MDC450
Full HD PoE Mini Dome Camera
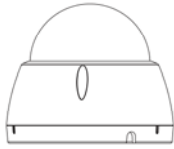

Installation Guide

Version: 1.0

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Package Contents

The following items should be included: If any of these items are damaged or missing, please contact your service provider immediately.
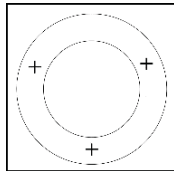
1. Mini Dome Camera

+

2. L Tool

3. Mounting Screws: M3*16(5.5*16mm) *3

4. Mounting Template Sheet

Chapter 1
Introduction

1

This Chapter provides details of the Mini Dome Camera's features, components and capabilities.

Overview

The MDC450 is a weather-resistant, HD mini dome camera. It comes with an IP66 rated housing, with a F1.8 large aperture lens, high sensitivity imaging sensor and high power IR LED illumination. The MDC450 displays high quality colorful images in low light conditions, enabling it to view distances of up to 20 meters at night.

The MDC450 is an all-in-one camera that has automatic day-night switching, a built-in heater and mechanical Pan/Tilt/Rotate orientation adjustment.

Features

- **Dual Video Support:** The camera supports H.264 and MJEPG video compression.
- **PoE Support.** You can use PoE (Power over Ethernet) to provide power to the Mini Dome Camera, so only a single cable connection is required.
- **IR LED Support.** The two built-in infrared LEDs can provide illumination for up to 20 meters.
- **Built-in Heater.** The built-in heater ensures that the camera will continue to operate even in extremely cold climates. The heater turns on when the temperature falls below 42°F (6°C).

Security Features

- **User Authentication.** If desired, access to live video can be restricted to known users. Users will have to enter their username and password before being able to view the video stream.
- **Password-Protected Configuration.** Configuration data can be password protected, so that it only can be changed by the Network Camera Administrator.

1

Physical Details - Mini Dome Camera
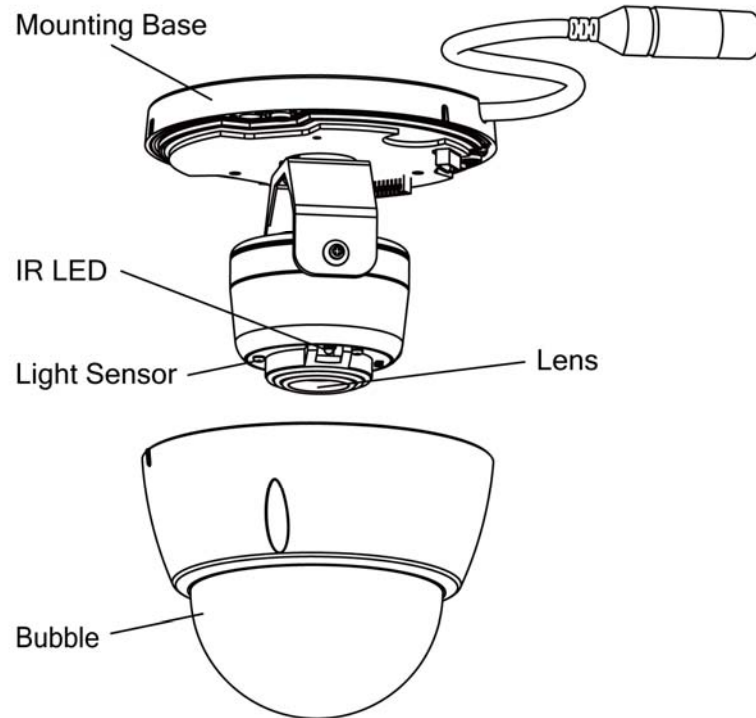
Front Panel - Mini Dome Camera

Figure 1: Camera Components

IR LEDs   These are used to provide illumination for night time viewing. Ensure that the two IR LEDs are not obstructed beneath the transparent dome bubble.

Light Sensor This is a hardware sensor to detect lux. Ensure that the light sensor is not obstructed beneath the transparent dome bubble.

Lens   No physical adjustment is required for the lens. Ensure that the lens cover remains clean.

LAN Port   Use a standard Ethernet cable (not included) to connect the LAN port of the supplied cable to the gateway. This port supports PoE which provides both power and network connectivity via a single Ethernet cable.

2

Status LED (Green, Amber, Blue)	On (Green) - Power on.
	Off - No power.
	Slow Blinking (Green) - The LED blinks during start up.
	Fast Blinking (Green) - Download mode.
	On (Blue) - Network connection is available.
	Blinking (Blue) - The data is transmitting/receiving via network.
	On (Amber) - Firmware upgrade failure or heater is on.
	Blinking (Amber) - The firmware is upgrading.
	Note: If data is being transmitted via LAN, the color of the LED is blue.

Reset Button
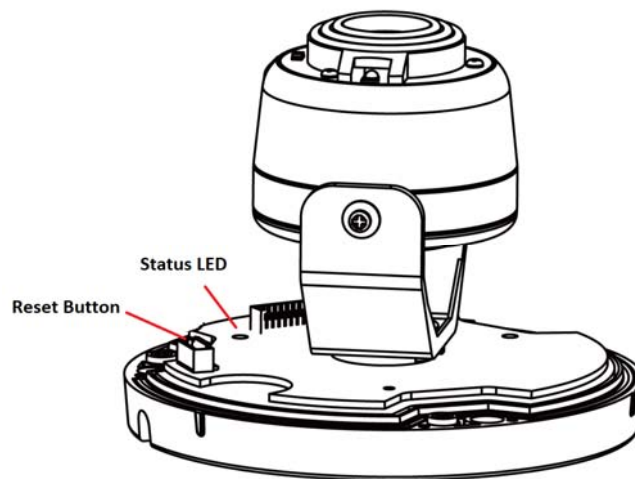
Figure 2: Reset Button

| Reset Button | When pressed and held over 15 seconds, the camera reboots and the settings are restored to default values. |

Chapter 2
Basic Setup

2

This Chapter provides details on how to setup and mount the Mini Dome Camera.

Installation

1. **Remove Bubble and Protective Foam**

   a. Use the L tool to remove the three retaining screws and bubble.

   b. Remove the protective foam.

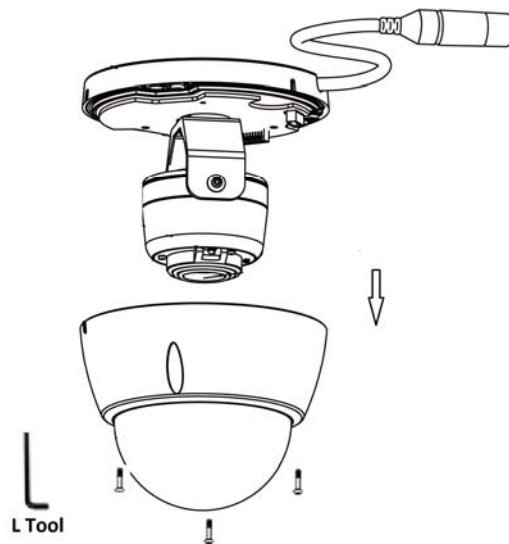   Note: Leave the bubble detached for later access for ceiling mounting.

Figure 3: Removing the Bubble

2. **Power Up**

   Connect a standard Ethernet cable (not provided) to the LAN port of the camera cable and the LAN port on the gateway
   Note: Please use the water-proof caps where the Ethernet cable needs to be run with wet environment. Tighten up the caps after connecting the Ethernet cable to the port of the camera.
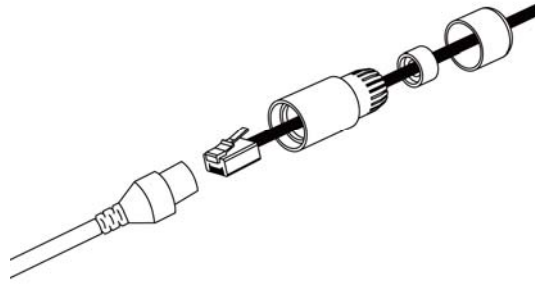
Figure 4: Connecting Ethernet Cable with the Caps

3. Check the Status LED

The Status LED turns on solid green during startup, which takes 60 to 90 seconds. After startup is completed, the LED begins to blink green. For location of the Status LED, refer to Figure 2.

4. Mount the Camera

Place the camera in a desired location near a power source. For details on mounting the camera on the ceiling with the mounting plate, please refer to the later section.

Mounting the Mini Dome Camera

*Note: Please ensure the Mini Dome Camera is configured and added to the network before permanent mounting.

Ceiling Mounting

1. Identify the location where you would like to mount the camera. Using the mounting template included in the box as a guide, drill three mounting holes in the ceiling.

2. If you have not done so already, use the L tool to remove the three screws and the bubble from the camera. Then remove the protective foam as shown.

3. If using the anchors, insert them into the mounting holes.

4. Align the three mounting holes of the camera stand with the three holes, and then mount the camera stand onto the ceiling using the provided screws.
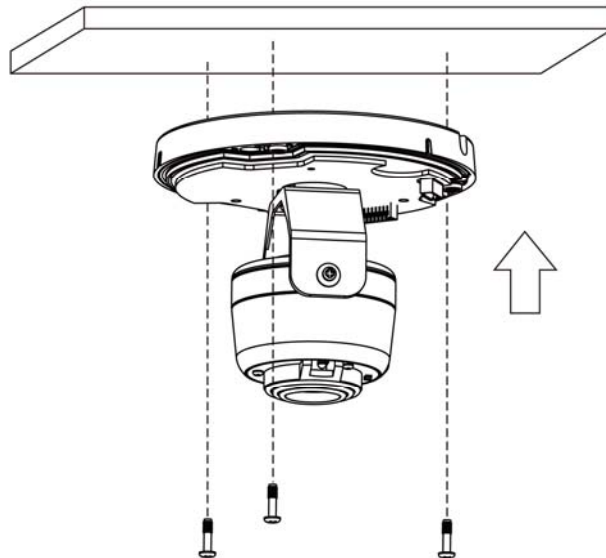
Figure 5: Installing the Screws

Note: It is recommended that you route the cable through the side opening of the mounting base.
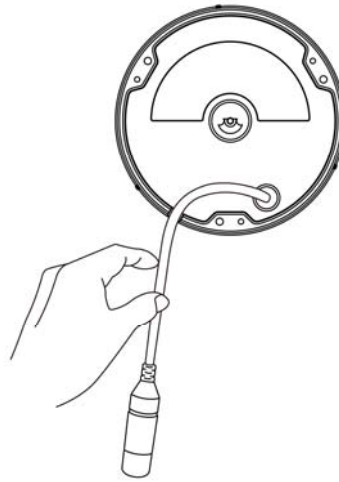
Figure 6: Routing the Cable

5.   Attach the bubble to the camera, and then secure it with the three screws by using the L tool.
     Note: Use the alignment marks to properly align the camera and bubble while attaching them together.

6.   Make sure that the camera is firmly secured to the ceiling.

Mounting Suggestion

The camera is very sensitive to motion and may even trigger a motion event with the movement of a small tree, bush or other object in the wind.

For this reason, be sure to mount the camera in a location where its field of view does not include small trees, bushes or other objects that could move and unintentionally trigger a motion event.

Appendix A
Specifications

A

Mini Dome Camera

Dimensions (DxH)	4.33" x 3.62" (110mm x 92mm)
Lens	F1.8. DFOV 75°
Video Compression	H.264 and MJPEG
Image Resolution	1080p
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Network Protocol	TCP/IP, DHCP, SMTP, NTP, HTTP, FTP, RTP, RTSP, UPnP
Network Interface	1 Ethernet 10/100BaseT (RJ45) LAN connection
Button	1 Reset Button
Status LED	1 Three-colored LED for Power/Network/Heater
IR LEDs	2
Micro-SD Slot	1
Bluetooth	Bluetooth 4.2 RF Module
Power	PoE (Power over Ethernet)

Regulatory Approvals

FCC Statement

Federal Communication Commission Interference Statement

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no

guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from thatto which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

If protective earthing is used as a **safeguard**, the instructions shall require connection of the equipment **protective earthing conductor** to the installation **protective earthing conductor** (for emample, by means of a power cord connected to a socket-outlet with earthing connection)

CE Approvals

The Mini Dome Camera and the Ethernet Mini Dome Camera meet the guidelines of the European Union and comply with the 99/5/EEC and RTTE 99/5EG directives, including the following standards:

- EN60950-1
- EN55022+55024
- EN62311

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

1 Plug in your Rhombus camera
Using PoE switch or optional WiFi adapter

2 Install the Rhombus Systems mobile app
Available on iPhone & Android

3 Tap Register Camera on the mobile app
To complete the registration