



Intelligent Wide Dynamic High Definition Color Camera

2013. V1.0

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. Product Features

1. High Sensitivity 1/3" CCD WDR Color Camera
2. High Resolution Color up to 600TVL
3. 2D/3D Noise Reduction (HDNR)
4. Super Real WDR Range/Digital WDR Function
5. Digital Slow Shutter from x2 up to x256 (Max)
6. Back Light Compensation(BLC) / High light Control(HLC)
7. E-PTZ (Zoom x 2) / Digital Zoom x 256
8. Editable Privacy Mask x 8 (Color)
9. Light Detection On Human Face With Dynamic Light Compensation
10. Human Face Detection With Auto Zoom In Feature
11. Multiple-objects auto tracking, detection, and image adjust.
12. Human faces detection and display.
13. Process The Images With High Quality Demisted Surveillance system
14. Night Intelligence IR Detection/ Auto Adjustment On Exposure (Smart IR)
15. Multi-Language OSD Control
16. Motion detection

B. Specifications

Video System	NTSC	PAL
Pick Up Element	1/3" 760H CCD Image Sensor	
Image Signal Process	Digital Signal Processor	
Number of Pixels	768 (H) x 494 (V)	752 (H) x 582 (V)
Picture Elements	Approx. 380K	Approx. 440K
Horizontal Resolution	Color: 600 TVL	
Power Supply	DC +12V	
Power Consumption	180 mA	
Synchronization	Internal Synchronization	
Scanning System	2 : 1 Interlace	
Minimum Illumination	0.01 Lux	
S/N Ration	Max. 52 dB (AGC Off,)	
OSD Menu	Build-in Multi-layers semi-opacity Menu Setting	
Camera Title/ Function Enable Display	Camera Title/ Function Enable Display	
Wide Dynamic Range	WDR real wide dynamic rang compression	
Digital Slow Shutter	X2 ~ X256	
(BLC) Backlight Compensation Function	HLC / BLC / off	
(AGC) Automatic Gain Control	on / off	
(DNR) Digital Noise Reduction	2D/3D-NR	
Digital Demist Process	On / Off	
Digital Zoom	Zoom 256X	
(D & N) Digital Day & Night Mode	on (Black & White) / Auto / External input / off (color)	
Human faces detection zoom in	on / off	
Multiple objects tracking zoom in	on / off	
Human faces display	on / off	
Face Detection	on / off	
Face Metering Compensation	on / off	
Motion Detecting Function	on / off	
Flash Suppression Function	on / off	
Privacy Masking Function	on/off (8 Editable area)	
Automatic Iris Control	DC Lens drive	
Blemish Compensation	Static & Dynamic (4096 points)	
Image Quality Adjustment	Brightness / Contract / Saturation / Sharpness / Hue	
Auto White Balance	AWB / ATW	

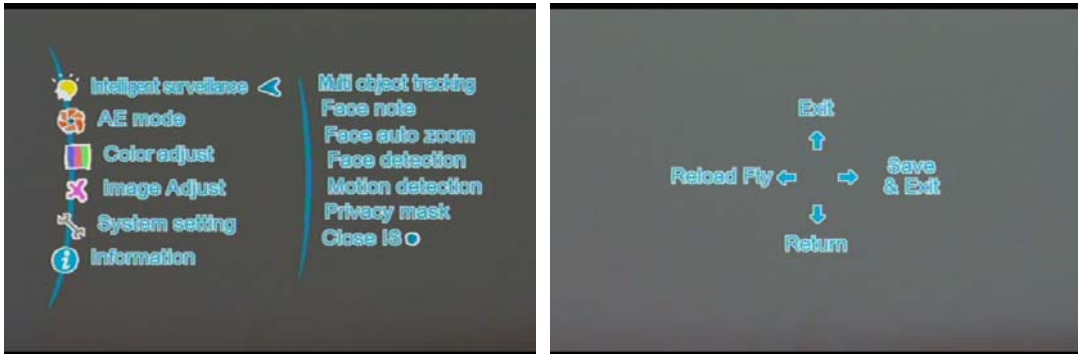
Language	English / Simplified Chinese / (support multi-language)
Electronic Shutter Speed	Auto:1/60(50)S TO 1/100,000 S
	Manual: 1/60(50)S, FL1/120(100)S, 1/250S, 1/500S, 1/1,000S, 1/2,000S, 1/4,000S, 1/10,000S
Video Signal Output	1 Vp-p standard video signal output, 75 Ohms
Operation Temperature	- 5°C ~ +40°C

C. OSD Functions

MENU	Function	Remark
Intelligent surveillance	1. Multiple- objects tracking	Please refer to OSD operation F-1 Intelligent surveillance
	2. Multiple face display	
	3. Face auto zoom	
	4. Face detection	
	5. Motion detection	
	6. Privacy mask	
	7. Close IS	
AE mode	1. Standard AE	Please refer to OSD operation F-2 AE mode
	2. SWDR	
	3. BLC	
	4. HLC	
	5. Face AE	
	6. Demist	
Color adjust	1. AWB	Please refer to OSD operation F-3 Color adjust
	2. Brightness	
	3. Color-Red	
	4. Color-Green	
	5. Color-Blue	
	6. Contrast	
	7. Saturation	
	8. CR suppress	
Image Adjust	1. Day & Night	Please refer to OSD operation F-4 Image Adjust
	2. Digital slow shutter	
	3. 3D-NR 3D	
	4. 2D-NR-1 2D	
	5. 2D-NR-2 2D	
	6. Sharpen	
	7. FC suppress	
	8. Blemish compensation	
System setting	1. Lens	Please refer to OSD operation F-5 System setting
	2. D-Zoom	
	3. RS485 setting RS485	
	4. Language	
	5. Monitor types selection	
	6. Other	
Information	Display the local information	

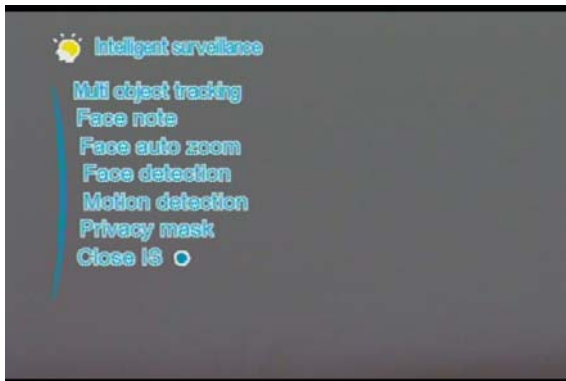
D. OSD operation

Main menu



- Setup: 1. Click one time to enter the Main menu
Click twice (△) to Exit OSD menu, <○ Reload Fty ,
○ Return to Previous page, ○> Exit & Save)
- △ UP / ▽ Down: Selection.
- <○ Left / ○> Right: Enter & Return.

(1) Intelligent



- Press to into OSD.
- Press ○> to into sub-menu.
- Press △ / ▽ : Selection.
- Press <○ : Return.

1. Multiple- objects tracking

- Magnification: Tracking magnification set up when motion detection activated, the greater number, the higher magnification.
- Symbol will show on the left upper corner of monitor.




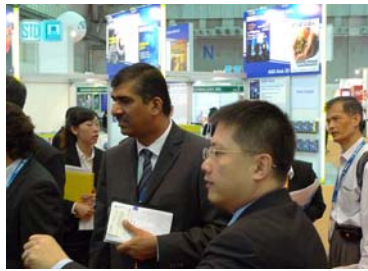
Normal



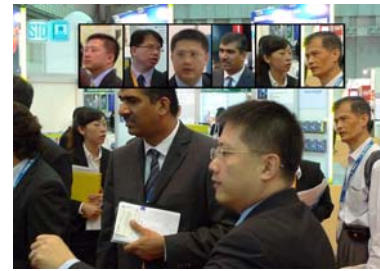
Multiple-objects tracking on activation

2. Multiple face display

- Sensitivity: human faces detection sensitivity set up, the greater number, and more sensitive (0-11)
- The period of displaying time setting: set the displaying time when function activates, the greater number, the longer display.
- Symbol  will show on upper left corner of monitor.




Normal



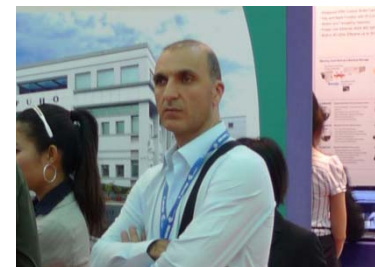
Multiple face display function activated

3. Face auto zoom

- Frame: (ON/OFF) Box up the human faces when human faces are detected .
- Sensitivity : (Value: 0~11) human face detection sensitivity: The higher number, the more sensitive.
- Warning Trigger: Level: (High/Low/Off) Alarm output when human face is detected. Default output port: PIO2.
- Warning Seconds: (Value: 0-65536 /sec) timer of alarm output, when human face is detected.
- Symbol  will be shown on the upper left corner of Live view



Normal




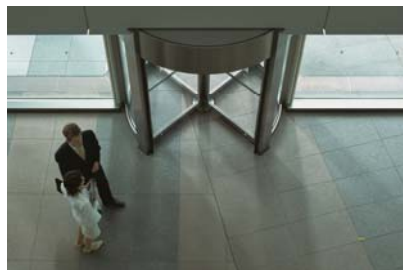
Face auto zoom in

4. Face detection

- Human face detection: ON/OFF
- Frame: (ON/OFF)
Box up the human faces when human faces are detected .
- Sensitivity : (Value: 0~11) human face detection sensitivity:
The higher number, the more sensitive.
- Warning Trigger: level: (High/Low/Off)
Alarm output when human faces are detected. Default output port: PIO2.
- Warning Seconds: (Value: 0-65536 /sec) timer of alarm output, when human face is detected.

5. Motion

- ON/OFF: Motion detection
 - Set Area:
Motion detection area set up(Click Right button to set up / click  to remove the area and Exit).
 - Sensitivity : (-2~2)
The higher number, the more sensitive.
1. Warning Trigger:
Level: (High/Low/Off)
An alarm outputs when a motion is detected. Default output port: PIO2.
 2. Warning Seconds:
(Value: 0-65536 /sec)
Timer of alarm output, when a motion is detected.



Live view



Motion detection area set up(Red zoom)

6. 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



Live view

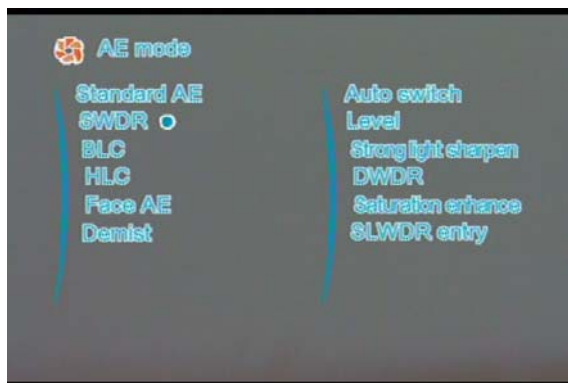







Privacy mask area set up (Red zoom)

7. Close IS


- Close intelligent function

(2) AE Mode setting




- Press  to into OSD.
- Press  to into sub-menu.
- Press  /  : Selection.
- Press  : Return.

1. Standard AE

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

2. SWDR

- Level: (Setting value: 0-8), smaller value will make outside image brighter, the higher value will make image brighter.
- DWDR: (On/Off) enable the digital WDR with the double scan WDR will make images brighter.
- Saturation Enhance.
Saturation set up.
- Star Light WDR
WDR enhance.
- Symbol  will be shown on the upper left corner of Live view.




Standard



SWDR

3. BLC

Back light compensation

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



Normal

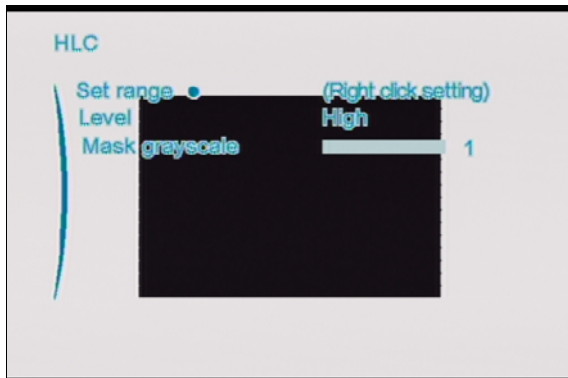







Back light compensation

4. 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)



- Press  to into OSD.
- Press  to into sub-menu.
- Press  /  : Selection.
- Press  : Return.




Normal




HLC on


Detection are (area marked in Red)

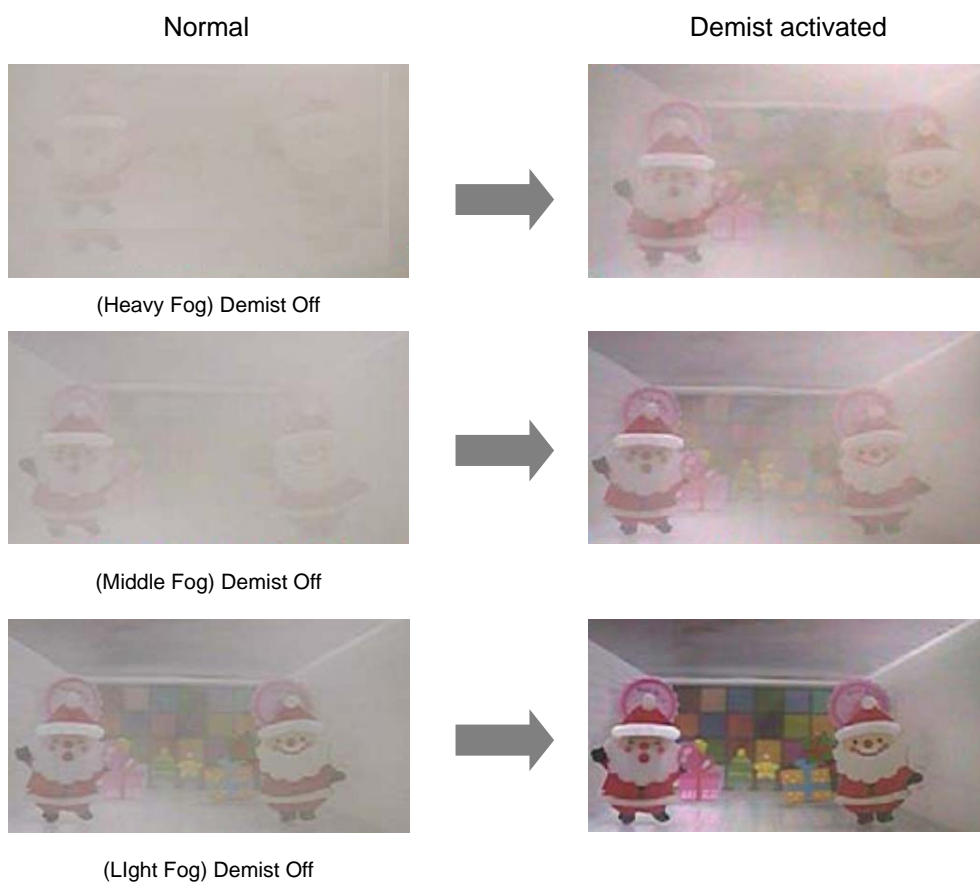
- Level : Low, Middle, High.
- Mask Grayscale: (Value: 1-6) Mask color set up, the color is closer to white when the value is higher.
- Symbol  will be shown on the upper left corner of Live view.

5. Face AE

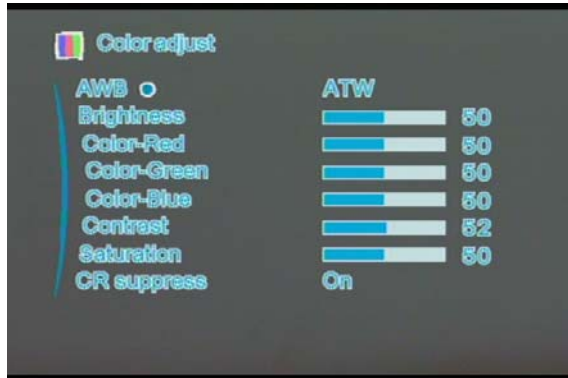
- Frame: (ON/OFF) Box up the human faces when human faces are detected .
- Sensitivity : (Value: 0~11) human face detection sensitivity:
- The higher number, the more sensitive.
- Symbol  will be shown on the upper left corner of Live view.






6. Demist

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



(3) Color Adjust








- Press  to into OSD.
- Press  to into sub-menu.
- Press  /  : Selection.
- Press  : Return.

1. WB
AWB / ATW / F/A / U30 / CWF / D50 / D65 / D75.
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

(4) Image adjust



- Press  to into OSD.
- Press  to into sub-menu.
- Press  /  : Selection.
- Press  : Return.

1. Day & Night

- Mode: Auto-General

When the condition light value matches the setting value, it will switch to mode BLACK and WHITE automatically.

(1) Color Burst

ON/OFF only be activated under mode BW and mode Auto-General.

(2) Delay Control

(0~255)

Day and Night switch timer set up. Only be activated under mode Auto-General.

(3) Day to Night: (Value: 0-255). "Only" be activated under mode Auto-General.

The value of Day to Night switches point setting (Color to BW switch). The Day to Night switch point "MUST" be latter than Night to Day recovery point.

(4) Night to Day: (Value: 0-255). "Only" be activated under mode Auto-General.

The value of Night to Day switch point set up (BW to Color). The Night to Day recovery point "MUST" be latter than the Day to Night switch point.

(5) IR CUT output

LEVEL: (High/Low/Off) only be activated under mode Auto-General. A high/low signal generated by GPIO3 in order to provide a standard point for IR-CUT switching.

- Mode: External input
External control, input port: PIO0, Caution: Please go to the menu System Setting→IR Voltage Level input setting →set up the value of input voltage level.
- Mode: Color
Color mode only
- Mode: BW
BW mode only
- Mode: Auto-Progressive

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



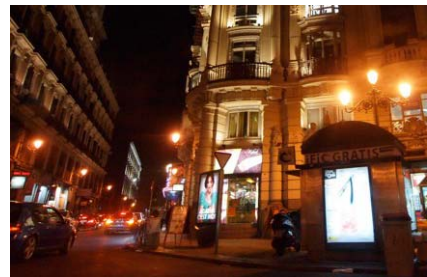
Slow shutter ON

3. 3D DNR

(0~3), To reduce image Noise



DNR OFF : Noisy



3D-DNR On/Auto Clearly

4. 2D DNR1

0~32

5. 2D DNR2

0~32

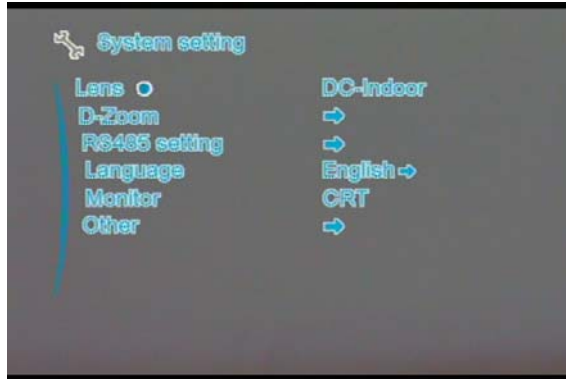
6. Sharpen






0~32

The higher value, the stronger effects.

7. FC suppress
0~15
The higher value, the stronger effects.
8. Blemish compensation

(5) System setting



- Press  to into OSD.
- Press  to into sub-menu.
- Press  /  : Selection.
- Press  : Return.

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)
2. D-Zoom
 - Digital Zoom : 1~256.
 - Vertical moving: vertical move while Digital zoom in.
 - Horizontal moving: horizontal move while Digital zoom in.
3. RS485 Set up
 - Camera ID: Pelco ID (0~255).
 - Baud rate: (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800).
4. Languages
language switch (English, Traditional Chinese, Simply Chinese)
5. Monitor selection
LCD/CRT
6. ID/Icon display
Pelco ID display and Icon display



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