

HIKVISION



HD-SDI Camera

User Manual

UD.6L0201D1078A01

www.hikvision.com

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual applies to DS-2CC11D3S-IR, DS-2CC51D3S-VPIR.

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

DISCLAIMER STATEMENT

“Underwriters Laboratories Inc. (“UL”) has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL’s Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.

Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the

Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new

equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.



Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into “Warnings” and “Cautions”

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

	
Warnings Follow these safeguards to prevent serious injury or death.	Cautions Follow these precautions to prevent potential injury or material damage.



Warnings

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with AC 24V or DC 12V according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- When the product is mounted on wall or ceiling, the device shall be firmly fixed.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)



Cautions

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.

- Do not touch sensor modules with fingers. If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period, please replace the lens cap to protect the sensor from dirt.
- Do not aim the camera at the sun or extra bright places. Blooming or smearing may occur otherwise (which is not a malfunction), and affect the endurance of sensor at the same time.
- The sensor may be burned out by a laser beam, so when any laser equipment is in using, make sure that the surface of sensor will not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold (the operating temperature shall be $-10^{\circ}\text{C}\sim+60^{\circ}\text{C}$), dusty or damp locations, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for operating environment.
- Keep the camera away from liquid while in use.
- While in delivery, the camera shall be packed in its original packing, or packing of the same texture.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

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1 Introduction

1.1 Product Features

This series of camera adopts high-sensitive sensor and advanced circuit board design technology. It features high resolution, low distortion, and low noise features, etc., which make it extremely suitable for surveillance system and image process system.

The main features of HD-SDI cameras are as follows:

- 2 Megapixel high-performance CMOS sensor
- Clear and detailed image of up to 1080P resolution
- Low illumination: 0.01Lux @ (F1.2,AGC ON), 0 Lux with IR
- IR cut filter auto switch
- Auto white balance, auto gain control, and backlight compensation for different surveillance environment
- Support Digital Wide Dynamic Range (D-WDR) for backlighting surveillance
- OSD menu, parameters are configurable
- Advanced 3-axis design
- Ingress protection level reaches IP66

1.2 Overview

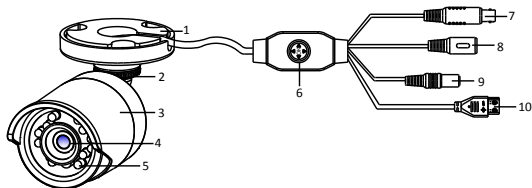


Figure 1-1 Overview of HD-SDI Bullet Camera

Table 1-1 Description

No.	Description	No.	Description
1	Mounting Base	6	OK Button
2	Adjustable Nut	7	SDI Cable
3	Sun Shield	8	Power Cable
4	Lens	9	Auxiliary Video Output
5	IR LED	10	RS485 Cable

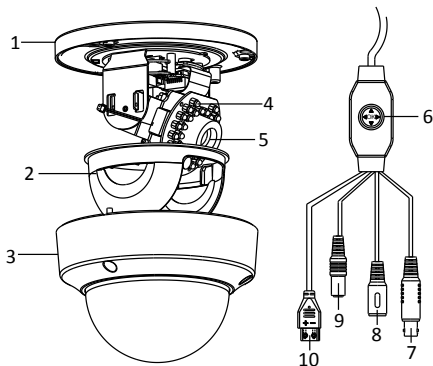


Figure 1-2 Overview of HD-SDI Dome Camera

Table 1-2 Description

No.	Description	No.	Description
1	Mounting Base	6	OK Button
2	Black Liner	7	SDI Cable
3	Lower Dome	8	Power Cable
4	IR LED	9	Auxiliary Video Output
5	Lens	10	RS485 Cable

2 Installation

Before you start:

- Please make sure that the device in the package is in good condition and all the assembly parts are included.
- Make sure that all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Check whether the power supply is matched with your AC outlet to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Please make sure the wall is strong enough to withstand three times the weight of the camera.

2.1 Installation of HD-SDI Bullet Camera

Steps:

1. Drill the screw holes in the wall according to the drill template.

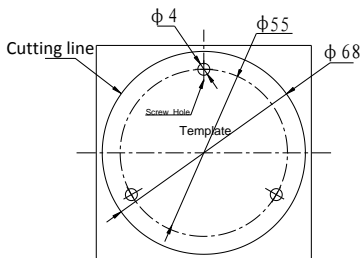


Figure 2-1 Drill Template

2. Route the corresponding cables.
3. Fix the camera to the wall with the supplied P A4 screws.

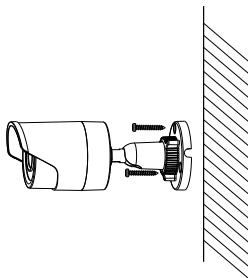


Figure 2-2 Secure the Camera to the Wall

4. Connect the video output cable to the monitor. Connect the power cable to the power supply.
5. Adjust the Lens.
 - 1). Loosen the adjustable nut.
 - 2). Adjust the camera from pan direction which is 0~360°adjustable.
 - 3). Adjust the camera from tilt direction which is 0~90°adjustable.
 - 4). Rotate 0~360° to adjust the lens to the surveillance angle.
 - 5). Tighten the adjustable nut to complete the installation.

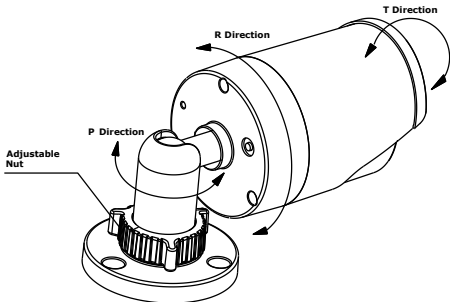


Figure 2-3 3-axis Adjustment

2.2 Installation of HD-SDI Dome Camera

Steps:

1. Drill the screw holes on the ceiling according to the drill template.

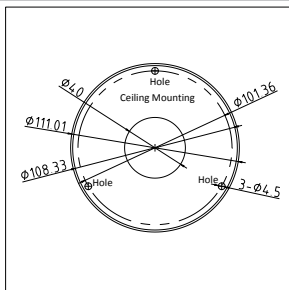


Figure 2-4 Drill Template

2. Loosen the set screws with a hex key (supplied) to remove the lower dome.

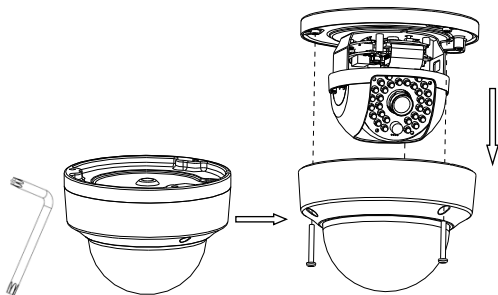


Figure 2-5 Remove the Lower Dome

3. Fix the mounting base on the ceiling with screws.

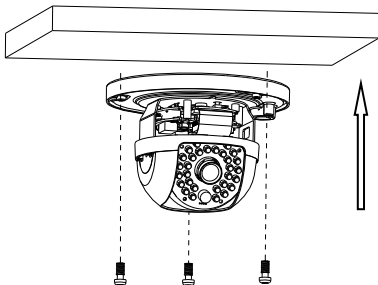


Figure 2-6 Fix the Mounting Base

Note: If required, you can route cables through the side opening on the side of the mounting base.

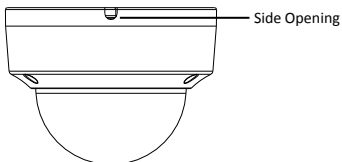


Figure 2-7 Side Opening

4. Loosen the tilt lock screws, adjust the tilting position in a range of 65 degrees, and tighten the tilt lock screws.

5. Rotate the black liner to adjust the panning position in a range of 180 degrees until you get the desired surveillance angle.

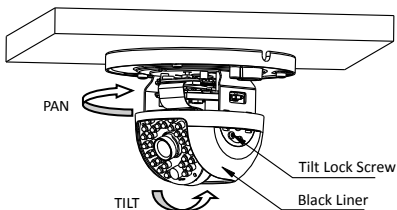


Figure 2-8 Angle Adjustment

Note: As the lens has already been factory adjusted to the best imaging effect, you just need to adjust the panning position and tilting position to get the desired surveillance angle.

6. Reinstall the lower dome and tighten the screws.

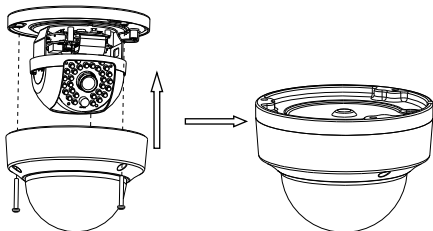


Figure 2-9 Lower Dome Reinstallation

3 Menu Description

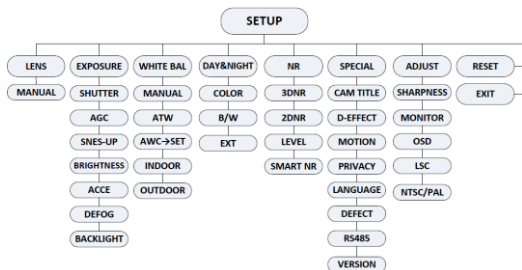


Figure 3-1 Main Menu Overview

Notes:

- The **OK** button on the cable is used to control the menu.
- Press the **OK** button up/down to select the menu item.
- Press the **OK** button left/right to adjust the value.
- **OK** button is also used to confirm a selection.

3.1 LENS

The camera is equipped with a fixed lens, which is not configurable.

3.2 EXPOSURE

EXPOSURE	
SHUTTER	AUTO
AGC	OFF
SENS-UP	---
BRIGHTNESS	--- ----- 40
ACCE	OFF
DEFOG	OFF
BACKLIGHT	OFF
RETURN	RET

Figure 3-2 Exposure

Exposure describes the brightness-related parameters. You can adjust the image brightness by the SHUTTER, AGC, SENS-UP, BRIGHTNESS, ACCE, BACKLIGHT, etc. in different light conditions.

3.2.1 Shutter

Shutter denotes the speed of the shutter.

AUTO, 1/25, 1/50, FLK, 1/250, 1/500, 1/1k, 1/2k, 1/5k, 1/10k, 1/50k, x2, x4, x6, x8, x10, x15, x20, x30, and x60 are selectable.

Note:

If you select shutter as AUTO or 1/25, the SENS-UP is adjustable (OFF/AUTO), and the SENS-UP is disabled if any other shutter speed is selected.

3.2.2 AGC

It's a form of amplification where the camera will automatically boost the image received in much lower light conditions than standard in order to optimize the clarity of image in poor light scene. OFF, LOW, MIDDLE, and HIGH are selectable for the AGC value.

Note:

The noise will be amplified if the AGC is on.

3.2.3 SENS-UP

SENS-UP increases the exposure on a signal frame, which makes a camera more sensitive to light so it can produce images even in low lux conditions. You can set the SENS-UP to OFF or AUTO according to different light conditions.

OFF: SENS-UP function is disabled.

AUTO: The SENS-UP function will automatically adjust itself to x2, x4, x6, x8, x10, x15, x20, x30, and x60 according to the different light conditions.

3.2.4 Brightness

Brightness refers to the brightness of the image. You can set the brightness value from 1 to 100 to darken or brighten the image. The higher the value is, the brighter the image is.

3.2.5 ACCE(Adaptive Contrast & Color Enhancement)

It performs an image enhancement processing to enhance the visibility of an image by expressing the contrast ratio of the image and improving the edge information of the image effectively.

You can set the ACCE to **OFF**, **LOW**, **MIDDLE**, and **HIGH**.

3.2.6 Defog

DEFOG is used in special environment such as fog or rain or in high illumination, which have lower dynamic range than ordinary environment.

OFF, **LOW**, **MIDDLE**, and **HIGH** are selectable.

3.2.7 Backlight

You can set the Backlight to **OFF**, **BLC**, and **HSBLC**.

Backlight Compensation (BLC)

If there's a strong backlight, the object in front of the backlight will appear silhouetted or dark. BLC bases on the back area to enhance the brightness of the whole image, which makes it possible to see the area before the strong backlight clearly, but the backlight area will be over-exposed.

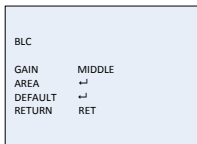


Figure 3-3 BLC

The GAIN of BLC can be set to **High**, **Middle**, **Low** and **OFF**, the higher the gain is, the clearer the image is. Follow the below steps to set a BLC area.

Steps:

1. Move the cursor **AREA**, and click **OK** button to enter the area edit interface.
2. Press the **OK** button up/down/left/right to define the BLC position.

3. Press the **OK** button up/down/left/right to define the BLC size.
4. Press **OK** to confirm the selection.

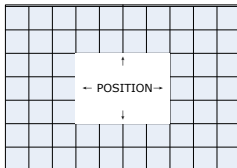


Figure 3-4 Define a BLC Area

HSBLC

HSBLC	
SELECT	AREA 1
DISPLAY	ON ↩
LEVEL	--- ----- 40
MODE	ALL DAY
BLACK MASK	ON
DEFAULT	↩
RETURN	RET

Figure 3-5 HSBLC

HSBLC masks strong light sources that usually flare across a scene. This makes it possible to see the detail of the image that would normally be hidden.

Set a HSBLC Area:

Steps:

1. Select HSBLC by setting the **OK** button to left/right, and press **OK** to enter the edit interface.
2. Move the cursor to SELECT and select the area by pressing the **OK** button to left/right. Four areas are selectable.
3. Set the display as ON to display the HLC area.
4. Press **OK** button to enter the position/size edit interface.
5. Press the **OK** button up/down/left/right to define the position/size.
6. Press **OK** button to confirm the configuration.

- **LEVEL**

It is adjustable from 0 to 100. If the brightness is higher than the level you set, the HLC will take effect.

- **MODE**

ALL DAY refers to the HSBLC works all day. **Night** refers to the HLC only works in night.

- **BLACK MASK**

ON and **OFF** are selectable. Only when the Black Mask is set to ON, the HSBLCs configuration will take effect. If you the set black mask to OFF, the HLCS function is disabled.

- **DEFAULT**

Selecting DEFAULT will restore all the configured settings to the default.

3.2.8 White Balance (WB)

White balance is the white rendition function of the camera to adjust the color temperature according to the environment. It can remove the unrealistic color casts in the image

INDOOR, OUTDOOR, MANUAL, ATW (Auto-tracking White Balance), AWC→SET are selectable.

- **INDOOR**

Indoor mode is applicable to the environment whose color temperature change is relatively slight.

- **OUTDOOR**

OUTDOOR mode is applicable to the environment whose color temperature is relatively large.

- **MANUAL**

Manual mode allows you to adjust the white balance by customizing the Blue and Red value, which range from 1 to 100.

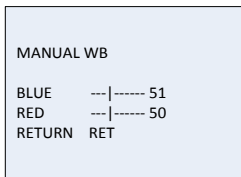


Figure 3-6 Manual White Balance

- **ATW**

ATW mode means the white balance is continuously being adjusted in real-time according to the color temperature of the scene illumination.

- **AWC→SET**

The camera will adjust the white balance according to a certain environment. If the environment is changed, you need to use AWC→SET to adjust the color temperature again.

3.3 Day & Night

Color, **B/W**, and **EXT** are selectable for DAY and NIGHT switches.

- **COLOR**

The image is color in color mode all the time.

- **B/W**

The image is black and white all the time. And the IR LED turns on if the camera is in night mode.

- **EXT**

The image color switches from color to B/W or from B/W to color automatically according to the light condition. And the IR LED turns on if the camera is in night mode.

3.4 NR

NR (Noise Reduction) is used to reduce the noise in the video stream.

Move the cursor to **NR**, and press confirm to enter the **NR** submenu.

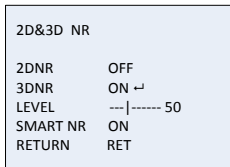


Figure 3-7 NR

- **2D NR:**

2D NR reduces the noise in a single frame to get a gentle image. You can set it **ON** or **OFF** by pressing the OK button left/right.

- **3D NR:**

Compared to traditional general 2D NR technology, 3D NR processes the noise reduction between two frames instead of in one frame. It can decrease the noise effect, especially when capturing moving images in low light conditions and delivering more accurate and sharp image quality.

You can customize the S level and the E level which ranges from 0 to 100 to set the 3D NR.

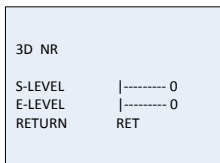


Figure 3-8 3D NR

The **NR Level** ranges from 0 to 100.

• SMART NR

Smart NR usually takes effect in cooperation with 3D NR. You can set it to **ON** to improve the image fluency. And set it to **OFF** to disable the SMART NR.

3.5 SPECIAL

In the SPECIAL sub-menu, you can set the camera name, the digital effect of the image, the motion detection, privacy task, language, dead pixel correction, and check the version of the camera.

SPECIAL	
CAM TITLE	ON ↵
D-DFFECT	↵
MOTION	OFF
PRIVACY	OFF
LANGUAGE	ENG ↵
DETECT	↵
RS485	↵
VERSION	121005
RETURN	RET

Figure 3-9 Special

3.5.1 Camera Title

You can name your camera by configuring the CAM TITLE. Move the cursor to **CAM TITLE**, set it to **ON**, and press **OK** button to enter the edit interface. Up to 15 characters can be selected.

OFF: The camera title will not be displayed.

ON: The camera title will be displayed.

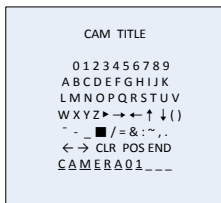


Figure 3-10 CAM Title

Steps:

1. Move the cursor to **←** or **→**, and press **OK** button to decide the character position on the dotted line.
2. Move the cursor to select the needed characters, numbers, and symbols.
3. Press **OK** button to confirm. The selected character will be displayed on the dotted line below.
4. Move the cursor to **POS** to edit the camera title position on the screen.
 - 1). Move the cursor to POS.
 - 2). Press **OK** button to enter the CAM TITLE position setting interface.
 - 3). Press up/down/left/right to change the position of camera title.
 - 4). Press **OK** button to exit the CAM TITLE position setting interface, and return to the CAM TITLE menu.
5. Move the cursor to **END** and press **OK** button to return to the previous menu.

Note:

Move the cursor to **CLR** to clear all the characters on the dotted line.

3.5.2 D-effect

D-EFFECT	
FREEZE	OFF
MIRROR	OFF
D-ZOOM	OFF
NEG. IMAGE	OFF
RETURN	RET

Figure 3-11 D-effect

- **FREEZE**

You can set the freeze function as **ON** or **OFF**. When you set it as on, the image is frozen as still. The live view will stay on the moment you set the freeze ON.

Note:

The mirror function will be disabled if the FREEZE is ON.

- **MIRROR**

This series of camera supports MIRROR function. **OFF**, **MIRROR**, **V-FLIP**, and **ROTATE** are selectable.

OFF: The mirror function is disabled.

MIRROR: The image flips 180 degree horizontally

V-FLIP: The image flips 180 degree vertically.

ROTATE: The image flips 180 degrees both horizontally and vertically.

- **D-ZOOM**

You can set the D-ZOOM as **ON** to zoom in the image. When digital zooming is processed, no actual pixel gained for the image, the selected area will be enlarged.

- **NEG.IMAGE**

You can set the NEG IMAGE as **ON** or **OFF**, if you set it as on, the bright area and the dark area of the image are reversed.

3.5.3 Motion

In the user-defined motion detection surveillance area, the moving object can be detected and the alarm will be triggered.

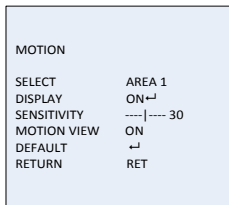


Figure 3-12 Motion Detection

Set a Motion Detection Area:

Steps:

1. Move the cursor to DISPLAY, and press **OK** button to enter the motion detection edit interface.
2. Press the **OK** button to up/down/left/right to define the position of the selected motion area.
3. Press **OK** button again to enter the area size configuration interface after the position is defined.
4. Press the **OK** button up/down/left/right to define the size of the selected area.
5. Select RET to return to the previous menu, or select AGAIN to re-configure the motion detection area.

• **SELECT**

3 motion detection areas are selectable. Press the **OK** button left/right to select the area.

- **DISPLAY**

Display the selected motion area or not.

- **SENSITIVITY**

The sensitivity of the motion detection. The sensitivity value ranges from 0 to 60, and the higher the sensitivity causes the better response of the detection.

- **MOTION VIEW**

You can choose whether to show the motion view. When you choose ON, once motion occurred, you can see the transparent red mosaic flickering to show the exact location where the motion occurs.

- **DEFAULT**

Restore the settings of motion detection.

3.5.4 Privacy

The privacy mask allows you to cover certain areas which you don't want to be viewed or recorded. Up to 8 privacy areas are configurable.

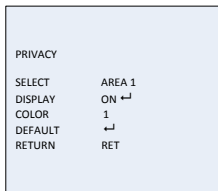


Figure 3-13 Privacy Masks

Set a Privacy Area:

Steps:

1. Move the cursor to **DISPLAY**, and press **OK** button to enter the privacy mask edit interface.
2. Press the **OK** button to up/down/left/right to define the position of the selected privacy mask area.
3. Press **OK** button again to enter the area size configuration interface after the position is defined.
4. Press the **OK** button up/down/left/right to define the size of the selected area.
5. Select **RET** to return to the previous menu, or select **AGAIN** to re-configure the privacy mask.

• **SELECT**

Select the privacy mask area to configure. Press the **OK** button left/right to select the area.

• **DISPLAY**

Set to display the selected area or not.

• **COLOR**

The color of the privacy area, 16 colors are selectable for each privacy mask.

• **DEFAULT**

Restore the settings of privacy mask to the default.

3.5.5 Language

CHN1, **CHN2**, and **ENG** are selectable.

3.5.6 Defect

DEFECT	
LIVE DPC	ON
LEVEL	--- -----30
STATIC DPC	ON
START	↵
LEVEL	--- -----25
SENS-UP	X8
RETURN	RET

Figure 3-14 Dead Pixel Correction

- **LIVE DPC**

You can choose ON, OFF and AUTO. If auto is selected, the level is not configurable.

- **LEVEL**

The level of the LIVE DPC, which ranges from 0 to 60.

- **STATIC DPC**

You can set the static DPC as ON or OFF.

- **START**

Start to correct the dead pixels. Press **OK** button to start DPC correction if you see the message of **CLOSE THE IRIS THEN PRESS ENTER KEY** showing up on the screen.

- **LEVEL**

The level of the STATIC DPC, which ranges from 0 to 60.

- **SENS-UP**

Adjust the sensor. X2, X4, X6, X8, X10, X15, X20, X30, and X60 are selectable.

3.5.7 RS485

If you want to configure the menu items remotely, you have to set the RS485 parameters of control device the same as those of camera.

RS485	
CAM ID	1
ID DISPLAY	OFF
BAUDRATE	38400
RETURN	RET

Figure 3-15 RS485

Camera ID ranges from 0 to 255, which is used to recognize the corresponding camera.

You can set the camera ID to ON/OFF to display the camera ID or not.

Baud rate ranges 2400 to 38400, which has be the same as that of the control device.

3.5.8 Version

The software version is listed here.

3.6 ADJUST

In the Adjust sub-menu, you can set the sharpness, the image quality on monitor, the OSD settings, the Lens Shadow Compensation, and the Video output standard.

ADJUST	
SHARPNESS	←→
MONITOR	LCD←→
OSD	←→
LSC	OFF
NTSC/PAL	PAL
RETURN	RET

Figure 3-16 Adjust

3.6.1 Sharpness

SHARPNESS	
SHARPNESS	ON
LEVEL	---- ----60
RESOLUTION	OFF
RETURN	RET

Figure 3-17 Sharpness

• SHARPNESS

Sharpness determines the amount of detail an imaging system can reproduce. You can set the sharpness as ON and OFF, when sharpness is on, the images appears clearer and sharper.

- **LEVEL**

The sharpness level is between 0 and 100.

- **RESOLUTION**

You can set the resolution as ON and OFF.

3.6.2 Monitor

Monitor CRT, and Monitor LCD are selectable.

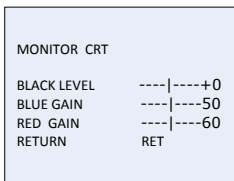


Figure 3-18 Monitor CRT

- **BLACK LEVEL**

-30 to +30 are selectable.

- **BLUE GAIN**

0 to 100 are selectable.

• RED GAIN

0 to 100 are selectable.

MONITOR LCD	
GAMMA	USER 1
BLUE GAIN	---- ----50
RED GAIN	---- ----50
RETURN	RET

Figure 3-19 Monitor LCD

• GAMMA

Gamma is the name of a nonlinear operation used to code and decode luminance or tristimulus values in video or still image system

1.00, 0.95, 0.90, 0.85, 0.80, 0.75, 0.70, 0.65, 0.60, 0.55, 0.50, 0.45, USER1, USER2, and AUTO are selectable.

• BLUE GAIN

The value of the blue gain is between 0 and 100.

• RED GAIN

The value of the red gain is between 0 and 100.

3.6.3 OSD

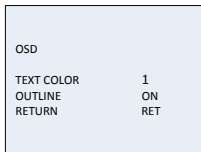


Figure 3-20 OSD Configuration

- **TEXT COLOR**

There are 8 colors configurable for the OSD menu. Press the **OK** button to Left or right to change the color of the OSD.

- **OUTLINE**

You can set whether there is an outline of the text. Press the OK button left or right to set it **ON** or **OFF**.

3.6.4 LSC

Lens Shading Correction (LSC) corrects the phenomenon where the image gets darkened or blurred on the periphery.

ON and **OFF** are selectable.

3.6.5 NTSC/PAL

PAL, short for Phase Alternating Lines, is a color encoding system for analog television used in broadcast television systems in most countries broadcasting at 576i.

NTSC, short for the National Television System Committee, is the analog television system that is used in most of North America, parts of South America Myanmar, South Korea, etc.

3.7 RESET

Reset all the settings to the factory default.

3.8 EXIT

Move the cursor to EXIT and click **OK** button to exit from the menu.

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