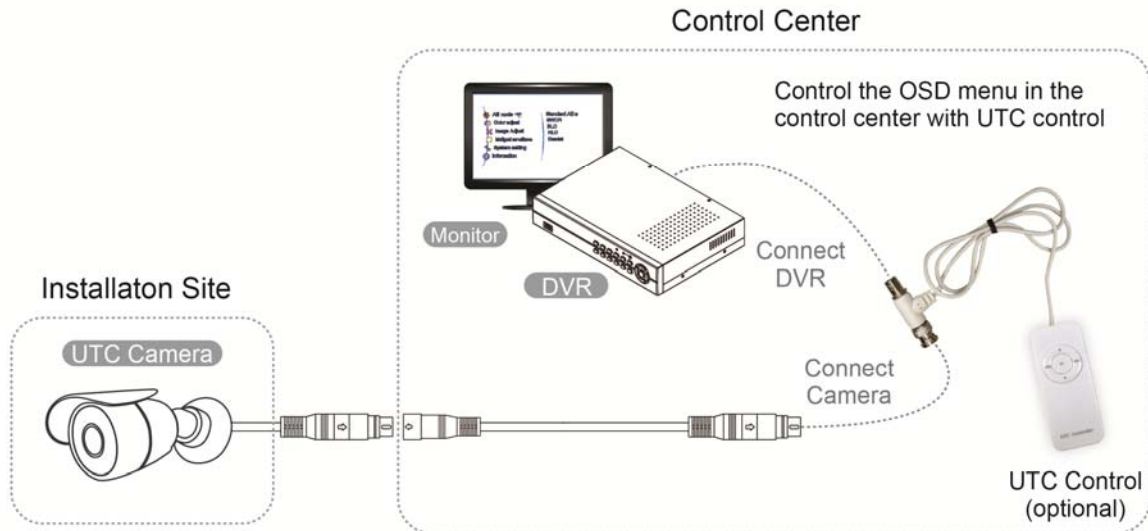
(6)Information

Display Version Information

Attachment A: UTC Controller Installation

UTC Controller (optional)

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