avigilon™

Installation Guide

Avigilon™ H4 Fisheye Dome Camera Models:

6.0L-H4F-DO1-IR and 12.0-H4F-DO1-IR

Important Safety Information

This manual provides installation and operation information and precautions for the use of this device. 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 reference.

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

> This 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.
- This product is intended to be used in an 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.
- This product is intended to be supplied by a UL Listed Power Unit marked "Class 2" or "LPS" or "Limited Power Source" with output rated 12 VDC or Power over Ethernet (PoE), rated 48 VDC, 25.5W min.
- Any external power supply connected to this product may only be connected to another Avigilon product of the same model series. External power connections must be properly insulated.
- Do not connect directly to mains power for any reason.

> **CAUTION —** Failure to observe the following instructions may result in injury to persons or damage to the device.

- Do not expose the camera directly to high levels of x-ray, laser, or UV radiation. Direct exposure may cause permanent damage to the image sensor.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other sources of heat.
- Do not subject the device cables to excessive stress, heavy loads or pinching.
- Do not open or disassemble the device. There are no user serviceable parts.
- Refer all device 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.
- This product should be installed in restricted access locations.

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.

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.

Legal Notices

CENTER, and ACC are trademarks of Avigilon Corporation. ONVIF is a trademark of Onvif, Inc. Other names or logos mentioned herein may be the trademarks of their respective owners. The absence of the symbols ™ and ® in proximity to each trademark in this document or at all is not a disclaimer of ownership of the related trademark.

Disclaimer

This document has been compiled and published using product descriptions and specifications available at the time of publication. The contents of this document and the specifications of the products discussed herein are subject to change without notice. Avigilon Corporation reserves the right to make any such changes without notice. Neither Avigilon Corporation nor any of its affiliated companies: (1) guarantees the completeness or accuracy of the information contained in this document; or (2) is responsible for your use of, or reliance on, the information. Avigilon Corporation shall not be responsible for any losses or damages (including consequential damages) caused by reliance on the information presented herein.

Avigilon Corporation
avigilon.com

PDF-H4FDO-A

Revision: 8 - EN
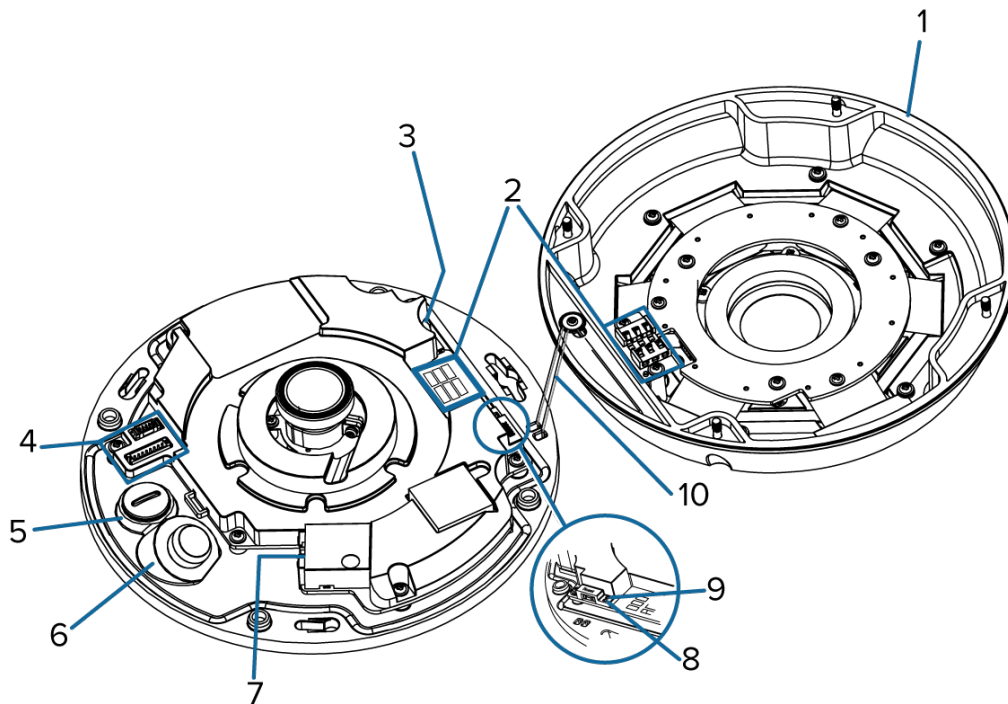
20230403

Table of Contents

Overview

Cover View

1. **Dome cover**

   Vandal resistant dome cover.

2. **Tamper resistant screws**

   Star-shaped captive screws to fix the dome cover to the base.

3. **IR illuminator**

   Provides scene illumination in the IR spectrum.

4. **Microphone**

   Built-in audio receiver.

Internal View

1. **Dome cover**

   Vandal resistant dome cover.

2. **IR contacts**

   Align the IR contacts when installing the dome cover to the base. The contacts must be connected to use the IR illuminators.

3. **microSD card slot**

   Accepts a microSD card for onboard storage. For more information, see *(Optional) Configuring microSD Card Storage* on page 10.

4. **Auxiliary cable connector**

   Accepts an auxiliary connection for connecting the camera to auxiliary power, audio and I/O devices.

5. **Auxiliary cable entry hole**

   An entry hole for the auxiliary cable.

6. **Ethernet cable entry hole**

   An entry hole for the Ethernet cable.

7. **Ethernet port**

   Accepts an Ethernet connection to a network. Server communication and image data transmission occurs over this connection. Also receives power when it is connected to a network that provides Power over Ethernet.

8. **Link LED indicator**

   Amber LED indicates if there is an active connection in the Ethernet port.
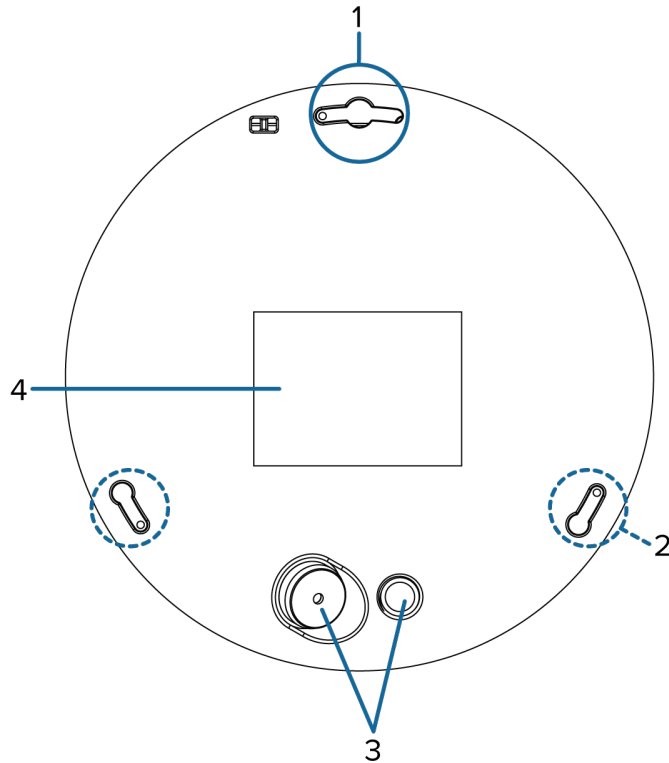
9. **Connection status LED indicator**

Green LED provides information about device operation. For more information, see *Connection Status LED Indicator* on page 35.

10. **Lanyard**

Anchors the dome cover to the camera base.

Bottom View

1. **Primary mounting slot**

The primary mounting point for the camera.

If using the optional mounting bracket or NPT adapter, align the primary camera post (largest diameter post) with the primary mounting slot.

> **Note:** If you are planning to mount the camera on a wall, be aware that the primary mounting slot aligns with the top of the video image.

2. **Secondary mounting slots**

Mounting points for the camera.

If you are using the optional mounting bracket or NPT adapter, align the camera posts to the mounting slots.
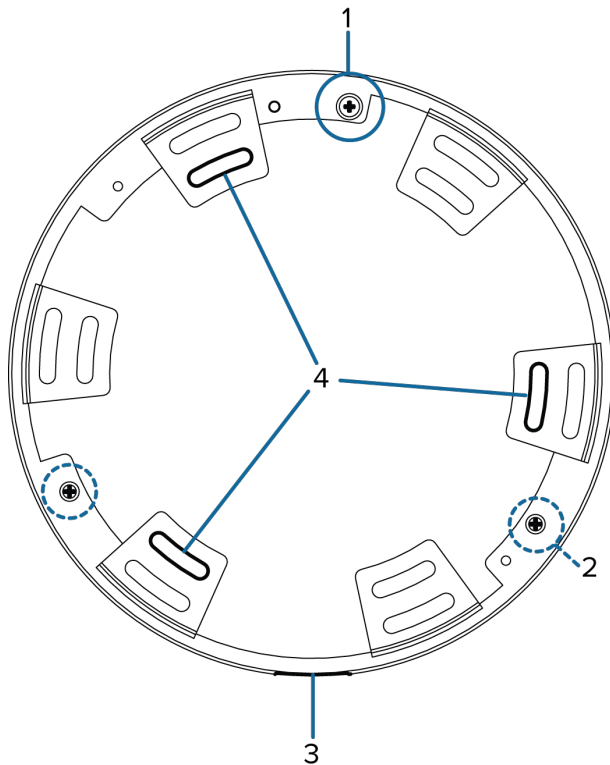
3. **Cable entry holes**

An entry holes for the cables required for camera operation.

4. **Serial number tag**

    Device information, product serial number and part number label.

Bracket View

1. **Primary camera post**

    Align the primary camera slot on the optional bracket to the primary mounting post on the dome camera base.

2. **Secondary camera posts**

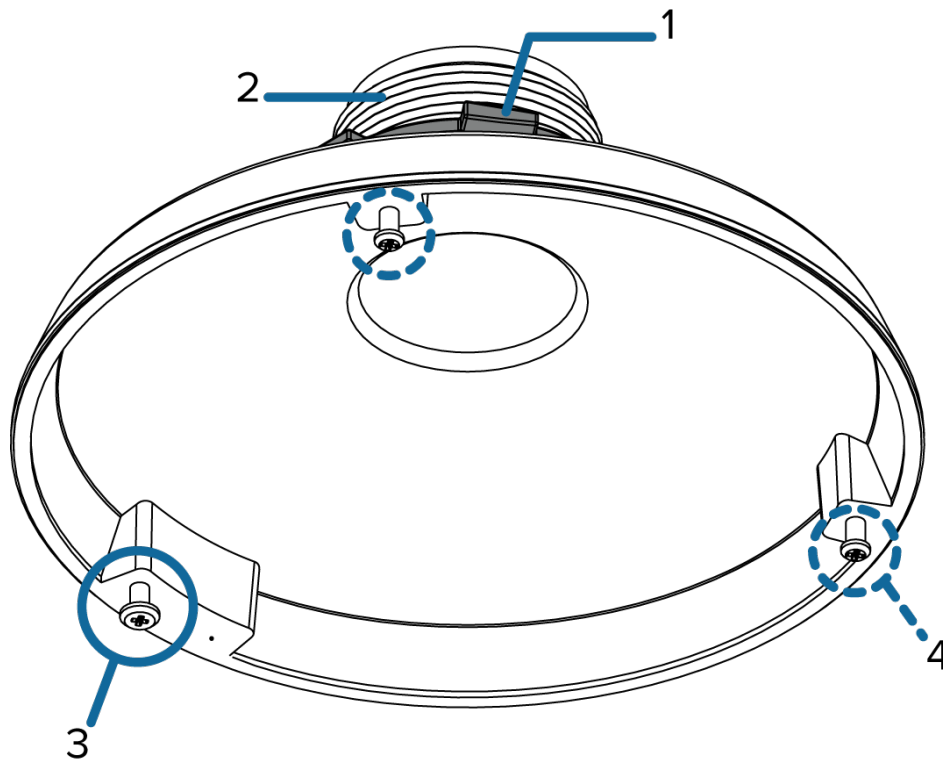   Align the camera posts on the bracket to the mounting slots on the dome camera base.

3. **Cable entry notch**

    An entry notch for network, power and I/O cables.

4. **Mounting slots**

    Mounting points for the optional bracket.

NPT Adapter View

1. **Lock nut**

   Lock nut for securing the NPT adapter to the pipe.

2. **1-1/2" NPT thread mount**

   Standard female 1-1/2" NPT thread mount for mounting the dome camera to a pole or bracket.

3. **Primary camera post**

   Align the primary camera slot on the NPT adapter to the primary mounting post on the dome camera base.

4. **Secondary camera posts**

   Align the camera posts on the adapter to the mounting slots on the dome camera base.

Required Tools and Materials

The following tools are required to complete the installation but are not included in the package:

If you will be installing the NPT adapter (H4F-MT-NPTA), you will need:

- 1-1/2" NPT female to female adapter
- NPT pipe
- NPT lock nut

Camera Package Contents

Ensure the package contains the following:

- Avigilon™ H4 Fisheye Dome Camera
- Camera Base Mounting Template sticker
- Bracket Mounting Template sticker
- Optional mounting bracket
- Star-shaped screwdriver
- Auxiliary cable
- Desiccant bag
- 3 screws and anchors — for securing the camera to the mounting surface.
- 1 x (M3 x 8 mm) T10 star-shaped screw — for securing the camera base to the bracket.
- 2 x (M4 x 8 Philips) machine screws — for securing the bracket to an electrical gang box.
- Rubber washer
- Rubber grommet

If you are using the optional NPT adapter (H4F-MT-NPTA), ensure the package contains the following:

- NPT adapter for the H4 Fisheye Dome Camera
- 1 x (M3 x 8 mm) T10 star-shaped screw — for securing the camera base to the bracket.
- Thread seal tape

Installation

Removing the Dome Cover

1. From the bottom of the dome camera, remove the white plug covering the Ethernet cable entry hole. Once removed, the plug can be discarded.

   Be aware that a vacuum may occur within the camera during shipping. Removing the plug may allow the dome cover to be removed more easily.
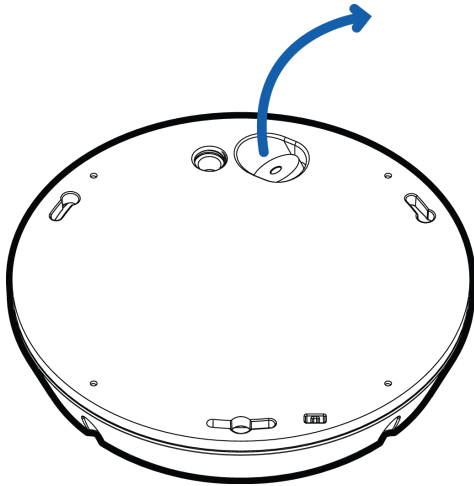
2. Remove the dome cover by loosening the screws that fix the cover to the base. Use the provided star-shaped screwdriver to loosen the screws.
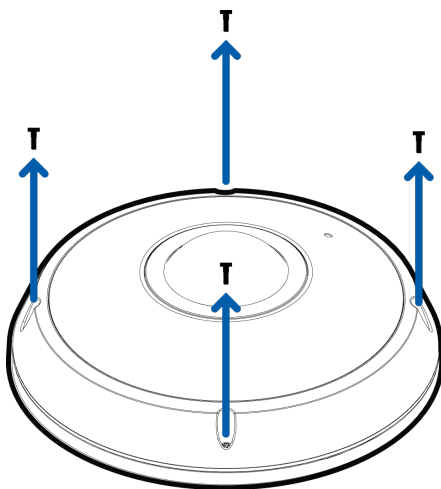
> **Note:** Be careful not to scratch or touch the dome bubble. The resulting marks or fingerprints may affect the overall image quality. Keep the protective covers on the outside of the dome bubble until the installation is complete.

Preparing the Cables

Before you connect the cables to the dome camera, you must prepare the cables for installation.

If the dome camera is installed outdoors, it is important that the cables be insulated against the weather. Provided with the dome camera is a rubber grommet for waterproofing the Ethernet cable, and a rubber washer for the auxiliary cable.

Note: The Ethernet cable must be uncrimped to perform this procedure.

The auxiliary cable that is provided with the dome camera includes an I/O terminal, external power connector, audio input and audio output connectors. You need to connect the auxiliary cable to the dome camera if any one of the auxiliary cable connectors is used. For more information about each of the connector options, see *Auxiliary Cable Connections* on page 32.
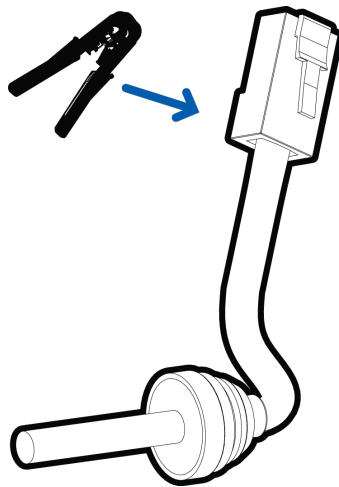
1. Thread the Ethernet cable into the rubber grommet.

    a. Drill a hole through the center of the provided rubber grommet.

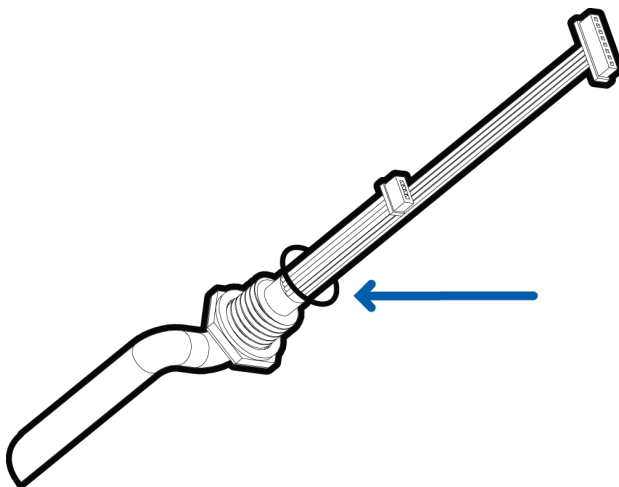   Do not cut or slice the rubber grommet. This may void the warranty.
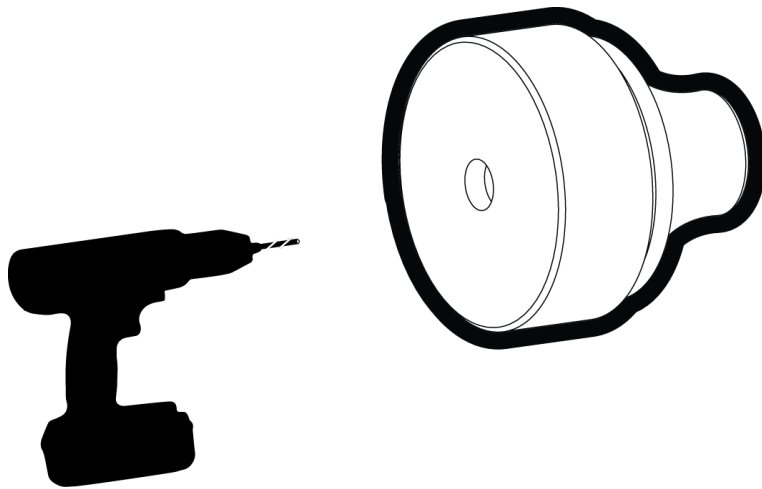
    b. Push the cable through the hole in the rubber grommet.

       Ensure the orientation of the cable and grommet matches the following image.
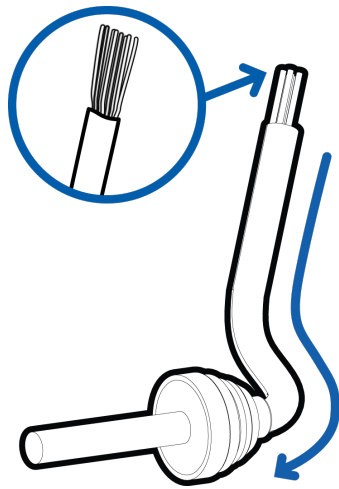
    c. Crimp the connector onto the Ethernet cable.

2. If you are using the auxiliary cable, thread the rubber washer through the end with the white connectors.

3. Do not connect the cables to the dome camera till indicated.

(Optional) Configuring microSD Card Storage

To use the camera's SD card storage feature, you must insert a microSD card into the card slot.

It is recommended that the microSD card have a write speed of class 10 or better. If the microSD card does not meet the recommended write speed, the recording performance may suffer and result in the loss of frames or footage.

1. Insert a microSD card into the camera.

    ⚠ **CAUTION —** Do not force the microSD card into the camera or you may damage the card and the camera.

2. Access the camera's web interface to enable the onboard storage feature. For more information, see the *Avigilon High Definition H4 and H5 IP Camera Web Interface User Guide*.

(Optional) Enabling the Microphone

This dome camera features an internal microphone, and newer models include a switch to physically enable or disable the microphone. The microphone switch is set to OFF by default.

It is recommended that you enable the microphone before installing the camera in its final location.

1. Locate the microphone controller on the dome cover assembly.
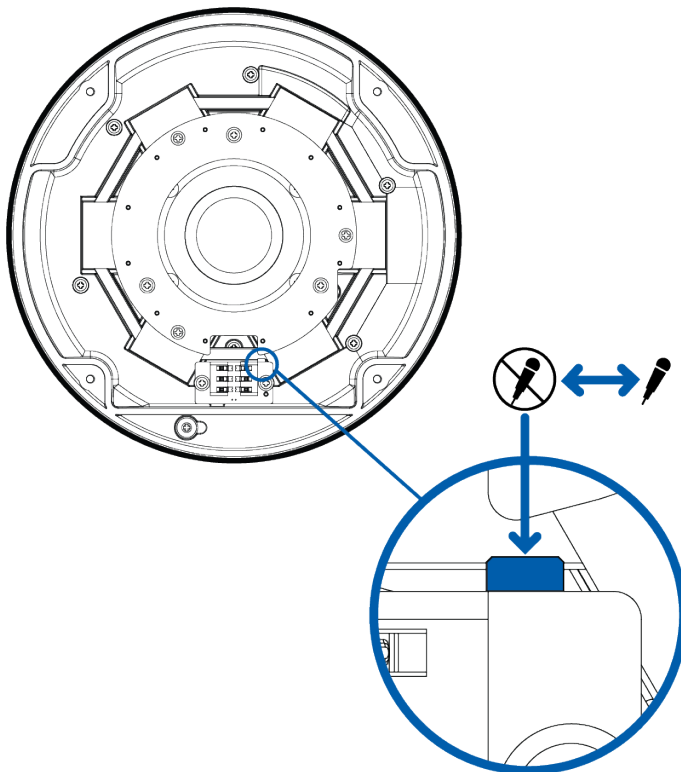
2. Slide the switch from the default OFF position to ON to enable the microphone.

Mounting the Dome Camera

The dome camera can only be mounted to a pendant wall mount (H4-MT-WALL1) or a pendant NPT mount (H4-MT-NPTA1). The mounts are sold separately.

Use the pendant wall mount if you will be mounting the camera to a vertical mounting surface such as a wall. Use the pendant NPT mount if you will be mounting the camera to a 1-1/2" NPT pipe for a free hanging installation.

Mounting the Dome Camera to a Ceiling or Wall

Perform the following steps if the required cables will be coming from inside the mounting surface and the camera will be mounted immediately over the cable hole. Use this procedure on surfaces that can be easily drilled into, and when the cables should be kept out of sight.

If you do not need to use the auxiliary cable, skip the relevant steps.
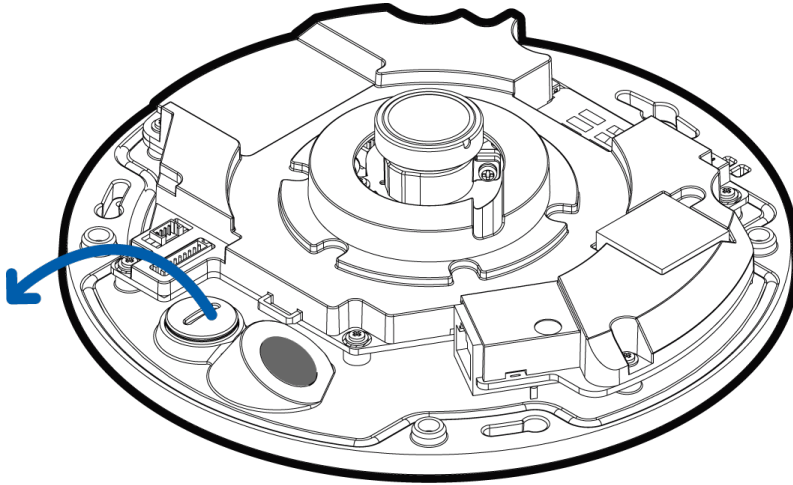
1. Using the Camera Base Mounting Template, drill 3 pilot holes into the mounting surface.

   If you are mounting the camera to a wall, make sure the pilot hole for the primary mounting slot is at the top, or the video image will be rotated.
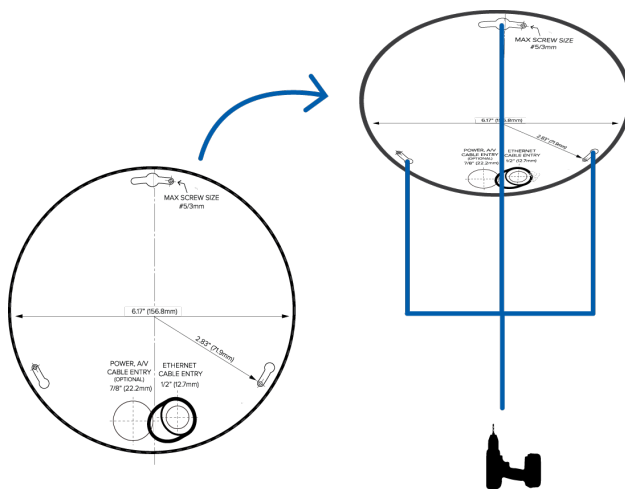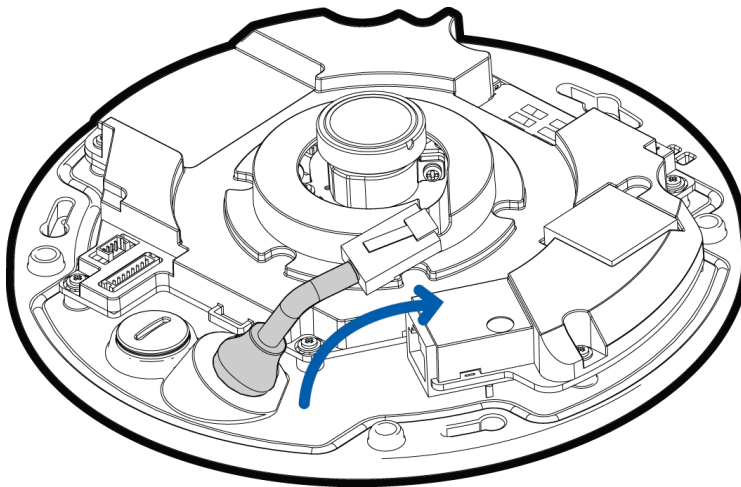

2. Hammer the supplied plastic anchors into the holes.
3. Drill the 2 cable entry holes into the mounting surface.
4. Pull the required cables through the mounting surface.

5. If you are installing the auxiliary cable, remove the black plug covering the auxiliary cable entry hole. Otherwise, keep the cover on the auxiliary cable entry hole to prevent dust from entering the dome camera.
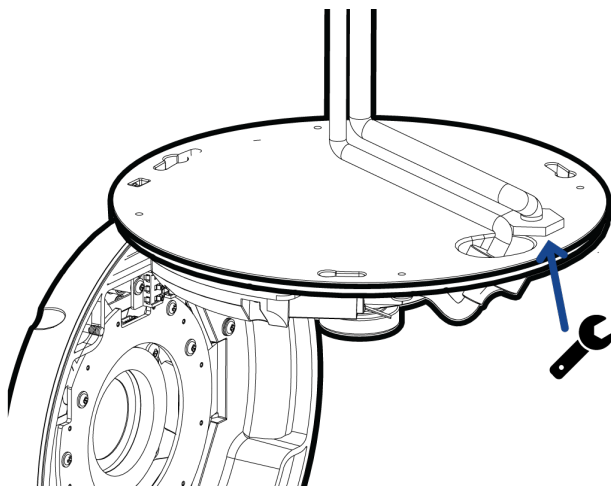

6. Pull the Ethernet cable through the Ethernet cable entry hole on the camera base. The thread around the grommet should line up with the cable entry hole.

    The rubber grommet around the Ethernet cable should be pressed firmly into the Ethernet cable entry hole to create a seal.
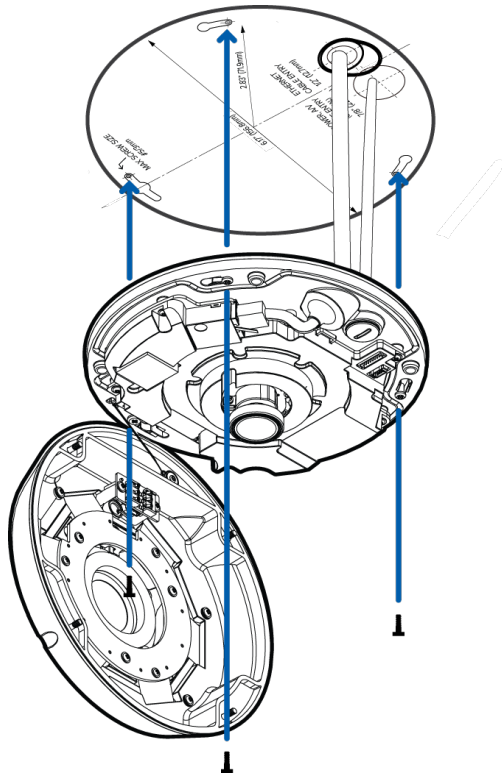
7. If you need the auxiliary cable, pull the cable through the auxiliary cable entry hole.
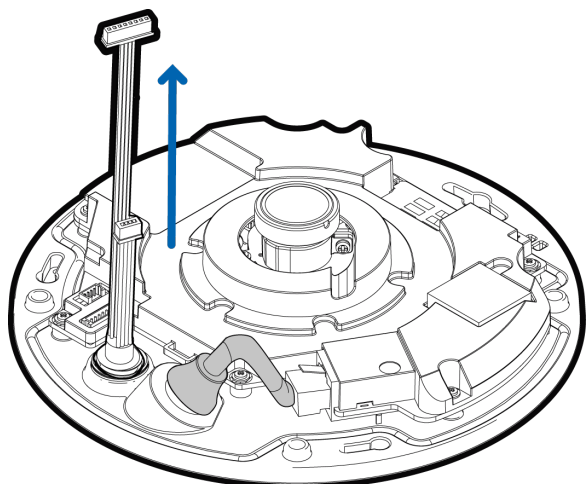
8. Using a wrench or pliers, tighten the auxiliary cable into the camera base.

9. Align the camera base to the pilot holes then use the provided self-tapping screws to secure the camera to the mounting surface.


Mounting the Dome Camera Using the Side Cable Entry Hole

Perform the following steps if the required cables will be run along the mounting surface. Use this procedure if the mounting surface is difficult to drill into, or if the cables must be routed outside of the mounting surface.
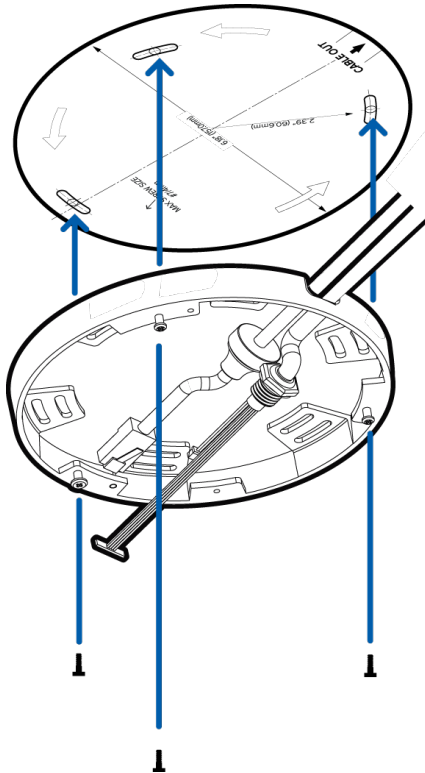
If you do not need to use the auxiliary cable, skip the relevant steps.

1. Using the Bracket Mounting Template, drill 3 holes into the mounting surface.
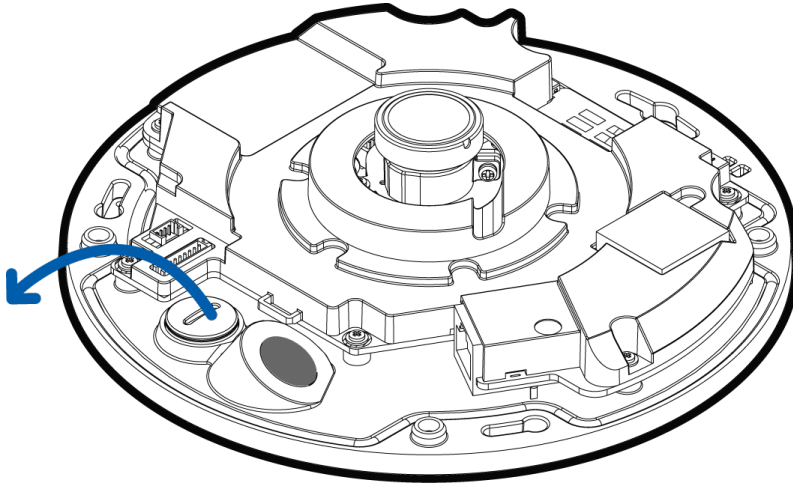
    When installing on a wall, the side cable entry hole must point straight down or the video image will be rotated.
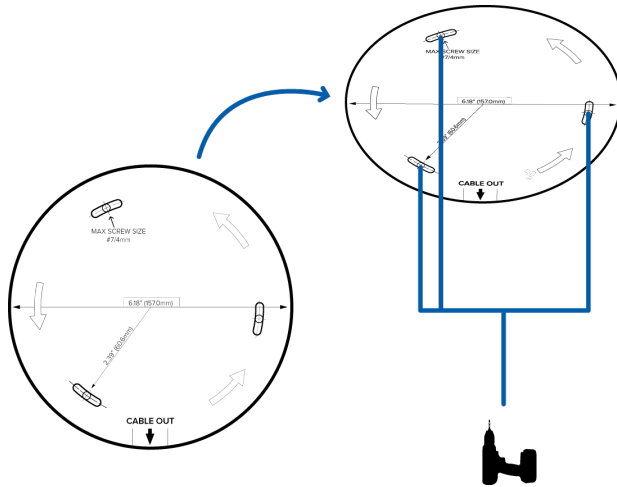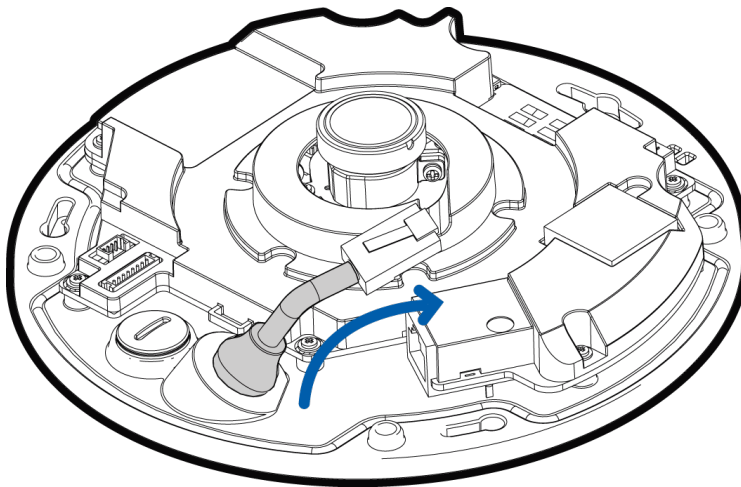
2. Hammer the supplied plastic anchors into the holes.

3. Arrange and feed the required cables through the cable entry notch on the bracket.

4. Align the bracket to the mounting holes then use the provided self-tapping screws to secure the mounting bracket to the mounting surface.
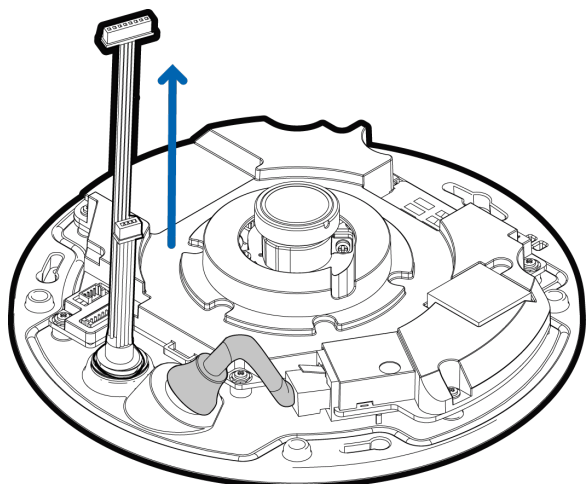
5. If you are installing the auxiliary cable, remove the black plug covering the auxiliary cable entry hole. Otherwise, keep the cover on the auxiliary cable entry hole to prevent dust from entering the dome camera.

6. Pull the Ethernet cable through the Ethernet cable entry hole on the camera base. The thread around the grommet should line up with the cable entry hole.

   The rubber grommet around the Ethernet cable should be pressed firmly into the Ethernet cable entry hole to create a seal.
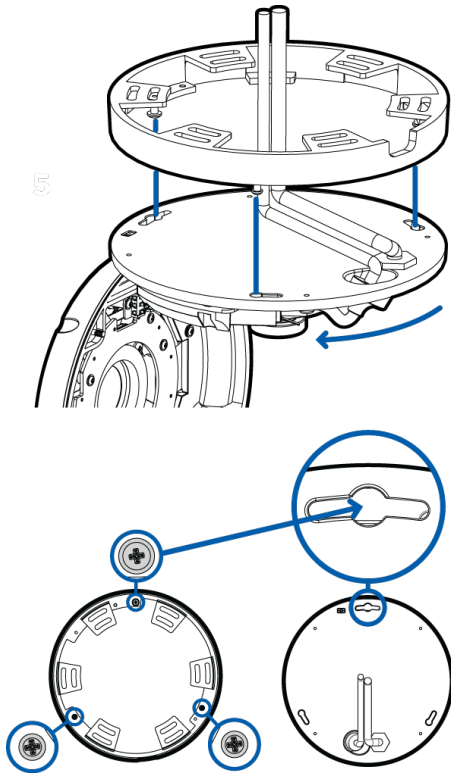
7. If you need the auxiliary cable, pull the cable through the auxiliary cable entry hole.

8. Using a wrench or pliers, tighten the auxiliary cable into the camera base.

9. Align the mounting slots on the camera base to the camera posts on the bracket, then twist counter-clockwise until the posts come to the right end of the mounting slots.

A tapped hole is now visible through the left side of the primary mounting slot on the camera base.

10. Insert the provided star-shaped screw through the primary mounting slot in the camera base, and into the now visible hole in the mounting bracket.

11. Tighten the screw to lock the camera to the bracket.

Mounting the Dome Camera to an Electrical Box

Perform the following steps if the required electrical components and cables must be contained in an

electrical gang box. To mount the dome camera to an electrical gang box, you must use the provided bracket.

If you do not need to use the auxiliary cable, skip the relevant steps.

1. Install the electrical gang box as required.
2. Align the bracket mounting holes to the mounting points on the electrical gang box.

   If you are mounting the camera to a wall, make sure the primary mounting post on the bracket is at the top, or the video image will be rotated.

3. Use the provided machine screws to secure the bracket to the electrical gang box.
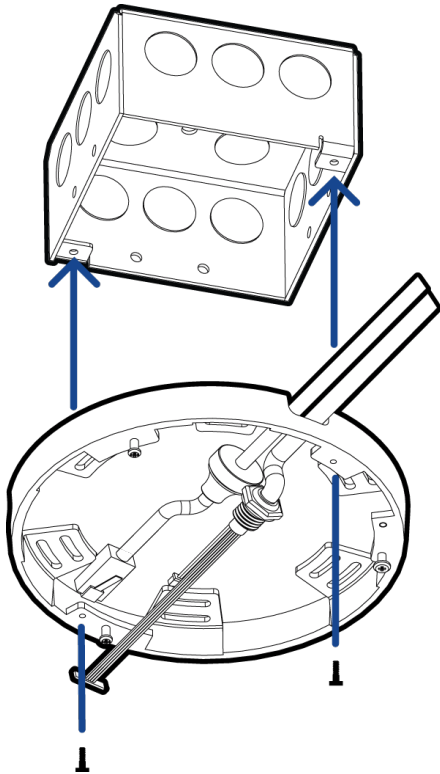
4. If you are installing the auxiliary cable, remove the black plug covering the auxiliary cable entry hole. Otherwise, keep the cover on the auxiliary cable entry hole to prevent dust from entering the dome camera.
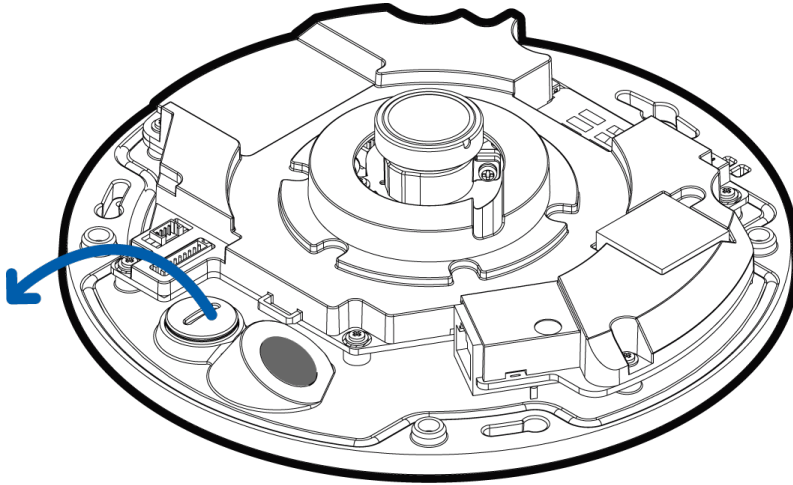

5. Pull the Ethernet cable through the Ethernet cable entry hole on the camera base. The thread around the grommet should line up with the cable entry hole.

   The rubber grommet around the Ethernet cable should be pressed firmly into the Ethernet cable entry hole to create a seal.

6. If you need the auxiliary cable, pull the cable through the auxiliary cable entry hole.
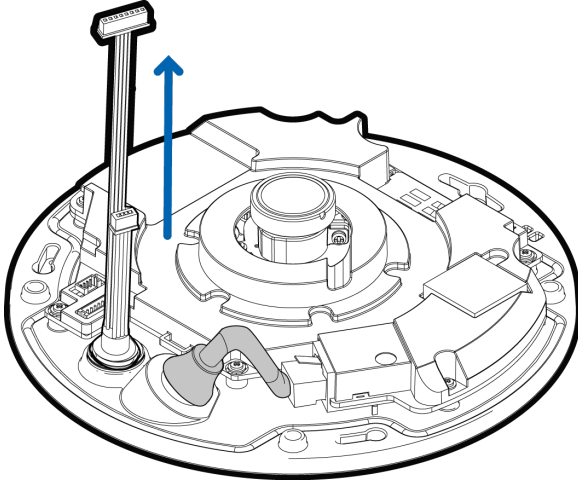
7. Using a wrench or pliers, tighten the auxiliary cable into the camera base.
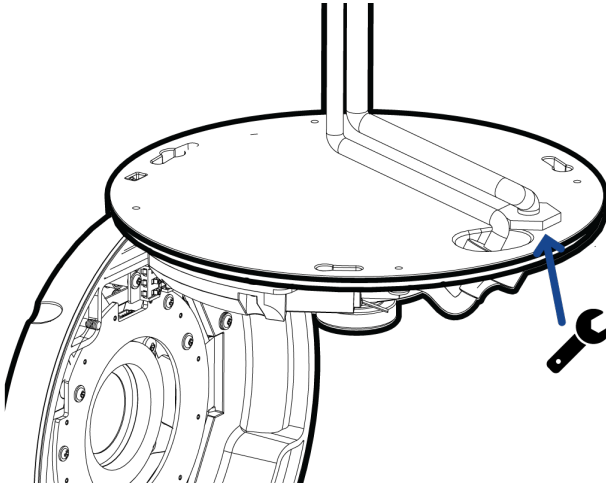
8. Align the mounting slots on the camera base to the camera posts on the bracket, then twist counter-clockwise until the posts come to the right end of the mounting slots.
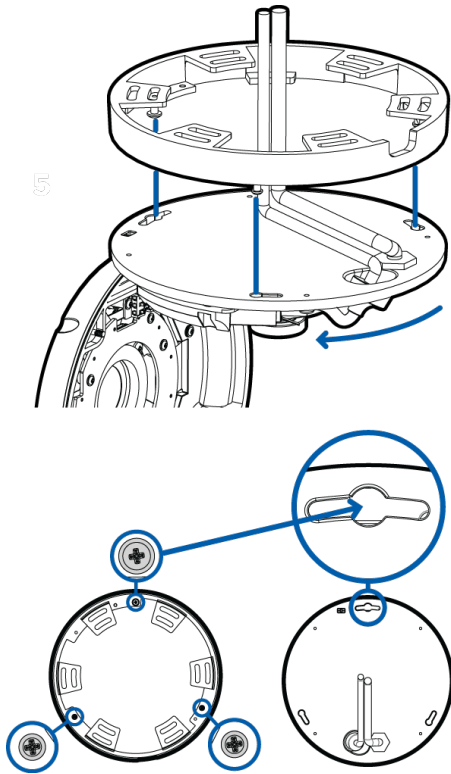
A tapped hole is now visible through the left side of the primary mounting slot on the camera base.

9. Insert the provided star-shaped screw through the primary mounting slot in the camera base, and into the now visible hole in the mounting bracket.
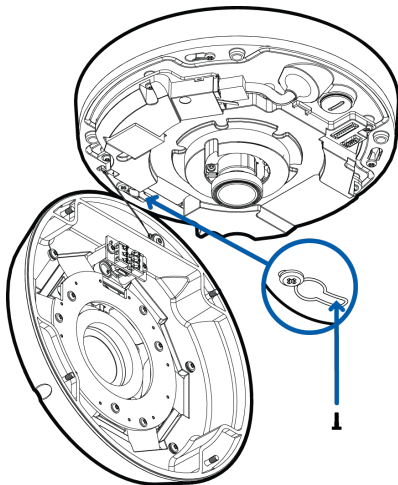
10. Tighten the screw to lock the camera to the bracket.

(Optional) Mounting the Dome Camera to an NPT Pipe

Perform the following steps if the dome camera needs to be installed to an NPT pipe for a pendant

installation. To perform this procedure, you need the optional NPT adapter (H4F-MT-NPTA).

> **Note:** The NPT pipe and NPT-female to NPT-female adapter are not supplied by Avigilon and should be sourced separately.

If you do not need to use the auxiliary cable, skip the relevant steps.

1. Pull the required cable through the NPT conduit pipe.
2. Apply thread seal tape to the pipe in the direction shown in the image below and screw on the 1-1/2" NPT female to NPT female pipe adapter.
3. Screw the lock nut onto the NPT adapter.
4. Apply thread seal tape to the NPT adapter and screw it into the pipe adapter.

   Make sure the parts are assembled in this order from NPT conduit pipe to camera adapter:

   a. NPT conduit pipe
   b. 1-1/2" NPT female to female pipe adapter
   c. Lock nut
   d. NPT adapter

5. If you are installing the auxiliary cable, remove the black plug covering the auxiliary cable entry hole. Otherwise, keep the cover on the auxiliary cable entry hole to prevent dust from entering the dome camera.

6. Pull the Ethernet cable through the Ethernet cable entry hole on the camera base. The thread around the grommet should line up with the cable entry hole.

    The rubber grommet around the Ethernet cable should be pressed firmly into the Ethernet cable entry hole to create a seal.

7. If you need the auxiliary cable, pull the cable through the auxiliary cable entry hole.

8. Using a wrench or pliers, tighten the auxiliary cable into the camera base.

9. Align the mounting slots on the camera base to the camera posts on the NPT adapter, then twist counter-clockwise until the posts come to the right end of the mounting slots.
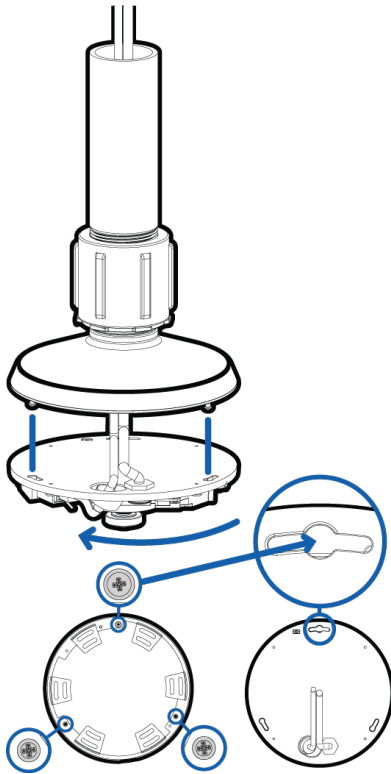
A tapped hole is now visible through the left side of the primary mounting slot on the camera base.

10. Insert the provided star-shaped screw through the primary mounting slot in the camera base, and into the now visible hole in the NPT adapter.
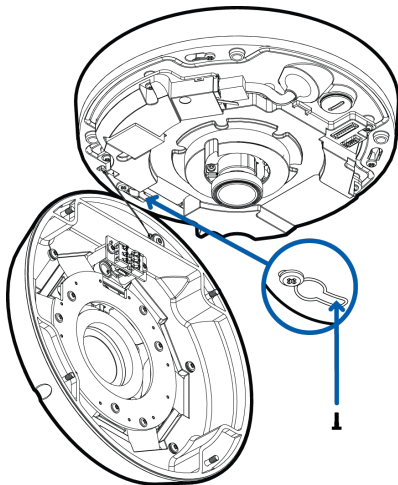
11. Tighten the screw to lock the camera to the bracket.

Connecting Cables

Refer to the diagrams in the Overview section for the location of the different connectors on the camera base.

1. Connect a network cable to the camera's Ethernet port (RJ-45 connector).
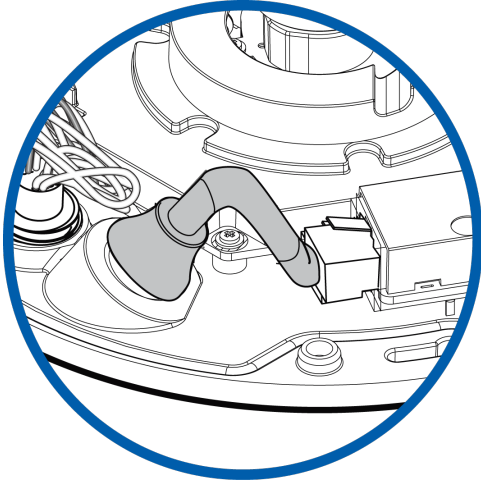
2. If the camera is connected to any external devices, connect the auxiliary cable to the auxiliary cable connectors.
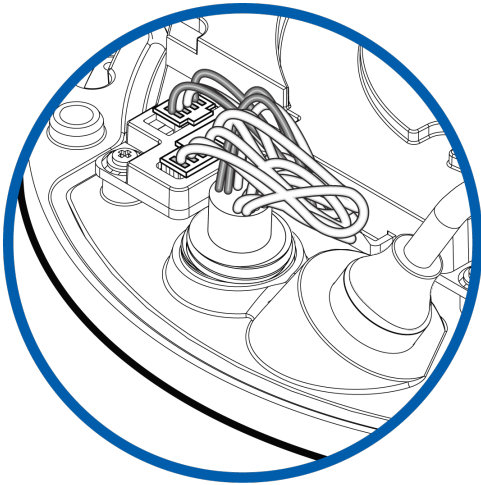
3. Power the camera using one of the following methods.

   - Power over Ethernet (PoE) Class 3 — If PoE is available, the LEDs will turn on.
     - For max IR range up to 10 m (32.8 ft) PoE+, IEEE 802.3at Class 4 power is required.
     - Camera powered by PoE, IEEE 802.3af Class 3, will have a reduced IR range of up to 8 m (26.2 ft).
   - External Power — Connect the auxiliary cable to the auxiliary cable connectors.

   The status LEDs turn on when the dome camera receives power.

   Note: The dome camera may not immediately begin normal operations if the environment is too cold. It may take up to 20 minutes for the dome camera to warm up and begin operations if the temperature is below -25°C (-13°F).

Initializing a Camera Username and Password

Cameras manufactured after January 1, 2020, do not have a default username or password and will be in a factory default state.

> **Important:** You must create a user with *administrator* privileges before the camera is operational.

The first user can be created using any of the following methods:

- Camera's Web Interface: enter the camera's IP address in a web browser to access the web interface. If the camera is in the factory default state you will be redirected to the Add a new user page to create the first user. For more information, see the *Avigilon High Definition H4 and H5 IP Camera Web Interface User Guide.*

- Camera Configuration Tool: cameras discovered in the factory default state will be identified by . Select the **Admin Users** tab to create the first user. For more information, see the *Avigilon Camera Configuration Tool User Guide*.

- Avigilon Control Center software version 7.4 or later, or version 6.14.12 or later: when connecting a camera in the factory default state, the client software will ask you to create a new user. For more information, see the *Avigilon Control Center Client User Guide.*

- Avigilon Cloud Services (ACS) v3.0 or later: when adding a camera you will be asked to create a new user for cameras in the factory default state. For more information, see the *Avigilon Cloud Services User Guide*.

> **Tip:** If you are connecting your Avigilon camera to a 3rd party VMS, you will need to set up the first user through the camera's Web Interface or Camera Configuration Tool before you connect to the 3rd party VMS.

Assigning an IP Address

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

> **Note:** If the device 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:

- Device's web browser interface: http://<camera IP address>/.
- Network Video Management software application (for example, the Avigilon Control Center™ software).
- ARP/Ping method. For more information, see *Setting the IP Address Using the ARP/Ping Method* on page 38.

> **Note:**
> Depending on the manufacture date of your camera, you will have one of the two options below to log in for the first time:
>
> - Cameras manufactured after January 1, 2020: these cameras do not have a default username or password and will be in a factory default state. **You must create a user with *administrator* privileges before the camera is operational.** For more information, see *Initializing a Camera Username and Password* on the previous page.
> - Cameras manufactured before January 1, 2020: login to the camera using the default username of `administrator` with no password. It is recommended that you change the password after your first login.

Accessing the Live Video Stream

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

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

> **Note:**
> Depending on the manufacture date of your camera, you will have one of the two options below to log in for the first time:
>
> - Cameras manufactured after January 1, 2020: these cameras do not have a default username or password and will be in a factory default state. **You must create a user with *administrator* privileges before the camera is operational.** For more information, see *Initializing a Camera Username and Password* on the previous page.
> - Cameras manufactured before January 1, 2020: login to the camera using the default username of `administrator` with no password. It is recommended that you change the password after your first login.

Installing the Dome Cover

Be careful not to touch or scratch the dome bubble. Any marks or fingerprints on the dome bubble may cause unwanted reflections from the IR illuminators.

1. Discard the desiccant pack that is glued to the camera base.
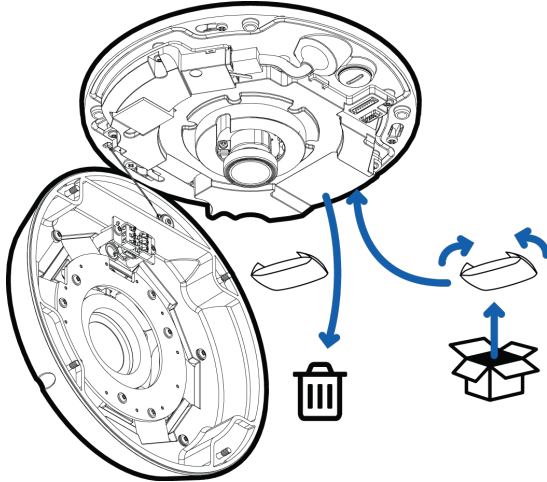
2. On the new desiccant pack provided with the camera, remove the adhesive backing and fold down the sides over the adhesive.

3. Place the new desiccant pack in the same location as the old pack and make sure it sticks to the camera.

4. Attach the dome cover to the base.

> **Tip:** Make sure the IR contacts are aligned to fit the dome cover to the base.
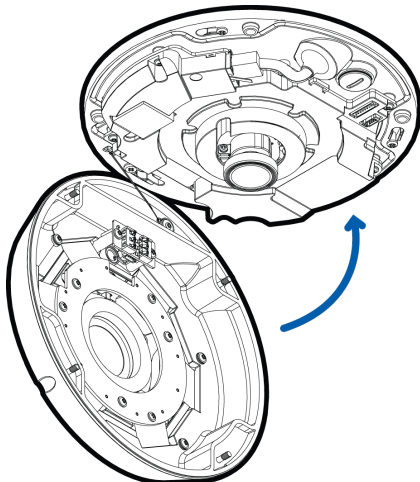
5. Tighten the screws with the star-shaped screwdriver.

6. Remove the plastic cover on the dome bubble.

Configuring the Camera

Once installed, use one of the following methods to configure the camera:

- If you have installed multiple cameras, you can use the Camera Configuration Tool to configure common settings. For more information, see the *Camera Configuration Tool User Guide*.
- If the camera is connected to the Avigilon Control Center system, you can use the client software to configure the camera. For more information, see the *Avigilon Control Center Client User Guide.*
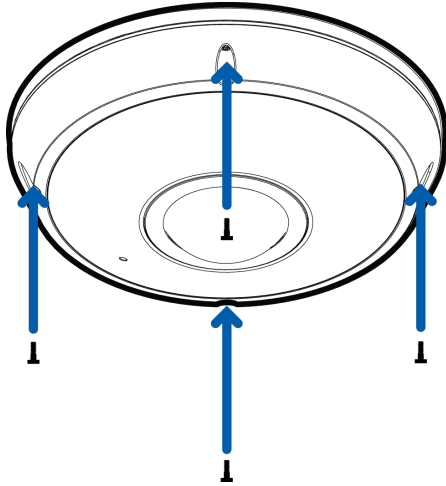- If the camera is connected to a third-party network management system, you can configure the camera's specialty features in the camera's web browser interface. For more information, see the *Avigilon High Definition H4 and H5 IP Camera Web Interface User Guide.*

For More Information

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

- *Avigilon Control Center Client User Guide*
- *Web Interface User Guide — Avigilon High Definition H4 and H5 IP Cameras*
- *Avigilon Camera Configuration Tool User Guide*
- *Designing a Site with Avigilon Video Analytics*

These guides are available on help.avigilon.com and on the Avigilon website: avigilon.com/support.

Auxiliary Cable Connections

The auxiliary cable that is provided with the dome camera includes an I/O terminal, external power connector, audio input and audio output connectors. Connect all the required external devices to the auxiliary cable:
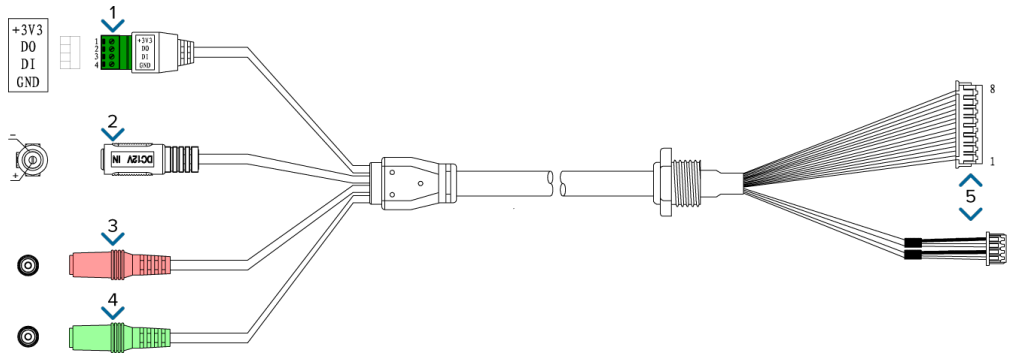
1. Connect external input and output devices to the I/O terminal block. External input and output devices can include: door contacts, relays, etc.

   ○ +3V3 — Power, 3.3 V DC, 100 mA max

   ○ DO — Digital output

   > **Note:** Maximum load is 25 VDC, 50 mA.

   ○ DI — Digital input

   ○ GND — Ground

2. If the camera will be using external power, connect a 12 V DC, 2.125 A min. polarized power adapter to the black power connector.

   > **Note:** Do not connect external power if you are powering the dome camera by PoE.

   ○ Positive on the center pin

   ○ 5.5 mm outer diameter

   ○ 2.1 mm inner diameter

3. Connect an external microphone or a line level input to the pink audio input connector. It accepts a 3.5 mm audio connector.
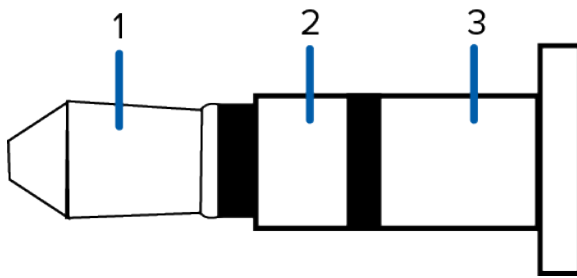
Pin	Purpose
1	Audio IN Left*
2	Audio IN Right*
3	GND

* Left and right audio channels are internally connected.

4. Connect a PA system or speaker with a built in amplifier to the green line level audio output connector. It accepts a 3.5 mm audio connector.
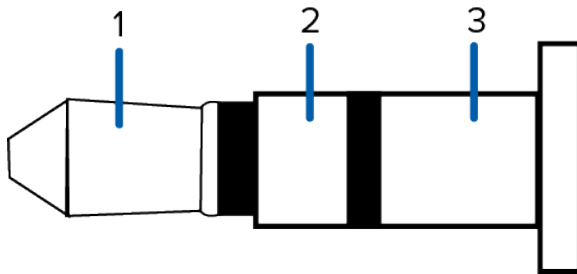
Pin	Purpose
1	Audio OUT Left*
2	Audio OUT Right*
3	GND

* Left and right audio channels are internally connected.

5. Connect the white connector heads directly to the camera I/O connector. This will allow the camera to use the auxiliary cable connections.

Configuring the Microphone

The H4 Fisheye Dome Camera features two microphones: a built-in microphone and an external audio input.

After you've connected the required microphones, you can configure the microphones or line level audio input from the camera web interface or in the ACC Client software.

- In the camera web interface, the microphones are configured from the Microphone page. You can adjust the microphone volume by changing the gain.
    - **Internal Microphone Gain** — configures the gain for the microphone that is built into the camera.
    - **External Source Gain** — configures the gain for any line level audio input that is connected to the pink audio input connector on the auxiliary cable.

    For more information, see the *Camera Web Interface User Guide*.

- In the ACC Client software, the microphones are configured in the Microphone dialog box that can be accessed from the camera's Setup tab. You can adjust the microphone volume by changing the gain and link the audio to other cameras in the site.
    - **External Input** — configures the gain for any line level audio input that is connected to the pink audio input connector on the auxiliary cable.
    - **Internal Mic** — configures the gain for the microphone that is built into the camera.

    For more information, see the *Avigilon Control Center Client User Guide*.

Connection Status LED Indicator

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

The following table describes what the LED indicator shows:

Connection State	Connection Status LED Indicator	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 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 or an ACC™ Server. The default connected setting can be changed to Off using the camera's web user interface. For more information see the *Avigilon High Definition H4 and H5 IP Camera Web Interface User Guide*.

Troubleshooting Network Connections and LED Behavior

Note: For any of the below LED behaviors, ensure that the camera is getting power and is using a good network cable before trying another solution.

LED Behavior	Suggested Solution
Green LED is off and amber is on	Perform a factory reset of the camera using the physical firmware revert button. Resetting through the camera's web interface will not produce the desired result.
Both LEDs are off and the camera is not connected or streaming video	Check the **General** setup page in the camera's web interface to ensure the LEDs are not disabled. If the LEDs are not disabled, perform a factory reset of the camera using the physical firmware revert button. Resetting through the camera's web interface will not produce the desired result.

LED Behavior	Suggested Solution
Both LEDs are blinking several times at the same time, then pause and repeat the blinking	Perform a factory reset of the camera using the physical firmware revert button. Resetting through the camera's web interface will not produce the desired result.
A different LED blinking pattern than those described above	Perform a factory reset of the camera using the physical firmware revert button. Resetting through the camera's web interface will not produce the desired result.

Resetting to Factory Default Settings

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

Use the firmware revert button to reset the device. The firmware revert button is shown in the following diagram:
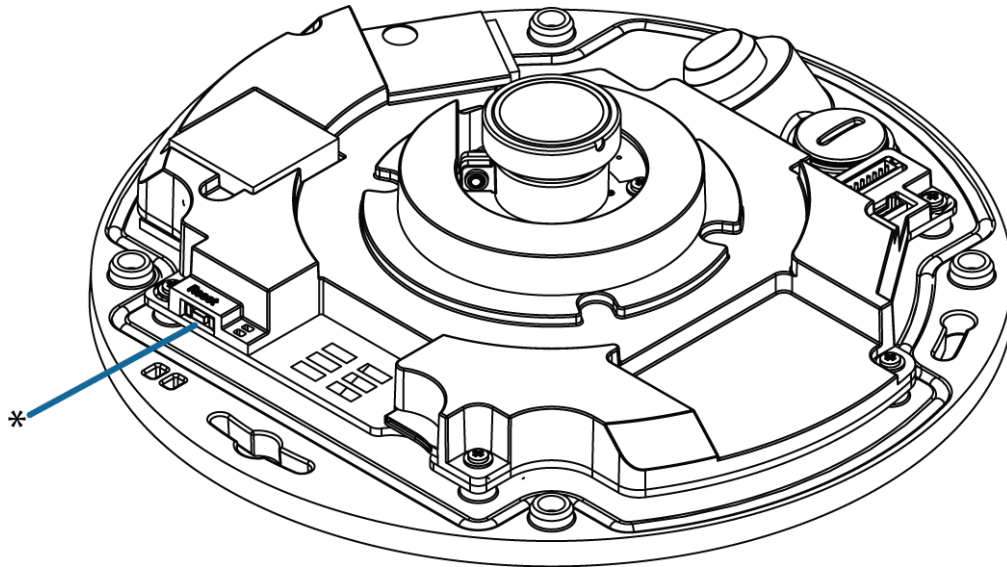

Figure 1: The reset button on the camera base beside the IR contacts.

1. Ensure the camera is powered on.
2. Remove the dome cover.
3. Press and hold the reset button.
4. Release the button when the LEDs beside the reset button turn off.

Wait while the dome camera reverts to the factory default settings.

Setting the IP Address Using the ARP/Ping Method

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

> **Note:** The ARP/Ping Method will not work if the **Disable setting static IP address through ARP/Ping method** checkbox is selected in the camera's web browser interface. For more information, see the *Avigilon High Definition H4 and H5 IP Camera Web Interface User Guide*.

1. Locate and make note of 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 fingerprints.
- 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. A damaged dome bubble may negatively impact image quality and cause 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.

Limited Warranty and Technical Support

Avigilon warranty terms for this product are provided at avigilon.com/warranty.

Warranty service and technical support can be obtained by contacting Avigilon Technical Support: avigilon.com/contact.