

1000TVL VACRON-P

Color Camera

2014. V2.0

User Manual

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A. FEATURES

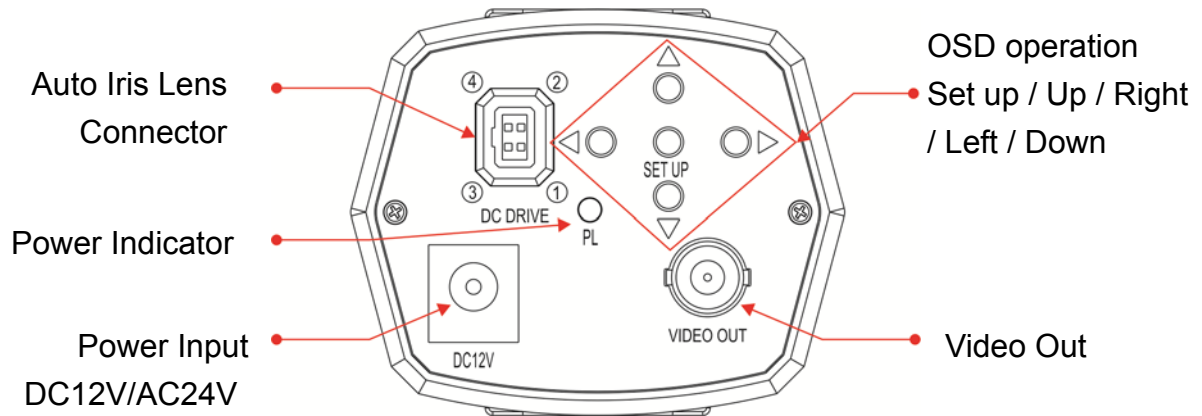
- 1/3" CCD High Solution Optics Double Frequency WDR Color Camera
- High Resolution Color 1000TVL
- 2D/3D Noise Reduction (HDNR)
- Optics Double Frequency WDR(128dB)
- Digital Slow Shutter from x2 up to x512 (Max)
- Adaptive Backlight compensation function (BLC) / Anti-Headlight (HLC)
- e-PTZ (Zoom x 4)
- Privacy Mask x 8 (Color)
- High Contrast Images
- Ideal for Backlight Environment
- Digital Demist Process
- Intelligent IR Exposure (Smart IR)
- Color Rolling Suppression
- UTC / OSD Control

B. Specifications

Video System	NTSC	PAL
Pick Up Element	SONY 1/3" CCD Image Sensor	
Image Signal Process	Digital Signal Processor	
Number Of Pixels	1020 (H) × 508 (V)	1024 (H) × 596 (V)
Picture Elements	Approx. 520K	Approx. 610K
Horizontal Resolution	1000 TVL	
Synchronization	Internal Synchronization	
Scanning System	2 : 1 Interlace	
Minimum Illumination	0.001 LUX	
S/N Ration	Max. 63 dB	
OSD Menu	Build-in Multi-layers semi-opacity Menu Setting	
Camera Title/ Function Enable Display	Camera Title/ Function Enable Display	
Wide Dynamic Range	WDR (128dB)	
Digital Slow Shutter	X2 ~ X512	
Backlight Compensation Function (BLC)	HLC / BLC / off	
Automatic Gain Control (AGC)	on	
Digital Noise Reduction (DNR)	2D/3D-NR	
Digital Demist Process	on / off	
Digital Zoom	Zoom 4X	
Digital Day & Night Mode (D & N)	Color / B&W / Auto-Progressive / Auto-General / External input	
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	
Video Signal Output	1 Vp-p standard video signal output, 75 Ohms	
Operation Temperature	- 5°C ~ +40°C	

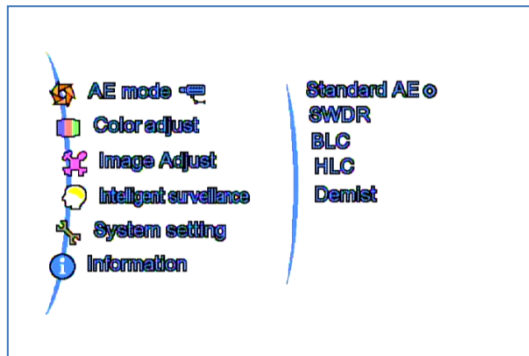
C. Structure of Product

Box Camera

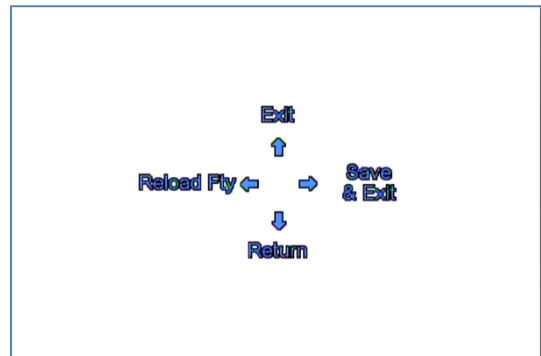


D. OSD Operation

■ Main menu

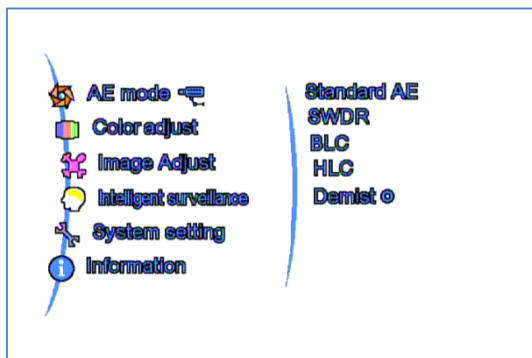


■ OSD Setup

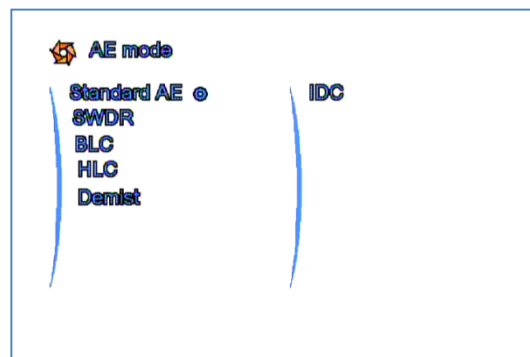


- Setup: 1.Click one time to enter the Main menu
Click twice (Δ to Exit OSD menu, $\triangleleft$ Reload Fty ,
 ∇ Return to Previous page, $\circ$ Exit & Save)
- Δ UP / ∇ Down: Selection.
- $\triangleleft$ Left / $\triangleright$ Right: Enter & Return.

(1.1) AE Mode Setting

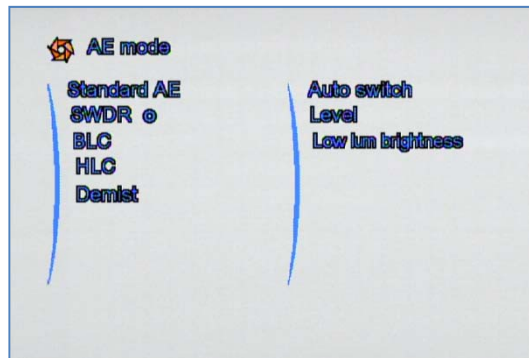


(1.2) Standard AE



Under Standard mode AE, symbol  will be shown on the upper left corner of Live view.

(1.3) SWDR



- Auto switch: Set to Auto/On
- Level: Value 0~10
Set the ratio of WDR. Small value will have more ratio for the outdoors; in the other hand, big value will have more ration for the indoors.
- Low lum brightness: Value 0~40, the brightness in the dark area will depend on the value.
-  icon will appear on the top-left corner.



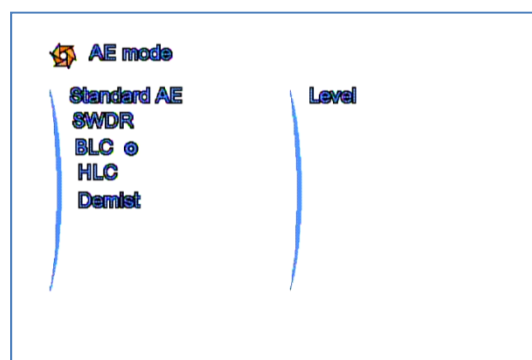
Standard



SWDR

(1.4) BLC

Back light compensation



- Level: (Auto, Low, Middle, High)

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



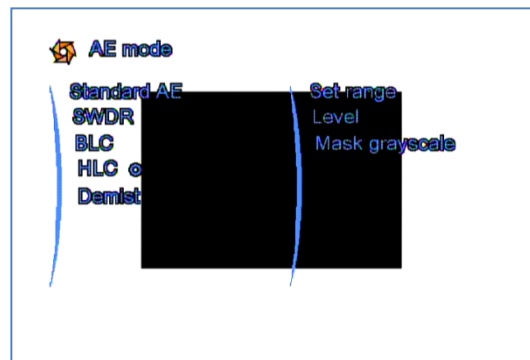
Normal



Back light compensation

(1.5) 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

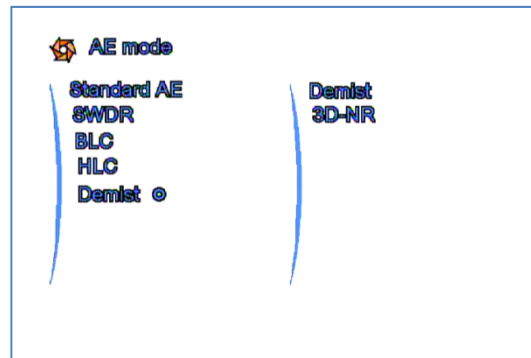


HLC on

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.

(1.6) 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



(Heavy Fog) Demist Off

Demist activated



(Middle Fog) Demist Off

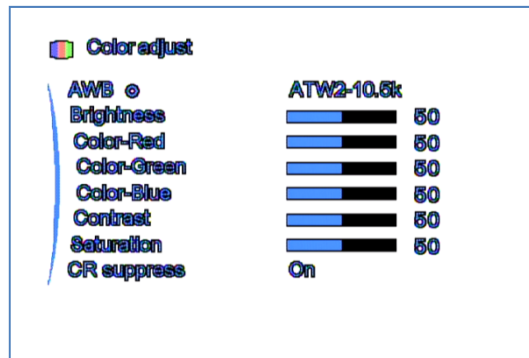


(Light Fog) Demist Off



2. Color Adjust

Color adjust settings



(2.1) White Balance

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

(2.2) Brightness

0~99

(2.3) Color-Red

Red (0~99)

(2.4) Color-Green

Green (0~99)

(2.5) Color-Blue

Blue (0~99)

(2.6) Contrast

0~99

(2.7) Saturation

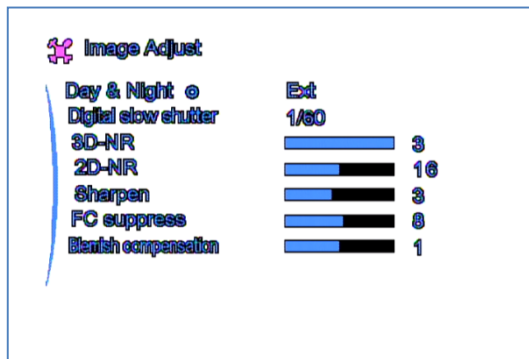
0~99

(2.8) CR suppress

ON/OFF

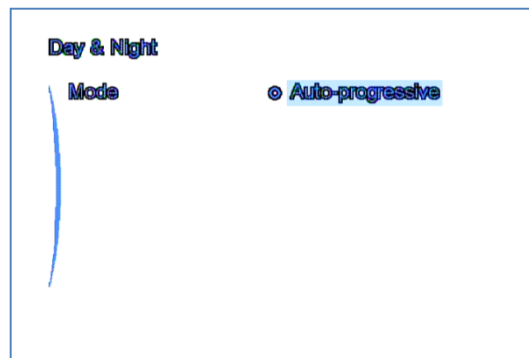
3. Image Adjust

Image adjust settings

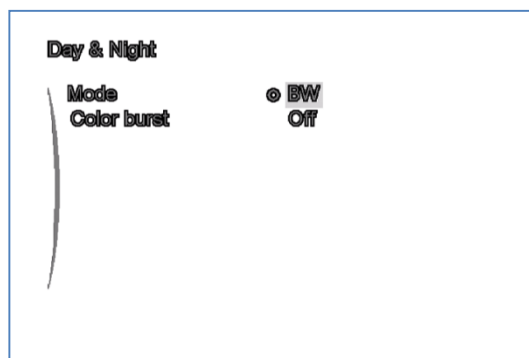


(3.1) Day & Night

- Mode: Auto-Progressive
Like human eyes

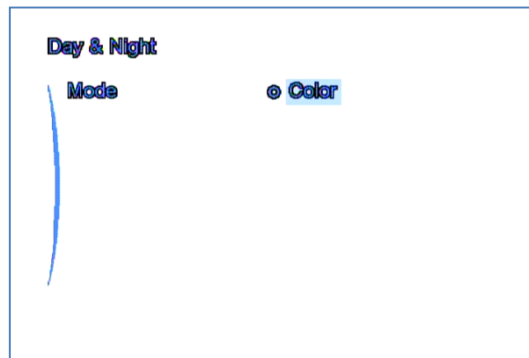


- Mode: B/W
Change to B/W mode

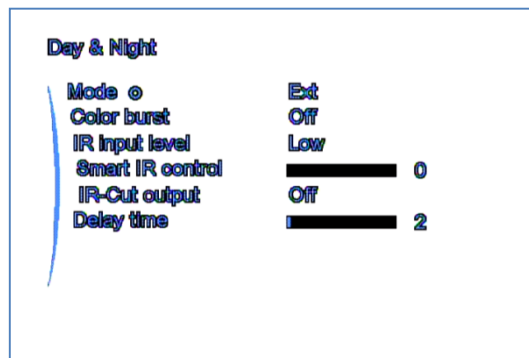


- Color burst: On/Off Color burst

- Mode: Color
Change to Color mode.

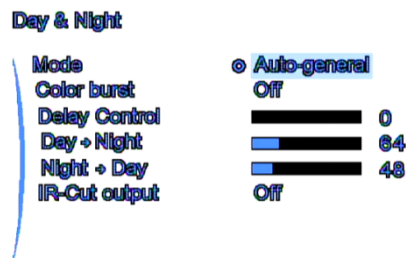


- Mode: Ext
For external control, the input pin is the PIO 0 on the PCB board.



- Color burst
On/Off Color burst
- IR Input level
Set Input level (High, Low) to make it work!
- Smart IR
Set 0~6 to adjust the curve of brightness to prevent overexposure/underexposure of image blocks.
- IR CUT Output
Via GPIO 3, output high/low level for IR-CUT use.

- Mode: Auto-general
When reaching assigned brightness, change to BW.



- Color burst
On/Off Color burst
- Delay control
Delay time for changing Day/Night mode (0~255)
- Day→Night
Set the start point from Color mode to BW mode.
Day->Night value must be greater than Night->Day value.
- Night→Day
Set the recovery point from BW mode to Color mode.
Day->Night value must be greater than Night->Day value.
- IR CUT Output
By GPIO 3, output high/low level for IR-CUT use. Mode
(High/Low/Off)

(3.2) 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

To extend the photoperiod in order to enhance the sensitization. It will help to have brighter images in a condition with lack of light.



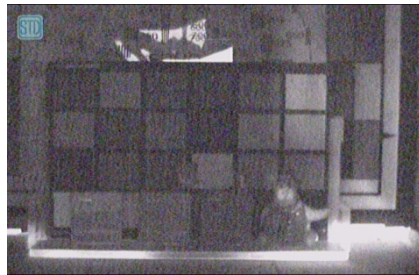
Slow shutter OFF



Slow shutter ON

(3.3) 3D DNR

(0~3), To reduce image Noise



DNR OFF : Noisy



3D-DNR On/Auto Clearly

(3.4) 2D DNR

0~32

(3.5) Sharpen

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

(3.6) FC suppress

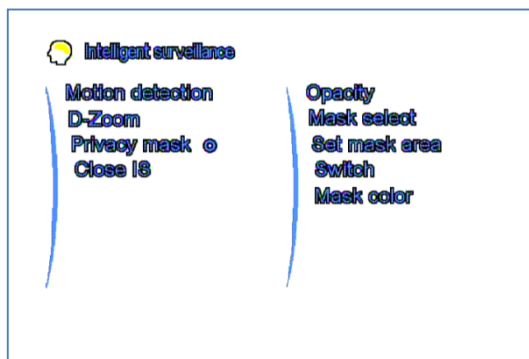
0~15, The higher value, the stronger effects.

(3.7) Blemish compensation

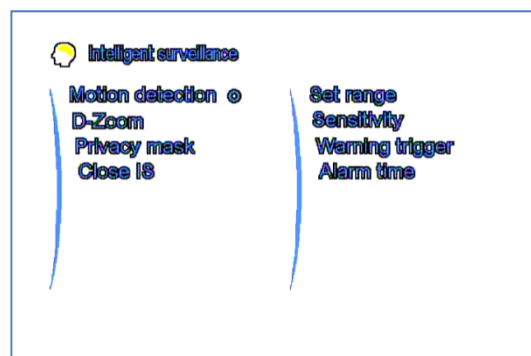
Set the effect of compensation(0-2)

4. Intelligent

Intelligent surveillance setting



(4.1) Motion Detection



- **Set Area**
Motion detection area set up (Click Right button to set up /

click **SETUP** to remove the area and Exit).
- **Sensitivity**
(-2~2), The higher number, the more sensitive.
- **Warning Trigger**
Level: (High/Low/Off)
An alarm outputs when a motion is detected. Default output port:
PIO2.
- **Warning Seconds**
(Value: 0-65536 /sec)
Timer of alarm output, when a motion is detected.

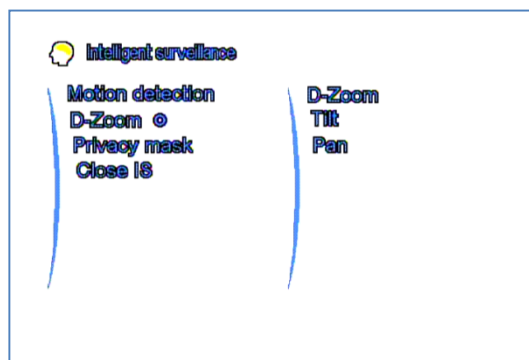


Live view



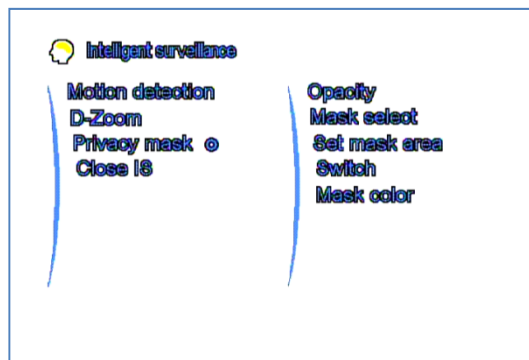
Motion detection area set up(Red zoom)

(4.2) 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)

(4.3) Privacy mask



- Opacity
(0~3), Mask transparency setting.
- Mask select
(1~8), Select and set up the mask, maximum 8.
- Set mask range
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.



Live view



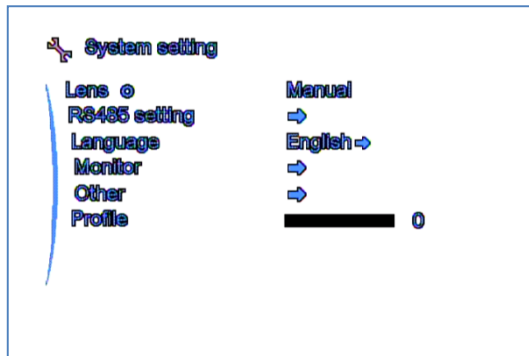
Privacy mask area set up (Red zoom)

(4.4) Close IS

- Close intelligent function

E. System setting

System setting



(1.1) 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 (0~2)

(1.2) RS485 Set up

- Camera ID: Pepco ID (0~255).
- Baud rate: (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800).

(1.3) Languages

- Language switch (English, Traditional Chinese, português)

(1.4) Monitor selection

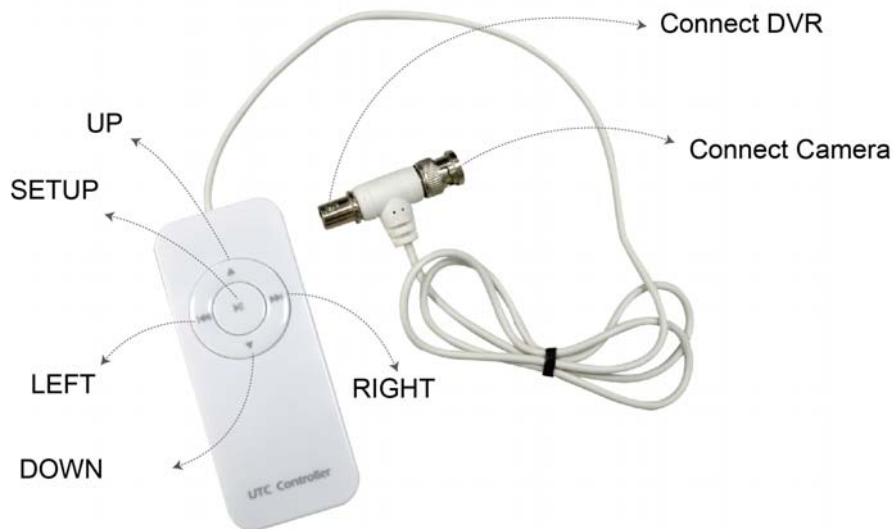
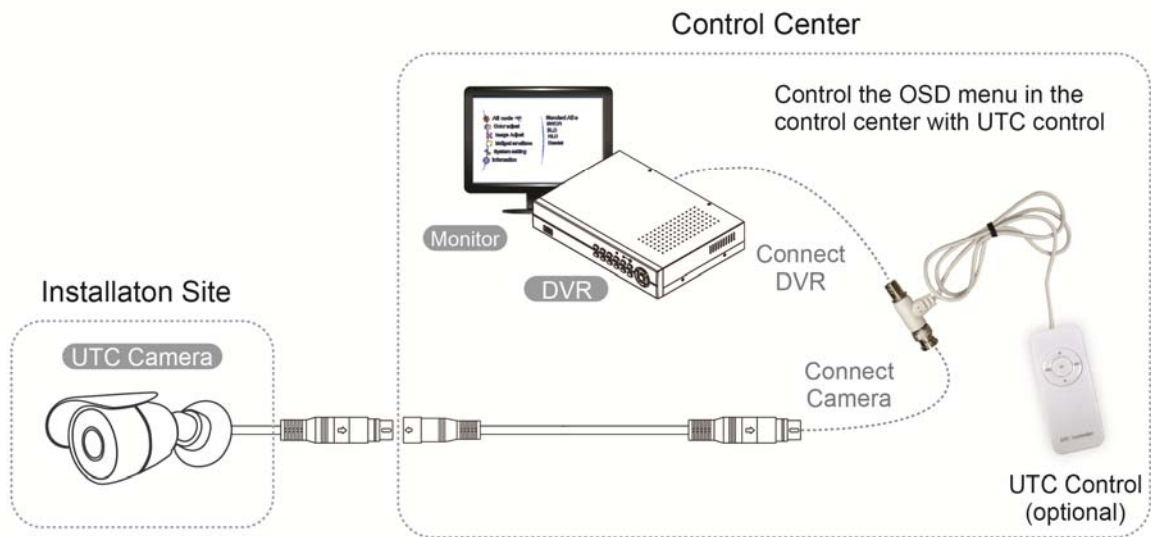
- Select monitor: LCD/CRT
- Brightness: set the brightness level(0~37)

(1.5) Others

- Mirror: Horizontal/Vertical/Off
- Show ID/Icon: OFF/ Show ID/Icon/ Show ID/ Show Icon

F. Attachment A: UTC Controller Installation

UTC Controller (optional)





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