



Performance Series
HD273XD2
1080P HQA Rugged Dome Camera

User Guide

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

The information in this publication is believed to be accurate in all respects. However, Honeywell cannot assume responsibility for any consequences resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.

Regulatory Information

FCC compliance

This equipment has been tested and found to comply with the limits for a Class 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class A digital apparatus complies with Canadian ICES-003.

Manufacturer's Declaration of Conformance

North America The equipment supplied with this guide conforms to UL 60950-1 and CSA C22.2 No. 60950-1.

Europe The manufacturer declares that the equipment supplied is compliant with the European Parliament and Council Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (2011/65/EU), General Product Safety Directive (2001/95/EC), and the essential requirements of the EMC directive (2014/30/EU), conforming to the requirements of standards EN 55032 for emissions, EN 50130-4 for immunity, and EN 62368-1 for electrical equipment safety.

CAUTION This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

WEEE (Waste Electrical and Electronic Equipment)



Correct disposal of this product (applicable in the European Union and other European countries with separate collection systems). This product should be disposed of, at the end of its useful life, as per applicable local laws, regulations, and procedures.





Safety Instructions

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

The precautions are 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.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN			THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THE UNIT.
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.				THIS SYMBOL INDICATES THAT IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS ACCOMPANY THIS UNIT.

WARNING This device is configured for 12 V DC or 24 V AC operation. Do not connect to a higher voltage. Use only with NRTL-approved Class 2 power supplies.

CAUTION IR emitted from this product. Do not view directly with optical instruments. Do not stare directly into the lamp at a distance of less than 3.3 ft (1 m).

CAUTION Class 1 LED product. Invisible LED radiation (850 nm). Avoid exposure to beam.



Important Safety Instructions

- Read and keep these instructions.
- Ensure that your installation area can safely support 3 times the weight of the camera.

- Do not install the camera in extreme temperature conditions. Only use the camera where temperatures are within the limits shown in the camera specifications. Be especially careful to provide ventilation when operating under high temperatures.
- To prevent damage to the imager, do not aim the camera toward an extreme light source.
- Do not touch the camera lens, dome or bezel (front glass plate).
- Do not drop the camera or subject it to physical shock.
- Do not use strong or abrasive cleaners, clean only with a soft cloth and mild detergent or alcohol.
- Do not open the camera or attempt to service it yourself. Refer all service issues to your dealer.

List of Symbols

The following is a list of symbols that may appear on the camera:

Symbol	Explanation
	<p>The WEEE symbol.</p> <p>This symbol indicates that when the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling. By separating this product from other household-type waste, the volume of waste sent to incinerators or landfills will be reduced, and thus natural resources will be conserved.</p>
	<p>The UL compliance logo.</p> <p>This logo indicates that the product has been tested and is listed by UL (formerly Underwriters Laboratories).</p>



The FCC compliance logo.

This logo indicates that the product conforms to Federal Communications Commission compliance standards.



The direct current symbol.

This symbol indicates that the power input/output for the product is direct current.



The alternating current symbol.

This symbol indicates that the power input/output for the product is alternating current.



The RCM compliance logo.

This logo indicates that the product conforms with Australian RCM guidelines.



The CE compliance logo.

This logo indicates that the product conforms to the relevant guidelines/standards for the European Union harmonization legislation.



The caution symbol.

This symbol indicates important information.



The protective earth (ground) symbol.

This symbol indicates that the marked terminal is intended for connection to the protective earth/grounding conductor.

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1 Introduction

Product Features

This series of camera adopts a high performance imaging sensor and advanced circuit board design technology. Featuring high resolution, low distortion, and low noise, it is ideal for surveillance systems and image processing systems.

The main features are as follows:

- High performance CMOS sensor supplies high resolution high-quality images
- Low illumination, 0.1 Lux @ F1.2 (AGC ON), 0 Lux with IR LEDs on
- IR cut filter with automatic switching
- OSD menu, parameters are configurable
- Auto white balance, auto gain control, electronic shutter control and internal synchronization
- Advanced Engineering Design and patented universal adjustable structure provides convenient adjustment and high reliability
- SMART IR mode
- Advanced 3-axis design meets different installation requirements
- Ingress protection: IP66-rated

Overview

Figure 1-1 Overview of Camera

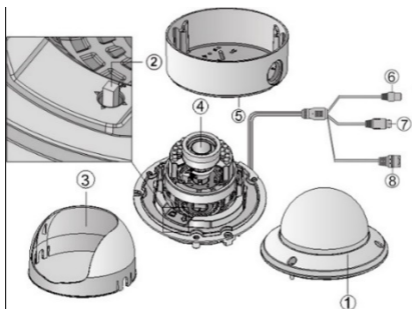


Table 1-1 Description

No.	Description
1	Bubble
2	Menu Button (Joystick) Press this button to call out the on-screen menu.
3	Black Liner
4	Lens
5	Back Box
6	Power Cable (12 V DC or 24 V AC)
7	Video Cable
8	Switch Button Press and hold this button for 5 seconds to switch the output from one mode to another among CVI (default mode) / TVI / AHD / CVBS.

2 Installation

Before You Start

- Please make sure that the camera is in good condition and all of the assembly parts are included.
- Make sure that all related equipment is powered-off during the installation.
- Check that the camera specification agrees with the installation environment.
- To avoid damage, ensure the power supply voltage matches your camera requirements.
- Please make sure the installation surface is strong enough to withstand three times the weight of the camera and the mounting.
- If the installation surface is concrete, you need to insert expansion screws before you install the camera. If the installation surface is wood, you can use self-tapping screws to secure the camera.
- 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.

Note

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the

installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.

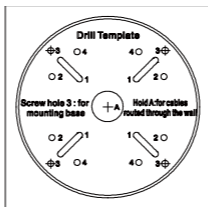
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens and obscure the image.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDs. Fasten the dome cover to the camera body so that the foam ring and the dome cover are seamlessly connected.

Surface Mounting the Camera on a Ceiling/Wall

Steps

1. Attach the mounting template (supplied) to the place where you want to install the camera, and then drill the screw holes and cable hole (if needed) in the ceiling/wall according to the mounting template.

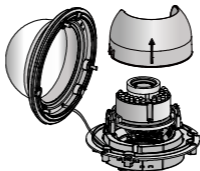
Figure 2-1 HD273XD2 Mounting Template



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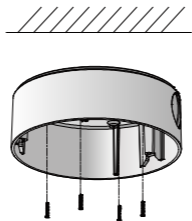
2. Loosen the three screws on the edge of the bubble with the supplied screwdriver to remove the bubble and the black liner.
3. Remove the camera from the back box.

Figure 2-2 Removing the Camera from the Back Box



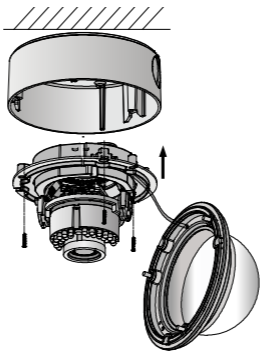
4. Attach the back box to the ceiling/wall by aligning the holes of the back box with the holes drilled in step 1 and secure it to the ceiling/wall with the supplied screws.

Figure 2-3 Securing the Back Box



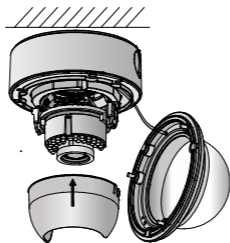
5. Route the cables through the cable hole.
6. Align the camera with the back box, and tighten the set screws to secure the camera with the back box.

Figure 2-4 Aligning the Camera



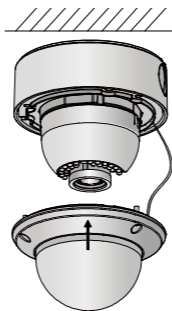
7. Connect the video output (BNC) connector to the monitor. Connect the power connector to the power supply.
8. Adjust the image and focus. See [Adjusting the Image and Focus](#) for details.
9. Fit the black liner back onto the camera

Figure 2-5 Fitting the Black Liner



10. Tighten the screws to secure the bubble with the back box.

Figure 2-6 Securing the Bubble



-
- Note** Remove the protection film softly after the installation is complete. Leaving the film on the bubble during installation will protect it from scratches during the installation process.
-

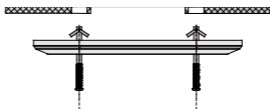
In-ceiling Mounting the Camera

- Note** You need to purchase an in-ceiling mount separately if your installation requires an in-ceiling mounting.
-

Steps

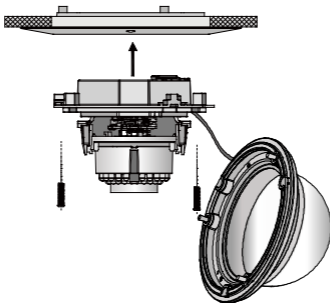
1. Attach the mounting template (supplied) to the place where you want to install the camera, and then drill the screw holes and cable hole in the ceiling according to the mounting template.
2. Secure the in-ceiling mount with two mounting screws as shown in figure below:

Figure 2-7 Securing the In-ceiling Mount



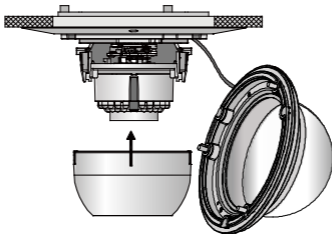
3. Route the cables through the hole in the center of the in-ceiling mount.
4. Align the camera with the in-ceiling mount, and tighten the set screws to secure the camera with the in-ceiling mount.

Figure 2-8 Securing the Camera



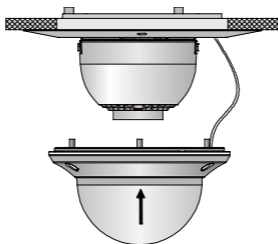
5. Connect the video output (BNC) connector to the monitor. Connect the power connector to the power supply.
6. Adjust the image and focus. See [Adjusting the Image and Focus](#) for details.
7. Fit the black liner back onto the camera.

Figure 2-9 Fitting the Black Liner



- Align the bubble with the in-ceiling mount, and then tighten the screws to secure the bubble to the in-ceiling mount.

Figure 2-10 Aligning the Bubble



Note

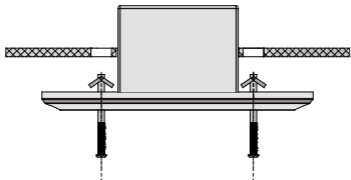
Remove the protection film softly after the installation is complete. Leaving the film on the bubble during installation will protect it from scratches during the installation process.

In-ceiling Mounting the Camera with a Gang Box

Steps

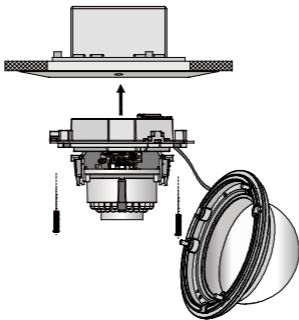
- Secure the in-ceiling mount (supplied) to the gang box with two screws.

Figure 2-11 Securing the In-ceiling Mount to the Gang Box



2. Route the cables through the hole in the center of the in-ceiling mount.
3. Align the camera with the gang box, and tighten the screws to secure the camera with the gang box.

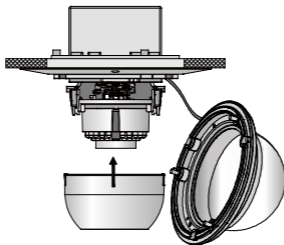
Figure 2-12 Securing the Camera



4. Connect the video output (BNC) connector to the monitor. Connect the power connector to the power supply.

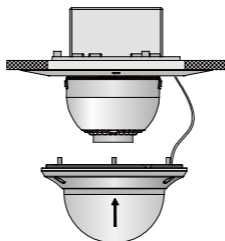
- Adjust the image and focus. See [Adjusting the Image and Focus](#) for details.
- Fit the black liner back onto the camera.

Figure 2-13 Fitting the Black Liner



- Align the bubble with the in-ceiling mount, and tighten the screws to secure the bubble to the in-ceiling mount.

Figure 2-14 Securing the Bubble



Note

Remove the protection film softly after the installation is complete. Leaving the film on the bubble during installation will protect it from scratches during the installation process.

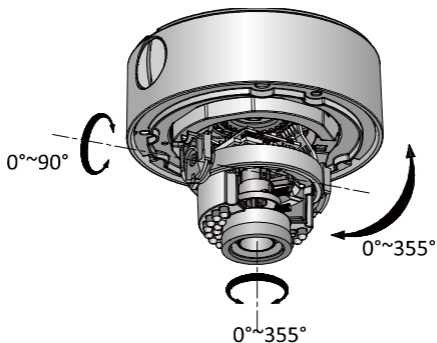
Adjusting the Image and Focus

Steps

3-axis surveillance angle adjustment (see [Figure 2-15](#) while adjusting the angle):

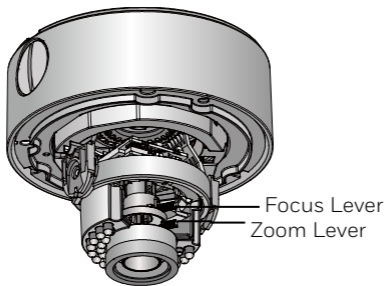
- View the camera image with the connected monitor.
- Rotate the panning table to adjust the pan direction [0°~355°].
- Loosen the tilting lock screw.
- Rotate the tilting table to adjust the tilt direction [0°~90°].
- Tighten the tilting lock screw.
- Rotate the camera [0°~355°] to adjust the lens to the optimum surveillance angle.

Figure 2-15 3-axis Angle Adjustment

**Zoom and focus adjustment:**

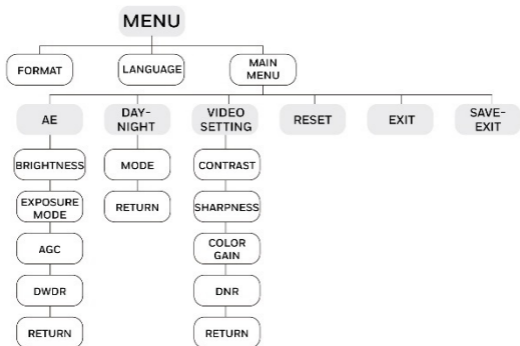
- View the camera image with the connected monitor.
- Loosen the zoom lever and move the screw between T (Tele) and W (Wide) to obtain the optimum zoom setting.
- Tighten the zoom lever.
- Loosen the focus lever and move the screw between F (Far) and N (Near) to obtain the optimum focus setting.
- Tighten the focus lever.

Figure 2-16 Zoom and Focus Adjustment



3 Menu Description

Figure 3-1 Main Menu Overview



- This camera uses a joystick to select the menu and confirm a selection (see [Figure 1-1](#) for the joystick location).
 - Move the joystick up/down to select a menu item.
- Note**
- Move the joystick left/right to adjust the value of the selected item.
 - Press down on the joystick to confirm a selection. The menu button mentioned in the chapter below refers to the joystick.
-

FORMAT

You can set the video format as 1080P25 (PAL) or 1080P30 (NTSC).

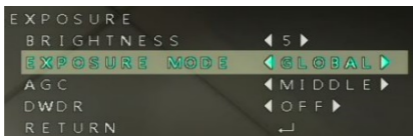
LANGUAGE

You can set the language as Chinese or English.

AE (Auto Exposure)

AE describes the brightness-related camera parameters. You can adjust the image brightness by changing the **BRIGHTNESS**, **EXPOSURE MODE**, **AGC**, and **DWDR** values in different light conditions.

Figure 3-2 AE Menu



BRIGHTNESS

Brightness refers to the brightness of the image. The value ranges from 1 to 10. The higher the value is, the brighter the image will be.

EXPOSURE MODE

- **GLOBAL**

GLOBAL refers to the normal exposure mode for situations such as unusual lighting distribution, variations, non-standard processing, or other conditions.

- **BLC**

BLC refers to the back-light compensation. This technology is designed to optimize the brightness of images through using digital signal processing. The value ranges from 0 to 8.

AGC

AGC optimizes the clarity of an image in a poorly light scene. The **AGC** level can be set as **HIGH**, **MIDDLE**, or **LOW**. Select **OFF** to disable **AGC**.

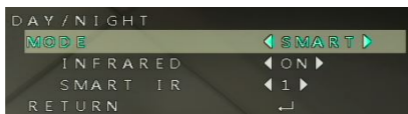
Note The noise will be amplified if the AGC is on.

DWDR

The digital wide dynamic range (**DWDR**) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, DWDR balances the brightness level of the whole image and provides clear images with visible details

DAY & NIGHT

Figure 3-3 Day-Night Menu



INFRARED

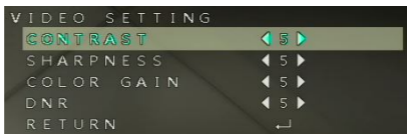
You can select to turn the infrared lamp **ON/OFF** to respond to the requirements of different circumstances.

SMART IR

The SMART IR function is used to adjust the light to its most suitable intensity and to prevent the image from over exposure. The value ranges from 0 to 5. The higher the value is, the more obvious the SMART IR effect will be. SMART IR is disabled when the value is 0.

VIDEO SETTING

Figure 3-4 Video Setting Menu



CONTRAST

Contrast enhances the difference in color and light between parts of an image. The value ranges from 1 to 10.

SHARPNESS

Sharpness determines the amount of detail an imaging system can reproduce. And you can adjust the **EDGE/DETAIL** sharpness value by entering the **SHARPNESS** submenu. The value ranges from 1 to 10. A higher sharpness value results in a clearer and sharper image.

COLOR GAIN

Adjust this feature to change the saturation of the color. The value ranges from 1 to 10.

DNR

DNR decreases the noise effect, especially when capturing moving images in low-light conditions and delivering more

accurate and sharp image quality. The value ranges from 1 to 10.

RETURN

Return to the previous menu.

RESET

Reset all the settings to their default settings.

EXIT

Exit the menu without saving the settings.

SAVE-EXIT

Save the settings and exit the menu.

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