

Installation Guide

Avigilon H5SL Dome Camera Models:

1.3C-H5SL-D1

2.0C-H5SL-D1

3.0C-H5SL-D1

5.0C-H5SL-D1

1.3C-H5SL-D1-IR

2.0C-H5SL-D1-IR

3.0C-H5SL-D1-IR

5.0C-H5SL-D1-IR

1.3C-H5SL-DO1-IR

2.0C-H5SL-DO1-IR

3.0C-H5SL-DO1-IR

5.0C-H5SL-DO1-IR

Legal Notices

© 2023, Avigilon Corporation. All rights reserved. AVIGILON, the AVIGILON logo, AVIGILON CONTROL CENTER, and ACC are trademarks of Avigilon Corporation. 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-H5SLDO-A

Revision: 7 - EN

20230609

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.
- For EN 50121-4 compliance, this product is intended to be supplied by a EN 50121-4 power source.
- The H5SL-D product is intended to be supplied by Power over Ethernet (PoE) that is a “Limited Power Source” or “LPS” rated 48 VDC, 5W min.
- The H5SL-DO product is intended to be supplied by Power over Ethernet (PoE) that is a “Limited Power Source” or “LPS” rated 48 VDC, 8W 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.

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.

The H5SL-DO1-IR camera model complies with EN 60529 IP66 and IP67 rating.

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.

To meet the requirements of the EN 50121-4 Railway Applications Standard, use an external power supply or POE injector that is also compliant with EN 50121-4. Please contact Avigilon for assistance regarding supporting equipment.

To meet the requirements of the EN 50130-4 Alarm Systems Applications standard, use an external uninterruptible power (UPS) supply. The UPS must have a backup run time of greater than 5 seconds (>5S) for the power level as specified on the product datasheet.

For Korea

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

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.

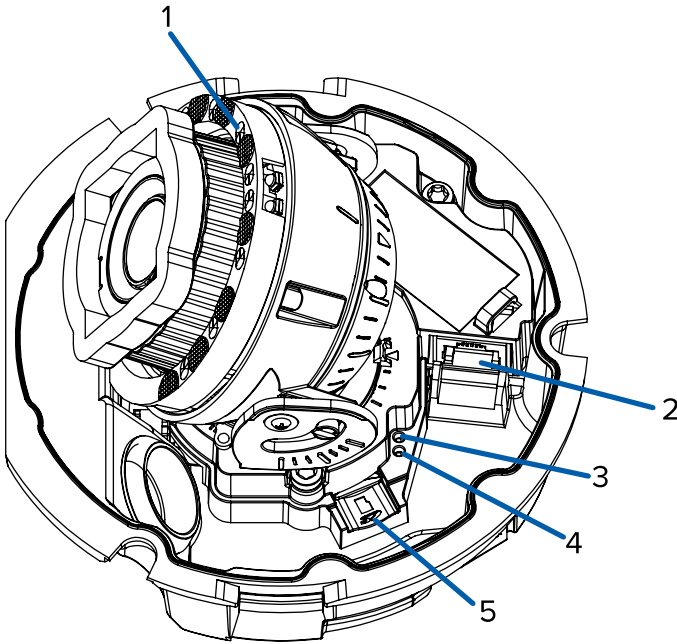
Table of Contents

Overview	1
Camera Base Front View	1
Camera Base Rear View	2
Camera Base Bottom View	3
Cover View, Surface Mount	4
Mounting Adapter View, Surface Mount	5
Cover View, In-Ceiling Mount	6
Mounting Adapter View, In-Ceiling Mount	7
Cover View, Pendant Wall Mount	8
NPT Adapter View, Pendant Mount	9
Pendant Wall Mount Bracket View	10
Pendant Wall Mount View	11
Surface Mount Installation	12
Required Tools and Materials	12
Camera Package Contents	12
Installation Steps	12
Removing the Dome Cover	12
Inserting Cables through the Sealing Grommet	13
Using the Surface Mount Adapter	14
Mounting the Dome Camera Using the Bottom Cable Entry	14
Mounting the Dome Camera Using the Side Cable Entry	15
Mounting the Dome Camera to an Electrical Box	18
Installing the Camera Base to the Mounting Adapter	18
Installing the Dome Cover	20
In-Ceiling Mount Installation	21
Required Tools and Materials	21
Camera Package Contents	21
Installation Steps	21
Removing the Dome Cover	22
Inserting Cables through the Sealing Grommet	22
Using the In-Ceiling Mounting Adapter	23
Installing the Camera Base to the Mounting Adapter	26
Installing the Dome Cover	28
Pendant Mount Installation	29

Required Tools and Materials	29
Package Content	29
Installation Steps	30
Removing the Dome Cover	30
Inserting Cables through the Sealing Grommet	31
Mounting the Dome Camera to a Pipe	32
(Optional) Mounting the Dome Camera to the Pendant Wall Mount	33
Installing the Camera Base to the Mounting Adapter	37
Installing the Dome Cover	38
Connecting to the Camera	40
Initializing a Camera Username and Password	40
(Optional) Using the USB Wi-Fi Adapter	40
Assigning an IP Address	41
Accessing the Live Video Stream	42
Aiming the Dome Camera	42
(Optional) Configuring microSD Card Storage	43
Zooming and Focusing the Dome Camera	44
Configuring the Camera	44
Setting the IP Address Using the ARP/Ping Method	44
For More Information	45
Connecting to External Audio and I/O Devices	46
Connection Status LED Indicator	47
Troubleshooting Network Connections and LED Behavior	47
Removing the Dome Camera from the Mounting Adapter	49
Resetting to Factory Default Settings	50
Limited Warranty and Technical Support	51

Overview

Camera Base Front View



1. IR illuminator

Provides scene illumination in the IR spectrum.

Only available on -IR models.

2. 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 occur over this connection.

3. Link LED indicator

Amber LED indicates if there is an active connection in the Ethernet port.

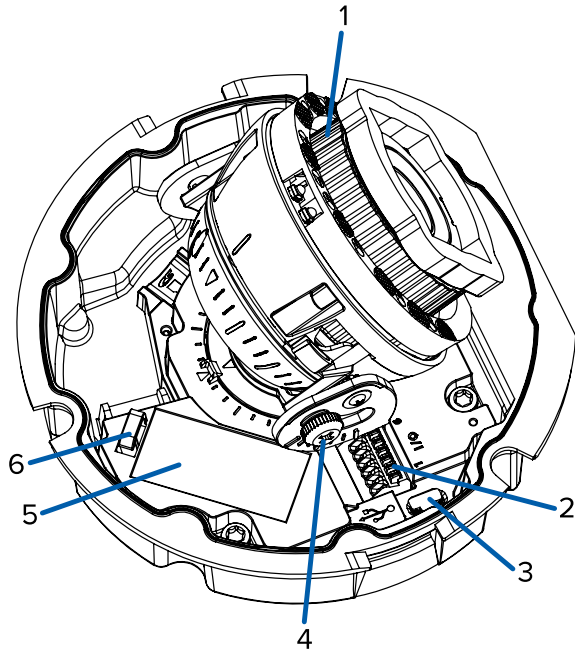
4. Connection status LED indicator

Green LED provides information about device operation. For more information, see *Connection Status LED Indicator* on page 47.

5. microSD card slot

Accepts a microSD card for onboard storage. For more information, see *(Optional) Configuring microSD Card Storage* on page 43.

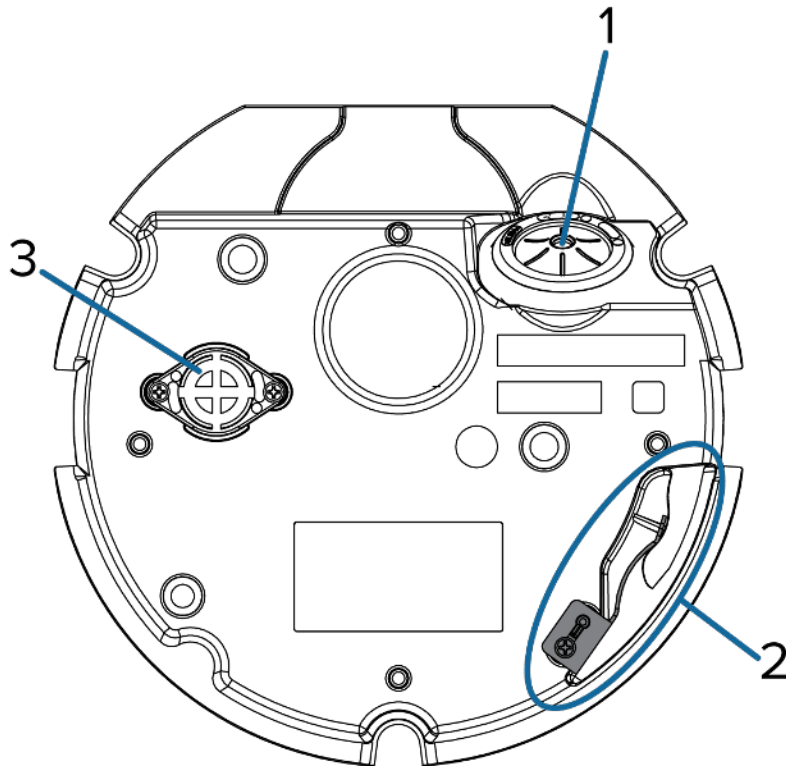
Camera Base Rear View



Displayed IR illuminators only available on -IR models.

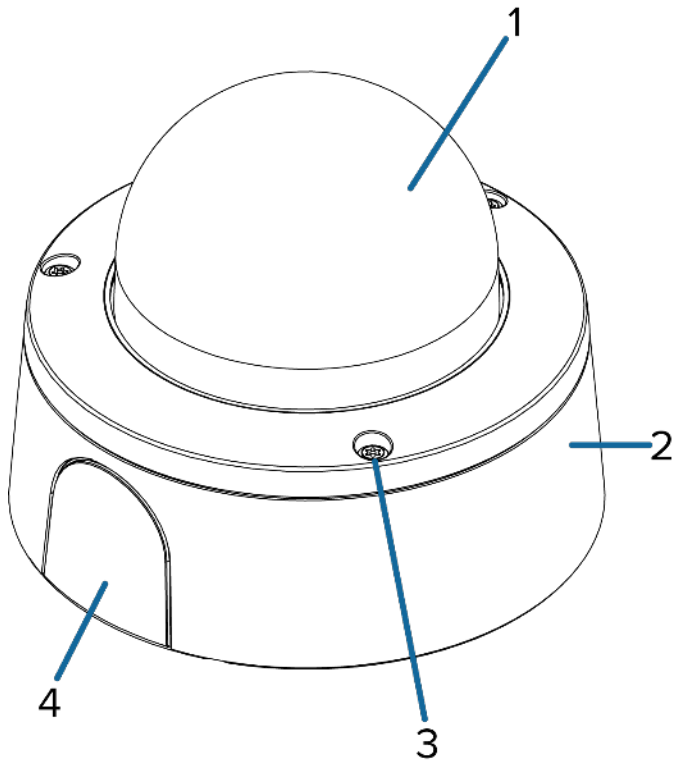
1. **Azimuth control**
Provides control of the image angle.
2. **I/O connector block**
Provides connections to external input/output and audio devices.
3. **Micro USB port**
Accepts a micro USB to USB adapter. Only required when using the Avigilon USB Wi-Fi Adapter.
4. **Tilt lock thumb screw**
Provides a locking mechanism for the image tilt adjustment.
5. **Serial number tag**
Device information, product serial number and part number label.
6. **I/O Cable Management Clip**
Clip to help secure the I/O cable in place.

Camera Base Bottom View



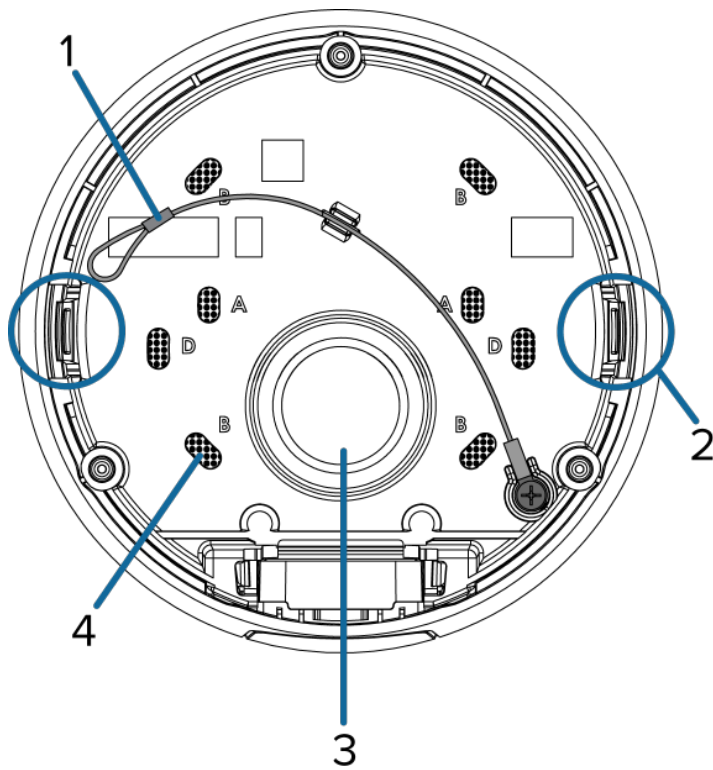
- 1. Cable entry hole**
An entry hole for the cables required for camera operation.
- 2. Lanyard anchor**
The safety lanyard attaches to the anchor to prevent the camera from falling during installation.
- 3. Vent**
Vent to allow moisture vapor to escape the sealed housing and equalize pressure.
Only available on H5SL-DO models.

Cover View, Surface Mount



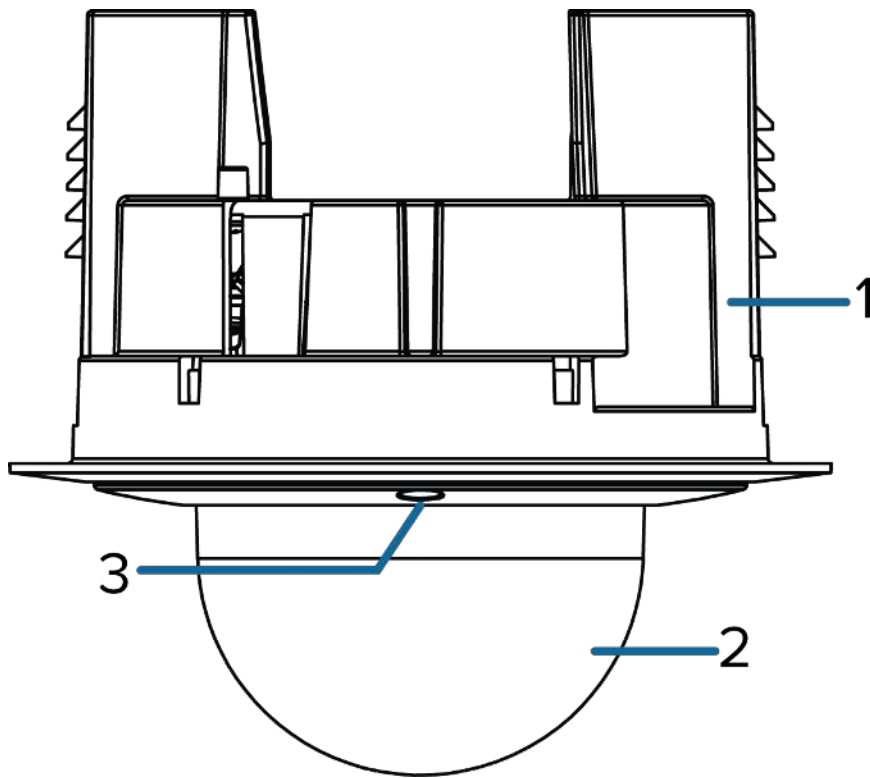
- 1. Dome cover**
Vandal resistant dome cover.
Only available on H5SL-DO models. Dome covers for H5SL-D models are not vandal resistant.
- 2. Surface mount adapter**
Used to mount the dome camera to a wall, ceiling or electrical box.
- 3. Tamper resistant screws**
Star-shaped captive screws to fix the dome cover to the base.
- 4. Side cable entry cover**
Covers the side cable entry hole.

Mounting Adapter View, Surface Mount



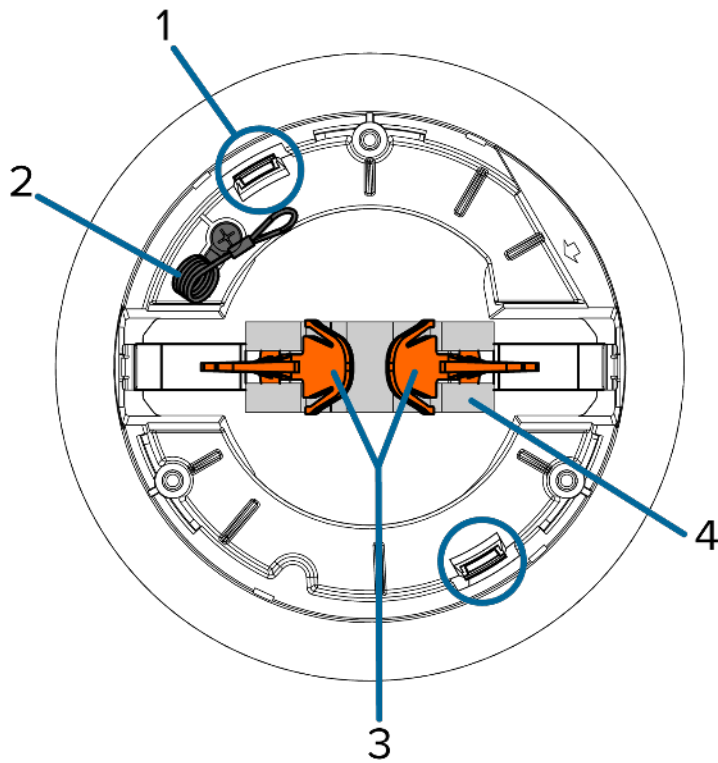
- 1. Lanyard**
Connects to the lanyard anchor on the camera base.
- 2. Camera housing clips**
Snaps to hold camera module during installation.
- 3. Cable entry hole**
An entry hole for the cables required for camera operation.
- 4. Mounting holes**
Holes for mounting the adapter to the following:
 - A — UK standard single gang box
 - B — Octagon gang box
 - D — US standard single gang box

Cover View, In-Ceiling Mount



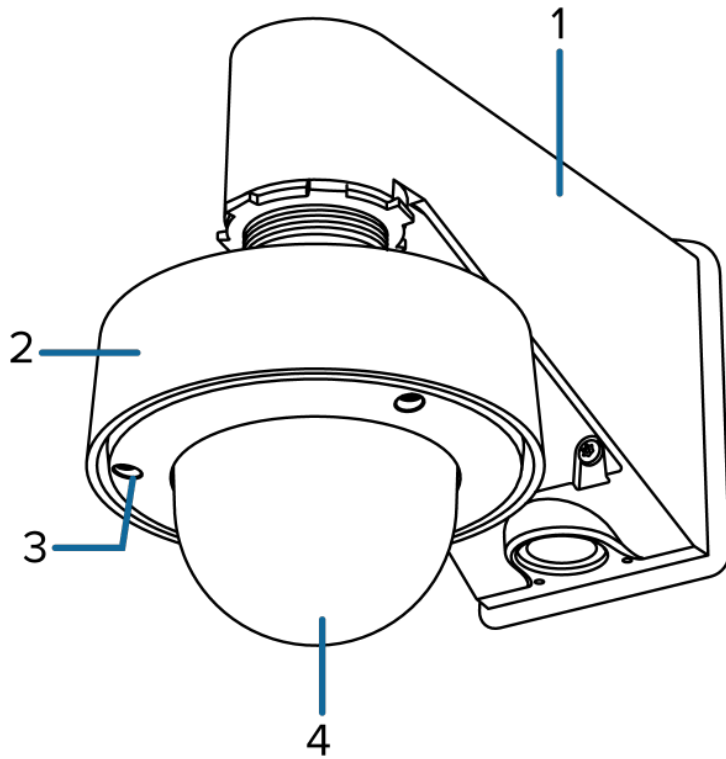
- 1. In-ceiling mount adapter**
Used to mount the dome camera to a wall, ceiling or electrical box.
- 2. Dome cover**
Vandal resistant dome cover.
Only available on H5SL-DO models. Dome covers for H5SL-D models are not vandal resistant.
- 3. Tamper resistant screws**
Star-shaped captive screws to fix the dome cover to the base.

Mounting Adapter View, In-Ceiling Mount



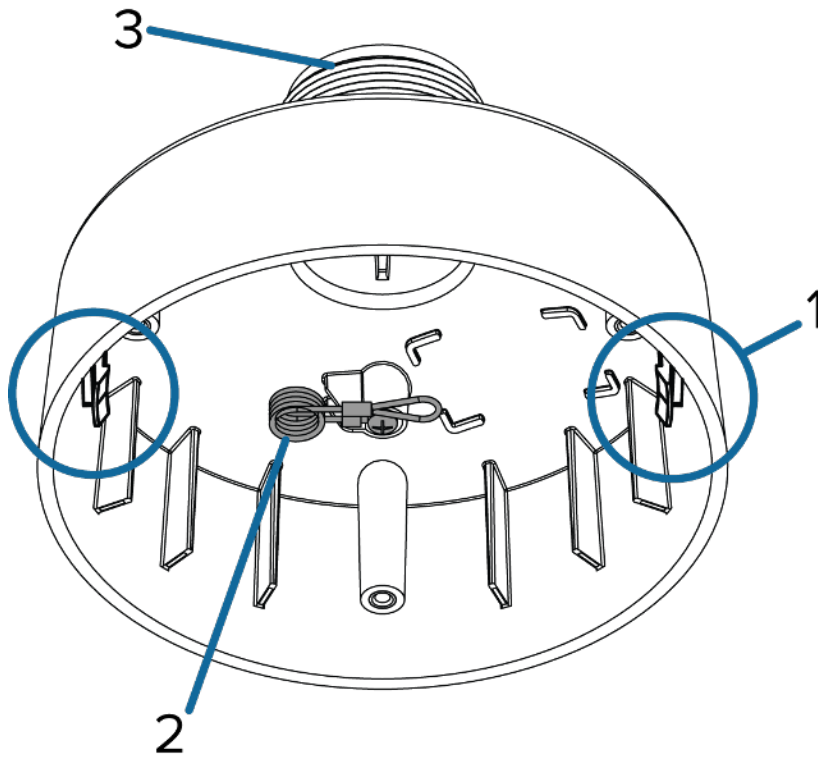
1. **Camera housing clips**
Snaps to hold camera module during installation.
2. **Lanyard**
Connects to the lanyard anchor on the camera base.
3. **Clamps**
Manually adjustable clamps for securing the dome camera to the ceiling.
4. **Clamp retainer**
Used to hold the clamps together before installation.

Cover View, Pendant Wall Mount



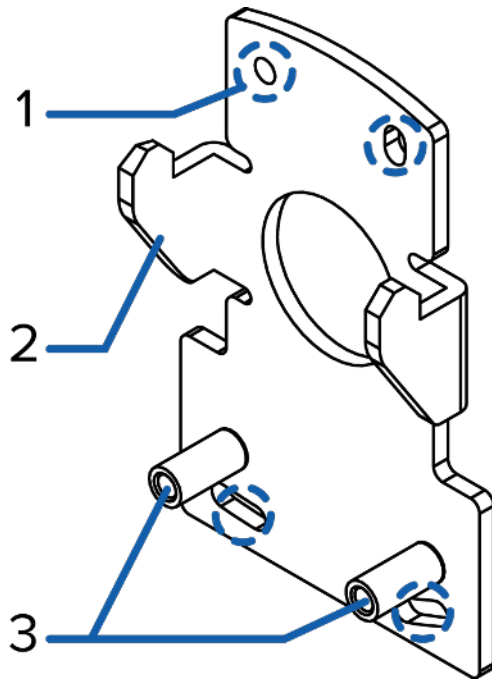
1. **Pendant wall mount** (optional)
Used with the NPT adapter to mount the dome camera to a wall in pendant installations.
2. **NPT adapter**
Used to mount the dome camera to NPT pipes.
3. **Tamper resistant screws**
Star-shaped captive screws to fix the dome cover to the base.
4. **Dome cover**
Vandal resistant dome cover.
Only available on H5SL-DO models. Dome covers for H5SL-D models are not vandal resistant.

NPT Adapter View, Pendant Mount



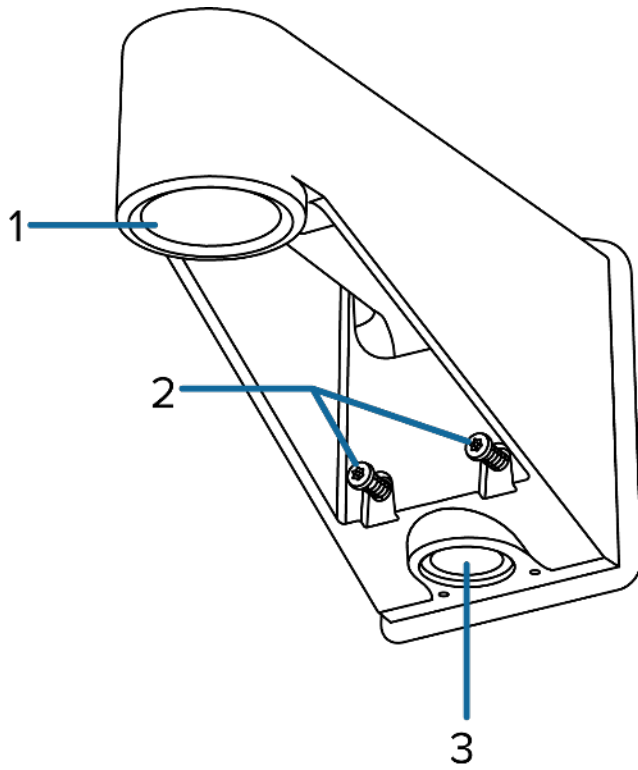
1. **Camera housing clips**
Snaps to hold camera module during installation.
2. **Lanyard**
Connects to the lanyard anchor on the camera base.
3. **1-1/2" NPT thread mount**
Standard male 1-1/2" NPT thread mount for mounting the dome camera to a pole or bracket.

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. **1-1/2" NPS thread mount**
Female NPS thread mount for pendant camera installations.
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.

Surface Mount Installation

Required Tools and Materials

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

- No. 2 Phillips screwdriver — for attaching camera to an electrical box or mounting surface.

Camera Package Contents

Ensure the package contains the following:

- Avigilon H5SL Dome Camera (Indoor model — H5SL-D)
 - Mounting template sticker
 - 4 screws and anchors for solid walls
 - Surface mount adapter
 - Side conduit cover
 - T20 Pin-In star-shaped driver
- Avigilon H5SL Dome Camera (Outdoor model — H5SL-DO)
 - Mounting template sticker
 - RJ-45 grommet piercing cap
 - 4 screws and anchors for solid walls
 - Surface mount adapter
 - Side conduit cover
 - Side conduit plate (2 sizes)
 - Conduit grommet
 - Cable entry grommet
 - T20 Pin-In star-shaped driver

Installation Steps

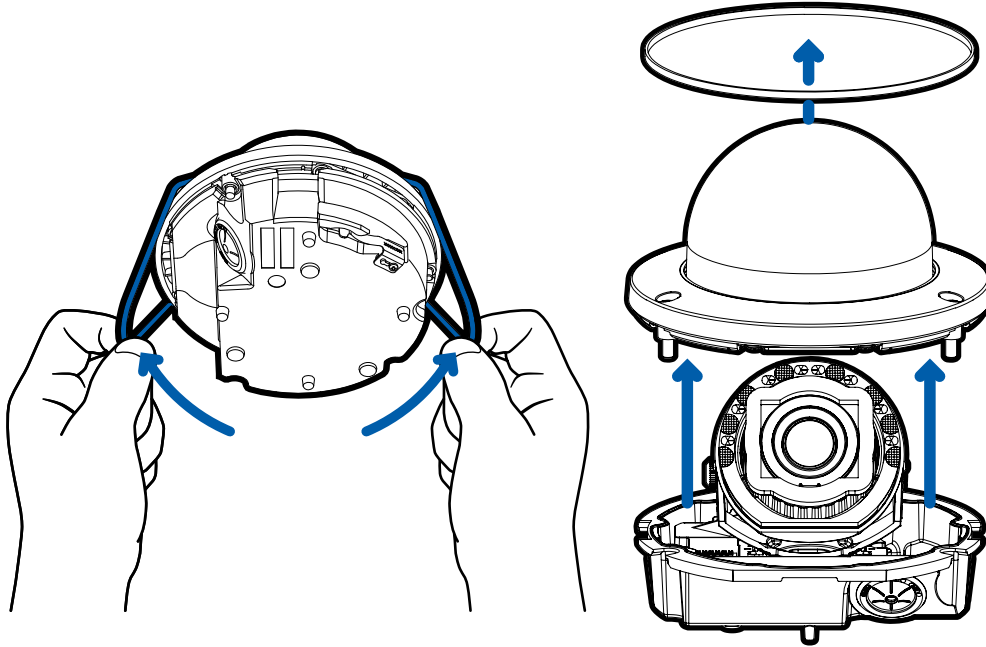
Complete the following sections to install the device.

Removing the Dome Cover

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.

- Remove the dome cover by releasing the elastic strap holding the dome cover to the camera base.



Inserting Cables through the Sealing Grommet

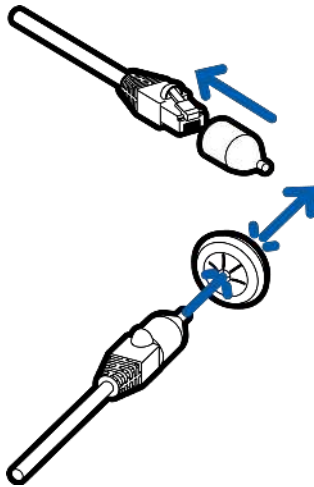
Always use the provided sealing grommet to prevent dust and debris from entering the camera.

1. Remove the sealing grommet from the camera base.
2. Push the Ethernet cable through the grommet.

If you are installing the indoor model (H5SL-D), you should be able to simply push the cable, crimped or uncrimped, through the grommet by hand.

If you are installing the outdoor model (H5SL-DO), use 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.

3. Push any other required cables through the grommet.

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

Using the Surface Mount Adapter

The dome camera is provided with a surface mount adapter that can be mounted to a wall, ceiling or electrical box.

If the dome camera needs to be installed in a different way, use one of the other mounting adapter options and refer to their sections in this manual for more information.

- In-ceiling mounting adapter (H4SL-MT-DCIL). For more information, see *In-Ceiling Mount Installation* on page 21.
- Pendant NPT mounting adapter (H4SL-MT-NPTA). For more information, see *Pendant Mount Installation* on page 29.
 - Pendant wall mounting adapter (CM-MT-WALL) — must be used with NPT mounting adapter.

Mounting the Dome Camera Using the Bottom Cable Entry

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.

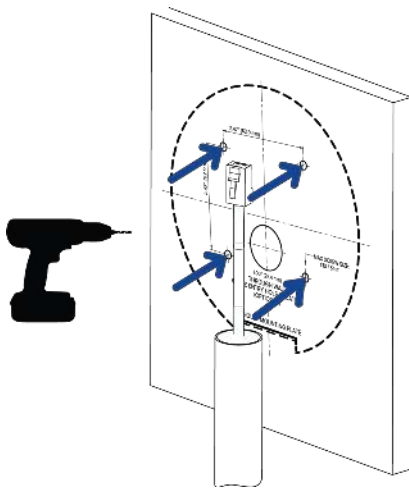
Perform the following steps to mount the dome camera to a ceiling or wall:

1. Use the mounting template to drill 4 mounting holes into the mounting surface and drill the cable entry hole.
2. Pull the required cables through the cable entry hole.
Make sure the cables are threaded through the sealing grommet from the camera base. For more information, see *Inserting Cables through the Sealing Grommet* on page 31
3. Drive 4 screws to fasten the mounting adapter to the ceiling or wall.

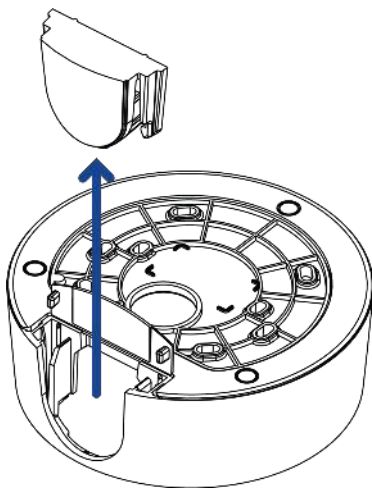
Mounting the Dome Camera Using the Side Cable Entry

Perform the following steps if you will be mounting to a surface with the required cables coming out of an external conduit pipe. Use this procedure if the mounting surface cannot be easily cut, or when cables must be brought along the outside of the mounting surface.

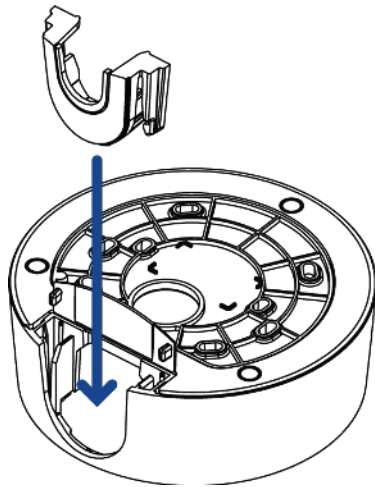
1. Use the mounting template to drill four mounting holes into the mounting surface.
Make sure the mounting template is aligned to where the conduit will enter the mounting adapter.



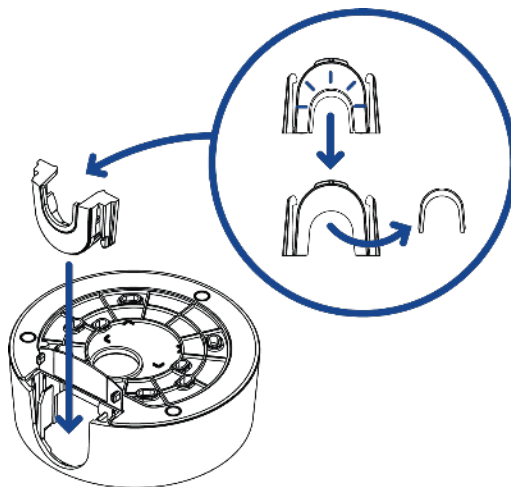
2. Pull the required cables through the conduit.
3. Slide the side cable cover off the mounting adapter.



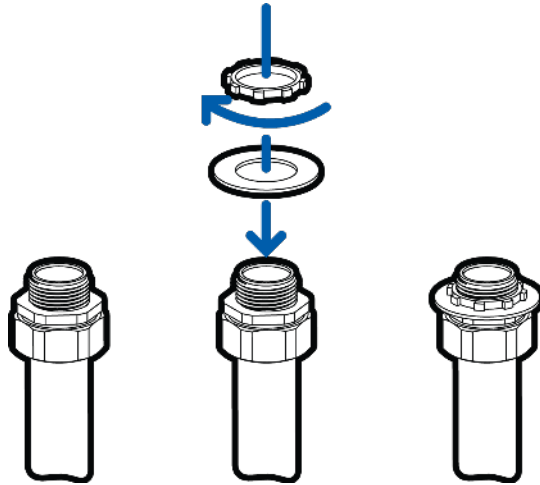
4. Depending on the conduit used, make the required adjustments to the side cable entry hole:
- If you are using a 1/2" or 20 mm interior conduit, install the provided side conduit cover on to the mounting adapter.



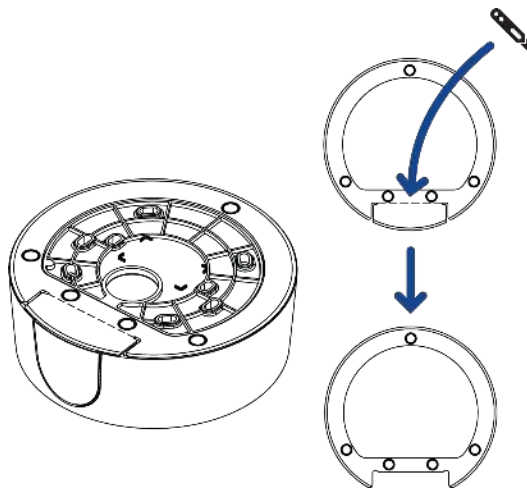
- If using 3/4" or 25 mm interior conduit, remove the center knockout piece on the provided side conduit cover then install the side conduit cover on to the mounting adapter.



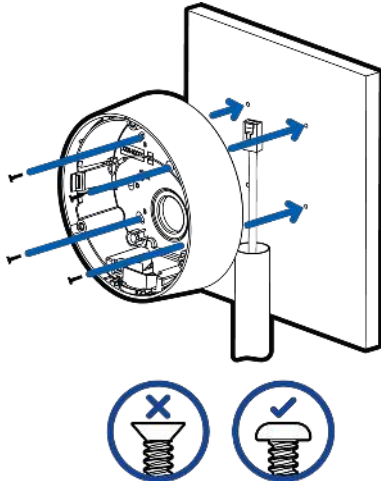
- If using ½” or ¾” exterior conduit, install a conduit plate to an external conduit adapter, then slide the mounting adapter over the conduit and plate assembly. Ensure the plate is compatible with the type of conduit used.



If you are installing the outdoor model (H5SL-DO), you may need to cut off part of the rubber gasket on the mounting adapter to make room for the plate.



5. Drive 4 screws to fasten the mounting adapter to the ceiling or wall.



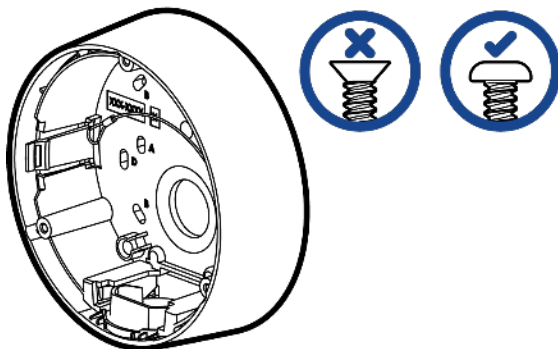
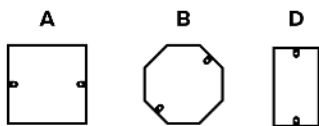
Mounting the Dome Camera to an Electrical Box

Perform the following steps if the required electrical components and cables will be contained in an electrical gang box inside the mounting surface.

1. Pull the required cables through the cable entry hole.
Make sure the cables are threaded through the sealing grommet from the camera base. For more information, see *Inserting Cables through the Sealing Grommet* on page 31.
2. Use pan head screws to install the mounting adapter to the electrical box.

Select the hole configuration that matches the electrical box shape:

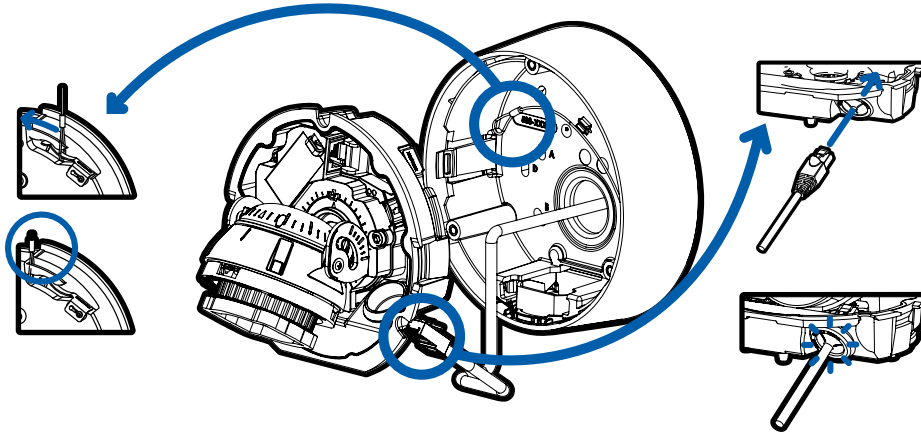
- A — UK standard single gang box
- B — Octagon gang box
- D — US standard single gang box



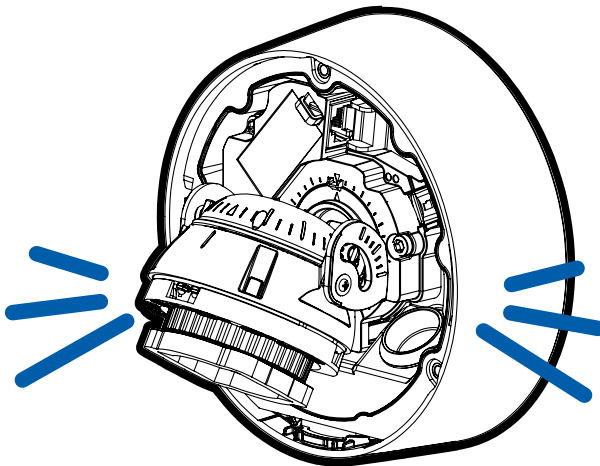
Installing the Camera Base to the Mounting Adapter

After you install the mounting adapter, mount the camera base to the adapter.

1. Attach the lanyard on the mounting adapter to the anchor on the camera base.



2. Pull the required cables through the cable entry hole on the camera base.
3. Install the grommet into the cable entry hole on the camera base.
Make sure the grommet flange is securely seated on the inside and outside of the cable entry hole.
4. Connect the network cable to the Ethernet port.
The Link LED will turn on once a network link has been established.
5. If external input or output devices, or audio devices are part of the installation (for example: door contacts, relays, microphone, etc.), connect the devices to the I/O connector block.
For more information, see *Connecting to External Audio and I/O Devices* on page 46.
6. Align the large orange arrow on the camera base to the side cable entry hole on the mounting adapter then press the camera base into the mounting adapter. The camera base clicks into place and is held securely.



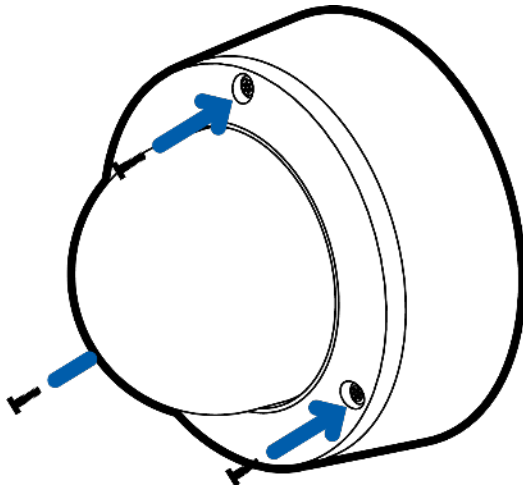
Installing the Dome Cover

Note:

Before installing the dome cover, we recommend that you first connect to the camera and adjust the aim, zoom, and focus so that the camera covers the required field of view. For more information, see:

- *Connecting to the Camera* on page 40
- *Aiming the Dome Camera* on page 42
- *Zooming and Focusing the Dome Camera* on page 44

1. Align the dome cover screws with the screw holes in the camera base. Apply even pressure on the dome cover and tighten the screws with the star-shaped driver.



2. Remove the protective cover on the outside of the dome bubble.

In-Ceiling Mount Installation

Required Tools and Materials

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

- Appropriate tool for cutting the entry hole in the mounting surface

Camera Package Contents

Ensure the dome camera package contains the following:

- Avigilon H5SL Dome Camera (Indoor model — H5SL-D)
 - T20 Pin-In star-shaped driver
 - Provided accessories that are not required for this installation:
 - Mounting template sticker
 - 4 screws and anchors for solid walls
 - Surface mount adapter
 - Side conduit cover
- Avigilon H5SL Dome Camera (Outdoor model — H5SL-DO)
 - RJ-45 grommet piercing cap
 - T20 Pin-In star-shaped driver
 - Provided accessories that are not required for this installation:
 - Mounting template sticker
 - 4 screws and anchors for solid walls
 - Surface mount adapter
 - Side conduit cover
 - Side conduit plate (2 sizes)

Ensure the mounting adapter (H4SL-MT-DCIL) package contains the following:

- In-ceiling mounting adapter for an H5SL Dome Camera
- Mounting template sticker

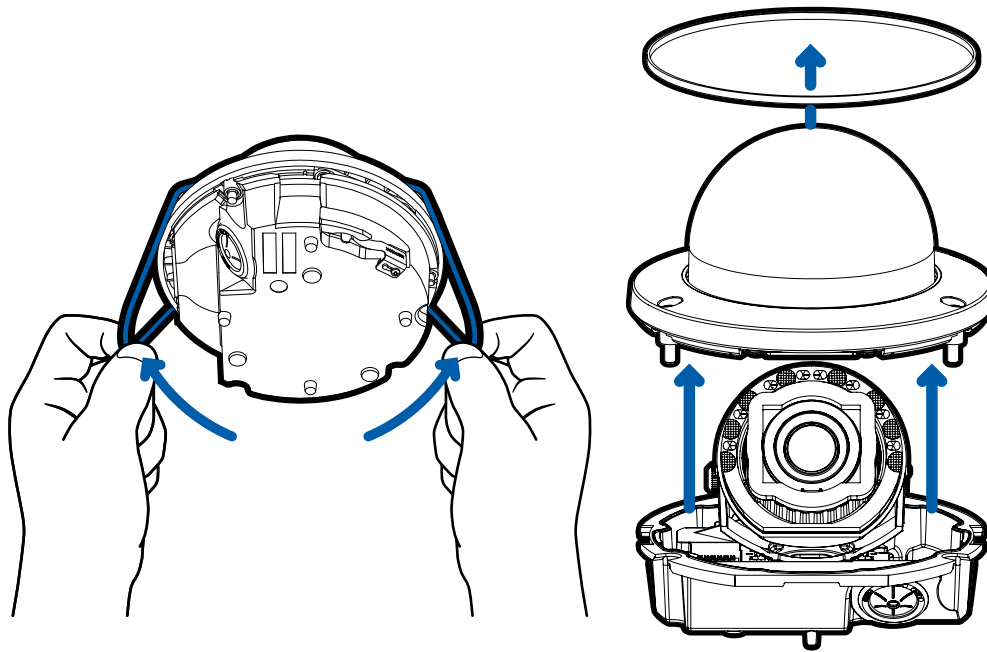
Installation Steps

Complete the following sections to install the device.

Removing the Dome Cover

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.

- Remove the dome cover by releasing the elastic strap holding the dome cover to the camera base.



Inserting Cables through the Sealing Grommet

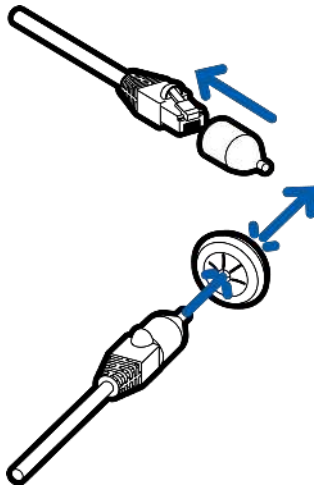
Always use the provided sealing grommet to prevent dust and debris from entering the camera.

1. Remove the sealing grommet from the camera base.
2. Push the Ethernet cable through the grommet.

If you are installing the indoor model (H5SL-D), you should be able to simply push the cable, crimped or uncrimped, through the grommet by hand.

If you are installing the outdoor model (H5SL-DO), use 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.

3. Push any other required cables through the grommet.

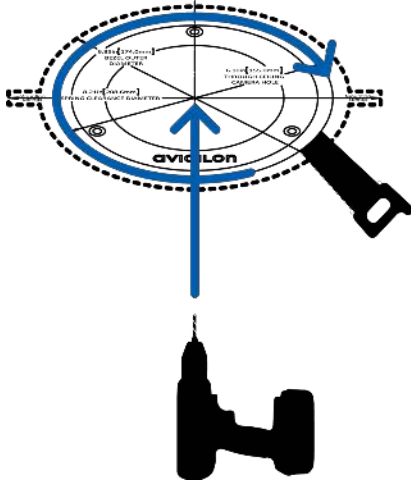
Note: If you pull multiple cables through the sealing grommet, apply silicone sealant to seal any gaps in the grommet.

Using the In-Ceiling Mounting Adapter

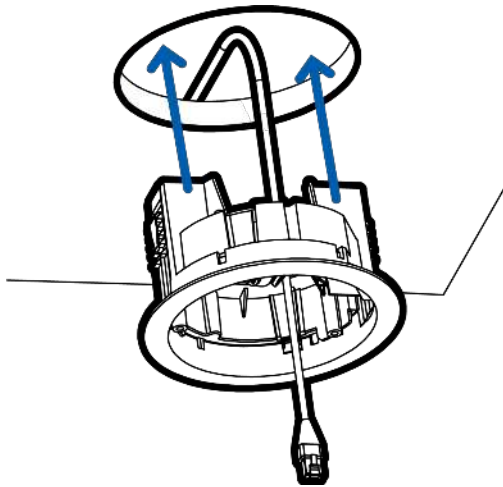
If the dome camera needs to be installed into a ceiling, you can discard the surface mount adapter that is provided with the dome camera and use the in-ceiling mounting adapter instead (H4SL-MT-DCIL).

Note: The maximum supported ceiling thickness is 32 mm (1.25").

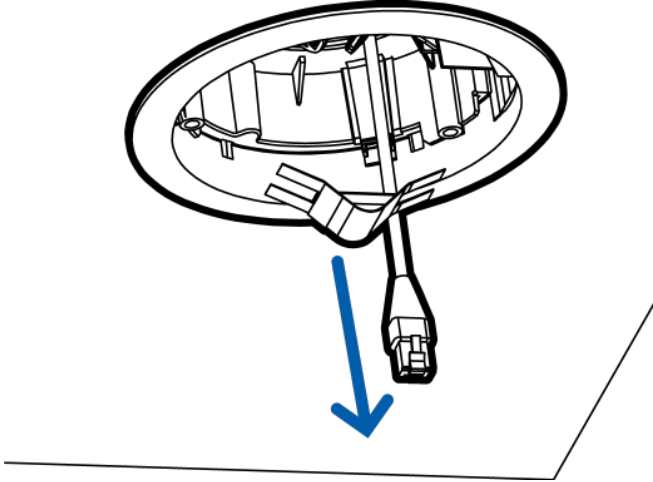
1. Use the in-ceiling mounting template to cut an entry hole for the camera into the ceiling.



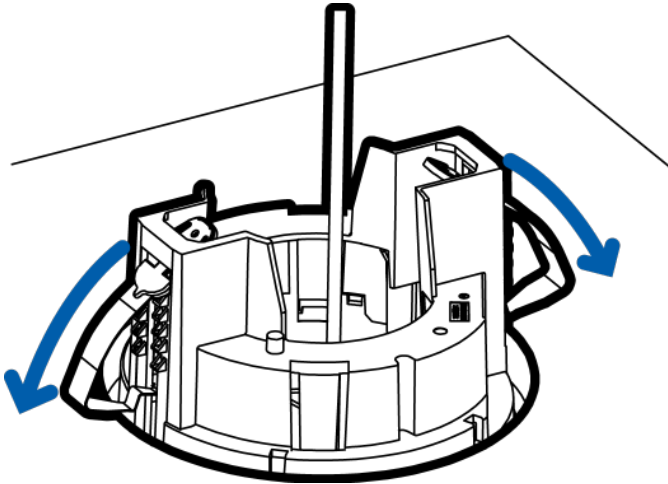
2. Insert the in-ceiling mounting adapter into the entry hole then pull the sealing grommet with the required cables through the adapter.



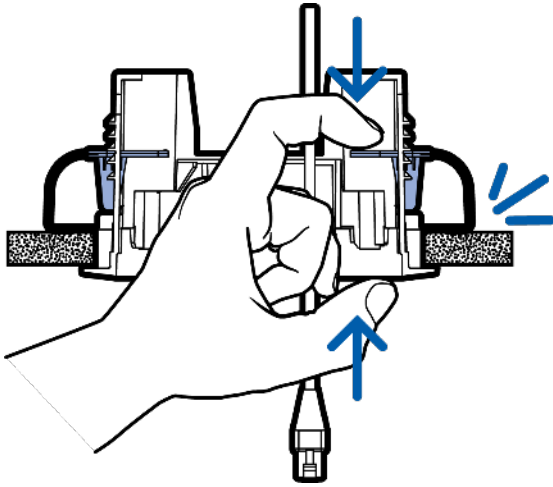
3. Pull off the clamp retainer holding the clamps in place.



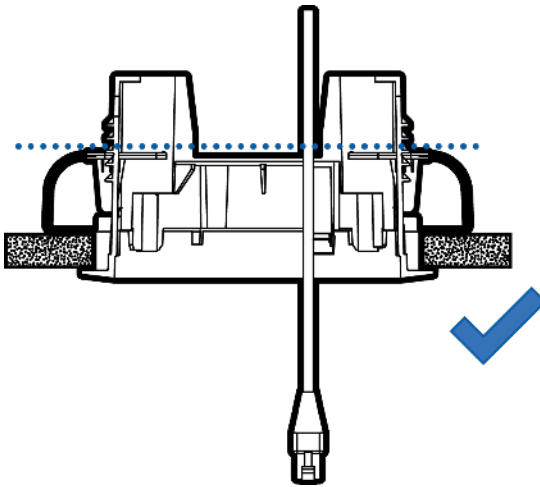
4. Push the orange clamp handles up so that the metal arms extend outside the mounting adapter.



5. With your thumb on the outside edge of the mounting adapter and your forefinger on one of the orange clamp handles, pinch the clamp down until the clamp is secured.



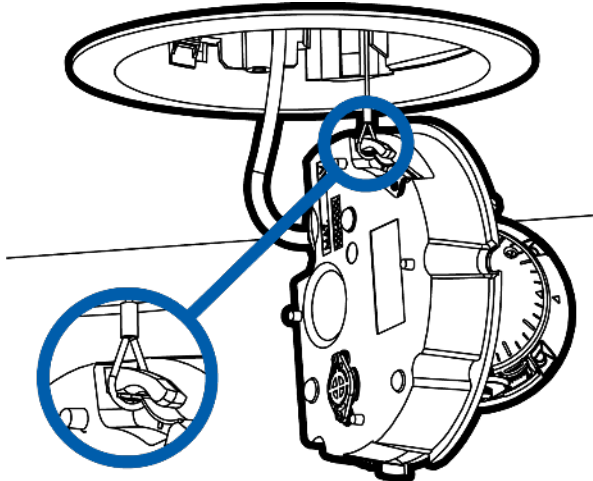
6. Repeat the previous step on the other side. Make sure both clamps are level and horizontal.



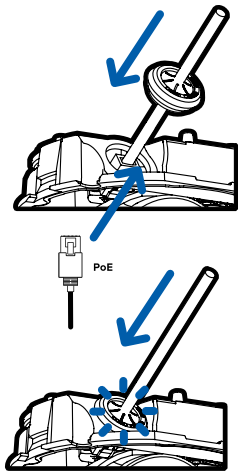
Installing the Camera Base to the Mounting Adapter

After you install the mounting adapter, mount the camera base to the adapter.

1. Attach the lanyard on the mounting adapter to the anchor on the camera base.



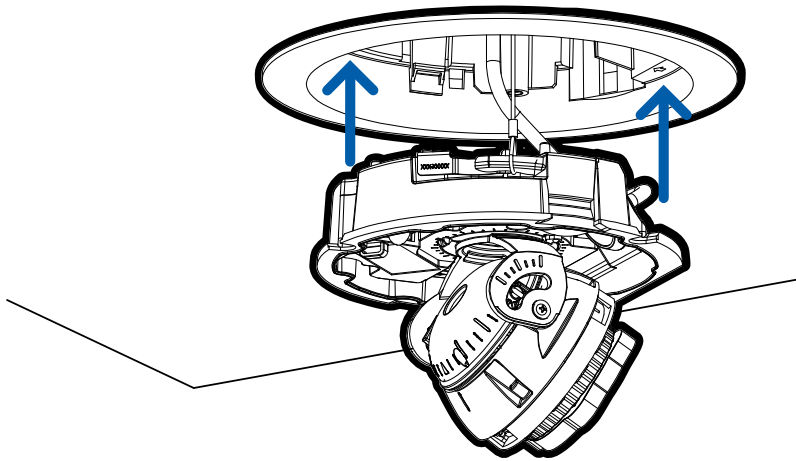
2. Pull the required cables through the cable entry hole on the camera base.
3. Install the grommet into the cable entry hole on the camera base.



Make sure the grommet flange is securely seated on the inside and outside of the cable entry hole.

4. Connect the network cable to the Ethernet port.
The Link LED will turn on once a network link has been established.
5. If external input or output devices, or audio devices are part of the installation (for example: door contacts, relays, microphone, etc.), connect the devices to the I/O connector block.
For more information, see *Connecting to External Audio and I/O Devices* on page 46.

6. Align the orange arrow on the camera base to the orange arrow on the mounting adapter, then press the camera base into the mounting adapter. The camera base clicks into place and is held securely.



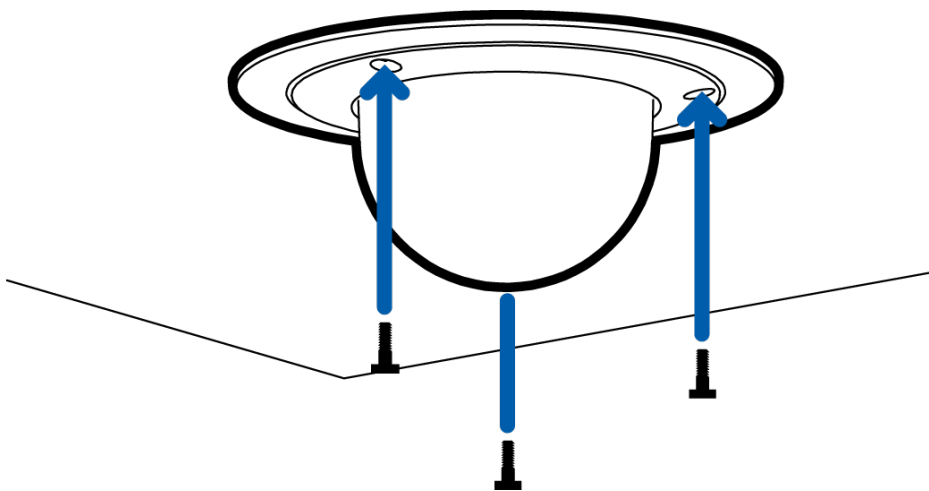
Installing the Dome Cover

Note:

Before installing the dome cover, we recommend that you first connect to the camera and adjust the aim, zoom, and focus so that the camera covers the required field of view. For more information, see:

- *Connecting to the Camera* on page 40
- *Aiming the Dome Camera* on page 42
- *Zooming and Focusing the Dome Camera* on page 44

1. Align the dome cover screws with the screw holes in the camera base. Apply even pressure on the dome cover and tighten the screws with the star-shaped driver.



2. Remove the protective cover on the outside of the dome bubble.

Pendant Mount Installation

Required Tools and Materials

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

- No. 2 Phillips screwdriver — for attaching the pendant wall mount bracket to the mounting surface.

Note: The NPT pipe (for pendant pipe mounted installations) and NPT-female to NPT-female adapter (for pendant pipe and wall mounted installations) are not supplied by Avigilon and should be sourced separately. However, if you are using the NPT adapter (H4SL-MT-NPTA), the lock nut is included.

Package Content

Ensure the dome camera package contains the following:

- Avigilon H5SL Dome Camera (Indoor model — H5SL-D)
- T20 Pin-In star-shaped driver
 - Provided accessories that are not required for this installation:
 - Mounting template sticker
 - 4 screws and anchors for solid walls
 - Surface mount adapter
 - Side conduit cover
- Avigilon H5SL Dome Camera (Outdoor model — H5SL-DO)
 - RJ-45 grommet piercing cap
 - T20 Pin-In star-shaped driver
 - Provided accessories that are not required for this installation:
 - Mounting template sticker
 - 4 screws and anchors for solid walls
 - Surface mount adapter
 - Side conduit cover (2 sizes)
 - Side conduit plate (2 sizes)

Ensure the NPT adapter (H4SL-MT-NPTA) package contains the following:

- NPT adapter for the H5SL Dome Camera
- T20 Pin-In star-shaped driver

- Lock nut
- RJ-45 grommet piercing cap
- Teflon sealing tape

If you are also installing the pendant wall mount (CM-MT-WALL1), ensure the package contains the following:

- Pendant wall mount
- Mounting template sticker
- T20 Pin-In star-shaped driver
- 4 concrete anchors (#8-10)
- 4 screws (#8 x 1.25)
- RJ-45 grommet piercing cap
- Teflon sealing tape

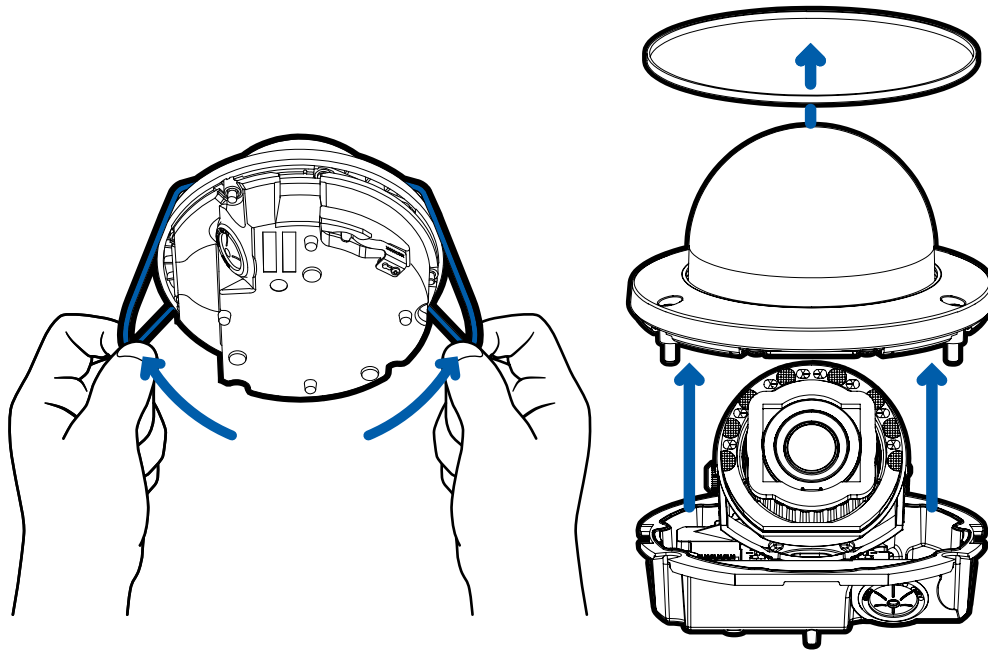
Installation Steps

Complete the following sections to install the device.

Removing the Dome Cover

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.

- Remove the dome cover by releasing the elastic strap holding the dome cover to the camera base.



Inserting Cables through the Sealing Grommet

Always use the provided sealing grommet to prevent dust and debris from entering the camera.

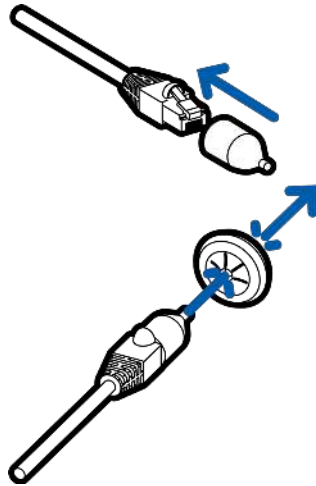
1. Remove the sealing grommet from the camera base.
2. Push the Ethernet cable through the grommet.

If you are installing the indoor model (H5SL-D), you should be able to simply push the cable, crimped or uncrimped, through the grommet by hand.

If you are installing the outdoor model (H5SL-DO), use 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.

3. Push any other required cables through the grommet.

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

Mounting the Dome Camera to a Pipe

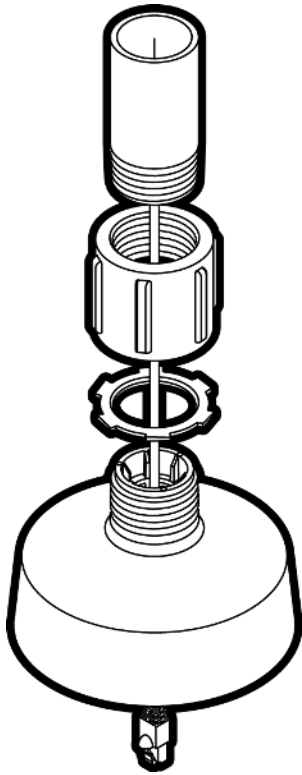
If the dome camera needs to be installed to a pipe for a pendant installation, you can discard the surface mount adapter that is provided with the dome camera and use the NPT adapter.

Note: This procedure requires a 1-1/2" NPT-female to NPT-female pipe adapter. It is recommended that the NPT adapter be 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 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

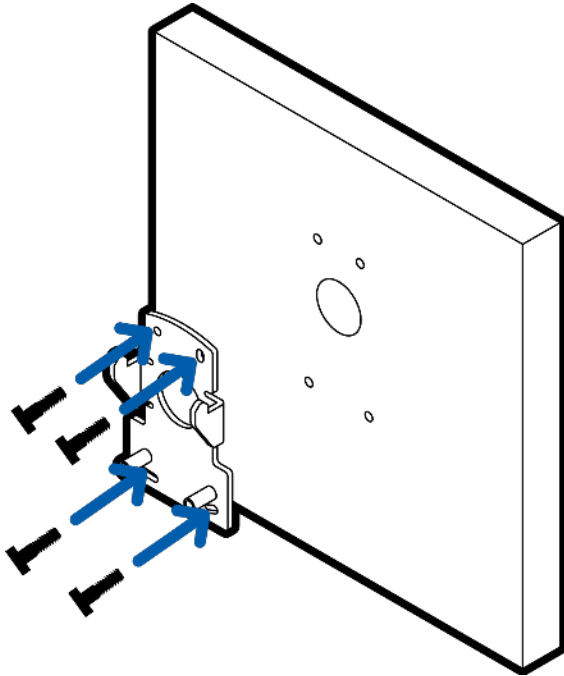


(Optional) Mounting the Dome Camera to the Pendant Wall Mount

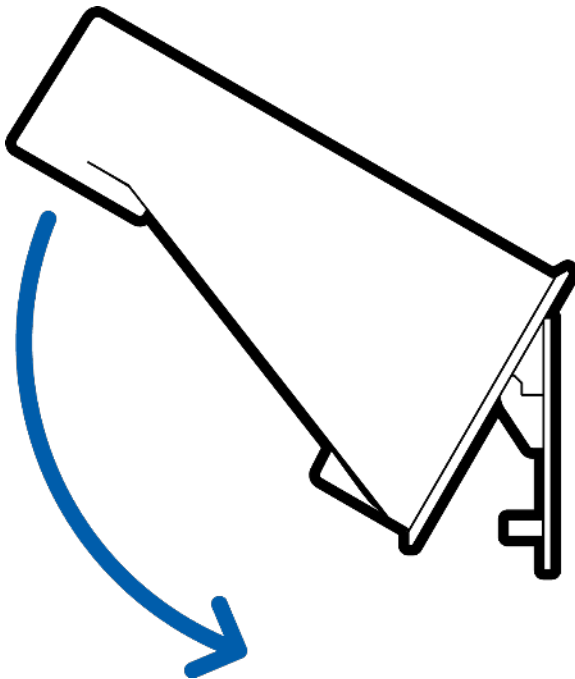
If the dome camera will be using the pendant wall mount, you will need to install the NPT adapter as well.

1. Determine where the cables will enter the pendant wall mount.
 - If the cables will be pulled from inside the mounting surface, use the cable entry hole at the rear of the pendant wall mount.
 - If the cables will be coming out of an external conduit pipe, use the 3/4" NPT pipe entry hole on the bottom of the pendant wall mount.
2. Use the provided mounting template to drill four mounting holes into the mounting surface.
 - If you are using the rear cable entry hole, also drill the cable entry hole into the mounting surface.

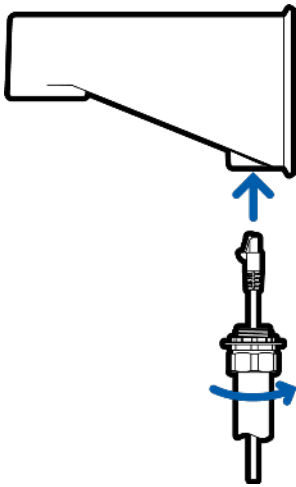
3. Fasten the pendant wall mount bracket to the mounting surface.



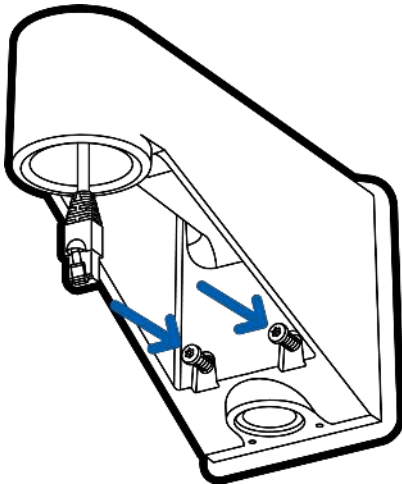
4. Insert the pendant wall mount over the bracket mounting tabs.



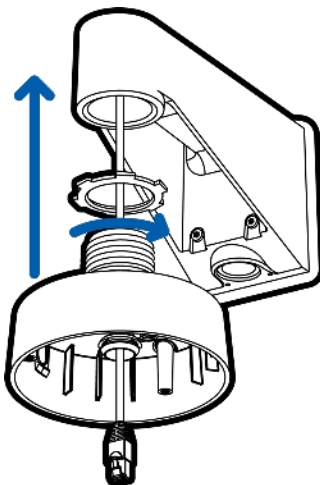
5. Pull the required cables through the preferred cable entry hole on the pendant wall mount.
 - If you are using the pipe entry hole, pull the cables through the pipe conduit then the wall mount. Next, apply thread seal tape to the pipe conduit and screw it into the pipe entry hole.



6. Tighten the wall mount screws to secure the wall mount to the bracket. Use the T20 star-shaped key provided in the camera package.



7. Loosely thread the lock nut onto the NPT adapter, then secure the NPT adapter into the pendant wall mount.

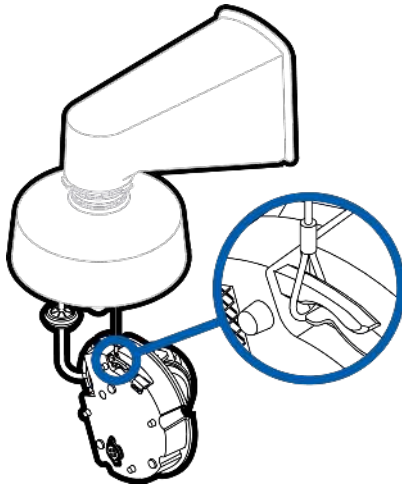


8. Carefully tighten the lock nut until the NPT adapter is secured to the wall mount.

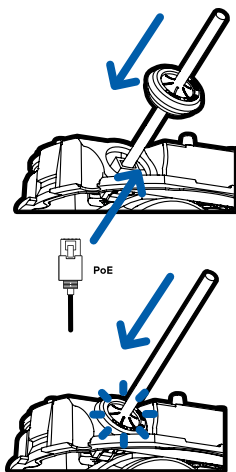
Installing the Camera Base to the Mounting Adapter

After you install the mounting adapter, mount the camera base to the adapter.

1. Attach the lanyard on the mounting adapter to the anchor on the camera base.



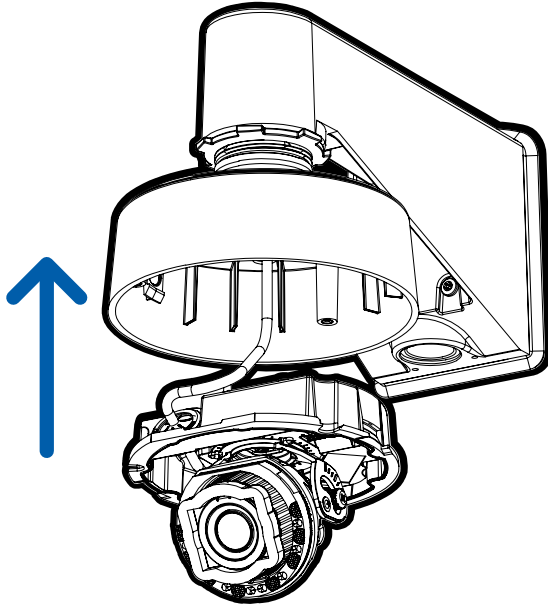
2. Pull the required cables through the cable entry hole on the camera base.
3. Install the grommet into the cable entry hole on the camera base.



Make sure the grommet flange is securely seated on the inside and outside of the cable entry hole.

4. Connect the network cable to the Ethernet port.
The Link LED will turn on once a network link has been established.
5. If external input or output devices, or audio devices are part of the installation (for example: door contacts, relays, microphone, etc.), connect the devices to the I/O connector block.
For more information, see *Connecting to External Audio and I/O Devices* on page 46.
6. Align the orange arrow on the camera base to the orange arrow on the mounting adapter, then press

the camera base into the mounting adapter. The camera base clicks into place and is held securely.



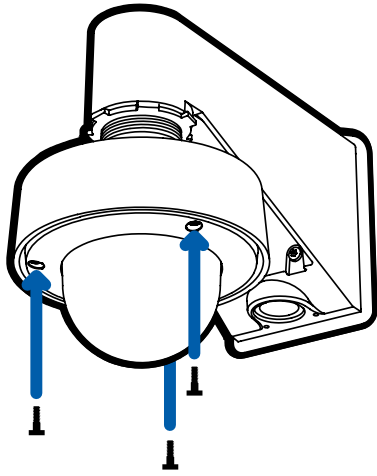
Installing the Dome Cover

Note:

Before installing the dome cover, we recommend that you first connect to the camera and adjust the aim, zoom, and focus so that the camera covers the required field of view. For more information, see:

- *Connecting to the Camera* on page 40
- *Aiming the Dome Camera* on page 42
- *Zooming and Focusing the Dome Camera* on page 44

1. Align the dome cover screws with the screw holes in the camera base. Apply even pressure on the dome cover and tighten the screws with the star-shaped driver.



2. Remove the protective cover on the outside of the dome bubble.


Connecting to the Camera

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*.
- USB Wi-Fi Adapter: when connecting a camera in the factory default state, you will be redirected to the Create Administrator User page to create the first user. For more information, see *Motorola Solutions USB Wi-Fi Adapter System 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, USB Wifi Adapter, or Camera Configuration Tool before you connect to the 3rd party VMS.

(Optional) Using the USB Wi-Fi Adapter

If you have a USB Wi-Fi 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 Wi-Fi 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 Wi-Fi Adapter System User Guide*.

Note: The camera will reserve the 10.11.22.32/28 subnet for internal use while the USB Wi-Fi Adapter is plugged in.

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:

- The mobile web interface using the USB Wifi Adapter. For more information, see *(Optional) Using the USB Wi-Fi Adapter* on the previous page.
- 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 44.

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:

- The mobile web interface using the USB Wifi Adapter. For more information, see *(Optional) Using the USB Wi-Fi Adapter* on page 40.
- Web browser interface: `http://< camera IP address>/`.
- Network Video Management software application (for example, the Avigilon Control Center software).

Note:

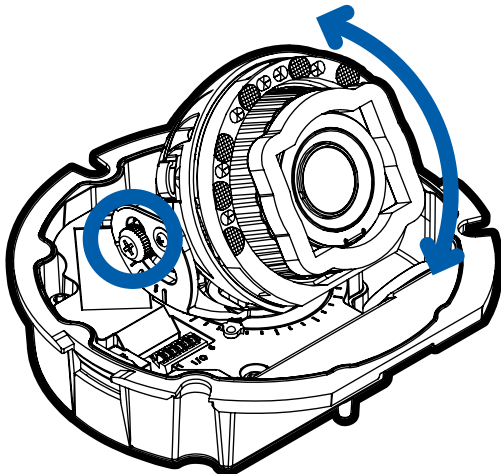
Depending on the manufacture date of your camera, you will have one of the two options below to log in for the first time:

- 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 page 40.
- 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.

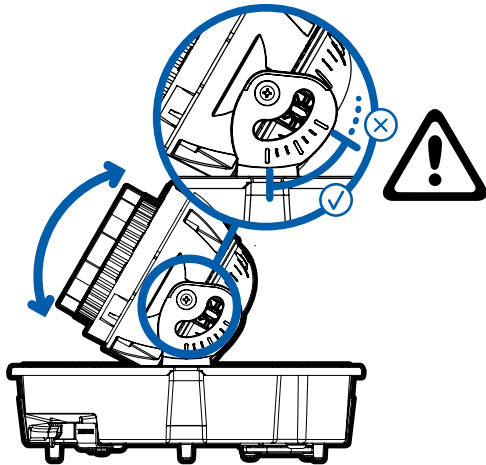
Aiming the Dome Camera

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

1. Pan the lens until it is aimed in the correct direction.
If the camera stops panning before it reaches its final destination, stop and pan the camera in the opposite direction.
2. Loosen the tilt lock thumb screw to tilt the lens.

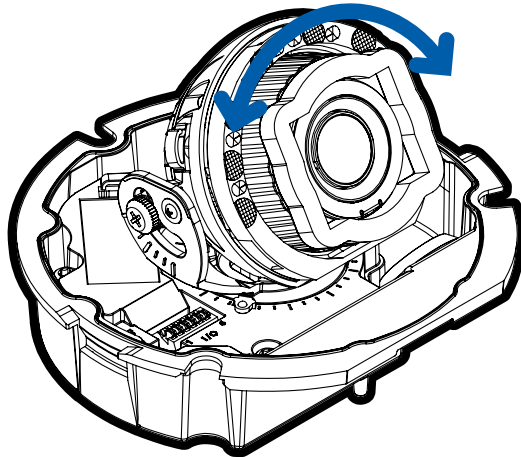


3. Adjust the tilt angle of the camera as needed.



Avigilon recommends that you adjust the tilt angle within the range indicated by the markings for best results. Tilting the camera past these markings is possible, but may result in infrared reflections beyond an acceptable level.

4. Tighten the tilt lock screw to secure the dome camera's position.
5. Rotate the azimuth control ring to set the image to the correct angle.



6. In the camera web browser interface or the Avigilon Control Center software, adjust the camera's Image and Display settings.

(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*.

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.

Note: If the H5SL-DO camera model is powered while the temperature is below -30 °C (-22 °F), the zoom and focus may be disabled for the first 45 minutes while the camera warms up.

- 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 lens.
 - c. Use the focus near and far buttons to manually 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 Wi-Fi Adapter System User Guide*.
- 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*.

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>: ...

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*
- *Web Interface User Guide — Avigilon High Definition H4 and H5 IP Cameras*
- *Avigilon USB Wi-Fi Adapter System User Guide*
- *Avigilon Camera Configuration Tool User Guide*
- *Designing a Site with Avigilon Video Analytics*

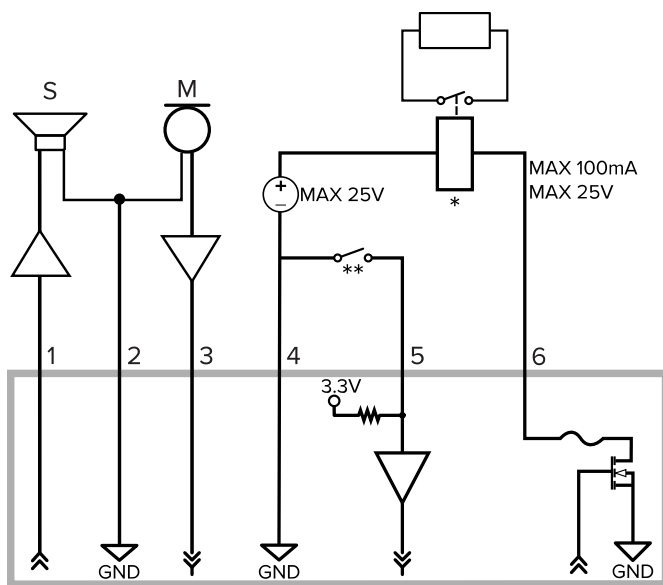
These guides are available on help.avigilon.com and on the Avigilon website: avigilon.com/support.

Connecting to External Audio and I/O Devices

Important: This product is intended to be supplied by Power over Ethernet (PoE). Do NOT connect auxiliary power to the audio or I/O terminal block or the camera will be damaged.

WARNING — This product is intended to be supplied by Power over Ethernet (PoE) that is a “Limited Power Source” or “LPS”, rated 48 VDC, 8 W min.

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



1. Audio Output (line level)

An external power amplifier should be used when connecting speakers and microphones, as shown in the diagram.

2. Audio Ground
3. Audio Input (line level)
4. Ground
5. Digital Input
6. Digital Output

- * — Relay
- ** — Switch
- M — Microphone
- S — Speaker

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 <i>Avigilon High Definition H4 and H5 IP Camera Web Interface User Guide</i> .

Troubleshooting Network Connections and LED Behavior

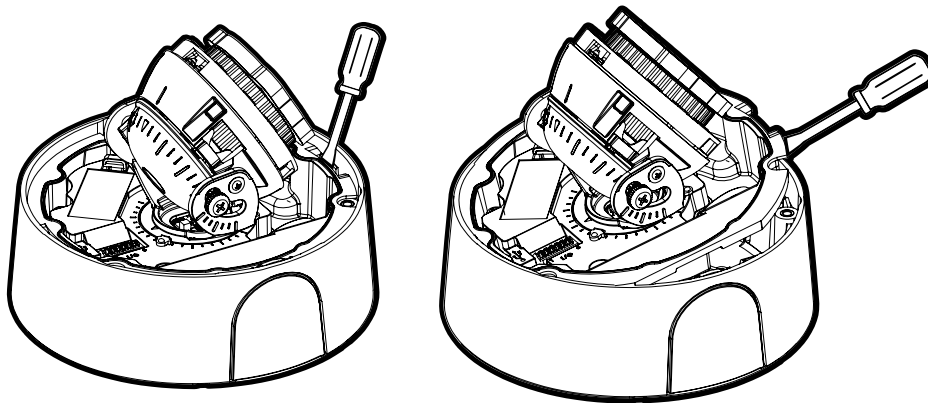
Note: For any of the below LED behaviors, ensure that the camera is getting power and is using a good network cable before trying another solution.

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.

Removing the Dome Camera from the Mounting Adapter

1. Loosen the star-shaped screws and remove the dome cover.
2. Locate the small orange arrows that point at the camera housing clips.
3. Insert a flat head screwdriver or grommet piercing cap against one of the camera housing clips.

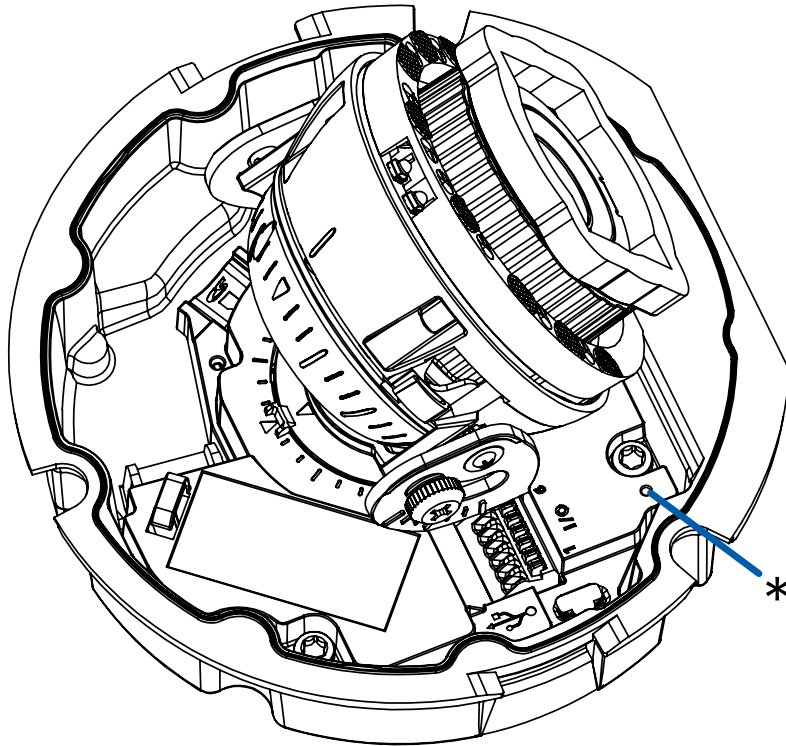


4. Lever one side of the camera base out of the clip.
5. Lift the camera base out of the adapter.

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:



1. Ensure the device 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 may damage the camera.

Limited Warranty and Technical Support

Avigilon warranty terms for this product are provided at [avigilon.com/warranty](https://www.avigilon.com/warranty).

Warranty service and technical support can be obtained by contacting Avigilon Technical Support: [avigilon.com/contact](https://www.avigilon.com/contact).