

Installation Guide

Avigilon™ High Definition H.264 IP Micro Dome Camera Models:

1.0-H3M-DC1, 1.0-H3M-DC1-BL, 2.0-H3M-DC1 and 2.0-H3M-DC1-BL

Important Safety Information

This manual provides installation and operation information and precautions for the use of this camera. Incorrect installation could cause an unexpected fault. Before installing this equipment read this manual carefully. Please provide this manual to the owner of the equipment for future use.



The Warning symbol indicates the presence of dangerous voltage within and outside the product enclosure that may constitute a risk of electric shock, serious injury or death to persons if proper precautions are not followed.



The Caution symbol alerts the user to the presence of hazards that may cause minor or moderate injury to persons, damage to property or damage to the product itself if proper precautions are not followed.



WARNING — Failure to observe the following instructions may result in severe injury or death.

- Installation must be performed by qualified personnel only, and must conform to all local codes.
- For indoor use only.
- This product is intended to be used in a Network Environment 0 per IEC TR62101. The camera is to be connected only to PoE network that complies with IEEE 802.3af without routing to the outside plant.



CAUTION — Failure to observe the following instructions may result in injury or damage to the camera.

- Do not install near any heat sources such as radiators, heat registers, stoves, or other sources of heat.
- Do not subject the cables to excessive stress, heavy loads or pinching.
- Do not open or disassemble the device. There are no user serviceable parts.
- Refer all servicing to qualified personnel. Servicing may be required when the device has been damaged (such as from a liquid spill or fallen objects), has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Do not use strong or abrasive detergents when cleaning the device body.
- Use only accessories recommended by Avigilon.

Regulatory Notices

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 Class B digital apparatus complies with Canadian ICES-003.

FCC Notice

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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications made to this equipment not expressly approved by Avigilon Corporation or parties authorized by Avigilon Corporation could void the user's authority to operate this equipment.

Disposal and Recycling Information

When this product has reached the end of its useful life, please dispose of it according to your local environmental laws and guidelines.

Risk of fire, explosion, and burns. Do not disassemble, crush, heat above 100 °C (212 °F), or incinerate.

European Union:



This symbol means that according to local laws and regulations your product should be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Some collection points accept products for free. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

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Avigilon Corporation
<http://www.avigilon.com>

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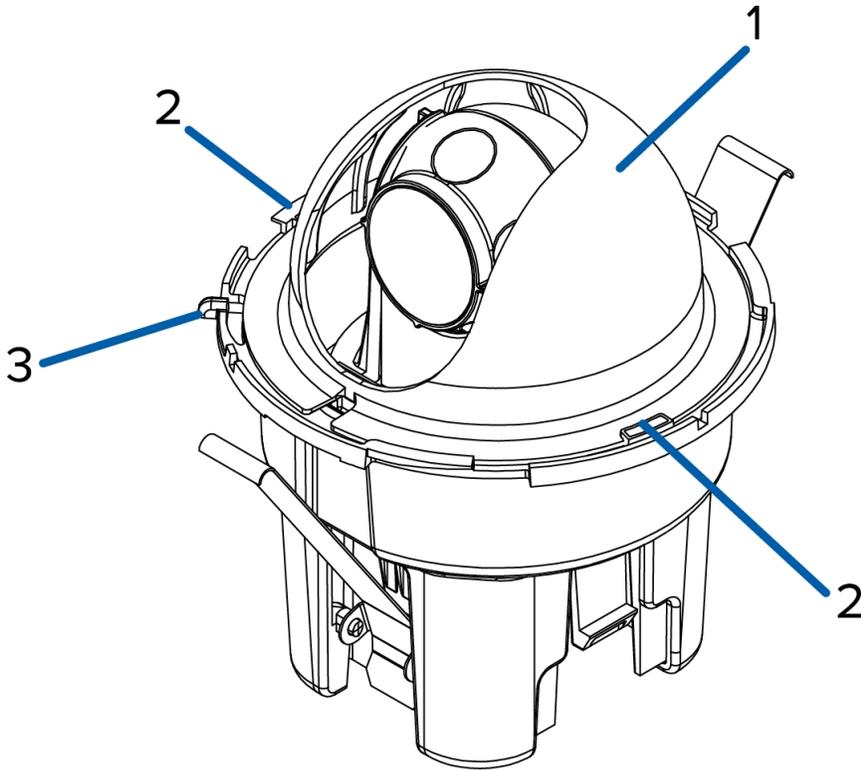
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Overview

Shroud View



1. **Dome Shield**

Hides the camera's field of view from observers.

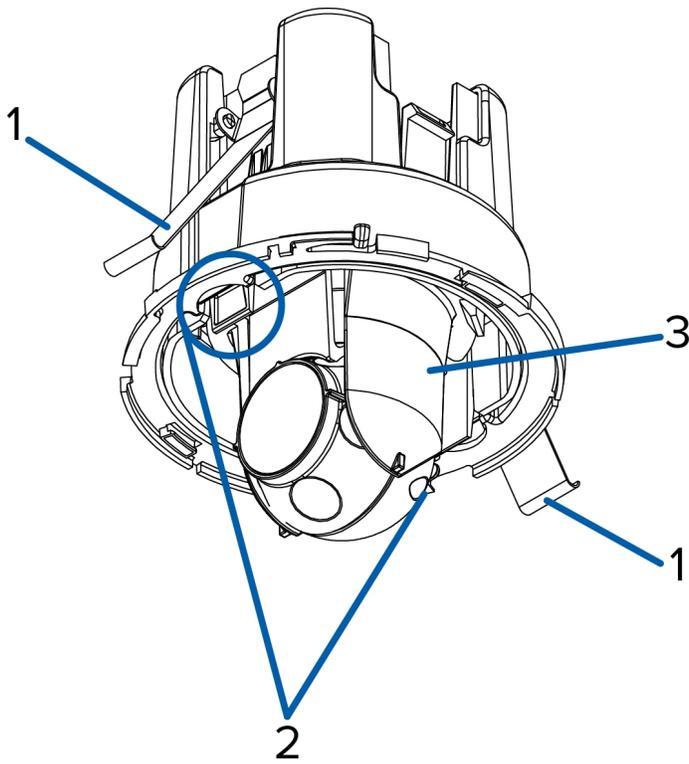
2. **Shield Locking Tab**

Locks the dome shield into place.

3. **Cover Release Tab**

Allows you to release and remove the dome cover.

Side View



1. **Locking Sheet Springs**

Locks the in-ceiling camera into place.

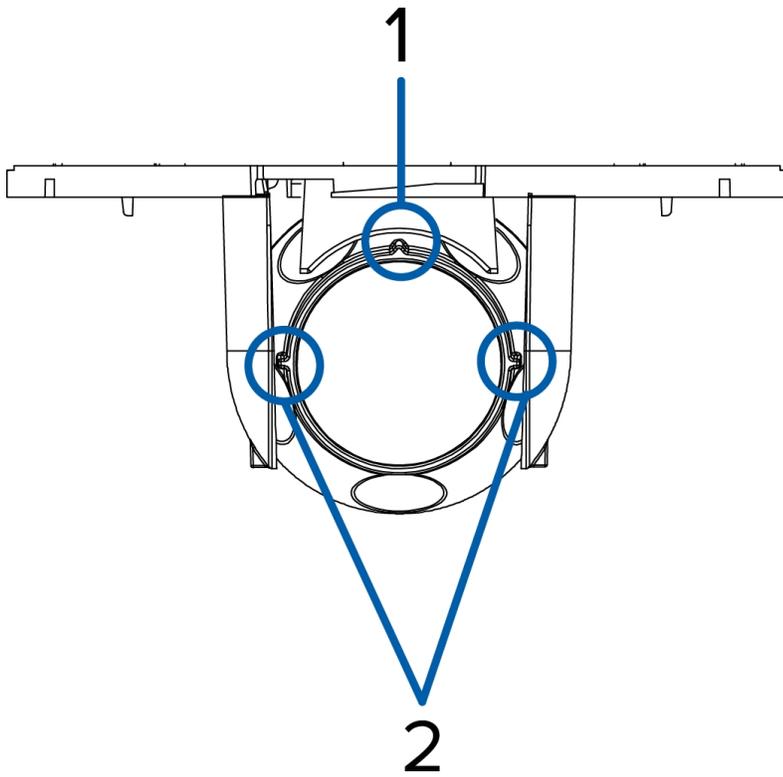
2. **Lock Release Snaps**

Releases the in-ceiling lock.

3. **Gimbal**

Allows you to move and aim the camera after it has been installed.

Front View



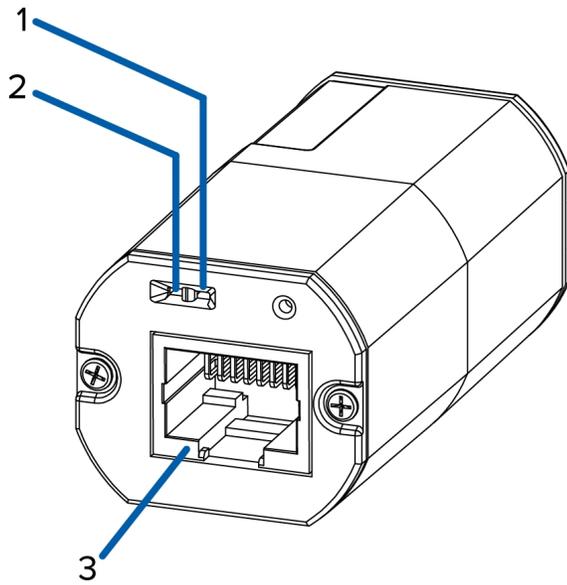
1. **Vertical Marker**

Provides a vertical reference point for the video image. Points up.

2. **Horizon Markers**

Provide reference points for aligning the video image with the horizon line.

Cable Assembly



1. **Link LED**

Indicates if there is an active connection in the Ethernet port.

2. **Connection Status LED**

Provides information about device operation. For more information, see *LED Indicators* on page 13

3. **Ethernet Port**

Accepts power and Ethernet connection to the network.

The camera can only be powered by Power over Ethernet (PoE). Server communication and image data transmission also occurs over this connection.

Installation

Camera Package Contents

Ensure the package contains the following:

- Avigilon™ HD Micro Dome Camera
- Dome Cover
- Rubber boot
- Hole template sticker

Installation Steps

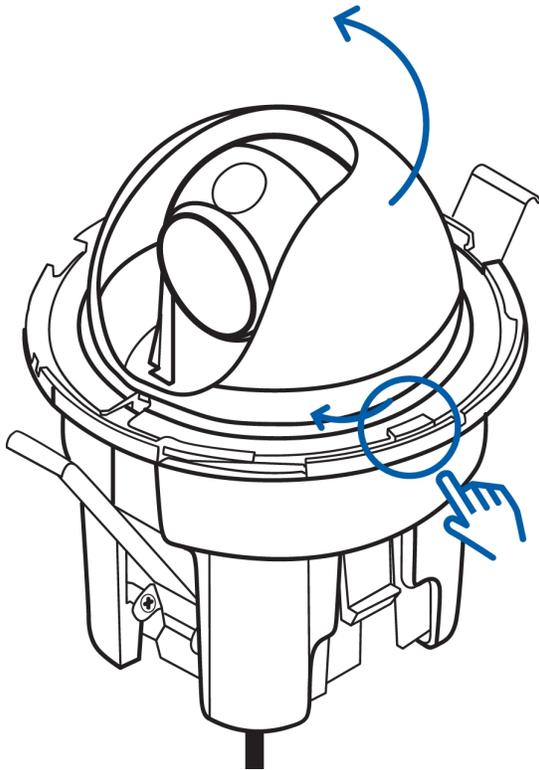
Complete the following steps to install the device:

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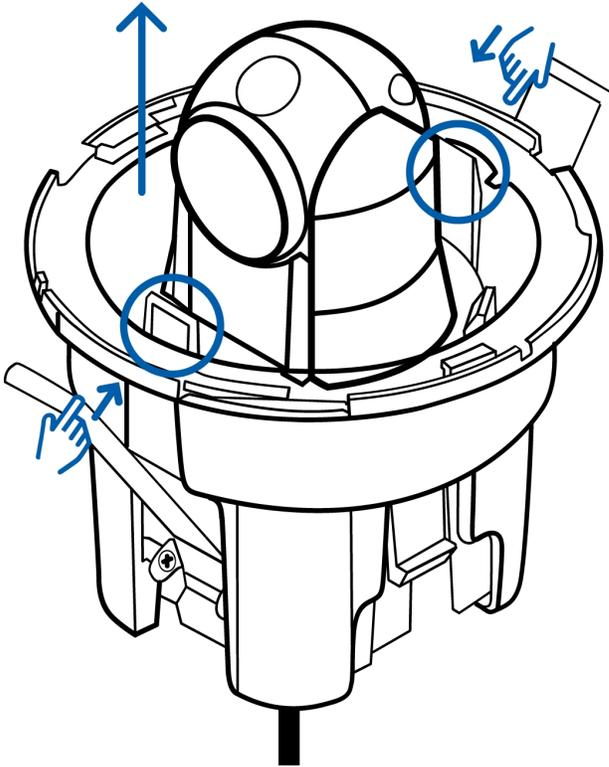
Preparing for the Installation

Before you can install the camera, you must first complete the following steps:

1. Use a 3" hole saw to cut a hole in the mounting surface.
 - Or, use the mounting template as a guide for cutting a hole in the mounting surface.
- NOTE:** The camera supports a mounting surface that is between 1 mm (0.04") to 25.4 mm (1") thick.
2. Pull the required Ethernet cables through the mounting hole.
 3. Remove the dome shield from the camera:
 - a. Press one side of the dome shield away from the shield locking tab that is holding it in place.
 - b. Lift the dome shield away from the camera.

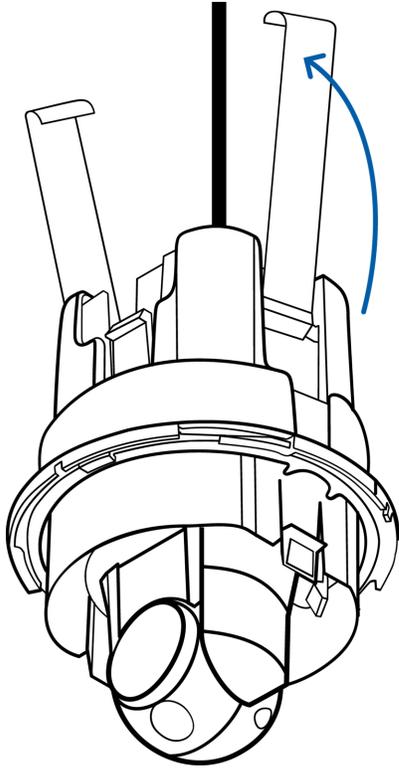


4. Squeeze the lock release snaps together and pull the dome camera up.



The locking sheet springs are released.

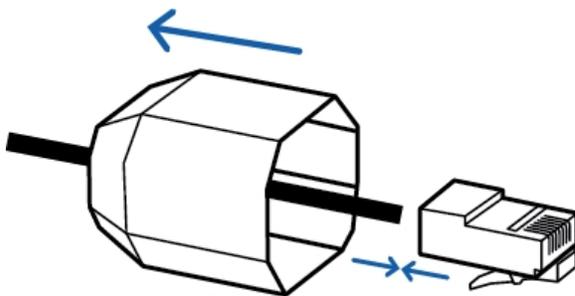
5. Rest the camera on its side to keep the locks disengaged.



Connecting PoE

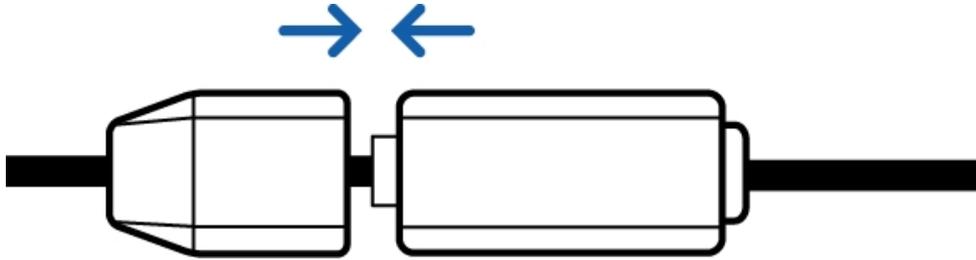
The HD Micro Dome camera can only be powered by Power over Ethernet (PoE).

1. Pull the required Ethernet cable to the camera.
2. To protect the cable from dust and moisture, slide the cable through the supplied rubber boot.
3. Crimp the end of the cable with an Ethernet connector.



4. Connect the crimped cable to the Ethernet Port.
5. Check that the camera's status LEDs indicate the correct state. See *LED Indicators* on page 13 for more information.

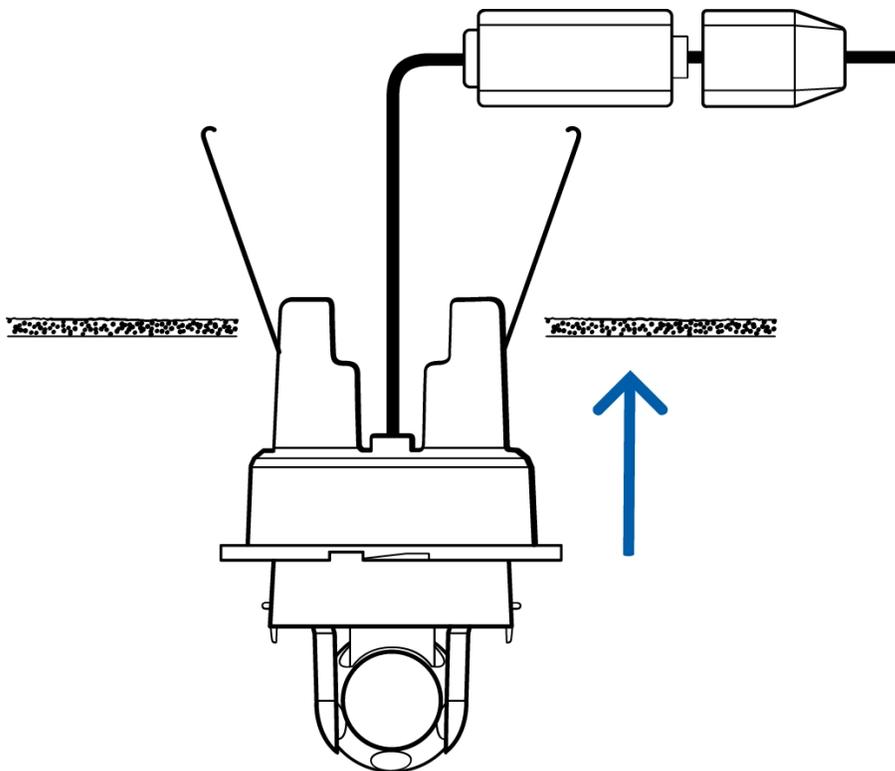
6. If you installed the rubber boot, slide the boot over the end of the cable assembly.



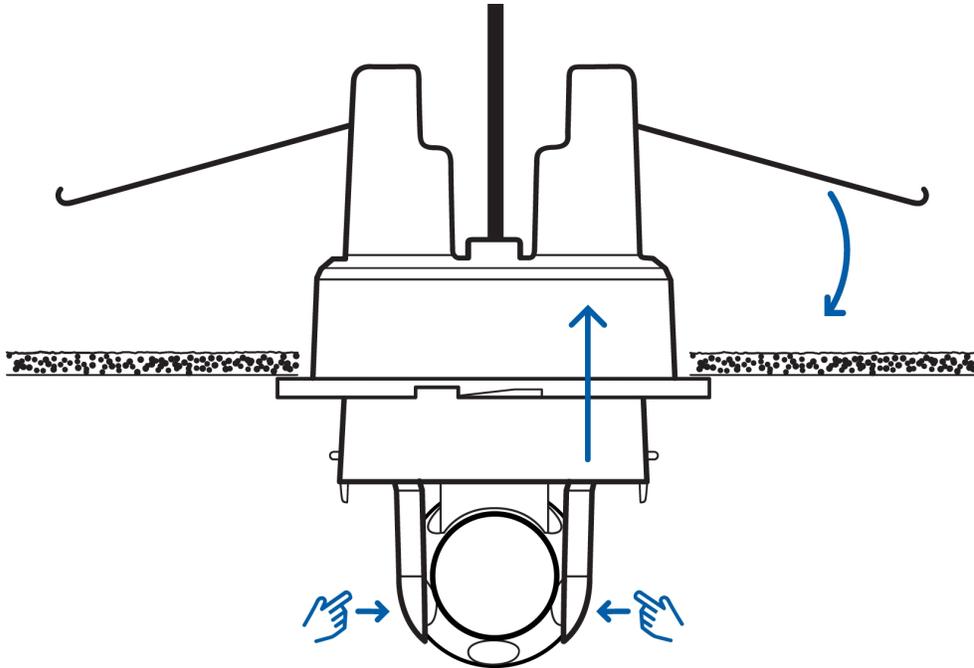
7. Tuck the cable assembly into the mounting hole. Make sure the cable assembly is not dangling by the cable.

Mounting the Micro Dome Camera

1. Hold the locking sheet springs together and insert the camera into the mounting hole.



2. Push the camera into the hole from the gimbal until you hear it click into place.



3. Check if the camera is secure by gently pulling the gimbal.
 - If the gimbal does not move, the camera is secure.
 - If the gimbal comes away from the base then the camera is not secured. You may need to push harder to secure the camera in the mounting hole. Make sure you hear a click before you continue.

Assigning an IP Address

The camera automatically obtains an IP address when it is connected to a network.

NOTE: If the camera cannot obtain an IP address from a DHCP server, it will use Zero Configuration Networking (Zeroconf) to choose an IP address. When set using Zeroconf, the IP address is in the 169.254.0.0/16 subnet.

The IP address settings can be changed using one of the following methods:

- Camera's web browser interface: `http://<camera IP address>/`
- ARP/Ping method. For more information, see *Setting the IP Address Using the ARP/Ping Method* on page 16
- Network Video Management software application (for example, Avigilon™ Control Center).

NOTE: The default camera username is `admin` and the default password is `admin`.

Accessing the Live Video Stream

Live video stream can be viewed using one of the following methods:

- Web browser interface: `http://<IP address>/`
- Network Video Management software application (for example, the Avigilon Control Center software).

NOTE: The default camera username is `admin` and the default camera password is `admin`.

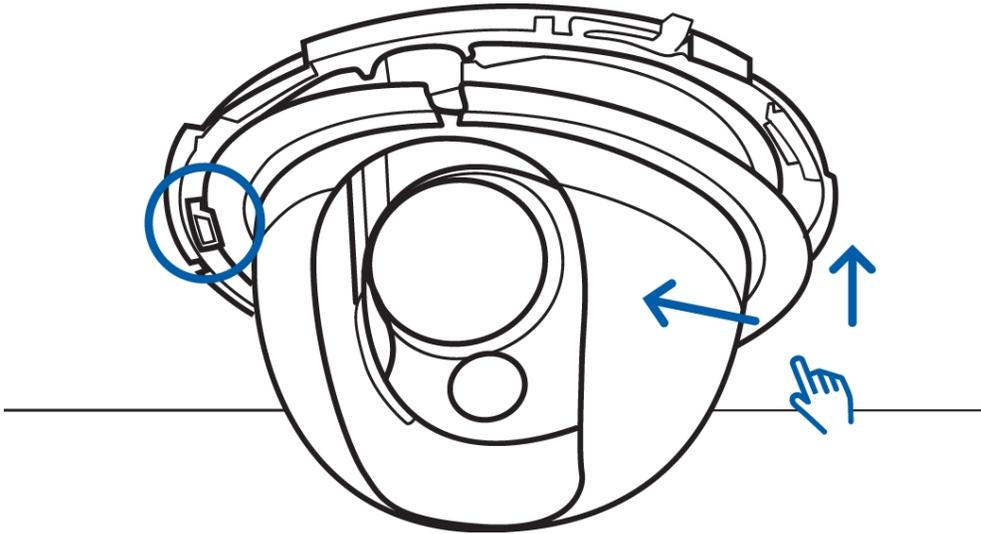
Aiming the HD Micro Dome Camera

1. Turn the gimbal and rotate the camera ball until it faces the direction you want.

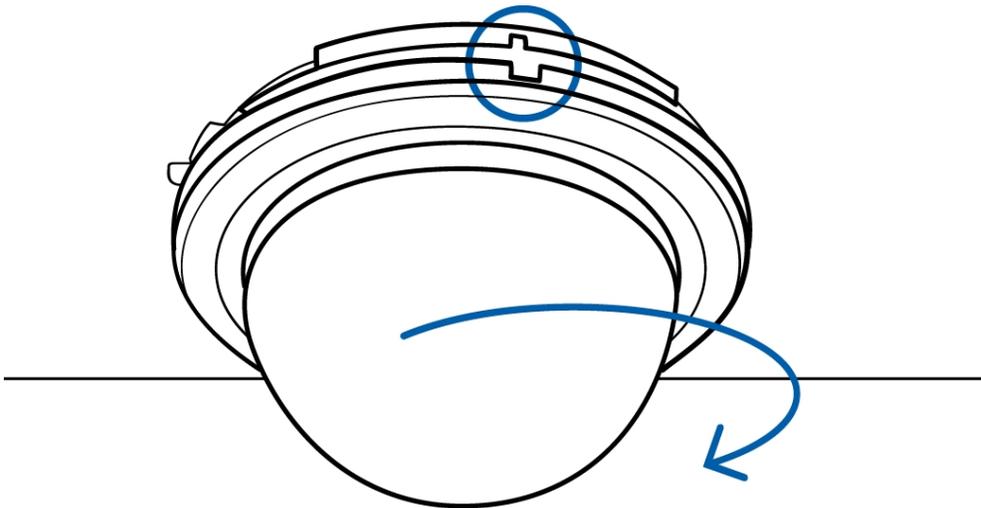
Use the horizon markers and the vertical marker as a guide.

Installing the Dome Cover

1. Reinstall the dome shield.
 - a. Insert one side of the dome shield into one of the shield locking tabs.
 - b. Press the opposite side of the dome shield against the shield locking tab, then push down until you hear the dome shield click into place.
 - c. Rotate the dome shield so that it does not block the camera's field of view.



2. Install the dome cover.
 - a. Align the dome cover with the base.
 - b. Press the dome cover against the base then turn until it clicks into place.



For More Information

Additional information about setting up and using the device is available in the following guides:

- *Avigilon™ Control Center Client User Guide*
- *Avigilon™ High Definition H.264 Web Interface User Guide*

The manuals are available on the Avigilon website: <http://avigilon.com/support-and-downloads>



LED Indicators

Once connected to the network, the Connection Status LED will display the progress in connecting to the Network Video Management software.

The following table describes what the LEDs indicate:

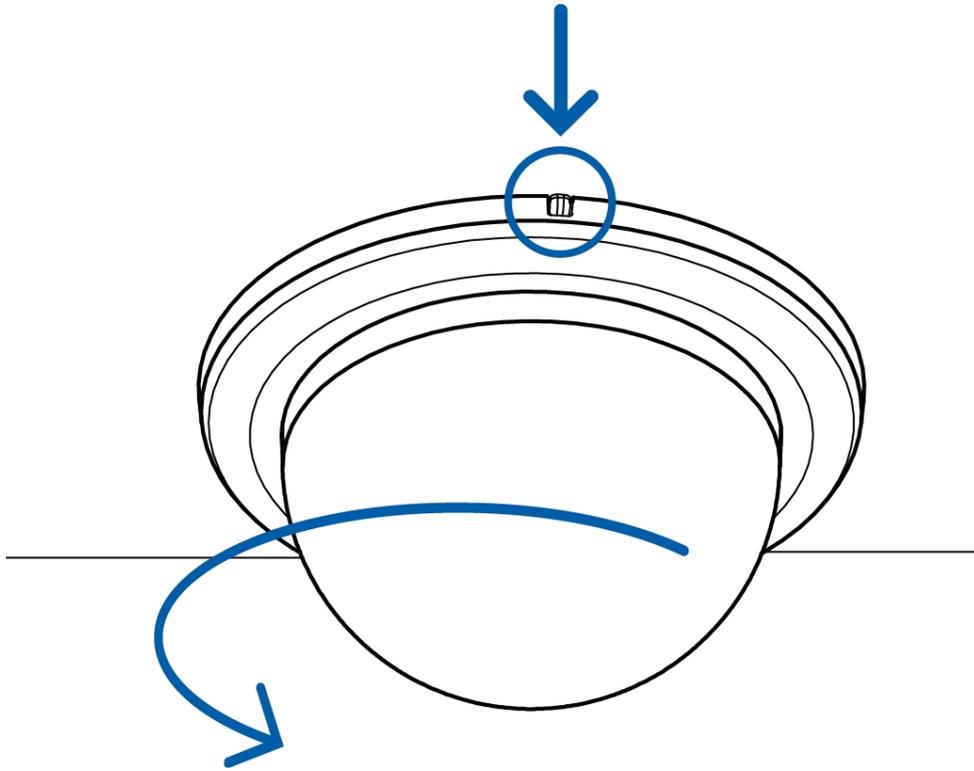
Connection State	Connection Status LED	Description
Obtaining IP Address	One short flash every second	Attempting to obtain an IP address.
Discoverable	Two short flashes every second	Obtained an IP address but is not connected to the Network Video Management software.
Upgrading Firmware	Two short flashes and one long flash every second	Updating the firmware.
Connected	On	Connected to the Network Video Management software.

Removing the Dome Cover

If you ever need to adjust the camera aim, or access the cable assembly, you will need to remove the dome cover first.

1. Press the cover release tab and twist the dome cover until it is released from the base.

The dome cover can only move in one direction.



2. To uninstall the camera, remove the dome shield then squeeze the lock release snaps together and pull the dome camera from the mounting surface. For more information, refer to the diagrams in *Preparing for the Installation* on page 6

NOTE: If the camera was mounted on a thinner mounting surface, you may need to bend the locking sheet springs flat.

Resetting to Factory Default Settings

If the camera no longer functions as expected, you can choose to reset the camera to its factory default settings.

Use the firmware revert button to reset the camera.

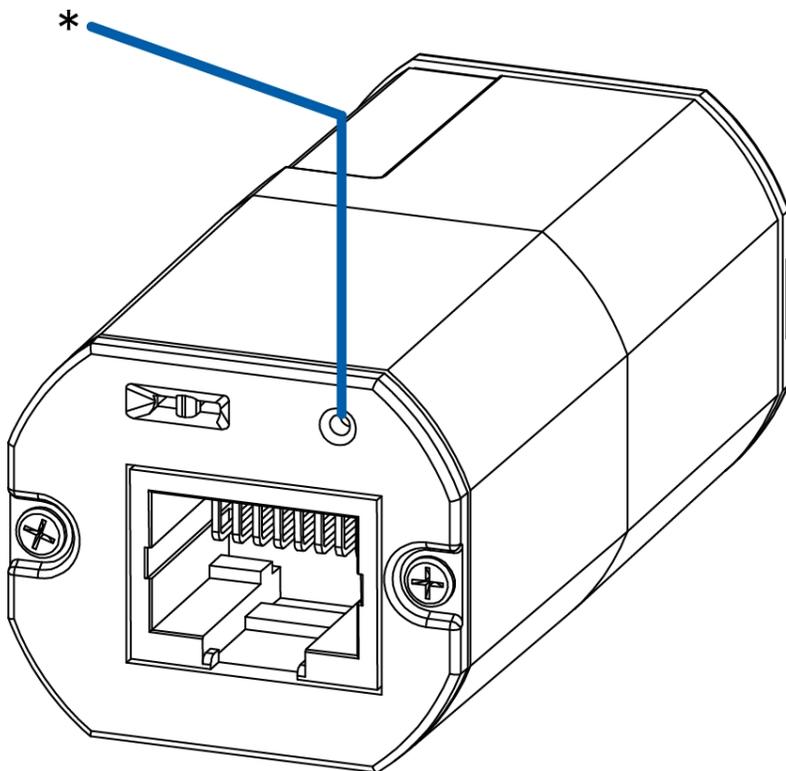


Figure 1: The firmware revert button on the cable assembly.

1. Disconnect power from the device.
2. Using a straightened paperclip or similar tool, gently press and hold the firmware revert button.
3. While continuing to hold the button, power the device.

Release the button after three seconds.



CAUTION — Do not apply excessive force. Inserting the tool too far will damage the device.

Setting the IP Address Using the ARP/Ping Method

Complete the following steps to configure the camera to use a specific IP address:

1. Locate and copy down the MAC Address (MAC) listed on the Serial Number Tag for reference.
2. Open a Command Prompt window and enter the following commands:
 - a. `arp -s <New Camera IP Address> <Camera MAC Address>`
For example: `arp -s 192.168.1.10 00-18-85-12-45-78`
 - b. `ping -l 123 -t <New Camera IP Address>`
For example: `ping -l 123 -t 192.168.1.10`
3. Reboot the camera.
4. Close the Command prompt window when you see the following message:
`Reply from <New Camera IP Address>: ...`

Cleaning

Dome Bubble

If the video image becomes blurry or smudged in areas, it may be because the dome bubble requires cleaning.

To clean the dome bubble:

- Use hand soap or a non-abrasive detergent to wash off dirt or finger prints
- Use a microfiber cloth or non-abrasive fabric to dry the dome bubble.

Important: Failure to use the recommended cleaning materials may result in a damaged or scratched dome bubble that will negatively impact image quality and result in unwanted IR light reflecting into the lens.

Body

- Use a dry or lightly dampened cloth to clean the camera body.

Do not use strong or abrasive detergents.

Specifications

Camera

Lens	Lens 2.8mm, F2.0
Network	
Network	100Base-TX
Cabling Type	CAT5
Connector	RJ-45
API	ONVIF compliance version 1.02, 2.00, Profile S (www.onvif.org)
Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication.
Streaming Protocols	IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP, RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP

Mechanical

Dimensions ØxH	90.00 mm x 107.54 mm (3.58" x 4.23")
Distance from mounting surface to rear of housing	61.28 mm (2.41")
Weight	150 g (5.29 oz) + 36 g (1.27 oz) for cable
Body	Plastic
Finish	Plastic, RAL 9003 (RAL 9005 for -BL model)
Adjustment Range	360° pan, 90° tilt, 360° azimuth

Electrical

Power Consumption	4 W max
Power Source	PoE: IEEE802.3af Class 3 compliant

Environmental

Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Storage Temperature	-30 °C to +70 °C (-22 °F to 158 °F)
Humidity	0-95% non-condensing

Certifications

Certifications	UL cUL CE ROHS
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	WEEE RCM EAC KC
Safety	UL 60950-1 CSA 60950-1 IEC/EN 60950-1
Electromagnetic Emissions	FCC Part 15 Subpart B Class B EN 55022 Class B IC ICES-003 Class B EN 61000-6-3 EN 61000-3-2 EN 61000-3-3
Electromagnetic Immunity	EN 55024 EN 61000-6-1

Limited Warranty & Technical Support

Avigilon warrants to the original consumer purchaser, that this product will be free of defects in material and workmanship for a period of 3 years from date of purchase.

The manufacturer's liability hereunder is limited to replacement of the product, repair of the product or replacement of the product with repaired product at the discretion of the manufacturer. This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material or workmanship. This warranty extends to the original consumer purchaser of the product only.

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Warranty service and technical support can be obtained by contacting Avigilon Technical Support by phone at 1.888.281.5182 or via email at support@avigilon.com.

