DIGITAL
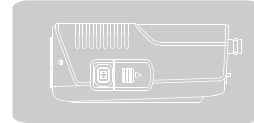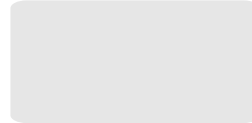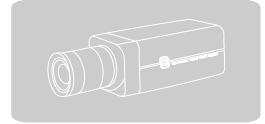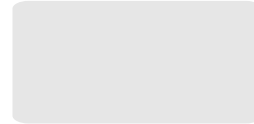**PIXEL**®
SYSTEM
FROM PIXIM

Ultra Wide Dynamic Standard Camera
User's Manual

1.Description

SA series Ultra WDR cameras are new, CCTV cameras which adopt Pixim's innovative □SEAWOLF□ image sensor chip based on Digital Pixel System □ technology. The resolution is up to 690TVL-E and the industry-leading wide dynamic range is up to 120dB. This WDR ensures brilliant image quality under any lighting environment. The image and color quality is also excellent in low illumination environments. This camera series is a ultra wide dynamic range camera in the real sense using digital sampling which can't be paralleled by average wide dynamic range cameras using older generation CCD imagers. The application of 3D digital noise reduction technology ensures higher S/N, which efficiently reduces the digital storage and transmission data saving system cost. Fashionable and professional exterior design and special all-in-one all directional bracket, makes round-the-clock surveillance easy and convenient.

A   B

2. Notice

1.Use the Appropriate Power Supply
   The input power will be DC12V/AC24V. Be sure to connect it to the appropriate power. Wrong connection may cause malfunction and/or damage to the video camera.

2.Do not attempt to disassemble the camera.
   To prevent electric shock, do not remove screws or covers. There are no user serviceable parts inside. Ask a qualified service person for servicing.

3.Handle the camera with care.
   Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

4、**Do note use strong or abrasive detergents when cleaning the camera body.**
   Use a dry cloth to clean the camera when dirty. In case the dirt is hard to remove. Use a mild detergent and wipe gently.

5、**Do not attempt to aim the camera at the sun**
   Do not attempt to aim the camera at the sun or other extremely bright objects no matter if the camera works or not,or it will damdage the DPS Sensn.

6、**Do not put the camera in a place with interference.**
   When this camera is installed near the equipment like wireless communication device which emits strong electromagnetic field, some irregularity such as noise on monitor screen may happen.

3.Features

"SEAWOLF" Image Sensor

This camera adopts innovative DPS(Digital Pixel System) image sensor and image processing technology. The sensor picks up details from each pixel based on hundreds of samples per video frame. vs CCD's limited exposures, to ensure wider dynamic range than is possible with analog CCD. The image quality is even brilliant under extreme lighting conditions.

Ultra Wide Dynamic Range

The captured wide dynamic range is 102dB typical and can reach 120dB maximum.

High Effective Resolution

Image resolution as high as 690TVL-E, offering enhanced horizontal and vertical resolution useable in existing as well as new CCTV systems.

3D Noise Eliminating Technology

Adopts Pixim fully digitalized 3D noise reduction technology to minimize noise, extending DVR storage by 30%+.

Low illumination working capability

0.1Lux low illumination (color)

OSD Menu

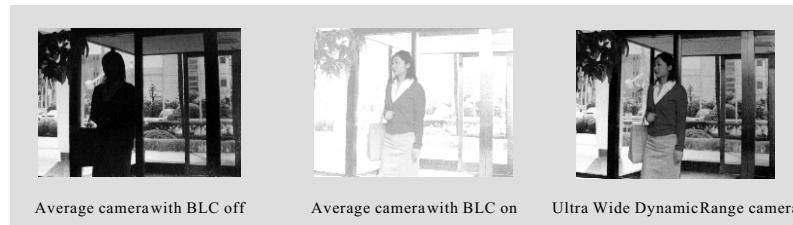Powerful OSD menu operation function, allows for setting of various functions.

DC12V/AC24V Dual Voltage

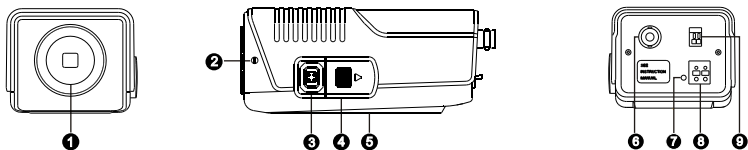Compatible for DC12V and AC24V voltage, which can shift to the correct mode as per the power input.

Auto D/N shift mode

Adopt color mode in day, because the light is enough in day; at night the illumination is lower which need higher sensitivity and better image quality, so it change to B/W mode automatically.

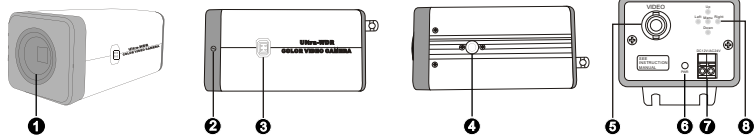Comparison of Wide Dynamic Range camera and average camera

Average camera with BLC off   Average camera with BLC on   Ultra Wide Dynamic Range camera

4.Parts Instruction

A

1. CS mount lens adapter
2. Back Focal LengthFixing Screws
9.RS-485 control
3.Auto Iris Lens Interface
4.OSD Menu Button
5. Bracket Fixing Hole
6.Video Out
7.PWR: Power Indicator LED
8. Power Input

B

1. CS mount lens adapter
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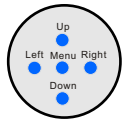

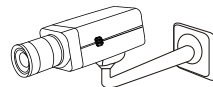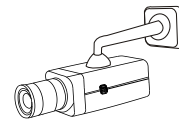| NO.	DC Drive
1	Control −
2	Control +
3	Drive +
4	Drive −

Auto Iris Interface Definition

A

B

Camera Installation

This camera can be installed by brackets from both upside and bottom, fixed the bracket on the wall by screw or other location.
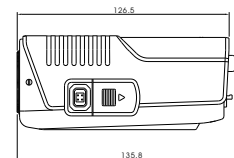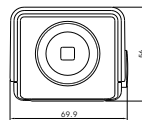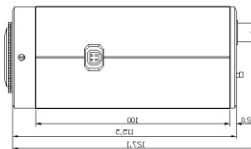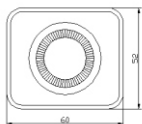

Installation from bottom   installation from upside

5. Size (Unit:mm)

A

B

OSD Menu Setup

ENTER : Menu button for choice

Move up and down by up and down button

Move horizontally or modify parameter by left and right button

6.OSD Menu Control

```
                    CAMERA SETUP
WDR CONTROL      MEDIUM (LOW/NORMAL/MEDIUM/HIGH)
BLC              OFF      (OFF/ON)
WHITE BALANCE    ATW      (ATW/AWB)
AGC              NORMAL (LOW/NORMAL/HIGH)
LENS SELECT      DC       (MANUAL/DC)
FLUORESCENT      OFF      (OFF/CRR/CRR2)
D/N CONTROL      AUTO     (OFF/AUTO/GPIO)
LANGAGE SELECT   ENGLISH (ENGLISH/CHINESE)
SAVE             DEFAULT (CANCEL)
```

```
WDR ZONE SELECT:
             NORMAL METER PRESETS

PRESETS     WD NROMAL      WD NROMAL/SAFE AREA/ATM/LOW 1/3
PRE         SAVE           CANCEL
```

*Specialists press "Left, Right, Left, Right, Down" button enter superior menu.

WDR Control:

Press Enter to show the menu, move the cursor to WDR Control, set MEDIUM, NORMAL, LOW, HIGH by left and right button; choose the setting for WDR in accordance with the lighting condition, set High in strong lighting contrast to realize higher quality image.

WDR ZONE SELECT: WD NROMAL/SAFE AREA/ATM/LOW 1/3.

BLC:

move to BLC by Up and Down button, set BLC by Left and Right button: On and Off.

WHITE BALANCE:

Move to White Balance by Up and Down button, set White balance by Left and Right button: AWB: Auto White Balance; ATW: Auto Tracking White Balance. The color's temperature are different in different lighting condition, The color's temperature changes in different lighting condition, so the white color in video image changes if the lighting condition changes. AWB means cameras can compensate color temperature automatically. In some special environment, in order to keep the same color temperature, ATW setting can keep a fixed color temperature

AGC:

Move cursor to AGC by Up and Down button, set AGC by Left and Right Button as : NORMAL, LOW and HIGH. Setting AGC is better for cameras to work in wider lighting range, if the illumination is low, can set AGC high to rise the sensitivity of cameras.

LENS SELECT:

Move cursor to LENS SELECT, set LENS SELECT by Right and Left button as :
MANUAL,DC:DC Automatically. MANUAL FOR MANUAL IRIS LENS, DC for
AUTO IRIS LENS.

FLUORESCENT:

Move cursor to FLUORESCENT by Up and Down button, set by Left and Right button
as: OFF, CRR2: Color Rolling Restrain. Cameras output color roll ing image under
fluorescent lamp, CRR can restrain colorrolling, keep the image stable.

LANGAGE SELECT:

Move cursor to LANGAGE SELECT by Up and Down button, set by Left and Right
button as : ENGLISH;CHINESE.

D/N Control:

Move cursor to D/N Control by Up and Down button, set D/N by Left and Right button
as: OFF; Auto;GPIO: External Control; On. The illumination is very low at night, so
we need to rise the sensitivity and improve imaging quality, then we can get better
image quality. Set D/N in accordance with different actual need.

SAVE&EXIT:

Move cursor to SAVE&EXIT by Up and Down button, set by Left and Right button
as : SAVE&EXIT;DEFAULT,CANCEL.

7.Technical parameter:

Technical parameter:			A-1	A-2	B-1	B-2
Sensor	Sensor		1/3□ DPSSensor			
	Video Format		PAL/NTSC			
	Resolution		690HTVL-E			
	Mini illumination		0.1Lux			
	S/N Ratio		≥50dB（AGC off)			
Menu Control	WDR control		Medium, normal, low,high			
	BLC		ON, OFF			
	AGC		normal, low, high			
	White Balance	Mode	Automatic Tracking WhiteBalance,(ATM)			
		Range	（Auto White Balance）2200~10000 K°			
	D/N		OFF;External Control, Auto; ON			
	SYNC Mode		INTERNAL			
Power	Voltage		DC12V/AC24V	DC12V	DC12V/AC24V	DC12V
	Current		<150mA			
Lens Interface			CS			
Video out			1.0Vp-p/75ohm			
RS-485			✓		— —	
Working Temperature			-10 C° ~50 C°			
Size			136(L) * 56(H) *70(W)		130(L) * 60(H) *50(W)	
Weight			450g		400g	

* Specification is subject to change without prior notice