AVIGILON™



Installation Guide

Avigilon H6SL Camera Models:

2.0C-H6SL-BO1-IR	3.0C-H6SL-BO1-IR
3.0C-H6SL-BO2-IR	5.0C-H6SL-BO1-IR
5.0C-H6SL-BO2-IR	8.0C-H6SL-BO1-IR

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HTML-PROJECT-A

Revision: 2 - EN

20240808

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.

WARNING — 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.
- ESD to the camera when it is operating could cause a temporary loss of video. When servicing the camera, follow the appropriate ESD mitigation procedures. The operator should remove any static by grounding themselves before servicing the camera.
- 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 13 W min. or Power over Ethernet (PoE), 13 W min.
- 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 (B)/NMB-3(B).

This device 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 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 supply (UPS).

This equipment contains a coin cell battery. Risk of fire, explosion, and burns. Do not disassemble, crush, heat above 100°C (212°F), or incinerate.

The use of EMC compliant support and auxiliary equipment with this device is required in order to fully comply with the EMC regulatory standards.

UK Product Security and Telecommunications Infrastructure (PSTI) Act: Avigilon cameras comply with the PSTI requirements. For more information, see the published **PSTI Statement of Compliance**.

For Korea

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

IR Safety Information



Use appropriate shielding or eye protection.

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.

European Union:



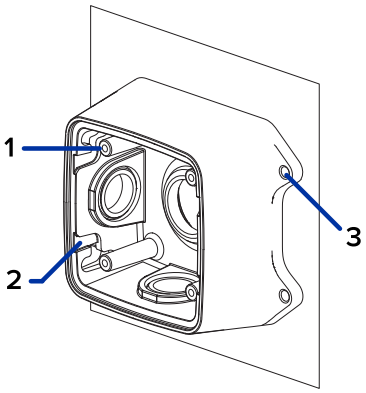
This symbol means that according to local laws and regulations your product should be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Some collection points accept products for free. The separate collection 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 7
Junction Box View 7
Front View 7
Side View 8
Rear View 8
Configuration Panel View 9
Installation 10
Camera Package Contents 10
Installation Steps 10
Mounting the Bullet Camera 10
Removing the Configuration Panel Cover 13
Initializing a Camera Username and Password 14
(Optional) Using the [[[Undefined variable webUI_WifiDongleMobile.ProductName]]] 14
Assigning an IP Address 15
Accessing the Live Video Stream 15
Aiming the Camera 16
Zooming and Focusing the Camera 17
(Optional) Configuring microSD Card Storage 17
Configuring the Camera 18
Connecting to External Devices 19
Connection Status LED Indicator 20
Troubleshooting Network Connections and LED Behavior 20
Resetting to Factory Default Settings 22
For More Information 23
Limited Warranty and Technical Support 24

Overview

Junction Box View



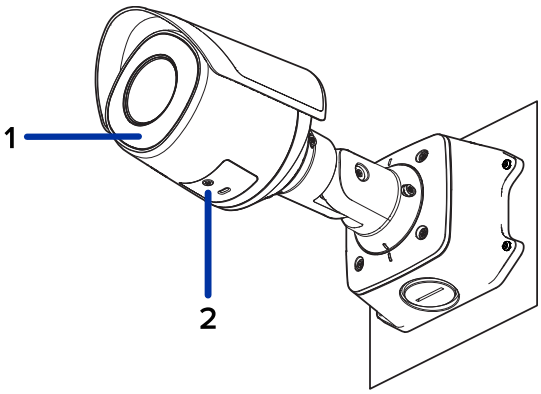
1. **Camera mounts**

   Points for installing the camera to the junction box.
2. **Mounting hook slots**

   Points to hold the camera to the junction box while connecting the required cables.
3. **Mounting holes**

   Holes for securing the junction box to the mounting surface.

Front View

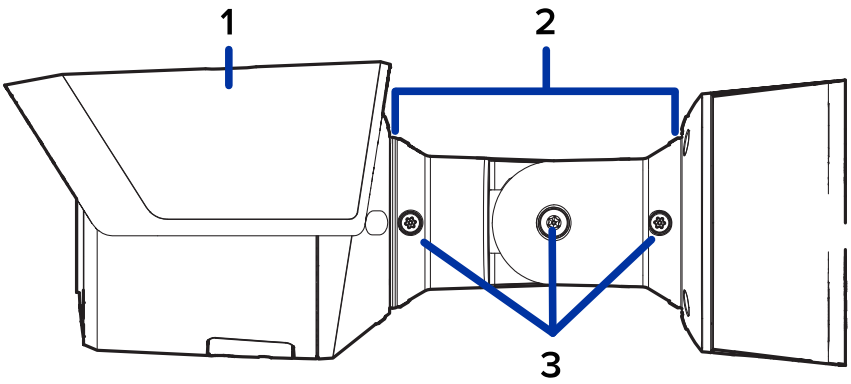


1. **IR Illuminator**

   Provides scene illumination in the IR spectrum.
2. **Configuration panel cover**

   Covers the configuration panel.

Side View



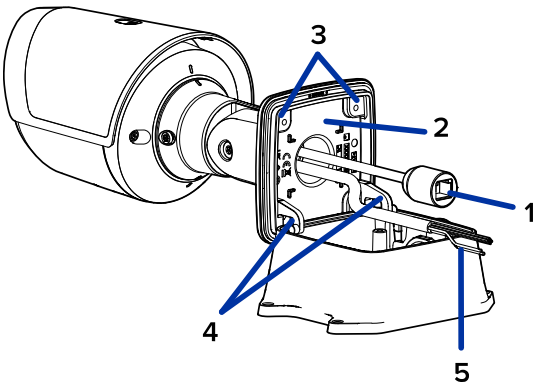
1. **Sun shroud**

   An adjustable cover to help protect the lens against glare from the sun.
2. **Mount arm**

   Adjustable mount arm for positioning the camera.
3. **Adjustment screws**

   Provides a locking mechanism for the mount arm.

Rear View



1. **Ethernet port**

   Accepts power and Ethernet connection to the network. Server communication and image data transmission also occur over this connection.

   The camera can either be powered by Power over Ethernet (PoE) or 12 VDC Aux.
2. **Serial number tag**

   Device information, product serial number and part number label.
3. **Camera mounting screws**

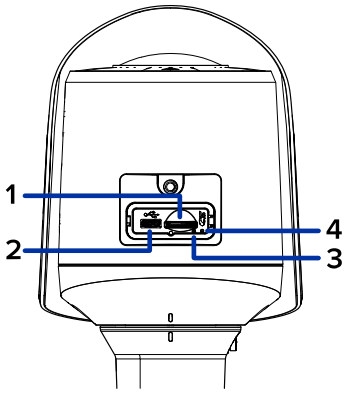
   Screws for mounting the camera to the junction box.
4. **Mounting hooks**

Hooks to attach the camera to the junction box while connecting the required cables.

5. **Power and I/O cables**

   Cables for connecting the camera to auxiliary power and I/O devices. For more information, see *Connecting to External Devices* on page 19.

Configuration Panel View



1. **microSD card slot**

   Accepts a microSD card for onboard storage. For more information, see *(Optional) Configuring microSD Card Storage* on page 17.

2. **Micro USB port**

   Accepts a micro USB to USB adapter. Only required when using the [[[Undefined variable webUI_WifiDongleMobile.ProductName]]].

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 20.

Installation

Camera Package Contents

- Avigilon H6SL Bullet Camera
- Junction box
- Mounting template sticker
- 4 screws and anchors for solid walls
- 4 screws for attachment to electrical box
- Protective rubber boot for Ethernet port
- Teflon tape

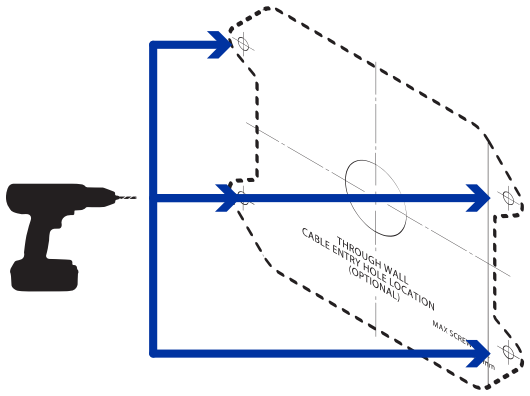
Installation Steps

Complete the following sections to install the device.

Mounting the Bullet Camera

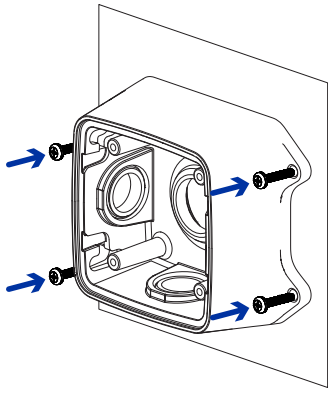
If the cables for the camera will not be provided from inside the mounting surface, install the junction box first. After you install the junction box, you can skip directly to step 3 of this procedure.

1. Use the mounting template to drill four mounting holes into the mounting surface.



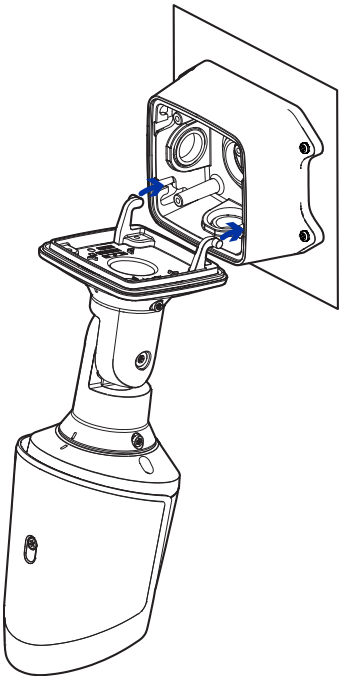
2. Drill the cable entry hole into the mounting surface then pull the required Ethernet cable through the cable entry hole.

3. Fasten the junction box to the mounting surface.



Note: To prevent moisture from entering the junction box, it is recommended to apply teflon tape around the threaded conduit pipe at the cable entry point of the junction box. Ensure the other two conduit plugs are fully tightened.

4. Insert the mounting hooks on the rear of the camera into the mounting hook slots on the junction box, then let the camera hang.



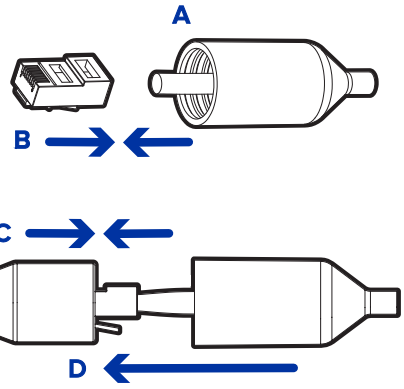
Note: Before connecting any cables, ensure that the cable connections are properly protected from moisture and corrosion. Make sure the protective cable boot is installed over the Ethernet port to protect the connection from dust and moisture.

If PoE is not available, the camera may be powered through the auxiliary power cable using either 12 VDC. For more information, see *Connecting to External Devices* on page 19.

5. If there are external input or output devices that need to be connected to the camera (for example: door contacts, relays, etc.), connect the devices to the camera's digital I/O connector cables. For more information see *Connecting to External Devices* on page 19.

   It is recommended that seal tape be applied around the external audio and I/O connection, if necessary, to prevent moisture from entering.

6. Install the protective cable boot.



   a. Thread one end of the Ethernet cable through the provided protective cable boot.

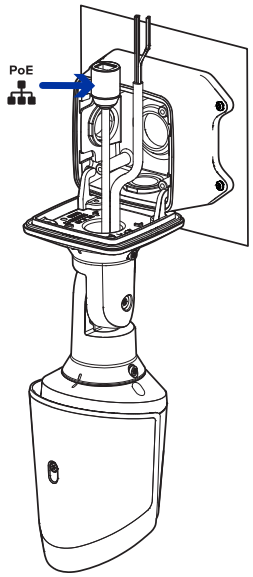
      Ensure the orientation of the cable and boot matches the one shown in the image.

   b. Crimp the Ethernet cable onto the cord.

   c. Plug the Ethernet cable into the camera's Ethernet port.

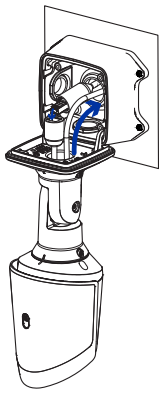
   d. After you connect the cable to the camera, slide the boot over the Ethernet port.

7. Connect the network cable to the camera's Ethernet port.

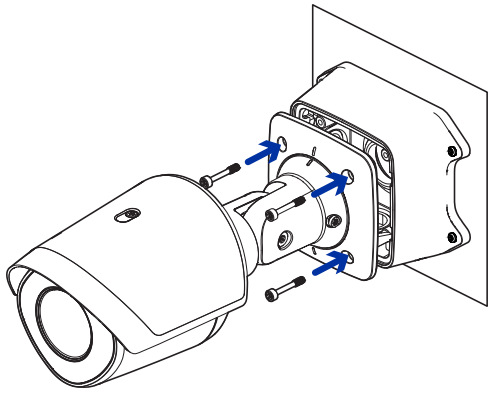


8. Tuck the extra lengths of cables into the cable entry hole or within the junction box compartment.

9. Raise the camera until it covers the junction box.

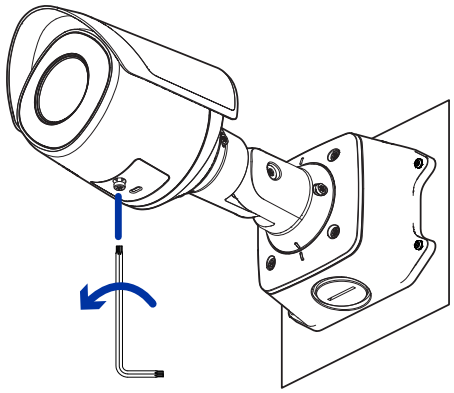


10. Use the camera mounting screws to fasten the camera to the junction box.



Removing the Configuration Panel Cover

1. Use a T20 Pin-In star-shaped driver to unscrew the configuration panel cover.



2. Remove the cover from the configuration panel.

Initializing a Camera Username and Password

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

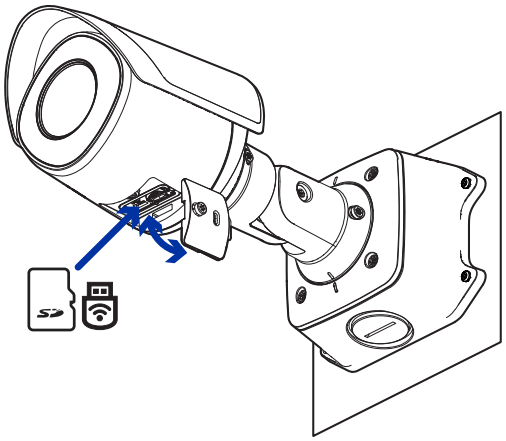
The first user can be created using any of the following methods:

- 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 IP Camera Web Interface User Guide.*
- Camera Configuration Tool: cameras discovered in the factory default state will be identified by . Select the **Admin Users** tab to create the first user. For more information, see the *Avigilon Camera Configuration Tool User Guide*.
- Avigilon Unity Video Client or Avigilon Control Center software version 7.4 or later, or version 6.14.12 or later: when connecting a device in the factory default state, the client software will ask you to create a new user. For more information, see the *Avigilon Unity Video Client User Guide* or the *Avigilon Control Center Client User Guide*.
- Avigilon Cloud Services (ACS) v3.0 or later: when adding a camera you will be asked to create a new user for cameras in the factory default state. For more information, see the *Avigilon Cloud Services User Guide*.

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

(Optional) Using the [[[Undefined variable webUI_WifiDongleMobile.ProductName]]]

If you have a [[[Undefined variable webUI_WifiDongleMobile.ProductName]]] (USB-AC56-**-MSI), 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://[[[Undefined variable webUI_WifiDongleMobile.camera-address]]]

For more information about configuring the camera from the mobile web interface see *[[[Undefined variable webUI_WifiDongleMobile.ProductName]]] System User Guide*.

Note: The camera will reserve the 10.11.22.32/28 subnet for internal use while the [[[Undefined variable webUI_WifiDongleMobile.ProductName]]] 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 [[[Undefined variable webUI_WifiDongleMobile.ProductName]]]* on the previous page.
- Device's web browser interface: http://*<camera IP address>*/.
- Network Video Management software application (for example, the Avigilon Unity Video software).

Accessing the Live Video Stream

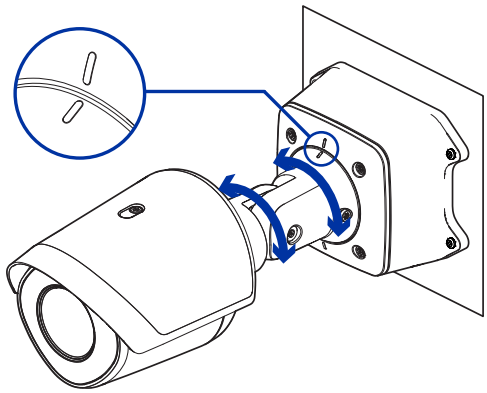
Live video stream can be viewed using one of the following methods:

- The mobile web interface using the USB WiFi Adapter. For more information, see *(Optional) Using the [[[Undefined variable webUI_WifiDongleMobile.ProductName]]]* on page 14.
- Web browser interface: http://*< camera IP address>/*.
- Network Video Management software application (for example, the Avigilon Unity Video software).

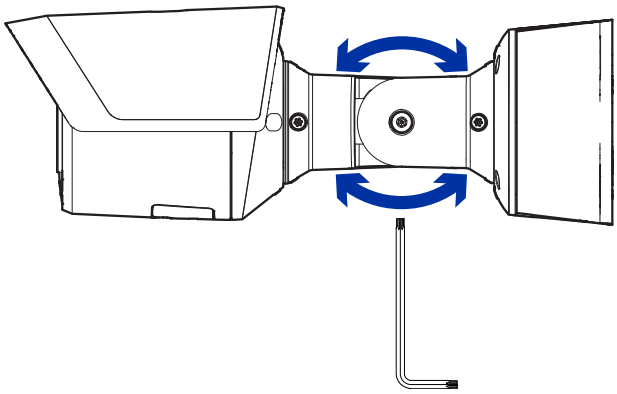
Aiming the Camera

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

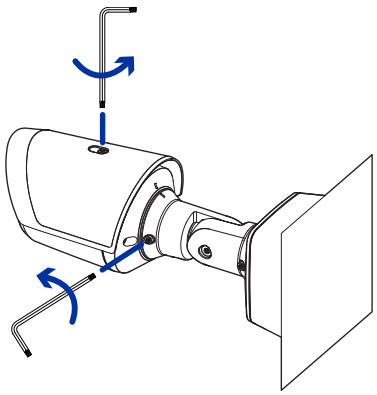
1. Loosen the adjustment screw closest to the junction box to rotate the camera arm.



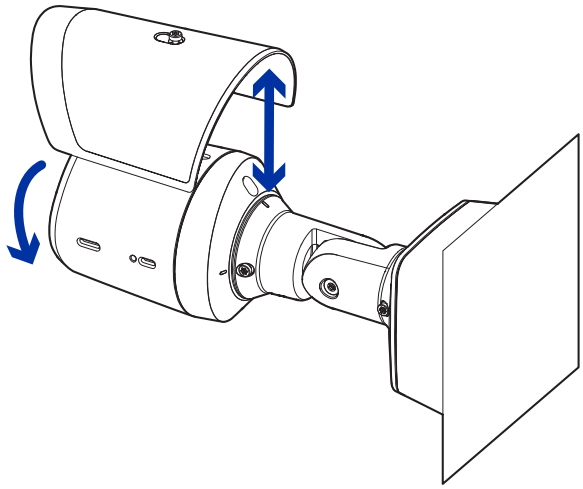
2. Loosen the center adjustment screw to tilt the camera.



3. Loosen the adjustment screw on the camera to turn the camera body.



4. If the camera is turned sideways to look vertically at a scene, you can remove the sun shroud then re-install it to cover the camera's new angle of view.



Zooming and Focusing the Camera

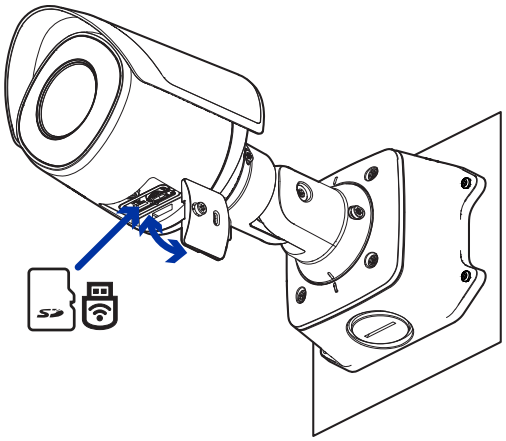
- In the camera web browser interface, the Avigilon Unity Video or Avigilon Control Center software, use the camera's Image and Display settings to zoom and focus the camera.
    a. Use the zoom buttons to zoom the camera in or out.
    b. Click **Auto Focus** to focus the lens.
    c. Use the focus near and far buttons to manually adjust the focus.

(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. 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 IP Camera Web Interface User Guide*.

Configuring the Camera

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

- If you have installed multiple cameras, you can use the Camera Configuration Tool to configure common settings. For more information, see the *Camera Configuration Tool User Guide*.
- If the camera is connected to the Avigilon Unity Video Client or 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 IP Camera Web Interface User Guide*.

Connecting to External Devices

External devices are connected to the camera through the power and I/O wires.
For the locations of the I/O connector block, see *Overview* on page 7.

The pinout for the I/O is shown in the following diagram.

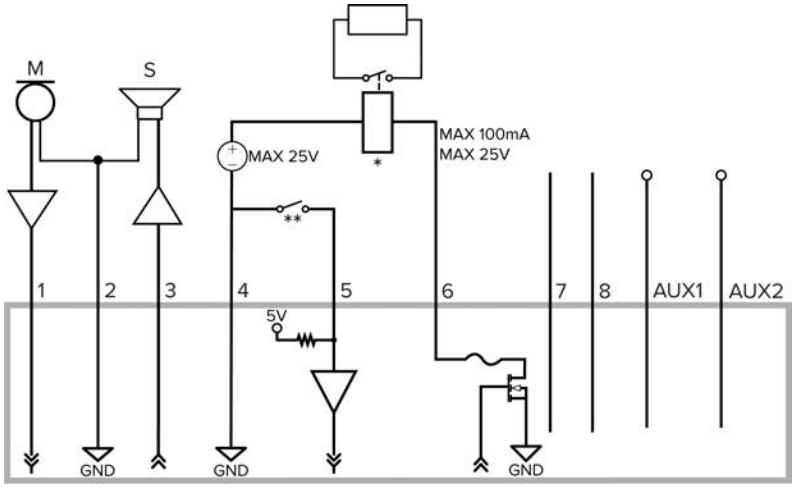


Figure 1: Example application.

1. Brown — Audio Input (line level)

   An external power amplifier should be used when connecting speakers and microphones, as shown in the diagram.
2. Yellow — Audio Ground
3. Green — Audio Output (line level)
4. Grey — Ground
5. Red — Digital Input
6. Pink — Digital Output
7. Purple — Reserved Wire, do not connect.
8. White — Reserved Wire, do not connect.

- * — Relay
- ** — Switch
- M — Microphone
- S — Speaker
- AUX1 — Auxiliary Power Wire, labeled *AUX PWR*
- AUX2 — Auxiliary Power Wire

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, a Unity Video Server, or an ACC™ Server. The default connected setting can be changed to Off using the camera's web user interface. For more information see the *Avigilon IP Camera Web Interface User Guide*.

Troubleshooting Network Connections and LED Behavior

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

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

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

Resetting to Factory Default Settings

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

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

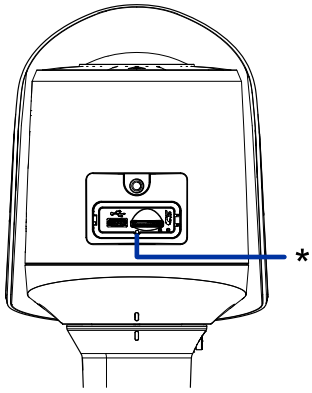


Figure 2: The firmware revert button in the Configuration Panel.

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.

For More Information

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

- *Avigilon Unity Video Client User Guide*
- *Avigilon Control Center Client User Guide*
- *Avigilon IP Camera Web Interface User Guide*
- *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**.

Limited Warranty and Technical Support

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

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