# TruVision Series 3 IP Camera Installation Guide

P/N 1073188-EN • REV C • ISS 07JUL16

**Trademarks and patents** Trade names used in this document may be trademarks or registered trademarks of the manufacturers or vendors of the respective products.

**Manufacturer** Interogix
2955 Red Hill Avenue, Costa Mesa, CA 92626-5923, USA

Authorized EU manufacturing representative:
UTC Fire & Security B.V.
Kelvinstraat 7, 6003 DH Weert, The Netherlands

**Certification**

**FCC compliance** **Class A**: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**FCC conditions** 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.

(2) This Device must accept any interference received, including interference that may cause undesired operation.

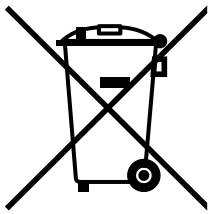
**ACMA compliance** **Notice!** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**Canada** This Class A digital apparatus complies with CAN ICES-003 (A)/NMB-3 (A).

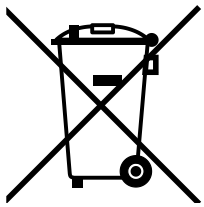
Cet appareil numérique de la classe A est conforme à la norme CAN ICES-003 (A)/NMB-3 (A).

**European Union directives**

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.



**2012/19/EU (WEEE directive):** Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info



**2013/56/EU and 2006/66/EC (battery directive):** This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

**Contact information**

For contact information, see www.interlogix.com or www.utcfssecurityproducts.eu.

# Content

# Introduction

## Product overview

This is the installation guide for TruVision Series 3 IP camera models:

### IP fixed lens bullet camera:

- TVB-5301 (2MPX Bullet, 4 mm lens)
- TVB-5302 (4MPX Bullet, 4 mm lens)

### IP VF lens bullet camera:

- TVB-5303 (2MPX Bullet, 2.8 to 12 mm VF lens)
- TVB-5304 (4MPX Bullet, 2.8 to 12 mm VF lens)

### IP fixed lens dome camera:

- TVD-5301 (2MPX Plastic Dome, 2.8 mm lens)
- TVD-5302 (4MPX Plastic Dome, 2.8 mm lens)

### IP VF lens dome camera:

- TVD-5303 (2MPX VF Dome)
- TVD-5304 (4MPX VF Dome)

### IP wedge camera:

- TVW-5301 (2MPX Wedge, 2.0 mm lens, Gray)
- TVW-5302 (2MPX Wedge, 2.8 mm lens, Gray)
- TVW-5303 (2MPX Wedge, 2.8 mm lens, White)

- TVW-5304 (2MPX Wedge, 2.8 mm lens, Black)
- TVW-5305 (4MPX Wedge, 2.8 mm lens, Gray)

### IP turret camera:

- TVT-5301 (2MPX Turret, 2.8 mm lens, Gray)
- TVT-5302 (2MPX Turret, 2.8 mm lens, White)
- TVT-5303 (2MPX Turret, 2.8 mm lens, Black)
- TVT-5304 (4MPX Turret, 2.8 mm lens, Gray)
- TVT-5305 (4MPX Turret, 2.8 mm lens, White)
- TVT-5306 (4MPX Turret, 2.8 mm lens, Black)

# Installation

This section provides information on how to install the cameras.

## Installation environment

When installing your product, consider these factors:

- **Electrical**: Install electrical wiring carefully. It should be done by qualified service personnel. Always use a proper PoE switch or a 12 VDC UL listed Class 2 or CE certified power supply to power the camera. Do not overload the power cord or adapter.
- **Ventilation**: Ensure that the location planned for the installation of the camera is well ventilated.
- **Temperature:** Do not operate the camera beyond the specified temperature, humidity or power source ratings.

The operating temperature of the camera is between -30 to +60°C (-22 to 140°F). Humidity is below 90%.

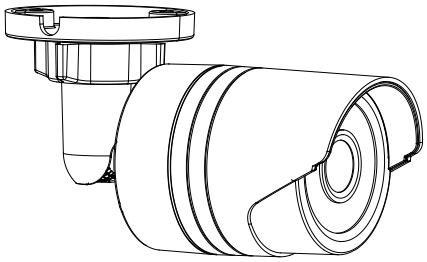
- **Moisture:** Do not expose the camera to rain or moisture, or try to operate it in wet areas. Turn the power off immediately if the camera is wet and ask a qualified service person for servicing. Moisture can damage the camera and also create the danger of electric shock.
- **Servicing**: Do not attempt to service this camera yourself. Any attempt to dismantle this product will invalidate the warranty and may also result in serious injury. Refer all servicing to qualified service personnel.
- **Cleaning**: Do not touch the sensor modules with fingers. If cleaning is necessary, use a clean cloth with some ethanol and wipe the camera gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensors from dirt.

## Package contents

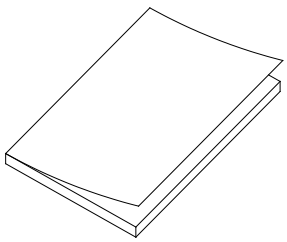
Check the package and contents for visible damage. If any components are damaged or missing, do not attempt to use the unit; contact the supplier immediately. If the unit is returned, it must be shipped back in its original packaging.

## IP fixed lens bullet camera

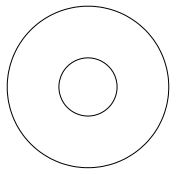
Camera:



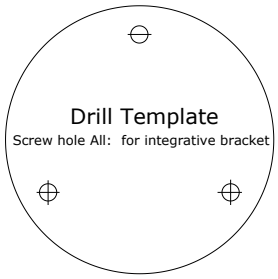
Installation manual:



CD with manuals and TruVision Device Manager:



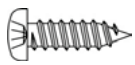
Drill template:



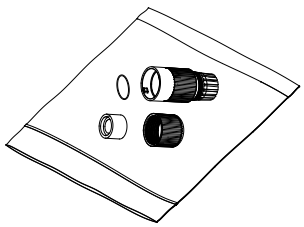

Screws:

Drywall anchor
7.5 × 24.5 mm (3 pcs)

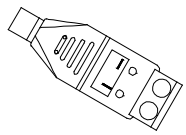
Screw
M4 × 25 mm (3 pcs)



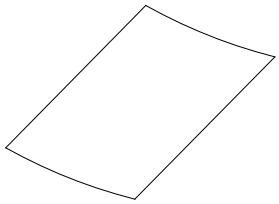
Water joint: Provides water resistance to network cable connector.



12 VDC connector: Two terminal connector with positive and negative indicators.

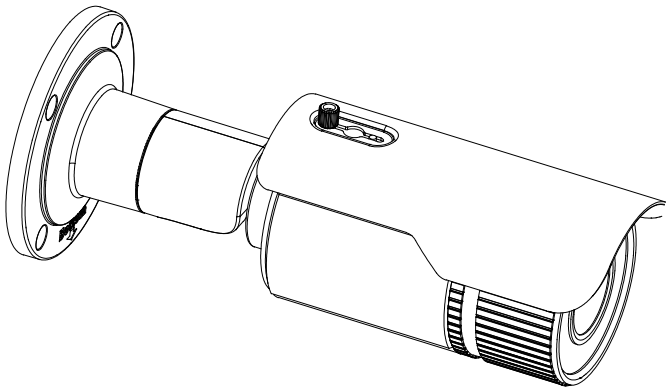


Equipment and Battery Disposal sheets:

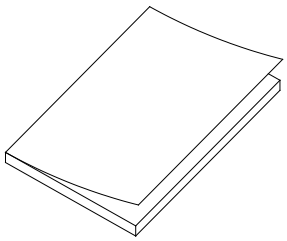


## IP VF lens bullet camera

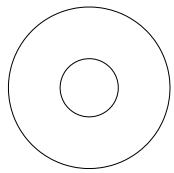
Camera:



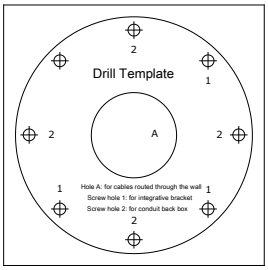
Installation manual:



CD with manuals and TruVision Device Manager:



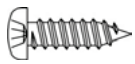
Drill template:



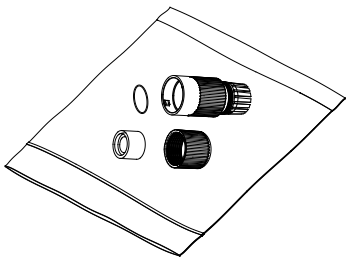

Screws:

Drywall anchor
7.5 × 24.5 mm (4 pcs)

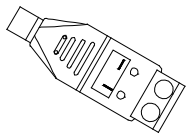
Screw
M4 × 25 mm (4 pcs)



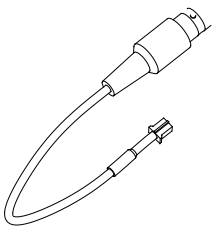
Water joint: Provides water resistance to network cable connector.



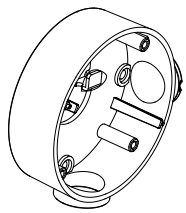
12 VDC connector: Two terminal connector with positive and negative indicators.



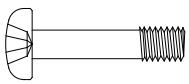
Video test cable:



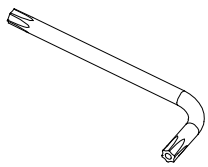
Back box:



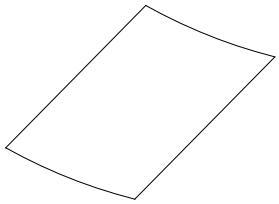
Screws: M4.8 × 8 (4 pcs)



Torx wrench:

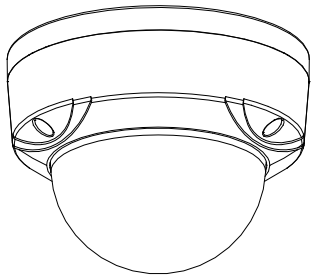


Equipment and Battery Disposal sheets:

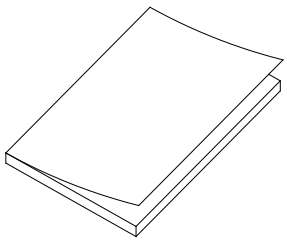


## IP fixed lens dome camera

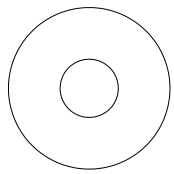
Camera:



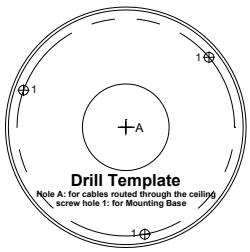
Installation manual:



CD with manuals and TruVision Device Manager:



Template:

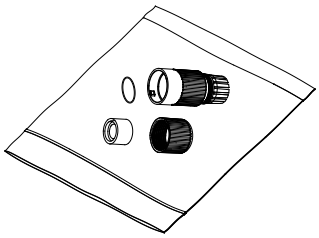



Screws:

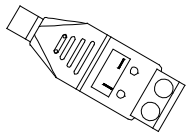
Drywall anchor
7.5 × 24.5 mm (3 pcs)

Screw
M4 × 25 mm (3 pcs)

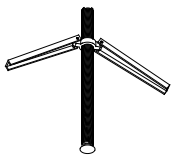
Water joint: Provides water resistance to network cable connector.



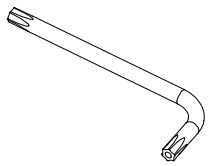
12 VDC connector: Two terminal connector with positive and negative indicators.



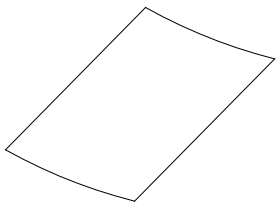
Screws: 4 × 75 mm (3 pcs)



Torx wrench:

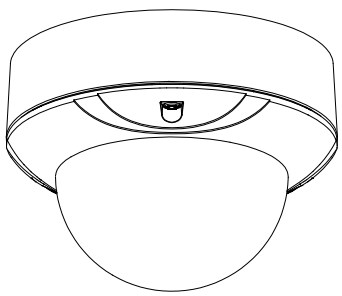


Equipment and Battery Disposal sheets:

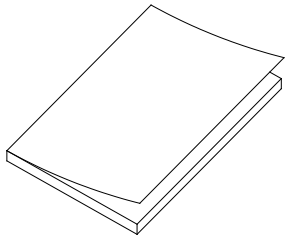


## IP VF lens dome camera

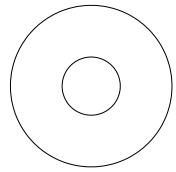
Camera:



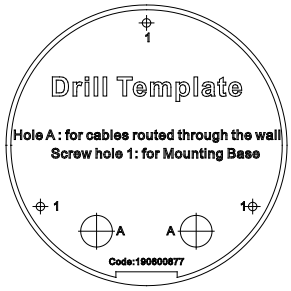
Installation manual:



CD with manuals and TruVision Device Manager:



Drill template:

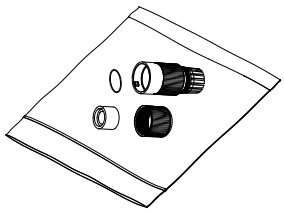



Screws:

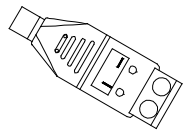
Drywall anchor
7.5 × 24.5 mm (4 pcs)

Screw
M4 × 25 mm (4 pcs)

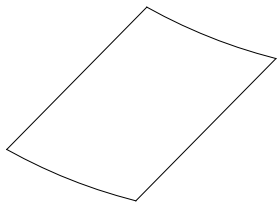
Water joint: Provides water resistance to network cable connector.



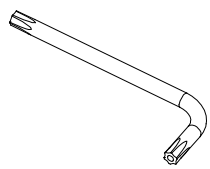
12 VDC connector: Two terminal connector with positive and negative indicators.



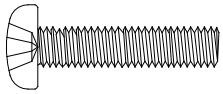
Equipment and Battery Disposal sheets:



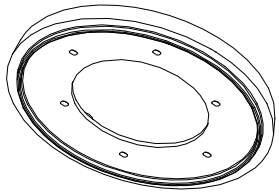
Hex wrench:



Screws: M4 × 9 (3 pcs)

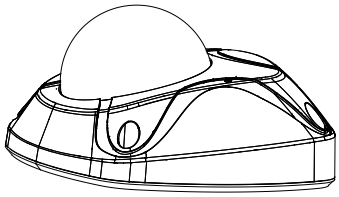


Mounting adaptor plate:

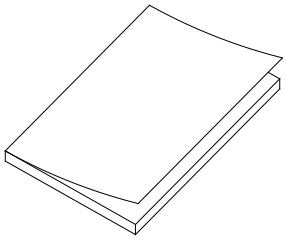


## IP wedge camera

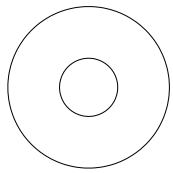
Camera:



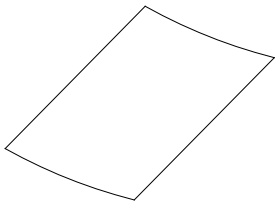
Installation manual:



CD with Configuration manual and TruVision Device Finder:



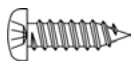
Equipment and Battery Disposal sheets:



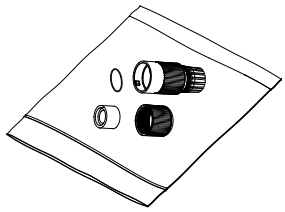
Screws:

Drywall anchor
7.5 × 24.5 mm (3 pcs)

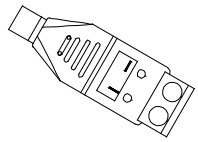
Screw
M4 × 25 mm (3 pcs)



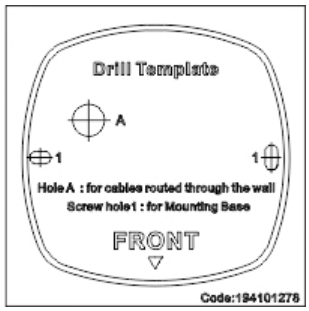
Water joint: Provides water resistance to network cable connector.



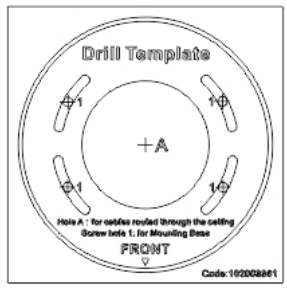
12 VDC connector:
Two terminal connector with positive and negative indicators.



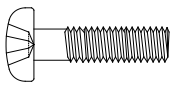
Camera drill template:



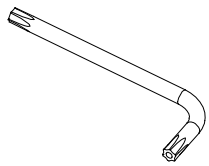

Adapter plate drill template:



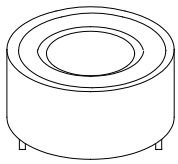

Screws: M4 × 8 (2 pcs)



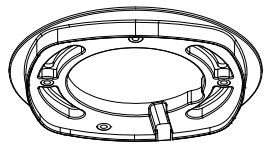
Torx wrench:



Lens adjustment tool:

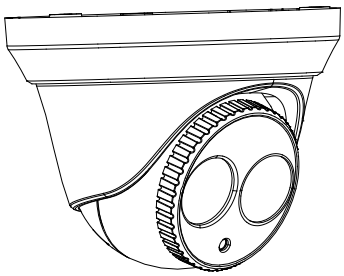


Adapter plate:

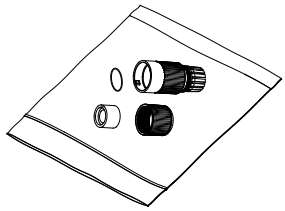


## IP turret camera

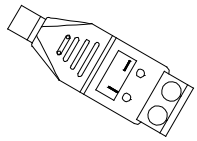
Camera:



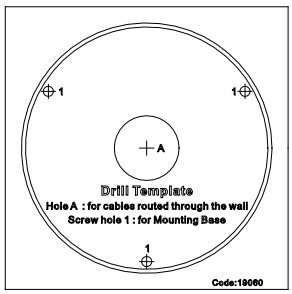
Water joint: Provides water resistance to network cable connector.



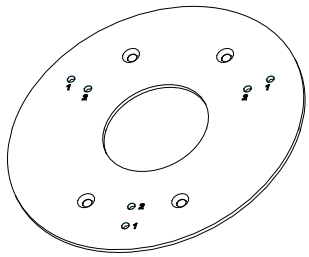
12 VDC connector: 2-terminal connector with positive and negative indicators.



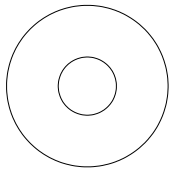
Camera drill template:




Adapter plate:



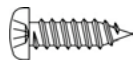
CD with Configuration manual and TruVision Device Finder:



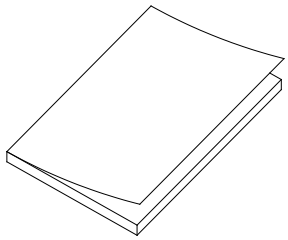
Screws:

Drywall anchor
7.5 × 24.5 mm (3 pcs)

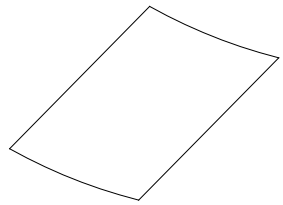
Screw
M4 × 25 mm (3 pcs)



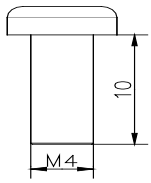
Installation manual:



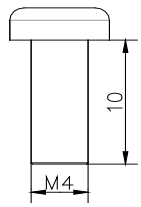
Equipment and Battery Disposal sheets:



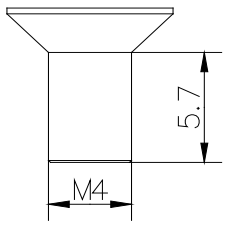
Screw PM4 × 8 (3pcs):




Screw PM6-32 × 10
(4 pcs, used to attach the turret camera to a 2 Gang electrical box):




Screw KM4 × 8 (4 pcs, used to attach the adapter to the brackets)



**CAUTION:** Use direct plug-in UL listed power supplies marked Class 2/CE certified or LPS (limited power source) of the required output rating as listed on the unit.

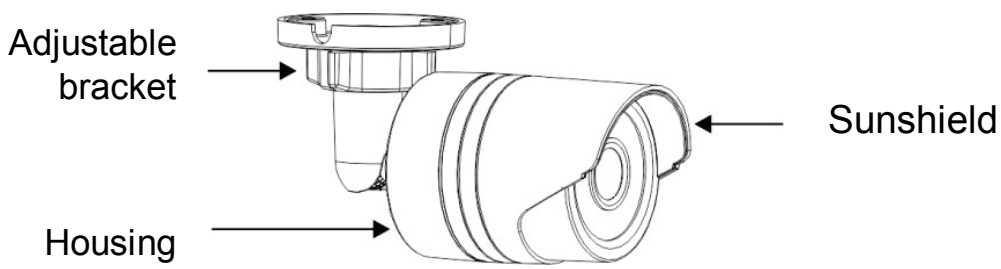
**CAUTION:** Risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

## Cable requirements

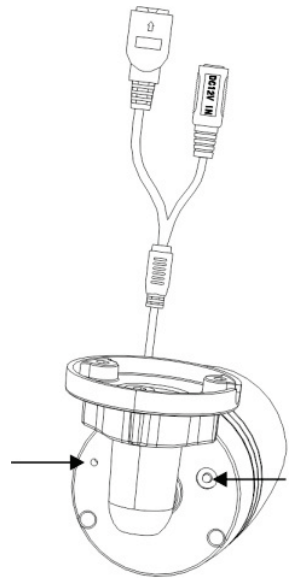
For proper operation, adhere to the following cable and power requirements for the cameras. Category 5 cabling or better is recommended. All network cabling must be installed according to applicable codes and regulations.

## Camera description

**Figure 1: IP fixed lens bullet camera**



Ethernet RJ45 PoE port

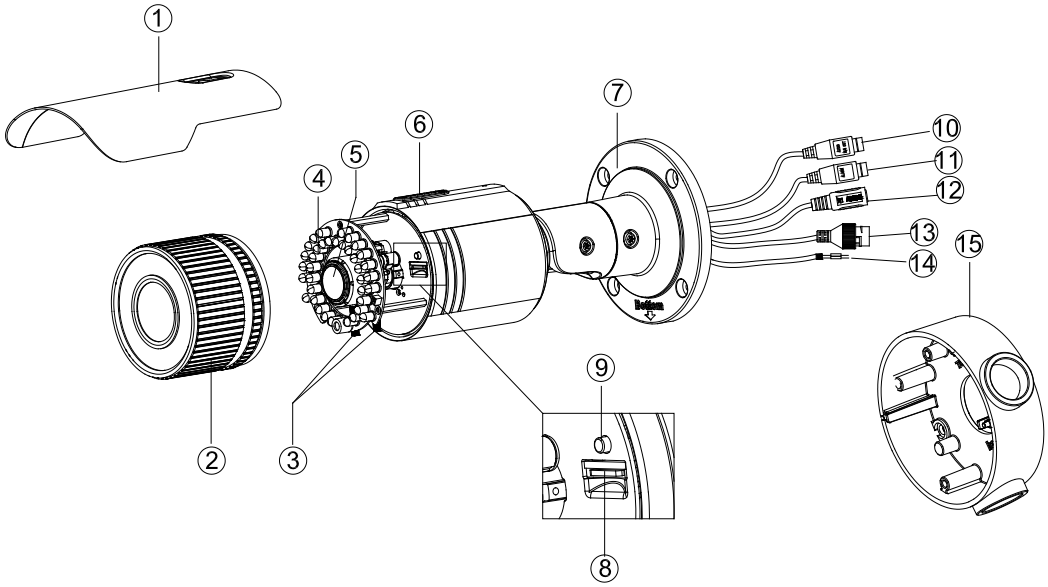



12 VDC power

Grounding screw

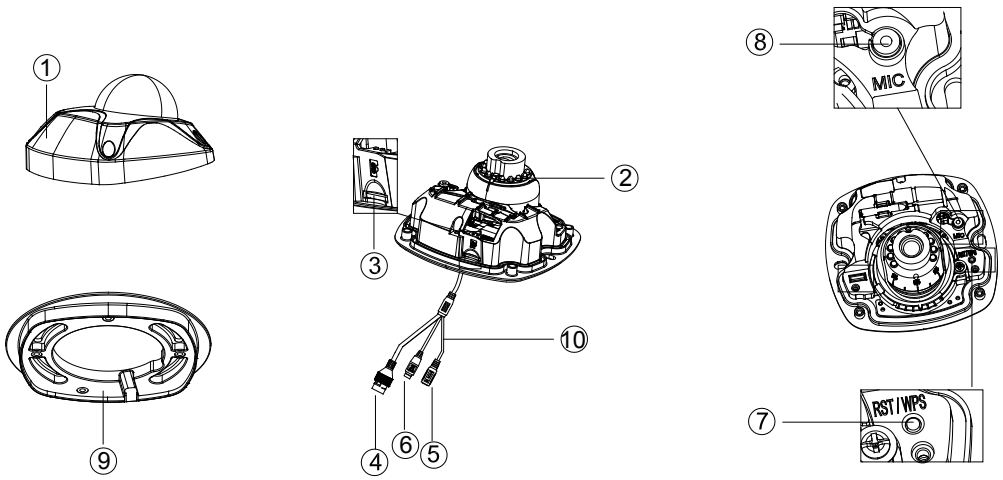
Reset button

**Figure 2: IP VF bullet camera**



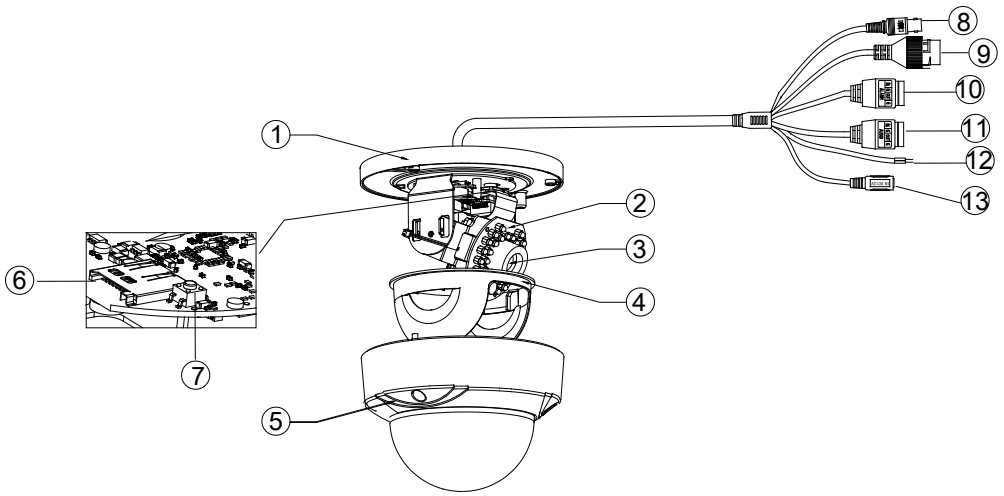

1. Sunshield
2. Front cover
3. Lens adjustment
4. IR LEDs
5. Lens
6. Waterproof film
7. Base
8. SD/SDHC/SDXC slot
9. Reset button
10. Audio I/O
11. Alarm I/O
12. 12 VDC power
13. Ethernet RJ45 PoE port
14. Aux power output (12 VDC, 50 mA)
15. Back box

**Figure 3: IP wedge camera**



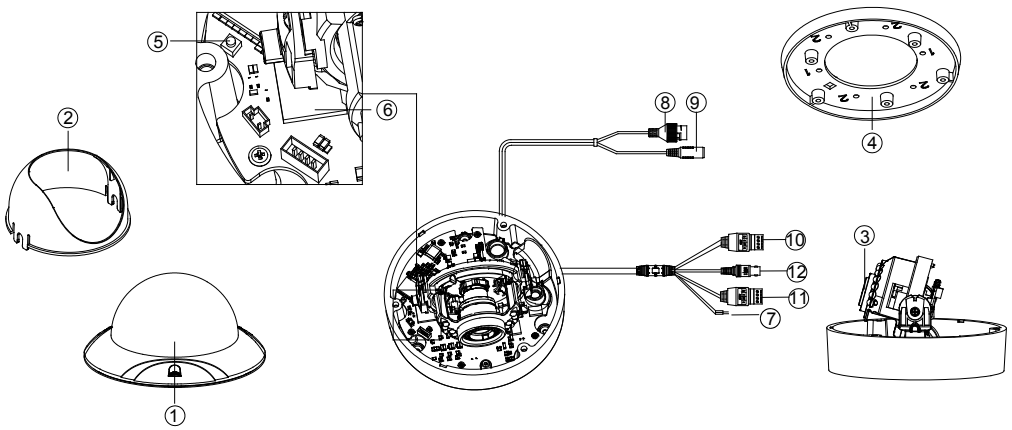

1. Housing cover
2. Lens
3. SD/SDHC/SDXC slot
4. Ethernet RJ45 PoE port
5. 12 VDC power
6. Audio output and alarm I/O
7. Reset button
8. Microphone
9. Adapter plate

**Figure 4: IP fixed lens dome camera**



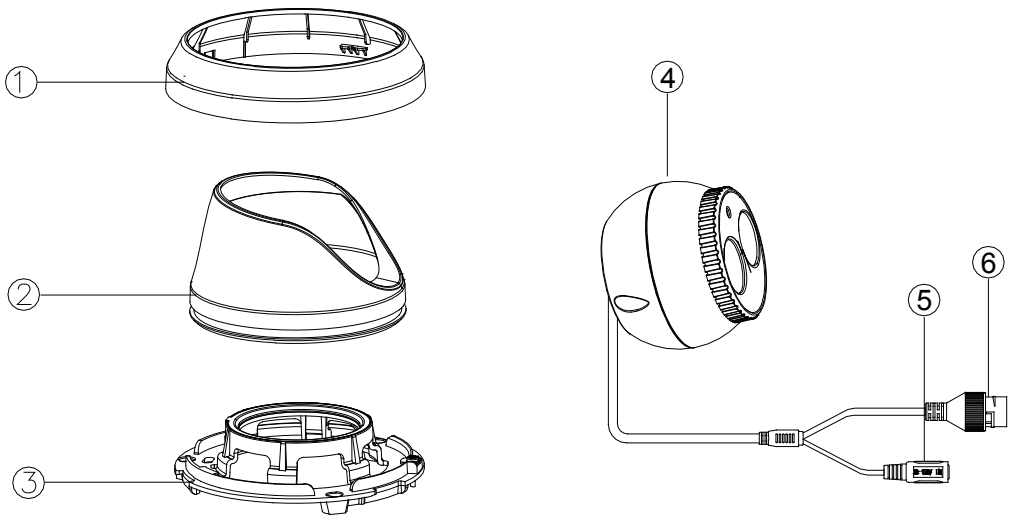

1. Base
2. IR LEDs
3. Lens
4. Dome liner
5. Housing cover
6. SD/SDHC/SDXC slot
7. Reset button
8. Analog video output (BNC)
9. Ethernet RJ45 PoE port
10. Alarm I/O
11. Audio I/O
12. Aux power output (12 VDC, 50 mA)
13. 12 VDC power

**Figure 5: IP VF lens dome camera**




1. Housing cover
2. Dome liner
3. Lens
4. Mounting plate adapter
5. Reset button
6. SD/SDHC/SDXC slot
7. Aux power output (12 VDC, 50 mA)
8. Ethernet RJ45 PoE port
9. 12 VDC power
10. Audio I/O
11. Alarm I/O
12. Analog video output (BNC)

**Figure 6: IP turret camera**




1. Trim ring
2. Housing
3. Base
4. Lens assembly
5. 12 VDC power
6. Ethernet RJ45 PoE port

## Setting up the camera

**Note:** If the light source where the camera is installed experiences rapid, wide variations in lighting, the camera may not operate as intended.

### To quickly put the camera into operation:

1. Prepare the mounting surface.
2. Mount the camera on the mounting surface using the appropriate hardware. See “Mounting the IP fixed lens bullet camera” on page 21.
3. Set up the camera’s network and streaming parameters so that the camera can be controlled over the network. For further information, please refer to the “TruVision IP Series 3 IP Camera Configuration Manual”.

4. Program the camera to suit its location. For further information, please refer to the “TruVision IP Series 3 IP Camera Configuration Manual”.

## Accessing the SD card

Insert a Micro SD card with up to 128GB capacity for local storage as a backup in case, for example, the network fails (see Figure 2 on page 16). The SD card is not supplied with the camera.

For the IP VF lens dome camera, point the lens vertically upwards to access the SD card slot.

For the IP VF bullet camera, remove the sunshield and open the front cover to access the SD card slot.

Video and log files stored on the Micro SD card can only be accessed via the web browser.

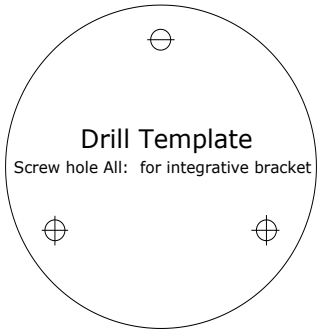
**Note**: There is no Micro SD card slot in the mini fixed lens bullet and turret cameras.

## Mounting the IP fixed lens bullet camera

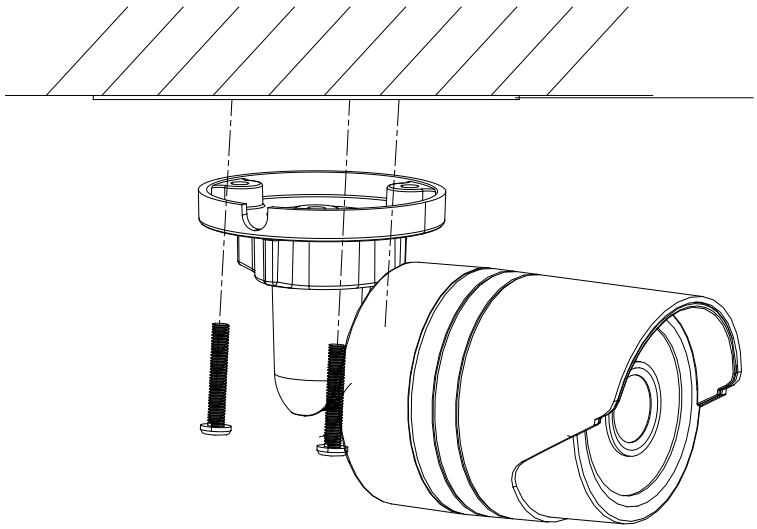
Mount the camera on a ceiling or wall.

### To mount the IP fixed lens bullet camera:

1. Use the supplied template to mark out the mounting area. Drill the screw holes in the mounting surface. If you need to route the cables from the camera base, cut out a cable access hole in the mounting surface.




2. Secure the mounting base to the ceiling or wall using the three mounting screws and drywall anchors.



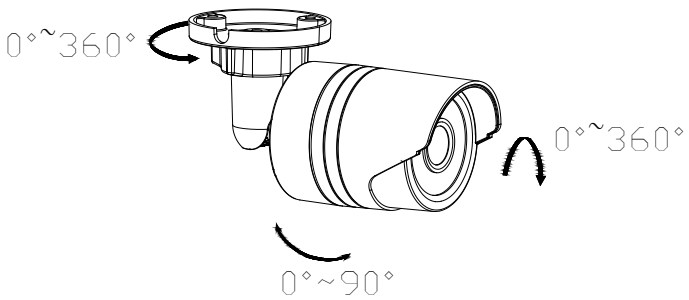
3. Loosen the large nut at the base of the mounting bracket to adjust the camera's viewing angle.

   Pan direction: 0 to 360° adjustable

   Tilt direction: 0 to 90° adjustable

   Rotate direction: 0 to 360° adjustable

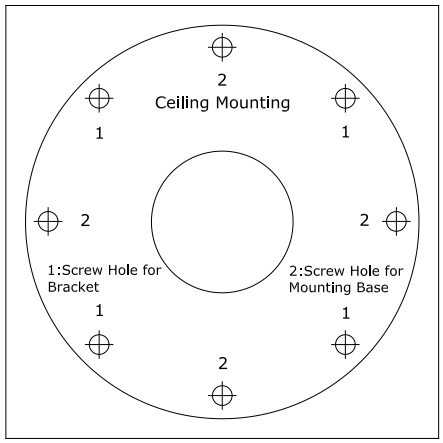
4. Adjust the lens to the desired surveillance angle. Tighten the adjustable nuts to complete the installation.



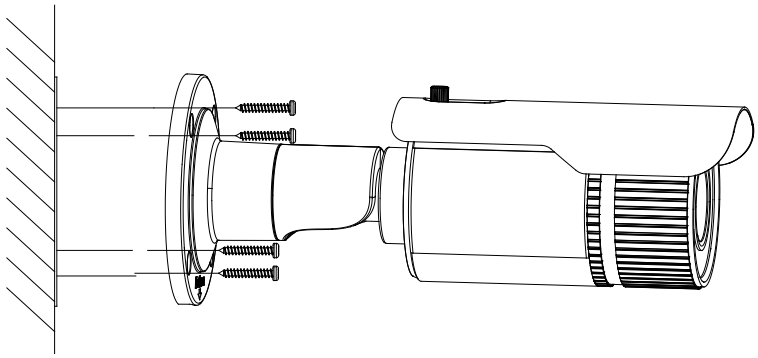

# Mounting the IP VF lens bullet camera (without the supplied back box)

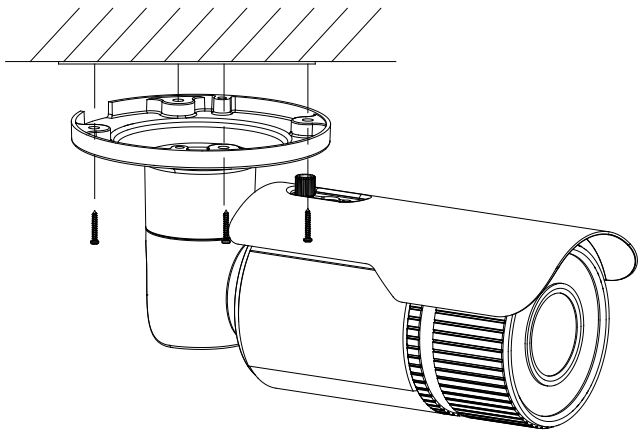
## To mount the IP VF lens bullet camera to a surface:

1. Attach the drill template (supplied) to the surface where the camera is to be mounted. Drill mounting holes in the surface using the holes labelled number “1” on the drill template.



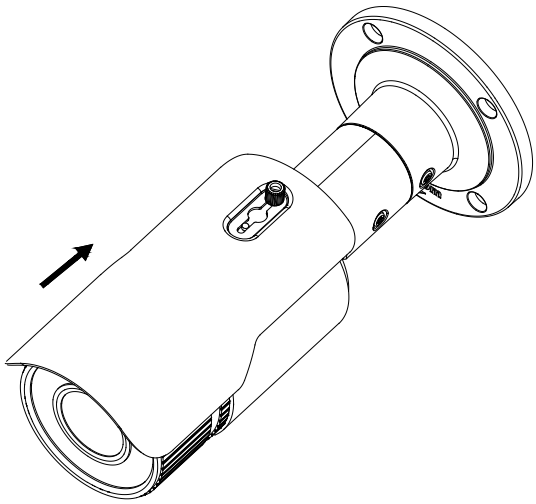

2. If you would like to route the cable harness through the mounting surface, cut a cable access hole in the mounting surface, referencing the letter “A” on the drill template. Skip this step if you want to route the cables on the surface.
3. Secure the camera to the surface with the four mounting screws and drywall anchors.



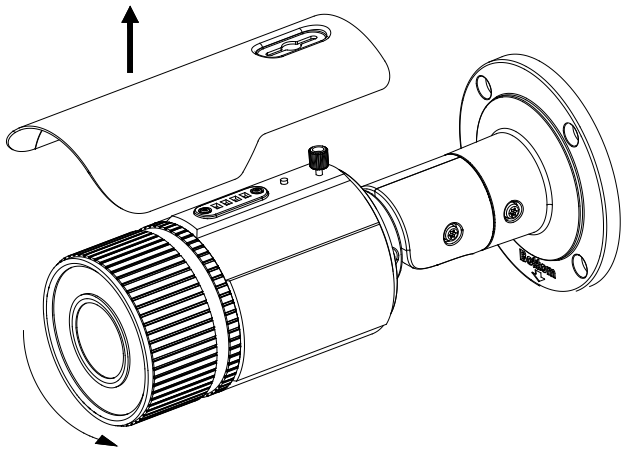


### To install the SD card:

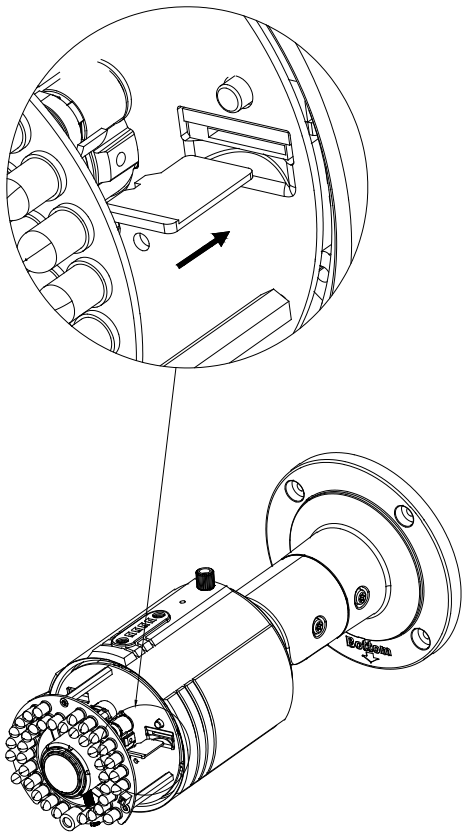
1. Rotate the screw that secures the sunshield counterclockwise to loosen it. Slide the sun shield so that the hole in the sunshield lines up with the screw head.



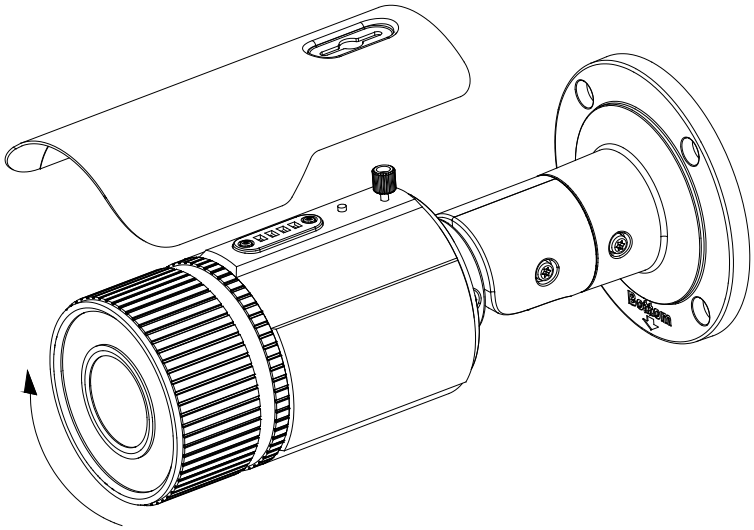
2. Remove the sun shield. Remove the lens cover by rotating it counterclockwise.



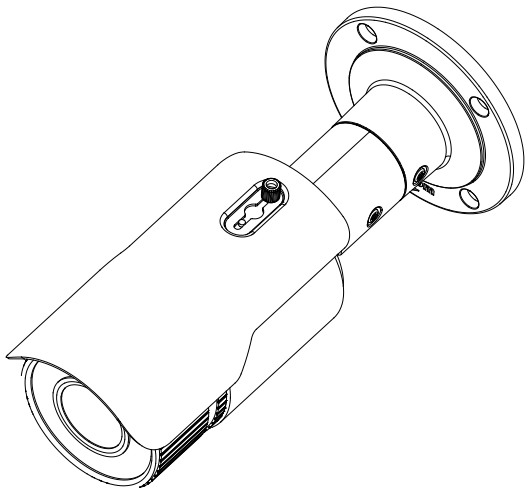
3. Insert the SD card in the SD card slot.



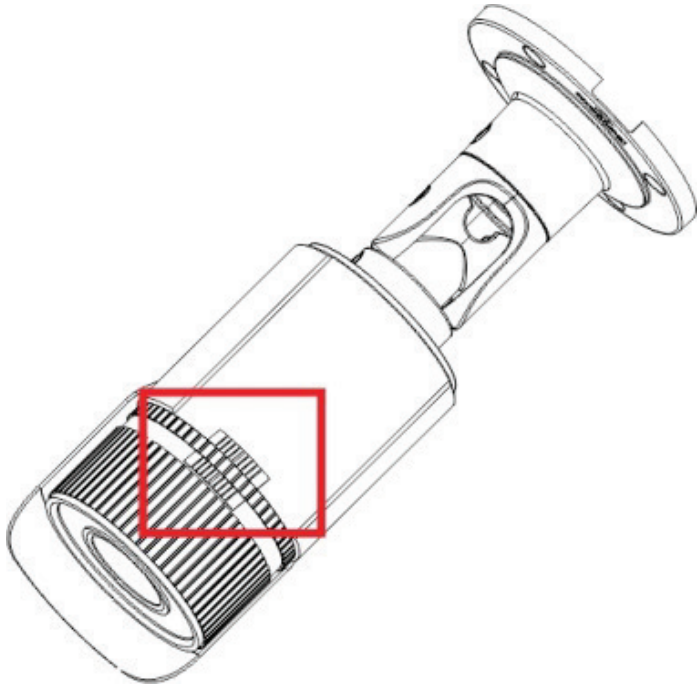
4. Reinstall the lens cover by rotating the assembly clockwise. Reinstall the sunshield.



5. Rotate the sunshield screw clockwise to tighten it.

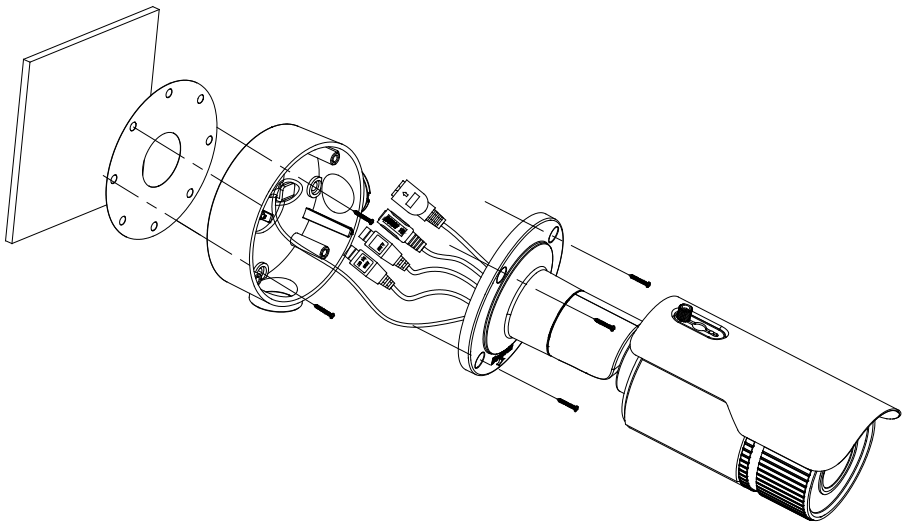


6. To ensure that the camera maintains its IP66 rating, when rotating the lens cover clockwise align the red bar on the label of the lens cover with red bar on the label that is located on the camera housing.



### To mount the IP VF lens bullet camera with a back box

1. Attach the drill template on the surface where the camera is to be mounted. Drill mounting holes in the surface using the holes labeled number “2” on the drill template.
2. If you would like to route the cable harness through the mounting surface, cut a cable access hole in the mounting surface, referencing the letter “A” on the drill template. Skip this step if you want to route the cables one of the two cable access ports in the back box.
3. Secure the back box to the wall using the mounting hardware provided.
4. Route the cables of the camera.
5. Hook the camera to the back box using the safety lanyard.
6. Secure the camera to the back box with the four M4 x 9 screws.



# Mounting the IP VF lens dome camera

**Note**: For planning purposes, there are several cable routing options available:

1. Route the interconnect cables through the mounting surface, straight out the back of the dome.

   – Or –

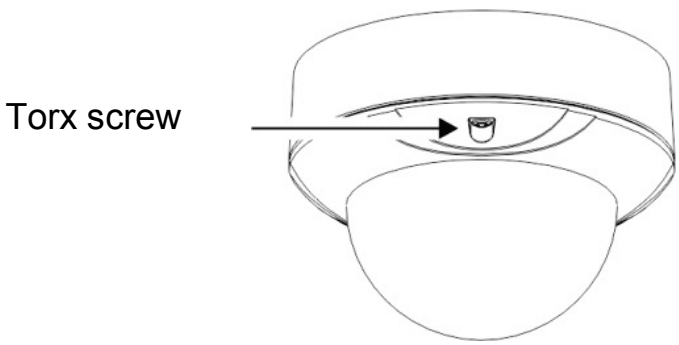
2. Route the interconnect cables through the side access hole of the dome camera housing. A  G3/4 cable adapter is provided

   – Or –

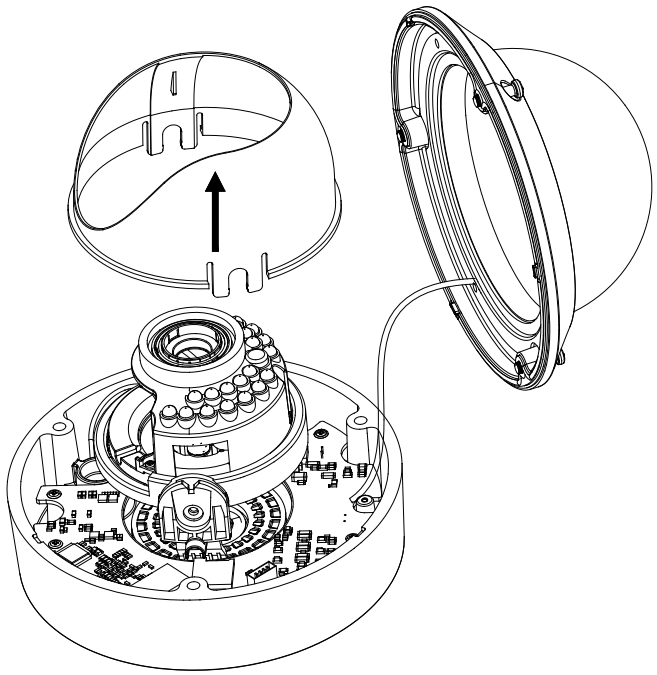
3. Use the mounting adapter plate to mount the dome on a 1or 2 gang electrical box.

### To mount the IP VF lens dome camera on a surface:

1. Loosen the three Torx screws at the edge of the dome housing using the supplied Torx wrench.

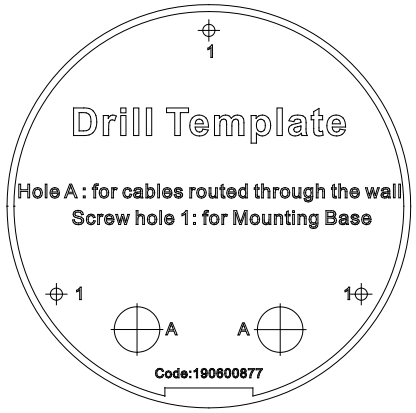



2. Remove the dome housing and then remove the black plastic inner liner.



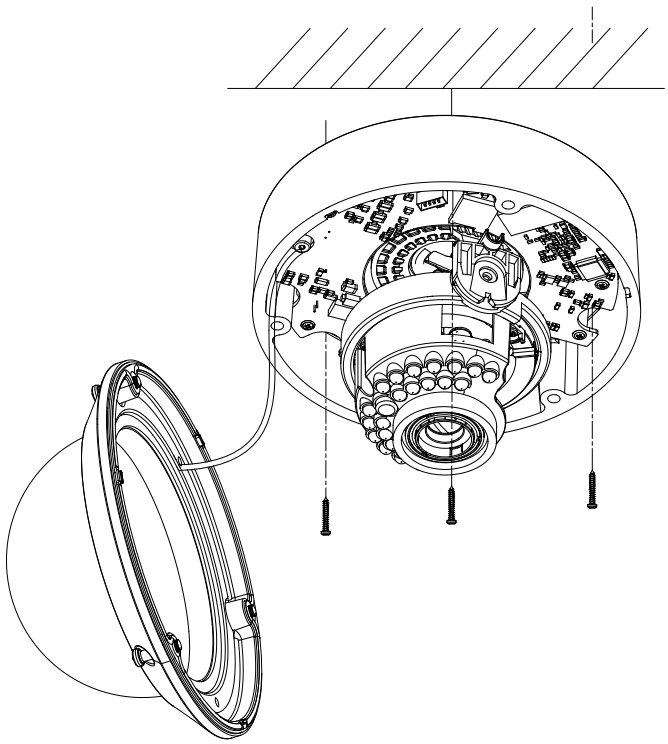
3. Before mounting the dome camera, line up the drill template in the correct orientation. Depending on how you would like to route the interconnect cables, route them out of the side of the dome housing or through the mounting surface.

   Drill the three screw holes on the ceiling in the mounting surface using with the supplied drill template. Use number “1” as reference.



4. If you would like to route the cable harness through the mounting surface, cut a cable access hole in the mounting surface, referencing the letter “A” on the drill template. Skip this step if you want to route the cables on the mounting surface.

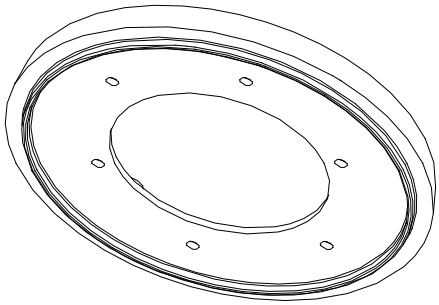
5. Attach the camera to the mounting surface. Secure the camera with the supplied screws and anchors, as shown below.



6. Connect the appropriate cables.

### To mount the IP VF lens dome camera on a 1 or 2 gang electrical box:

1. Follow steps 1 to 3 above (To mount the IP VF lens dome camera on a ceiling or wall).
2. Install the mounting plate adapter to a 1 or single gang electrical box, referencing number “2” on the adapter plate or to a 2 or double gang box referencing number “1” on the adapter plate.



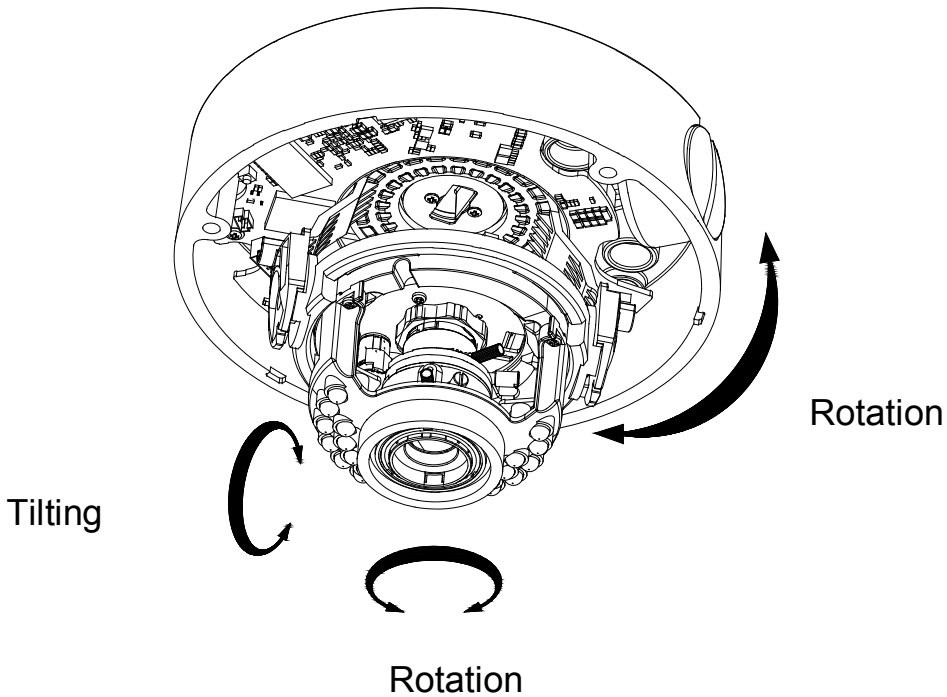
3. Route the cables through the center of the adapter plate and connect the appropriate cables within the electrical box.
4. Install the dome to the adapter plate.
5. Connect the video output connector to the monitor. Connect the power connector to the power supply.
6. Adjust the image and focus.

    a) Three-axis adjustment.
    View the camera image using the monitor. Rotate the lens assembly (see diagram) to adjust the panning position of the camera. Move the assembly up and down to adjust the tilt position of the camera. Rotate the inner lens assembly to obtain the desired surveillance angle.

    b) Zoom and focus adjustment.
    Loosen the zoom lever and move the lever between

T(Tele) and W(Wide) to obtain the appropriate angle of view.

c) Tighten the zoom lever.
Loosen the focus lever and move the lever between F(Far) and N(Near) to obtain the optimum focus.
Tighten the focus lever.



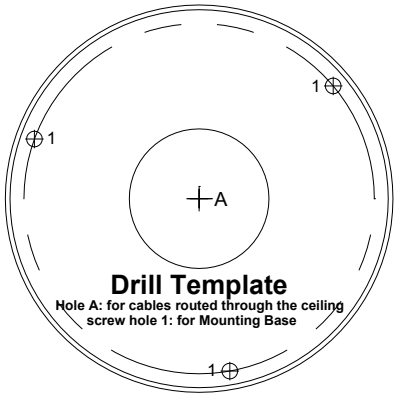

## Mounting the IP fixed lens dome camera

### To mount the IP fixed lens dome camera on a surface:

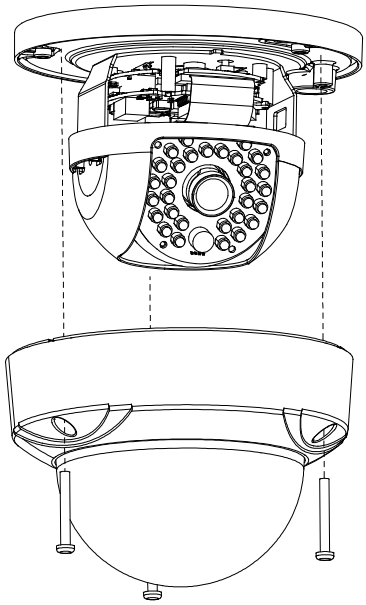
1. Attach the drill template (supplied) to the surface where the camera is to be mounted. Drill mounting holes in the surface using the holes labeled number ‘1’ on the drill template.

   If you would like to route the cable harness through the mounting surface, cut a cable access hole in the mounting surface, referencing the letter “A” on the drill

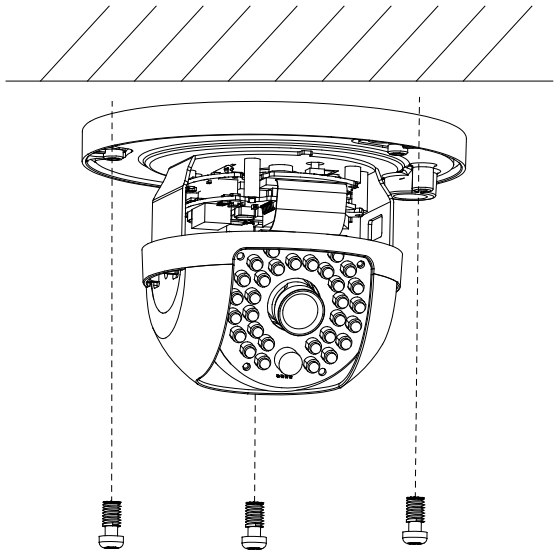
template. Skip this step if you want to route the cables on the surface.



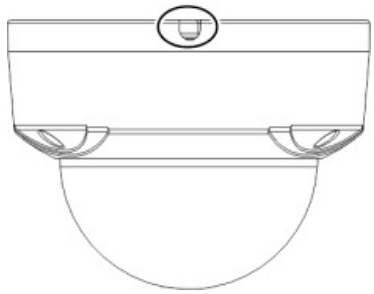

2. Using the supplied Torx wrench, loosen the screws to remove the dome housing.



3. Install the dome on the mounting surface using the supplied hardware.

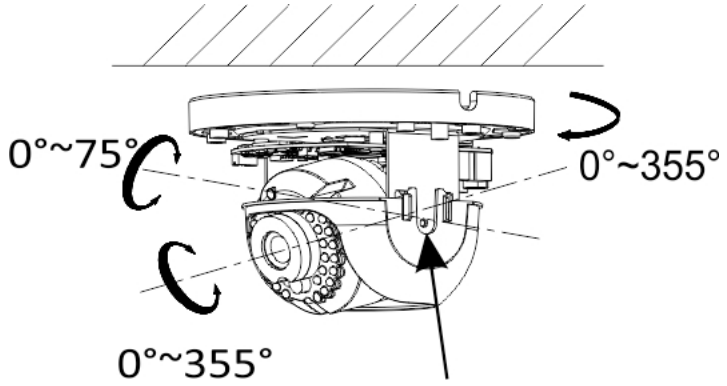


**Note**: If required, you can route cables through the side opening of the mounting base.



4. Loosen the tilt adjust screws (see image below) and adjust the tilt position of the lens assembly within a range of 75 degrees. Retighten the tilt adjust screws.

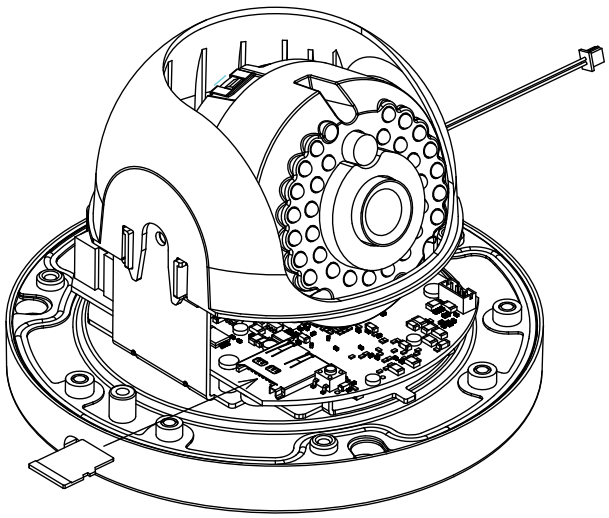
   Rotate the dome liner to adjust the pan position within a range of 355 degrees. Rotate the lens assembly (0 to 355°) to obtain the desired surveillance angle.



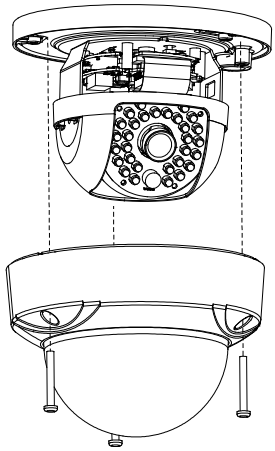

Tilt adjust screw

5. (Optional) If using a micro SD card (not included):

   To remove the SD card, push the micro SD card forward. The micro SD card will spring out.



6. Reinstall the dome housing and tighten the Torx screws.



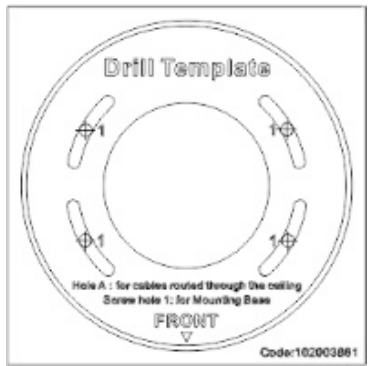
## Mounting the IP wedge dome camera

### To mount the IP wedge dome camera on a surface:

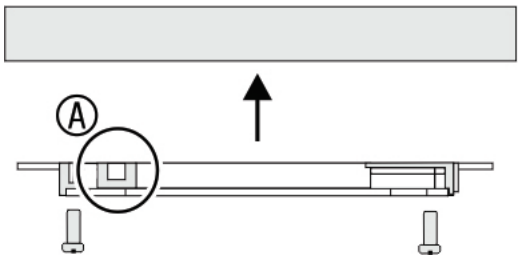
1. Attach the drill template (supplied) to the surface where the camera is to be mounted. Drill mounting holes in the surface using the holes labeled number “1” on the drill template.

   If you would like to route the cable harness through the mounting surface, cut a cable access hole in the mounting surface, referencing the letter “A” on the drill template. Skip this step if you want to route the cables on the surface

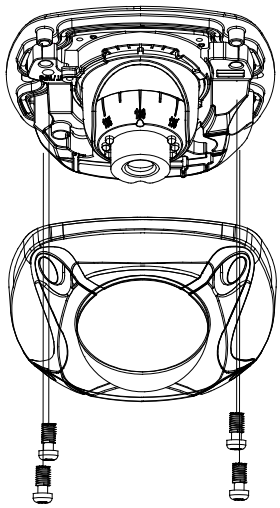
2. Install the adapter plate to the mounting surface using the drill template (optional).



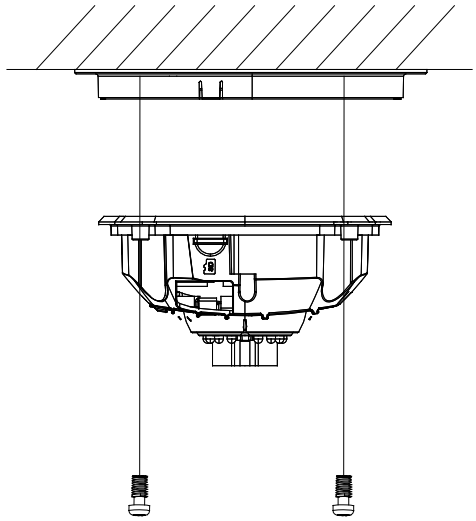
**Note**: If required, you can remove the tab (A) on the edge of the adapter plate to allow for cable access.




3. Loosen the Torx screws with a Torx wrench (supplied) to remove the dome housing.

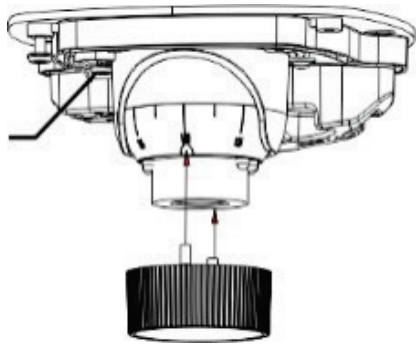


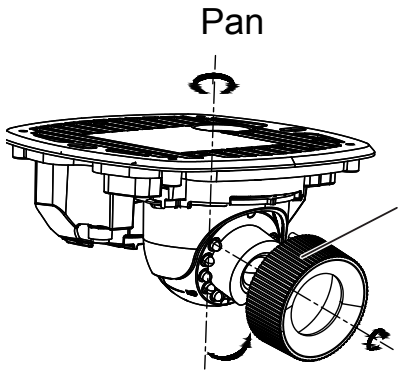
4. Install the camera base to the adapter plate or directly to the mounting surface.



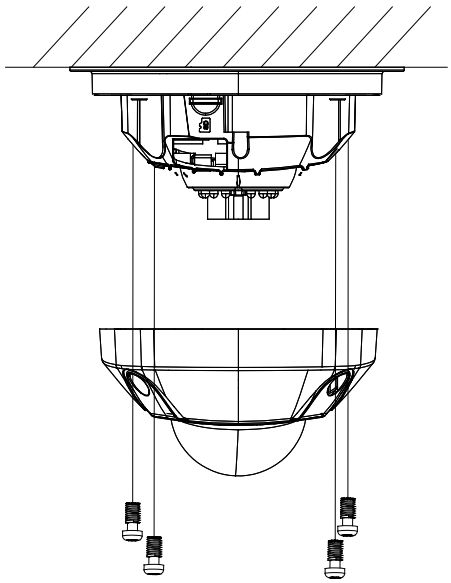
5. Loosen the locking screw, located near the lens assembly using the Torx wrench. Align the Lens Adjustment Tool with the two small holes located on the camera assembly. Rotate (pan) the camera assembly using the Lens Adjustment Tool until the lens is positioned in the correct location. The tool is also used to adjust the tilt angle.

Locking screw






6. Reinstall the dome housing cover to the camera base.

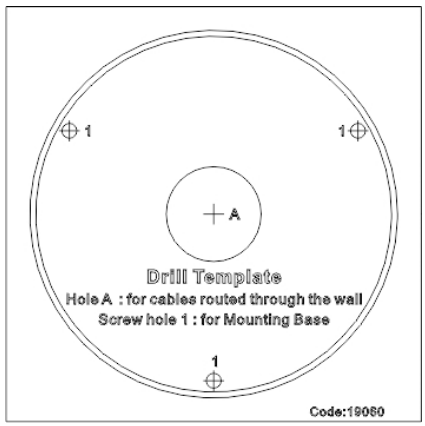


## Mounting the IP turret camera

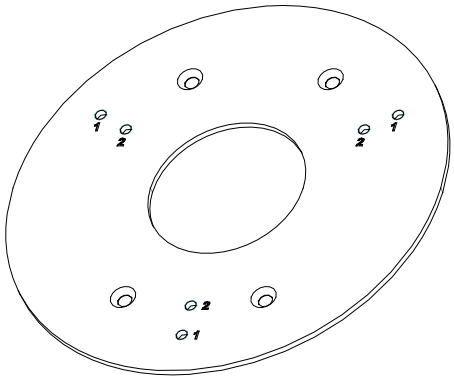
### To mount the IP turret camera on a surface:

1. Attach the drill template (supplied) to the surface where the camera is to be mounted. Drill mounting holes in the surface using the holes labeled number “1” on the drill template.

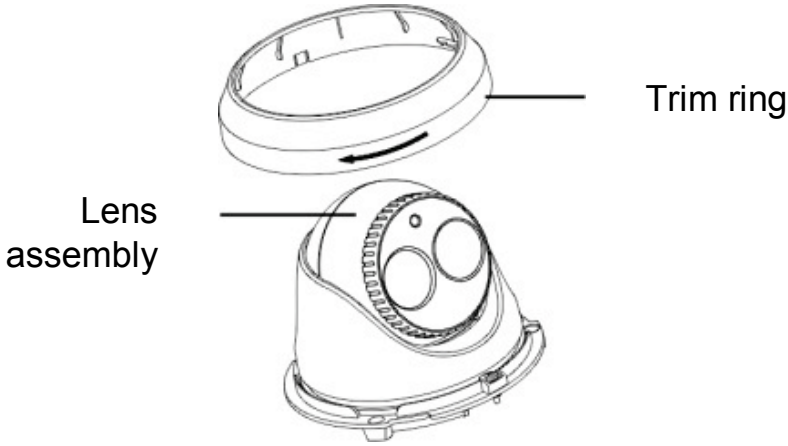
If you would like to route the cable harness through the mounting surface, cut a cable access hole in the mounting surface, referencing the letter “A” on the drill template. Skip this step if you want to route the cables on the surface.




If installing the turret camera to a wall mount or other accessory, an adapter plate is provided. Install the adapter plate to the accessory with three PM4X8 screws, referencing number “2”.

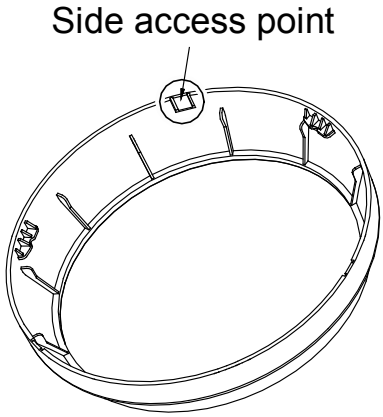



2. Rotate the trim ring counterclockwise to remove it from the camera.

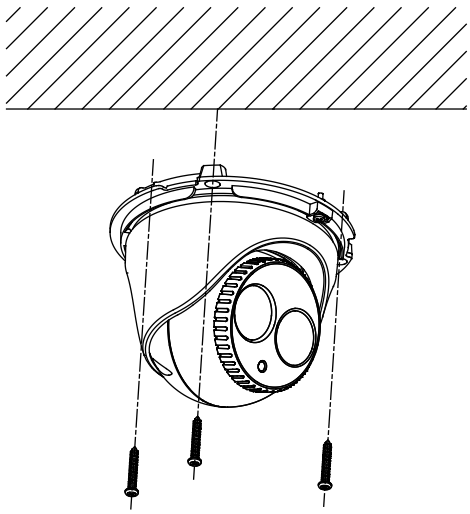



3. There two options for routing the cables.

   Route the cables directly out of the bottom of the camera or through the side access point shown below. Remove one of the tabs (using pliers) at the edge of the trim ring to provide cable access.




4. Connect the corresponding power and network cables.
5. Install the camera to the mounting surface using the supplied hardware.

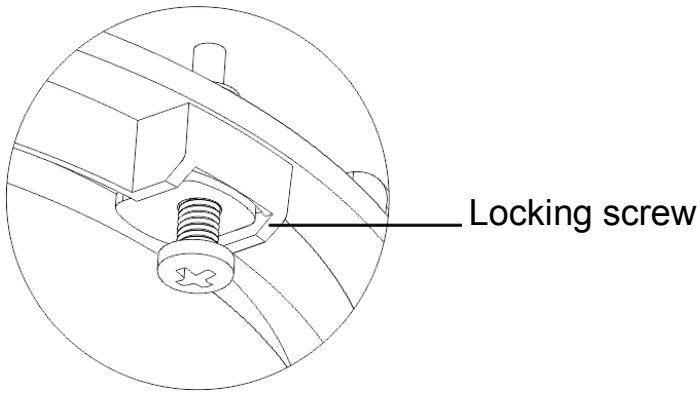


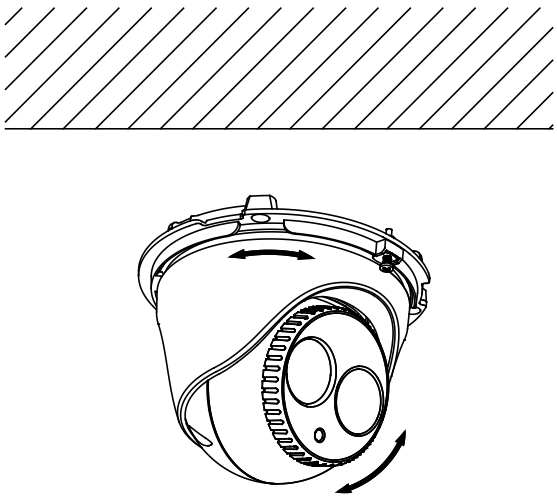
6. Adjust the lens.

   a) Loosen the locking screw using a Philips screw driver.

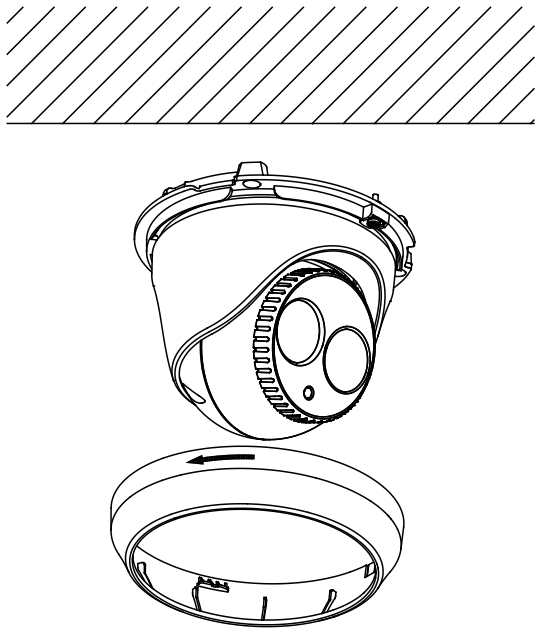
   b) Rotate the lens assembly to adjust the pan angle. Rotate the lens assembly to adjust the tilt angle.

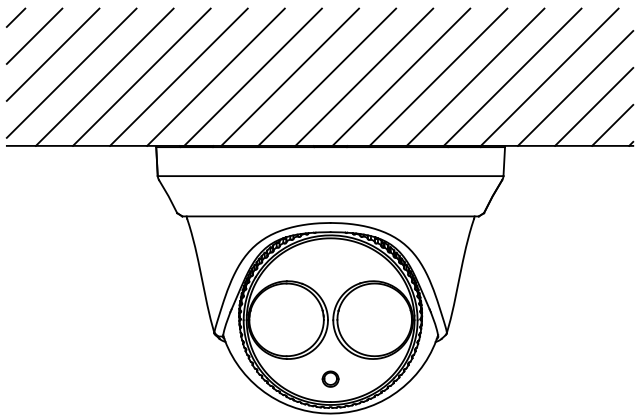
   c) Tighten the locking screw to secure the lens at the desired surveillance angle.





7. Attach the trim ring to the camera and rotate it clockwise to secure it.





## Using the camera with a recorder

Please refer to the recorder user manuals for instructions on connecting and operating the camera with these systems.

## Using the camera with TruVision Navigator

A camera must be connected to an Interlogix NVR or hybrid DVR in order to be operated by TruVision Navigator. Please refer to the TruVision Navigator user manual for instructions on operating the camera with the TruVision Navigator.

# Specifications

## TruVision IP fixed lens bullet cameras

| Electrical | |
|---|---|
| Voltage input | 12 VDC, PoE (IEEE 802.3af) |
| Power consumption | Max. 5 W |
| **Miscellaneous** | |
| Connectors | DC jack flying lead, RJ45 flying lead |
| Operating temperature | -30 to +60°C (-22 to +140°F) |
| Dimensions | 60 × 153 mm (2.3 × 6.0 in.) |
| Weight | 373 g (0.82 lb.) |
| Environmental rating | IP66 |

## TruVision IP VF lens bullet cameras

| Electrical | |
|---|---|
| Voltage input | 12 VDC, PoE (IEEE 802.3af) |
| Power consumption | Max. 7.5 W |
| **Miscellaneous** | |
| Connectors | DC jack flying lead, RJ45 flying lead |
| Operating temperature | -30 to +60°C (-22 to +140°F) |
| Dimensions | 105 × 94.7 × 265.4 mm / 4.13 × 3.74 × 10.4 in. (without back box )<br>105 × 94.7 × 301.4 mm / 4.13 × 3.74 × 11.86 in. (with back box) |

| | |
|---|---|
| Weight | 800 g (1.76 lb.) |
| Environmental rating | IP66 |

## TruVision IP fixed lens dome

| **Electrical** | |
|---|---|
| Voltage input | 12 VDC, PoE (IEEE 802.3af) |
| Power consumption | Max. 5 W |
| **Miscellaneous** | |
| Connectors | DC jack flying lead, RJ45 flying lead |
| Operating temperature | -30 to +60°C (-22 to +140°F) |
| Dimensions (L × W × H) | 111 × 82 mm (4.4 × 3.2 in.) |
| Weight | 370 g (0.81 lb.) |
| Environmental rating | IP66 |

## TruVision IP VF lens dome cameras

| **Electrical** | |
|---|---|
| Voltage input | 12 VDC, PoE (IEEE 802.3af) |
| Power consumption | Max. 5.5 W |
| **Miscellaneous** | |
| Connectors | DC jack flying lead, RJ45 flying lead |

| | |
|---|---|
| Operating temperature | -30 to +60°C (-22 to +140°F) |
| Dimensions (L × W × H) | 140 × 100 mm<br>(5.51 × 3.94 in.) |
| Weight | 807 g (1.78 lb.) |
| Environmental rating | IP66 |

## TruVision IP wedge cameras

| **Electrical** | |
|---|---|
| Voltage input | 12 VDC, PoE (IEEE 802.3af) |
| Power consumption | Max. 5 W (Max. 7 W with IR on) |
| **Miscellaneous** | |
| Connectors | DC jack flying lead, RJ45 flying lead |
| Operating temperature | -30 to +60°C (-22 to +140°F) |
| Dimensions (L × W × H) | 98 × 89 × 329 mm<br>(3.86 × 3.49 × 12.94 in.) |
| Weight | 409 g (0.9 lb.) |
| Environmental rating | IP66 |

## TruVision IP turret cameras

| Electrical | |
|---|---|
| Voltage input | 12 VDC, PoE (IEEE 802.3af) |
| Power consumption | Max. 5.5 W (Max. 7.5 W with IR on) |
| **Miscellaneous** | |
| Connectors | DC jack flying lead, RJ45 flying lead |
| Operating temperature | -30 to +60°C (-22 to +140°F) |
| Dimensions (L × W × H) | 127 × 97.5 mm<br>(5 × 3.84 in.) |
| Weight | 548 g (1.21 lb.) |
| Environmental rating | IP66 |

# Pin definitions

There are eight wires on a standard UTP/STP cable and each wire is color-coded. The following shows the pin allocation and color of straight and crossover cable connection:

**Figure 7: Straight-through cable**

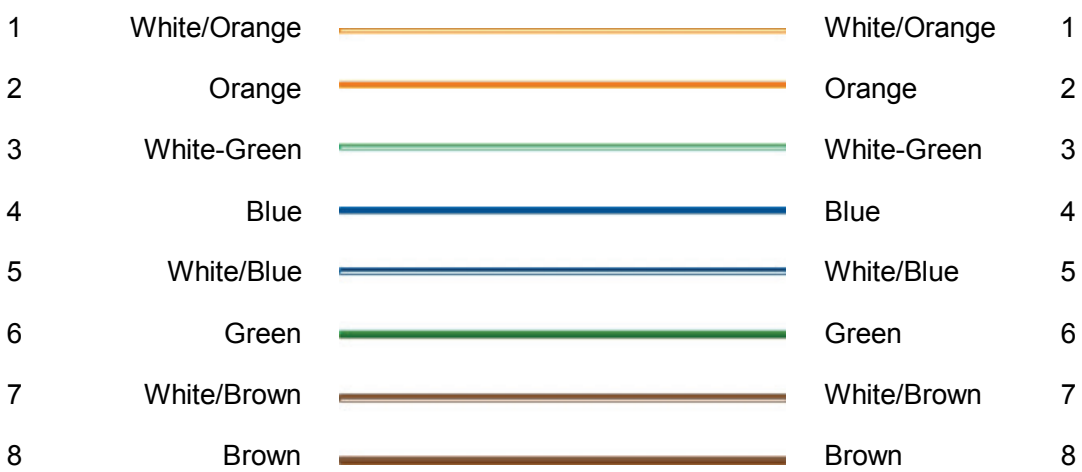
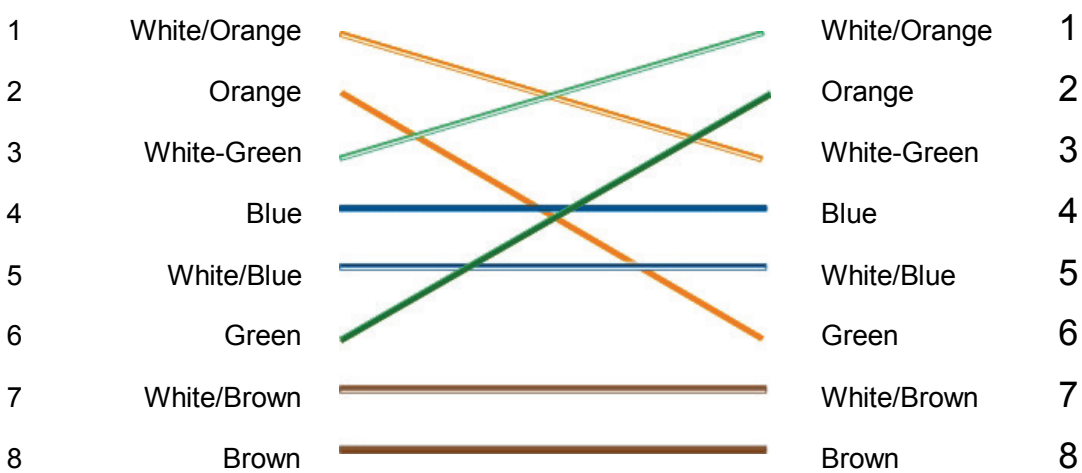



**Figure 8: Cross-over cable**



Please make sure your connected cables have the same pin assignment and color as above before deploying the cables in your network.