

# Installation Guide

Avigilon™ H4 HD Dome Camera Models:

H4A-DP1, H4A-DP1-IR, H4A-DP2, H4A-G-DP1-IR

# 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.
- 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 24 VAC, 7 W min. (9 W min. for -IR model) or Power over Ethernet (PoE), rated 48 VDC, 7 W min (9 W min. for -IR model).
- 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 or damage to the camera.

- 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 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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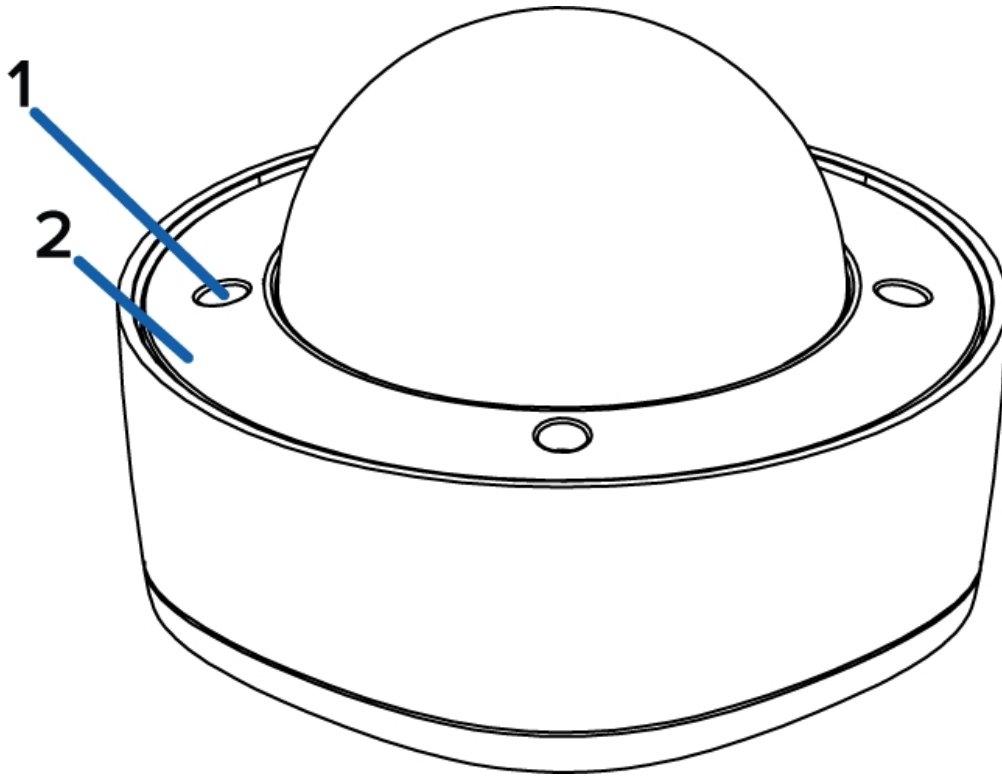
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# Overview

## Cover View



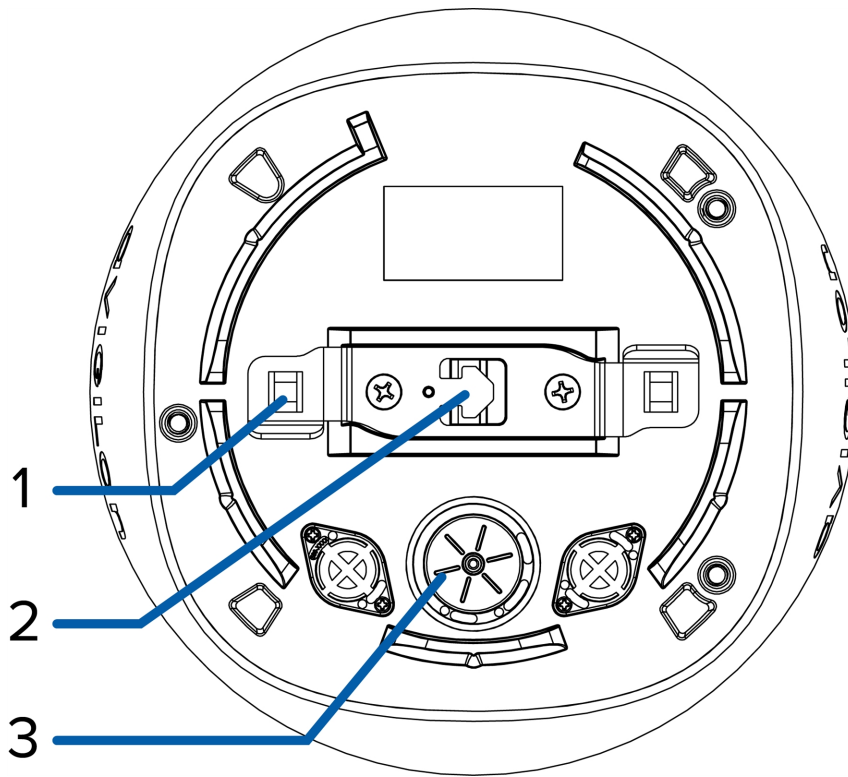
1. **Tamper resistant screws**

Torx captive screws to fix the dome cover to the base.

2. **Dome cover**

Vandal proof dome cover.

## Bottom View



1. **Camera alignment latch**

A latch for locking the camera into the pendant wall mount or the pendant NPT mount.

2. **Camera lanyard hook**

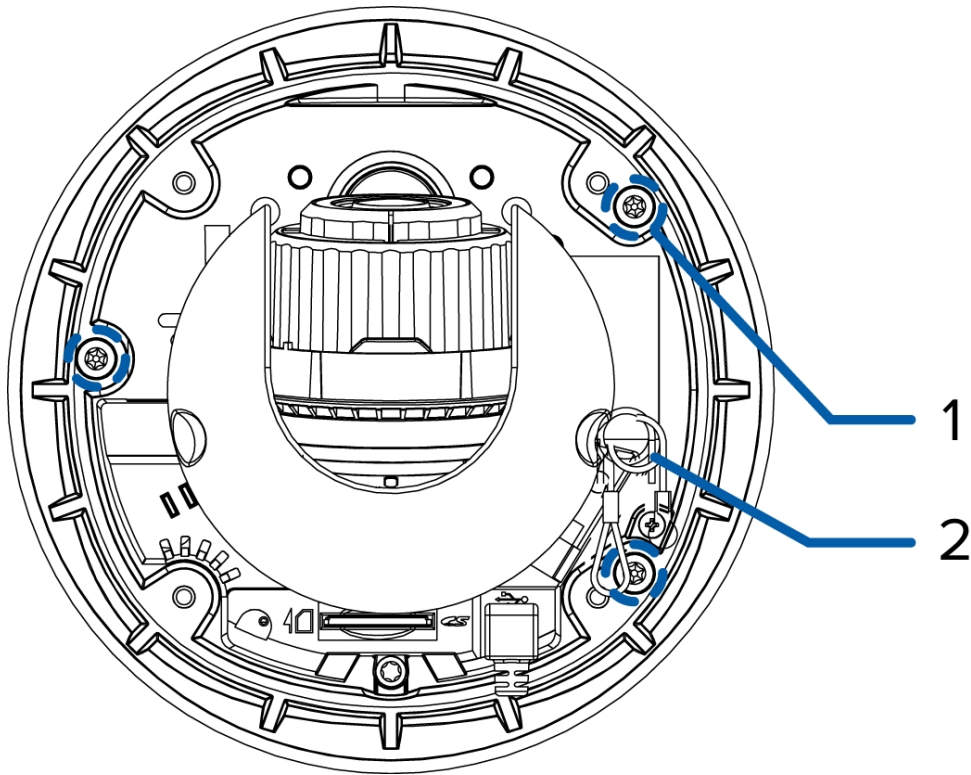
A hook for suspending the camera from the lanyard provided in the pendant wall mount or the pendant NPT mount.

3. **Cable entry hole**

An entry hole for the cables required for camera operation.



## Top View



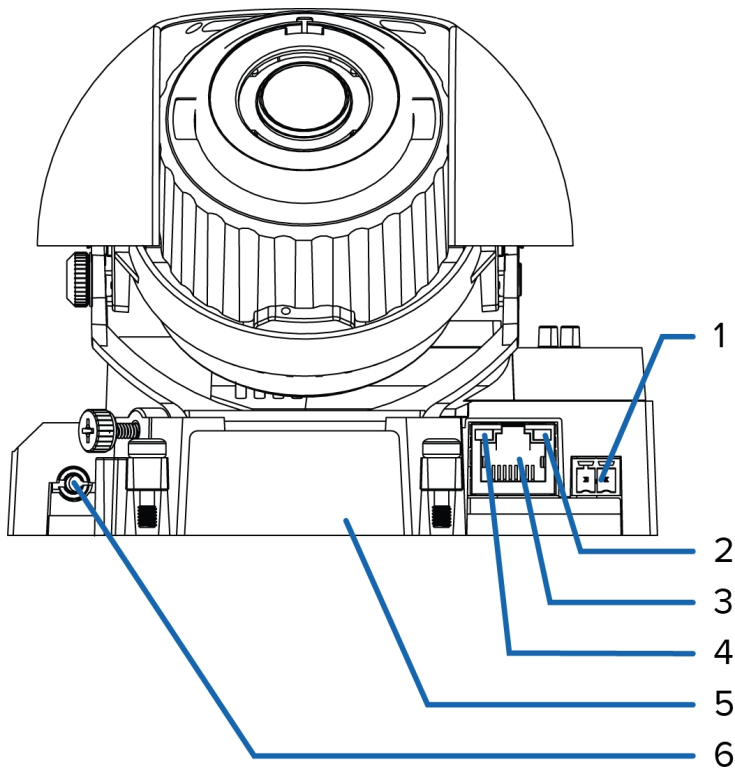
1. **Camera mounting screws**

Screws for securing the camera to the pendant wall mount or the pendant NPT mount.

2. **Lanyard**

Connects to a lanyard hook on the dome cover.

## Front View



1. **Power connector block**

Accepts a terminal block with either an AC or DC power connection. DC input can be either polarity. Only required when Power over Ethernet is not available.

2. **Link LED**

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

3. **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.

4. **Connection status LED**

Provides information about camera operation. For more information, see *LED Indicators* on page 27.

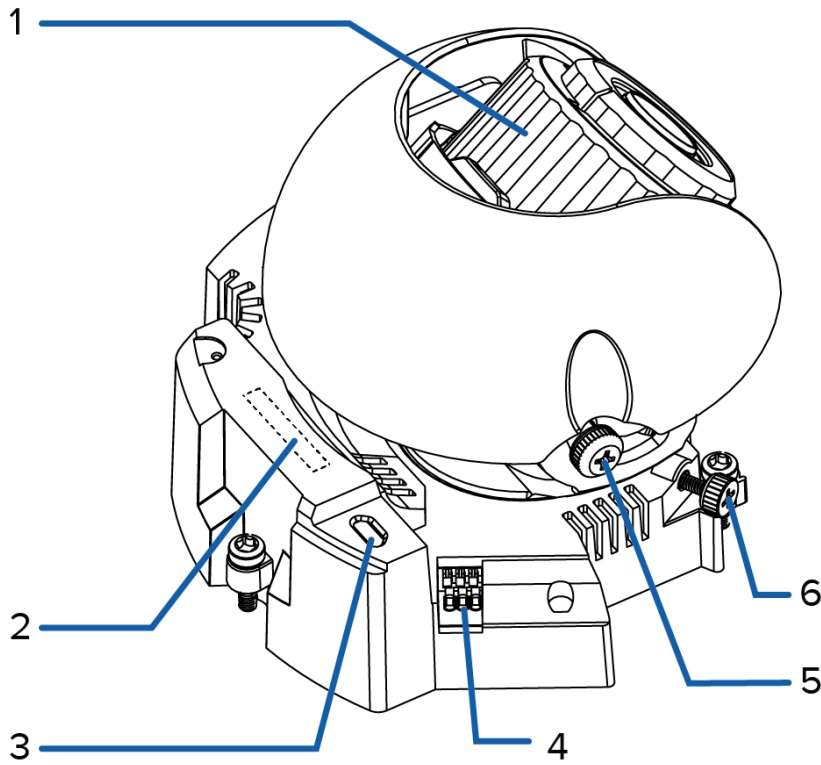
5. **Serial number tag**

Device information, product serial number and part number label.

6. **Audio/video connector**

Accepts a mini-jack connector (3.5 mm).

## Rear View



1. **Azimuth control**

Provides control of the image angle.

2. **SD card slot**

Accepts an SD card for onboard storage.

Not available on H4 Edge Solution (ES) Cameras.

3. **Micro USB port**

Accepts a micro USB to USB adapter. Only required when using the Avigilon USB Wifi Adapter.

4. **I/O connector block**

Provides connections to external input/output devices.

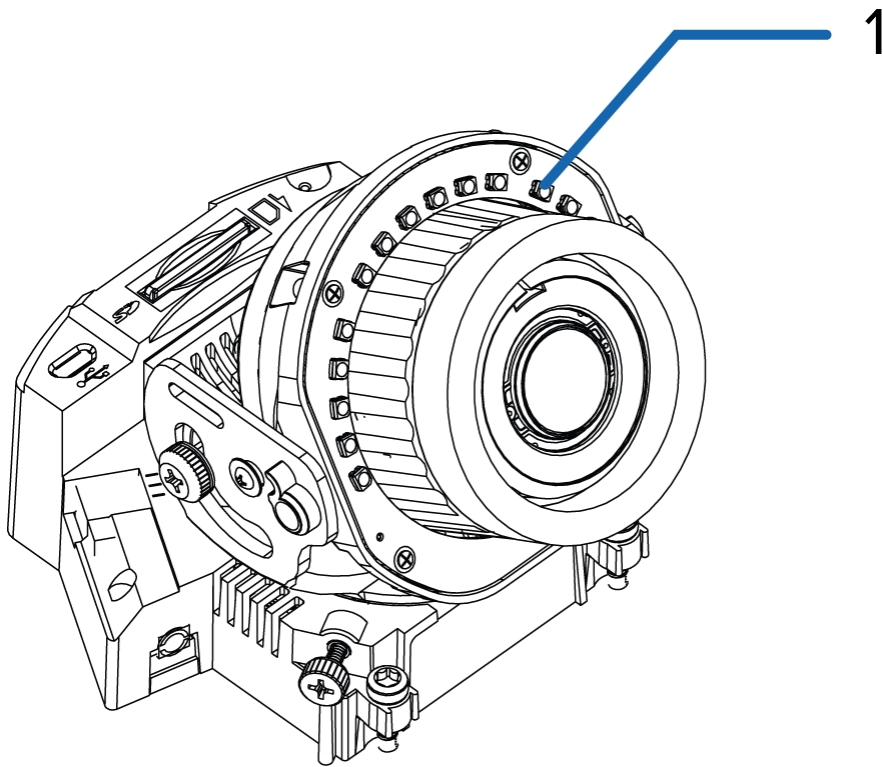
5. **Tilt lock thumb screws**

Provides a locking mechanism for the image tilt adjustment.

6. **Pan lock thumb screw**

Provides a locking mechanism for the image pan adjustment

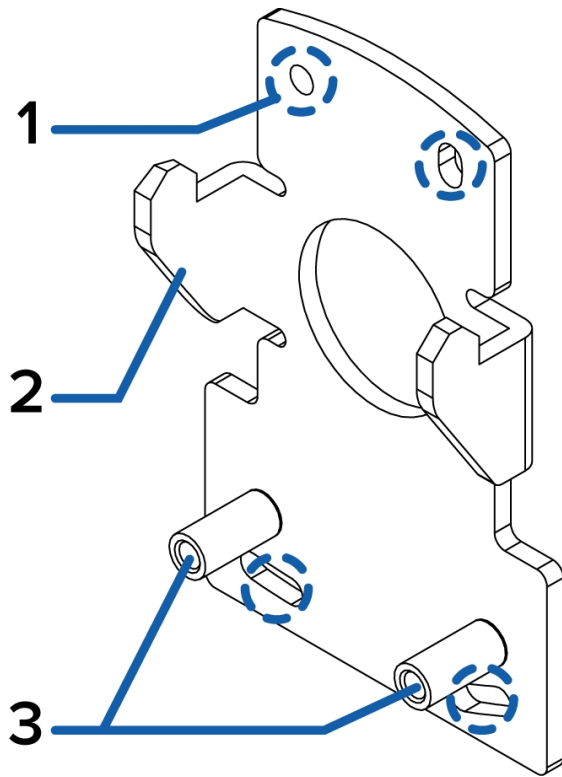
## IR View



### **IR Illuminator Ring**

Provides scene illumination in the IR spectrum. The IR illuminator ring is not included with all models.

## Pendant Wall Mount Bracket View



1. **Bracket mounting holes**

Points for mounting the pendant wall mount bracket to a mounting surface.

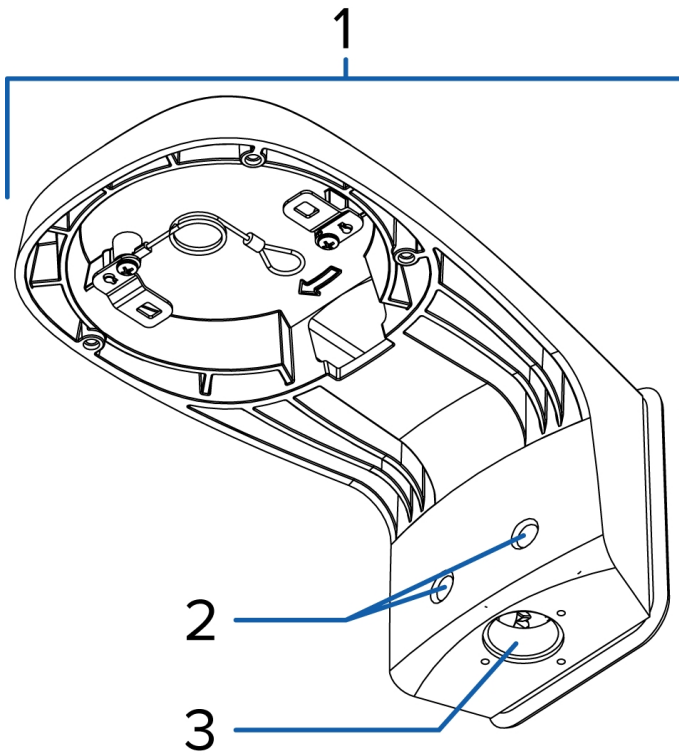
2. **Mounting tabs**

Tabs for placing the pendant wall mount onto the bracket.

3. **Mounting points**

Points for securing the pendant wall mount to the mounting bracket.

## Pendant Wall Mount View



1. **Pendant wall mount**

Dome camera mount for walls and other mounting surfaces.

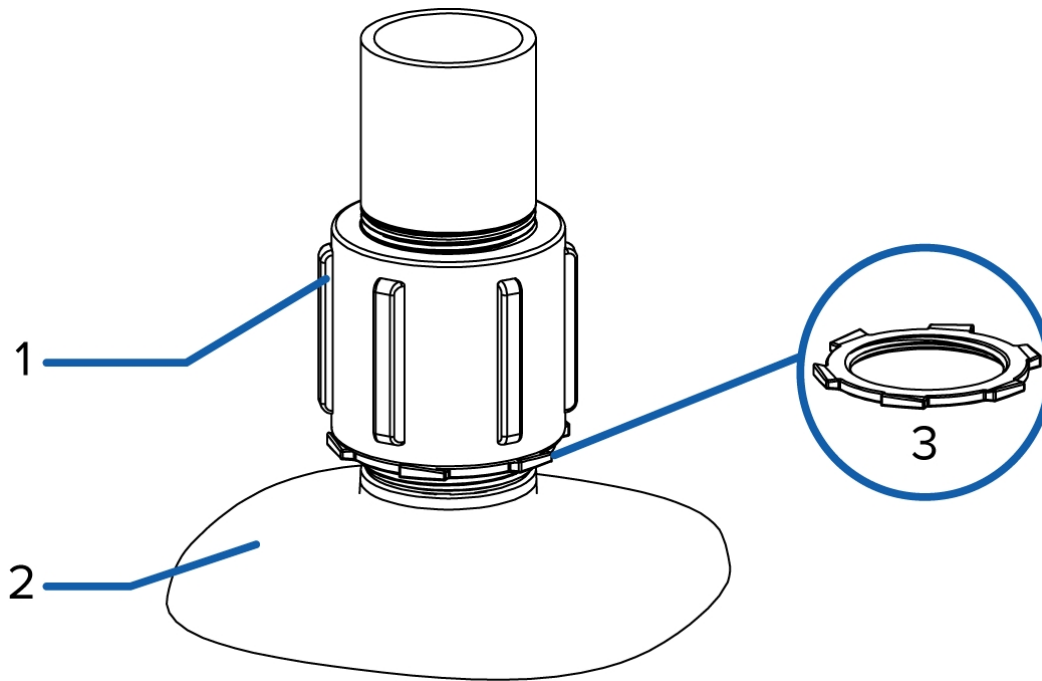
2. **Pendant wall mount screws**

Screws for securing the pendant wall mount to the mounting bracket.

3. **NPT pipe entry hole**

A 3/4" NPT threaded hole for NPT pipe conduits.

## Pendant NPT Mount View



1. **1-1/2" NPT-female to NPT-female adapter**

An adapter for attaching the pendant NPT mount to an NPT pipe.

2. **Pendant NPT mount**

Dome camera mount for NPT pipes.

3. **Locking ring**

Locking ring for securing the pendant NPT mount on the NPT-female to NPT-female adapter.

# Installation

## Required Tools and Materials

- Small slotted screwdriver with 5/64" or 2 mm blade width — for connecting power when not using Power over Ethernet.
- T20 Pin-In Torx driver
- Pendant wall mount (H4-MT-WALL1) or Pendant NPT Mount (H4-MT-NPT1)
  - (Pendant wall mount only) No. 2 Phillips screwdriver — for attaching the pendant wall mount bracket to a mounting surface
  - (Pendant NPT mount only) 1-1/2" NPT-female to NPT-female pipe adapter — for attaching the pendant NPT mount to a pipe
- Silicone sealant

## Package Contents

**NOTE:** The pendant wall mount and pendant NPT mount are sold separately.

- Avigilon™ H4 HD Dome Camera

Pendant Wall Mount:

- Mounting template sticker
- Mounting bracket
- Thread seal tape
- RJ-45 grommet piercing cap
- Four screws and anchors for solid walls

Pendant NPT mount

- Mounting template sticker
- Locking ring
- Thread seal tape
- RJ-45 grommet piercing cap

## Installation Steps

Complete the following steps to install the camera:

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## Removing the Dome Cover

Remove the dome cover by loosening the screws that fix the cover to the base. Use a T20 Pin-In Torx driver 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 bubble until after the installation is complete.

## Mounting and Aiming Video Analytics Cameras

When installing an Avigilon video analytics camera, follow the listed mounting and aiming recommendations to maximize the camera's analytics capabilities:

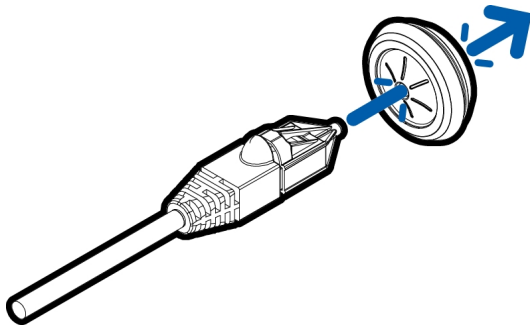
- The camera should be installed above 274 cm (9').
- The camera should tilt downwards no more than 45 degrees.
- The camera image should be level with the horizon line.
- The camera should be mounted to a stable surface to minimize the physical movement of the camera after installation.

For more details, see *Designing a Site for Video Analytics*. The document is available in the eDocs app and on the Avigilon website.

## Inserting Cables through the Sealing Grommet

Unless specified otherwise, you must pull the required cables through the sealing grommet included with the camera when using a cable entry hole.

1. Remove the sealing grommet from the camera.
2. Pull the tab on the grommet to open a hole for the Ethernet cable.
3. Push an Ethernet cable through the grommet by one of the following methods:
  - a. If the Ethernet cable is uncrimped, push the cable through the grommet.
  - b. If the Ethernet cable is already crimped, place the grommet piercing cap on the Ethernet connector then push the cable through the grommet.



Ensure that the orientation of the cable and grommet matches the one shown in the image.

4. Push any other required cables through the grommet.

**NOTE:** If you will pull multiple cables through the sealing grommet, apply silicone sealant to seal any gaps in the grommet.

## Mounting the Dome Camera

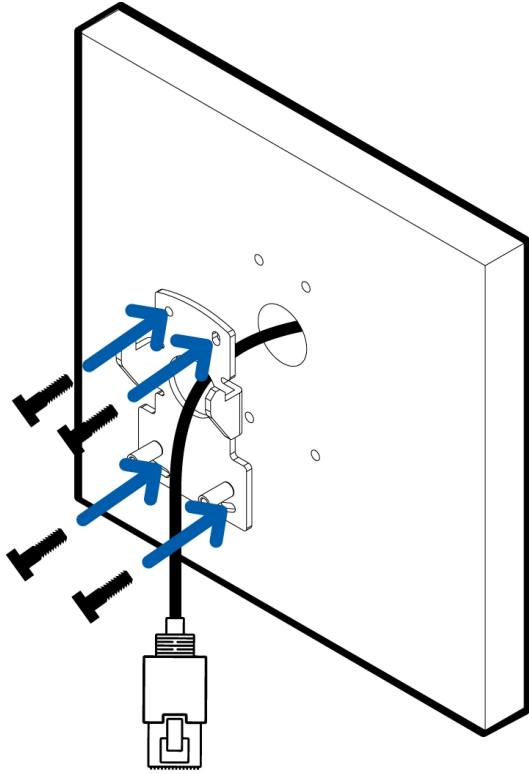
The dome camera can only be mounted to a pendant wall mount (H4-MT-WALL1) or a pendant NPT mount (H4-MT-NPTA1). The mounts are sold separately.

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.

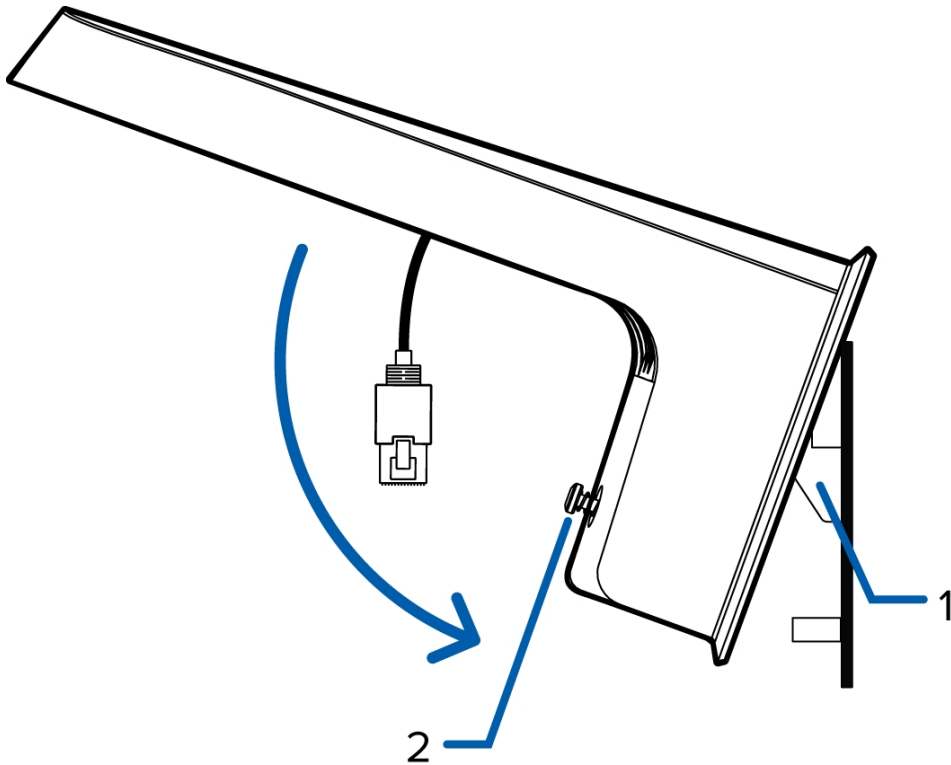
### Mounting the Dome Camera to the Pendant Wall Mount

1. Determine where the cables will enter the pendant wall mount. The cables can either enter through the rear of the mount from a cable entry hole in the mounting surface, or through the 3/4" NPT pipe entry hole on the bottom of the mount from a pipe conduit.
2. Use the provided mounting template to drill four mounting holes into the mounting surface.
  - a. If the cables will enter through the rear of the mount, also drill the cable entry hole in the mounting surface.
3. Pull the required cables through the preferred hole:
  - If the cables will enter through the rear of the mount, pull them through the cable entry hole in the mounting surface.
  - If the cables will enter through the pipe entry hole in the bottom of the mount, pull the cables through the pipe conduit.

4. Fasten the pendant wall mount bracket to the mounting surface.



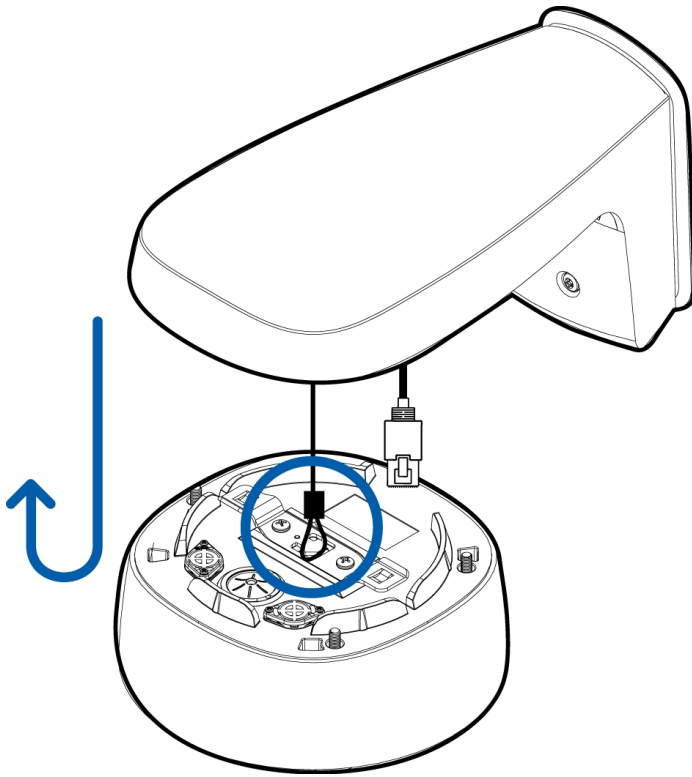
5. Pull the required cables through the wall mount and place it on the mounting tabs on the bracket.



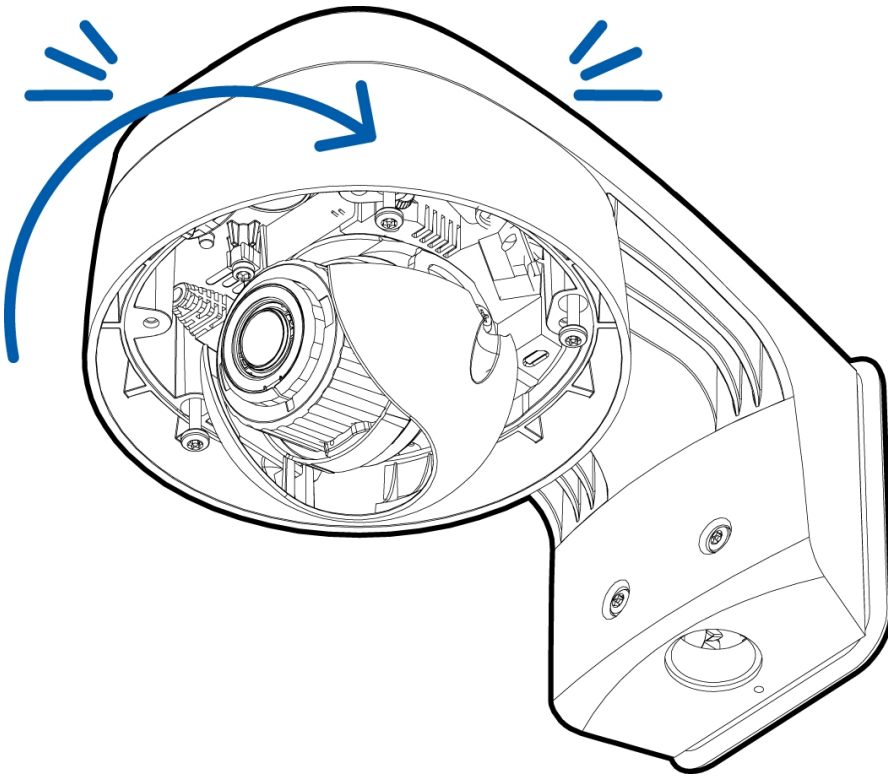
**Figure 1:** 1— mounting tabs on the bracket, 2 — pendant wall mount screws

6. Tighten the wall mount screws to secure the wall mount to the bracket.
  - If the cables are entering through the pipe entry hole, apply thread seal tape to the pipe conduit and screw it into the pipe entry hole.

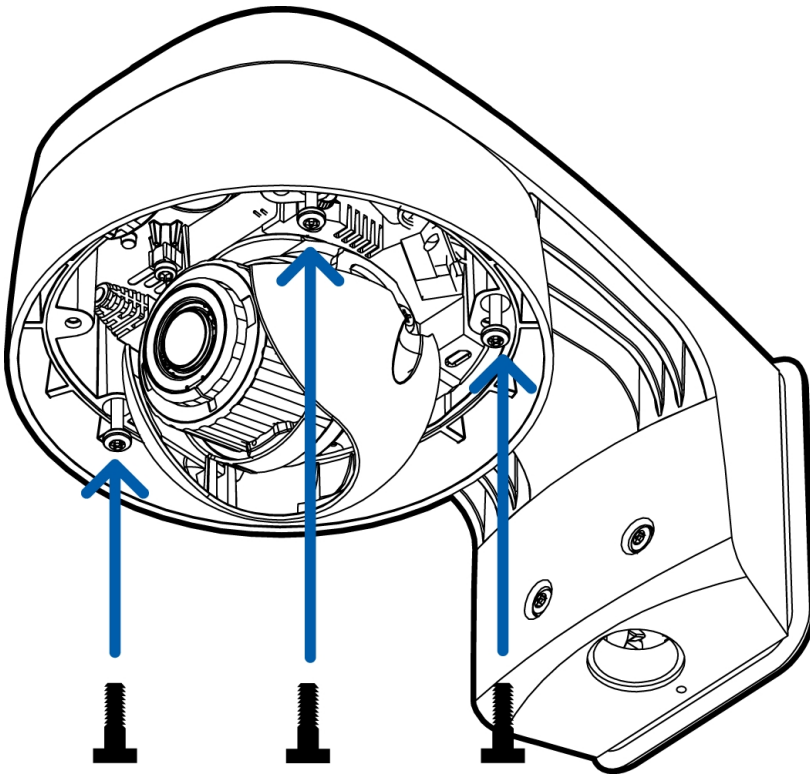
7. Connect the lanyard in the mount to the camera lanyard hook on the bottom of the camera. Allow the camera to hang.



8. Install the sealing grommet with all the required cables. For more information, see *Inserting Cables through the Sealing Grommet* on page 11.
9. Insert the camera into the mount:
  - a. Raise the camera body up to the wall mount, keep the camera turned slightly to the left to allow the camera to insert fully.
  - b. Once the camera is fully inserted, turn it to the right until it clicks into place.



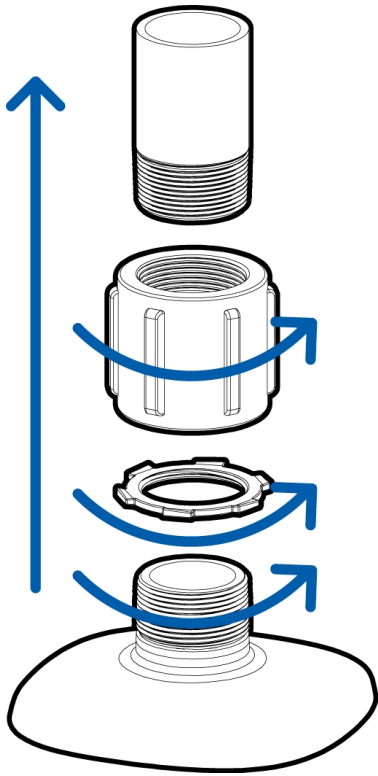
10. Secure the camera body to the mount using the camera mounting screws.



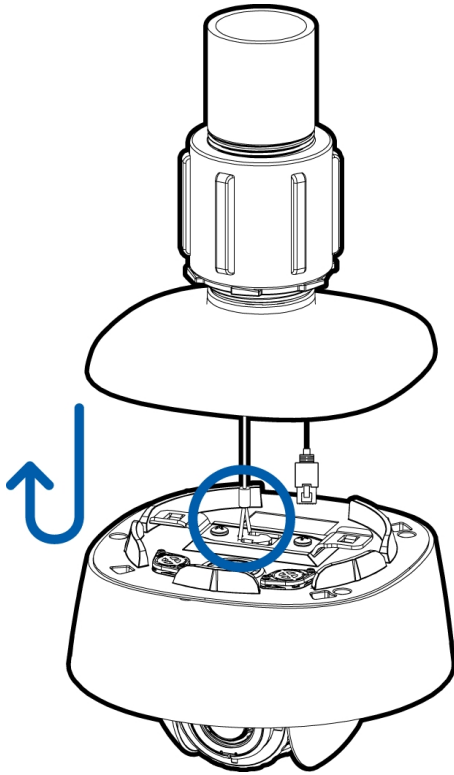
## Mounting the Dome Camera to the Pendant NPT Mount

**NOTE:** This procedure requires a 1-1/2" NPT-female to NPT-female pipe adapter. It is recommended that the pendant NPT mount is mounted to a 1-1/2" conduit pipe.

1. Pull the required cables through the NPT conduit pipe.
2. Apply thread seal tape to the pipe and screw on the 1-1/2" NPT female to NPT female pipe adapter.
3. Screw the locking ring onto the pendant NPT mount
4. Apply thread seal tape to the pendant NPT mount and screw it into the pipe adapter.

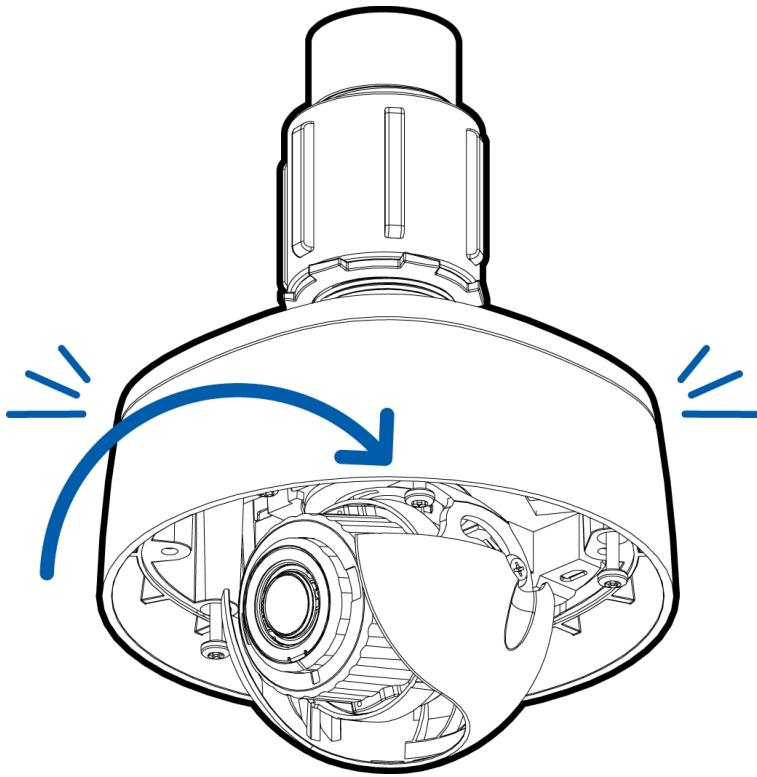


5. Connect the lanyard in the mount to the camera lanyard hook on the bottom of the camera. Allow the camera to hang.

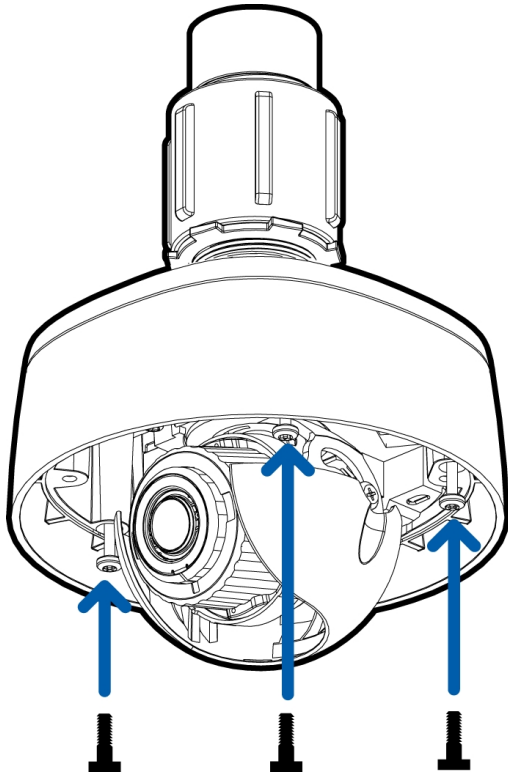


6. Install the sealing grommet with all the required cables. For more information, see *Inserting Cables through the Sealing Grommet* on page 11.
7. Insert the camera into the mount:
  - a. Raise the camera body up to the mount, keep the camera turned slightly to the left to allow the camera to insert fully.
  - b. Once the camera is fully inserted, turn it to the right until it clicks into place.





8. Secure the camera body to the mount using the camera mounting screws.



### Connecting Cables

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



1. If external input or output devices are part of the installation (for example: door contacts, relays, etc.), connect the devices to the I/O connector block.
2. If an external microphone needs to be connected to the camera, connect the device to the camera A/V connector.  
  
For more information, see *Connecting to Microphones, Speakers and Video Monitors* on page 25.
3. (1.0 and 2.0 megapixel models only) If an external video monitor needs to be connected to the camera, connect the device to the camera A/V connector.  
  
For more information, see *Connecting to Microphones, Speakers and Video Monitors* on page 25.
4. Connect a network cable to the Ethernet Port (RJ-45 connector).  
  
The Link LED will turn on once a network link has been established.
5. Connect power using one of the following methods:
  - Power over Ethernet (PoE) Class 3 — If PoE is available, the LEDs will turn on.
  - External Power — Connect an external 12 V DC or 24 V AC power source to the power connector block.
6. Check that the Connection Status LED indicates the correct state. For more information, see *LED Indicators* on page 27.

## 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:

- The mobile web interface using the USB Wifi Adapter. For more information, see *(Optional) Using the USB Wifi Adapter* below.
- Camera's web browser interface: `http://<camera IP address>/`
- Network Video Management software application (for example, Avigilon Control Center™).
- ARP/Ping method. For more information, see *Setting the IP Address Using the ARP/Ping Method* on page 29.

**NOTE:** The default camera username is `administrator` with no password.

### (Optional) Using the USB Wifi Adapter

If you have a USB Wifi Adapter (H4-AC-WIFI), attach it to the camera's micro USB port to access the camera's mobile web interface.

After you connect to the wifi signal broadcast by the adapter, you can access the mobile web interface from any mobile device using the following address:

`http://camera.lan`

For more information about configuring the camera from the mobile web interface see *Avigilon USB Wifi Adapter System User Guide*.

**NOTE:** The camera will reserve the 10.11.22.32/28 subnet for internal use while the USB Wifi Adapter is plugged in.

## Accessing the Live Video Stream

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

- The mobile web interface using the USB Wifi Adapter. For more information, see *(Optional) Using the USB Wifi Adapter* on the previous page.
- Web browser interface: `http://< camera IP address>/`
- Network Video Management software application (for example, the Avigilon Control Center software).

**NOTE:** The default camera username is `administrator` with no password.

## Aiming the Dome Camera

Reference the camera's live stream as you aim the camera.

1. Loosen the pan and tilt lock screws on the camera.
2. Turn the lens to the correct direction by panning and tilting the lens.
3. Tighten the pan and tilt lock screws to secure the dome camera's position.
4. Rotate the azimuth control ring to set the image to the correct angle.
5. In the camera web browser interface or the Avigilon Control Center software, adjust the camera's Image and Display settings. You can set the zoom position, focus, and change the image rotation.

## (Optional) Configuring SD Card Storage

**NOTE:** Only available on models that feature an SD card slot.

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

It is recommended that the SD card have a capacity of 8 GB or more and a write speed of class 6 or better. If the SD card does not meet the recommended capacity or write speed, the recording performance may suffer and result in the loss of frames or footage.

1. Insert an SD card into the camera.



**CAUTION** — Do not force the SD card into the camera or you may damage the card and the camera. The SD card can only be inserted in the orientation shown on the camera.

2. Access the camera's web interface to enable the onboard storage feature. For more information, see the *Avigilon High Definition H.264 Camera Web Interface User Guide*.

## Setting the Time

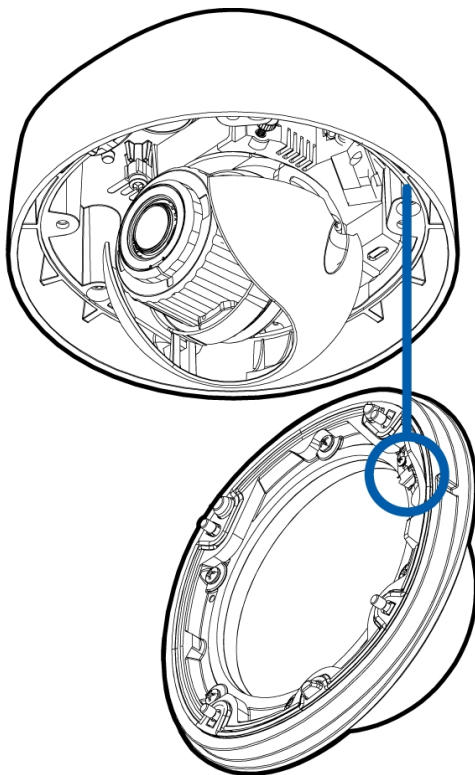
If you are installing an H4 ES camera, you must set the time on the camera. The ES camera model includes a built-in server component that runs the ACC Server software directly on the camera. Since the camera is accessed as its own network video recording server, you must set the time so that events and recorded video occur at the correct time.

1. Log in to the camera web interface.
2. Display the **Setup > Network** page.
3. In the Time Settings area, select the camera time zone.
4. Click **Apply**.
5. At the bottom of the Time Settings area, click the **Configure NTP Server** link.  
If you cannot see the link, select **Network** from the left menu pane.
6. In the NTP Server area, make sure the check box is selected then choose one of the following options:
  - **DHCP:** select this option to automatically use an NTP server on the network.
  - **Manual:** select this option to manually enter a specific NTP server address in the **NTP Server** field.
7. Click **Apply**.

## Installing the Dome Cover

**NOTE:** Be careful not to touch or scratch the dome bubble. Any marks or fingerprints on the dome bubble will cause unwanted reflections in the -IR model.

1. Attach the lanyard to the dome cover.



2. Remove the plastic cover on the inside of the dome bubble.
3. Attach the dome cover to the base by tightening the screws with the Torx driver.
4. Remove the plastic cover on the dome bubble.

## Zooming and Focusing the Dome Camera

Ensure this procedure is performed after the dome cover is installed, so you can accommodate for the focus shift caused by the dome bubble.

- In the camera web browser interface or the Avigilon Control Center software, use the camera's Image and Display settings to zoom and focus the camera.
  - a. Use the zoom buttons to zoom the camera in or out.
  - b. Click **Auto Focus** to focus the camera.
  - c. If the preferred focus was not achieved, use the focus near and far buttons to adjust the focus.

## Configuring the Camera

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

- If you have the USB Wifi Adapter, you can access the mobile web interface to configure the camera. For more information, see *Avigilon USB Wifi Adapter System User Guide*.
- If you have installed multiple cameras, you can use the Avigilon Camera Configuration Tool to configure common settings. For more information, see the *Avigilon Camera Configuration Tool User Guide*.
- If the camera is connected to the Avigilon Control Center, 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 H.264 Web Interface User Guide*.
- If you installed an H4 ES camera, you can use the Avigilon Control Center Client software to configure the camera and the embedded software.

## 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*
- *Avigilon™ Camera Configuration Tool User Guide*
- *Avigilon™ USB Wifi Adapter System User Guide*

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

# Cable Connections

## Connecting External Power

**NOTE:** Do not perform this procedure if Power over Ethernet (POE) is used.

If PoE is not available, the camera needs to be powered through the removable power connector block. Refer to the diagrams in this guide for the location of the power connector block.

The power consumption information is listed in the product specifications.

To connect power to the power connector block, complete the following steps:

1. Remove the power connector block from the camera.
2. Remove the insulation from  $\frac{1}{4}$ " (6 mm) of the power wires. Do not nick or damage the wires.
3. Insert the two power wires into the two terminals on the power connector block. The connection can be made with either polarity.

Use a small slotted ( $\frac{5}{64}$ " or 2 mm blade width) screwdriver to loosen and tighten the terminals.

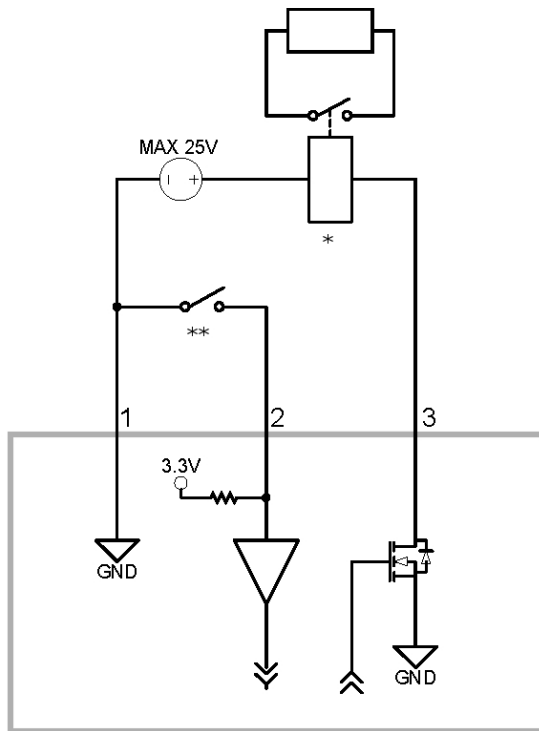
4. Attach the power connector block back into the camera.



**WARNING** — 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 24 VAC, 7 W min. (9 W min. with -IR model) or PoE rated 48 VDC, 7 W min. (9 W min. with -IR model).

## Connecting to External Devices

External devices are connected to the camera through the I/O terminal block. The pinout for the I/O terminal block is shown in the following diagram:



**Figure 2:** Example application.

1. Ground
  2. Input — To activate, connect the Input to the Ground pin. To deactivate, leave disconnected or apply between 3-15 V.
  3. Output — When active, Output is internally connected with the Ground pin. Circuit is open when inactive. Maximum load is 25 VDC, 120 mA.
- \* — Relay
  - \*\* — Switch

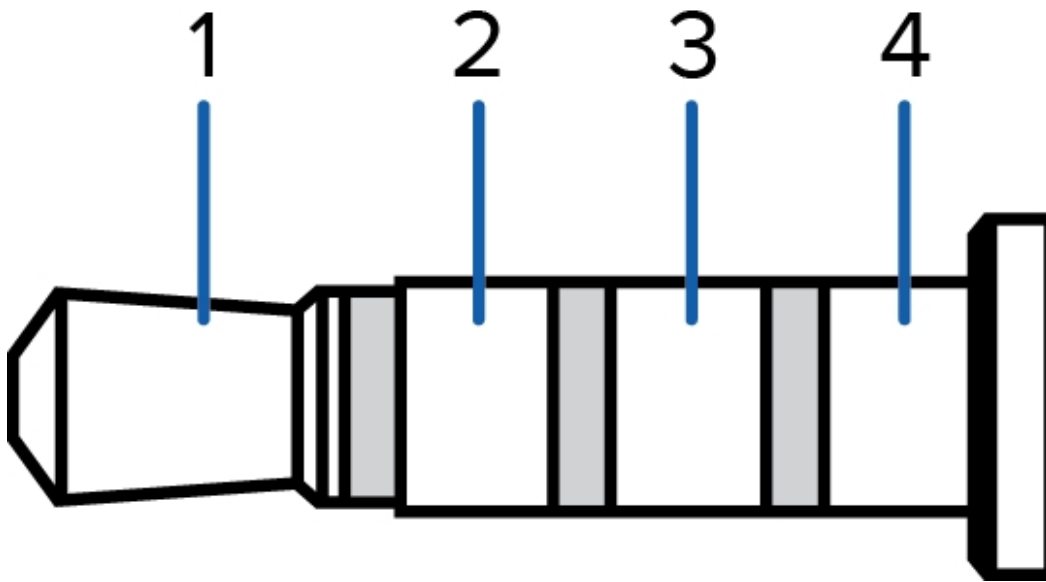
## Connecting to Microphones, Speakers and Video Monitors

The camera can be connected to an external microphone and speaker through the A/V connector. The camera only supports line level mono audio input.

1.0 and 2.0 megapixel models can also be connected to an external monitor through the same A/V connector.

The video output signal is determined by the camera flicker control setting. When the camera flicker control is set to 60 Hz, the video output signal is NTSC. When the flicker control is set to 50 Hz, the video output signal is PAL. Use the camera web browser interface to configure the camera's flicker control in the Image and Display settings.

All models of the camera use a mini-jack (3.5 mm) A/V connector. The pinout for the connector is shown in the following diagram:



**Figure 3:** Mini-jack audio video connector

1. Audio IN
2. Composite Video OUT
3. GND
4. Audio OUT



# 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 or an ACC Server.



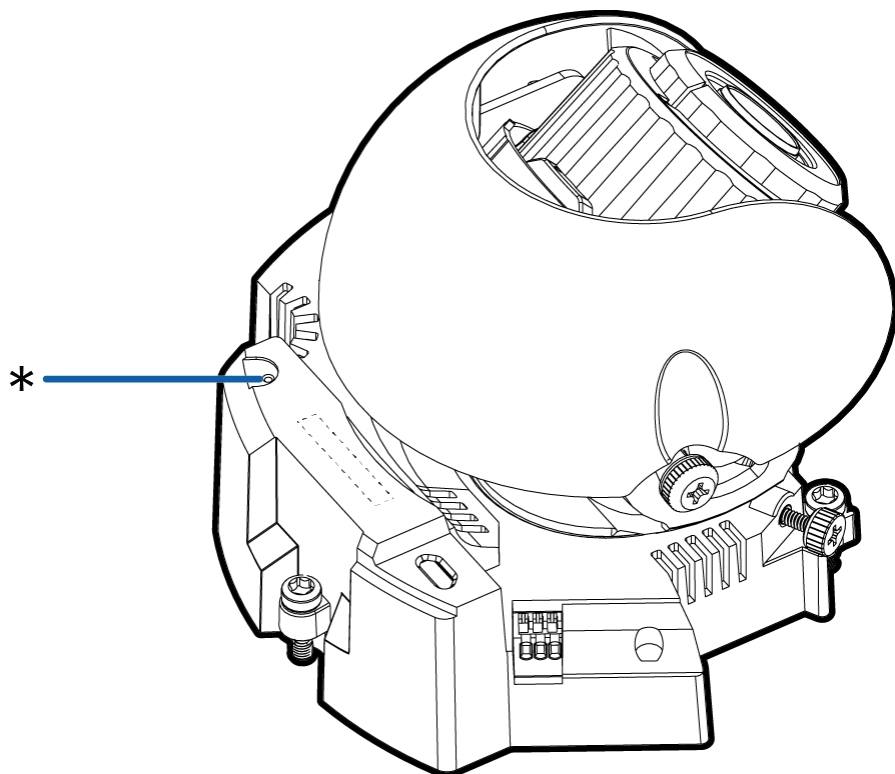
# Resetting to Factory Default Settings

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. The firmware revert button is shown in the following diagram:

**NOTE:** For the ES camera models, resetting the camera will erase all recorded video from the camera.

For models that feature an SD card slot, resetting the camera will not affect video that has been recorded to the SD card.



**Figure 4:** The firmware revert button on the dome camera.

1. Ensure the camera is powered on.
2. Using a straightened paperclip or similar tool, gently press and hold the firmware revert button.
3. Release the button after three seconds.



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

# 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** check box is selected in the camera's web browser interface. For more information, see the *Avigilon™ High Definition H.264 Web Interface User Guide*.

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. 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.

# Specifications

<b>Camera</b>	
Audio Input/Output	Line level input and output, A/V mini-jack (3.5 mm)
Video Output	NTSC/PAL, A/V mini-jack (3.5 mm)
Lens	H4A-DP1: <ul style="list-style-type: none"> <li>• (1 – 3 MP models) 3-9 mm, F1.3, P-iris</li> <li>• (5 – 8 MP models) 4.3-8 mm, F1.8, P-iris</li> </ul> H4A-DP2: <ul style="list-style-type: none"> <li>• (1 – 5 MP models) 9-22 mm, F1.6, P-iris</li> </ul>
SD Storage (Models with SD card slots only)	SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended
Onboard Storage (ES models only)	<ul style="list-style-type: none"> <li>• (1 MP model) 128 G</li> <li>• (2 – 3 MP models) 256 G</li> </ul>
<b>Network</b>	
Network	100Base-TX
Cabling Type	CAT5
Connector	RJ-45
API	ONVIF compliance version 1.02, 2.00, Profile S ( <a href="http://www.onvif.org">www.onvif.org</a> ) Compliant with version 2.2.0 of the Analytics Service Specification (bounding boxes and scene descriptions not available with third-party VMS)
Device Management Protocols	SNMP v2c SNMP v3
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
<b>Mechanical</b>	
Dimensions L x W x H	Dome camera — 172 mm x 172 mm x 124 mm (6.8" x 6.8" x 4.9") With wall mount — 275 mm x 172 mm x 152.1 mm (10.8" x 6.8" x 6.0") With NPT mount — 172 mm x 172 mm x 172.3 mm (6.8" x 6.8" x 6.8")
Weight	Dome camera — 1.55 kg (3.42 lbs) With wall mount — 1.80 kg (3.98 lbs) With NPT mount — 3.00 kg (6.62 lbs)

Dome Bubble	Polycarbonate, clear
Body	Aluminum
Housing	Pendant mount, vandal resistant
Finish	Powder coat, RAL 9003
Adjustment Range	360° pan, 9° - 95° tilt (30° - 95° tilt with -IR option), ±180° azimuth
<b>Electrical</b>	
Power Consumption	7 W 9 W for -IR option
Power Source	VDC: 12 V +/- 10%, 7 W min (9 W min with -IR option) VAC: 24 V +/- 10%, 10 VA min (13 VA min with -IR option) PoE: IEEE802.3af Class 3 compliant
Power Connector	2-pin terminal block
RTC Backup Battery	3V manganese lithium
<b>Environmental</b>	
Operating Temperature	-40 °C to +60 °C (-40 °F to 140 °F) 8.0 MP model — -40 °C to +50 °C (-40 °F to 122 °F)
Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)
Humidity	0-95% non-condensing
<b>Certifications</b>	
Certifications	UL cUL CE ROHS WEEE RCM KC EAC
Safety	UL 60950-1 CSA 60950-1 IEC/EN 60950-1 IEC 62471 (-IR option only)
Environmental	IK10 Impact Rating Meets IEC 60529 IP66 Weather Rating IEC/UL/CSA 60950-22
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

	KN 32
Electromagnetic Immunity	EN 55024 EN 61000-6-1 KN 35



# Limited Warranty and 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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This Limited Warranty gives you specific legal rights and you may also have other rights which vary from jurisdiction to jurisdiction.

**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](mailto:support@avigilon.com).**