# TruVision IP Camera Installation Guide

P/N 1072668A-EN • REV 1.0 • ISS 24SEP13

**Trademarks and patents** The TruVision name and logo are trademarks of United Technologies.

Other trade names used in this document may be trademarks or registered trademarks of the manufacturers or vendors of the respective products.

**Manufacturer** UTC Fire & Security Americas Corporation, Inc.
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** N4131

**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.

**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 Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-0330 du Canada.

**European Union directives**

**12004/108/EC (EMC directive):** Hereby, UTC Fire & Security declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.

**2002/96/EC (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.

**Contact information**

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

# Content

**Introduction 6**
Product overview 6

**Installation 7**
Installation environment 7
Package contents 8
Cable requirements 8
Camera description 9
Setting up the camera 12
Accessing the SD card 13
Mounting the bullet camera 13
Mounting the VF dome camera 15
Mounting the indoor mini dome camera 19
Mounting the wedge dome camera 21
Using the camera with an Interlogix NVR or Hybrid DVR or another system 22
Using the camera with TruVision Navigator 22

**Specifications 23**
TruVision IP bullet cameras 23
TruVision IP indoor mini dome 23
TruVision IP wedge cameras 24
TruVision IP VF mini dome cameras 24

**Pin definitions 25**

# Introduction

## Product overview

This is the installation guide for TruVision IP camera models:

- TVB-1101 (1.3MPX IP bullet camera, PAL)
- TVB-3101 (1.3MPX IP bullet camera, NTSC)
- TVB-1102 (3MPX IP bullet camera, PAL)
- TVB-3102 (3MPX IP bullet camera, NTSC)
- TVD-1103 (1.3MPX IP VF mini dome, PAL)
- TVD-3103 (1.3MPX IP VF mini dome, NTSC)
- TVD-1104 (3MPX IP VF mini dome, PAL)
- TVD-3104 (3MPX IP VF mini dome, NTSC)
- TVD-1101 (1.3MPX IP indoor mini dome, PAL)
- TVD-3101 (1.3MPX IP indoor mini dome, NTSC)
- TVD-1102 (3MPX IP indoor mini dome, PAL)
- TVD-3102 (3MPX IP indoor mini dome, NTSC)
- TVW-1101 (1.3MPX IP wedge dome, PAL)
- TVW-3101 (1.3MPX IP wedge dome, NTSC)
- TVW-1102 (3MPX IP wedge dome, PAL)
- TVW-3102 (3MPX IP wedge dome, NTSC)

# 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 or remove the covers from 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.

Package contents:

- Camera
- Hex wrench (for dome and mini dome cameras only)
- Installation manual
- CD with Configuration manual and TruVision Device Finder

---

**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.

---

## 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.

Table 1 on page 9 lists the requirements for the cables that connect to the camera.

**Table 1: Recommended power cable requirements**

| | |
|---|---|
| Bullet camera: | 12 VDC power jack or PoE (802.3af) |
| Mini dome: | PoE (802.3af) |
| Wedge camera: | 12 VDC power jack or PoE (802.3af) |
| VF dome camera: | 12 VDC power jack or PoE (802.3af) |

# Camera description

**Figure 1: IP bullet camera**

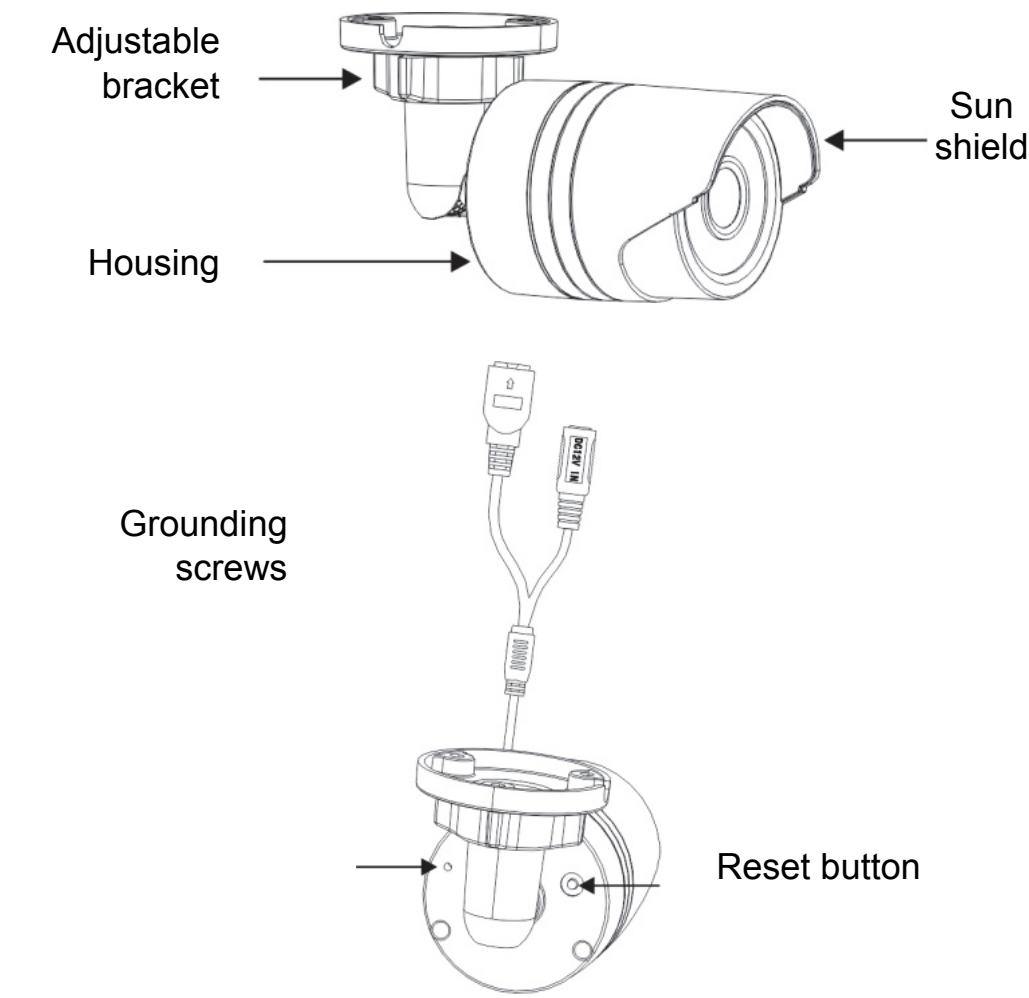
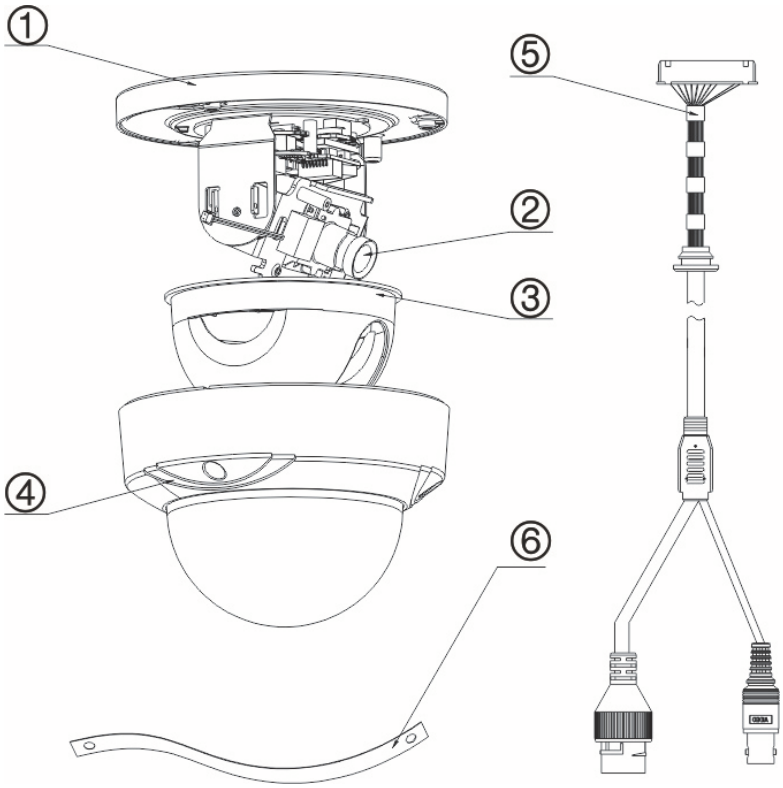
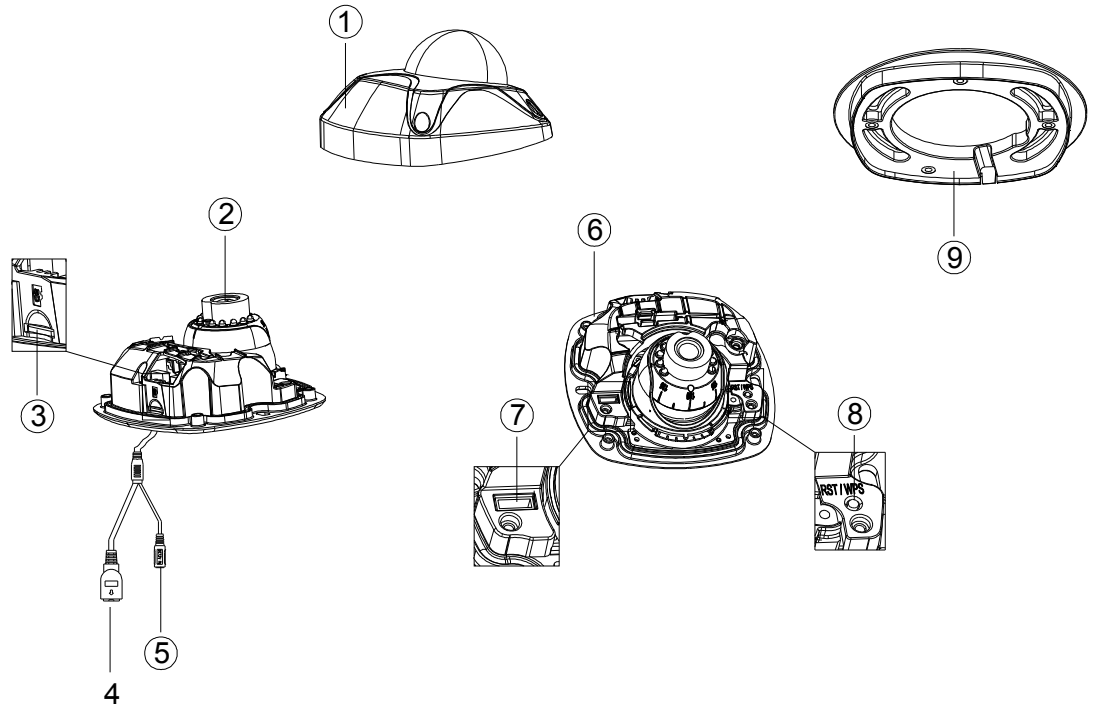


**Figure 2: IP indoor mini dome camera**



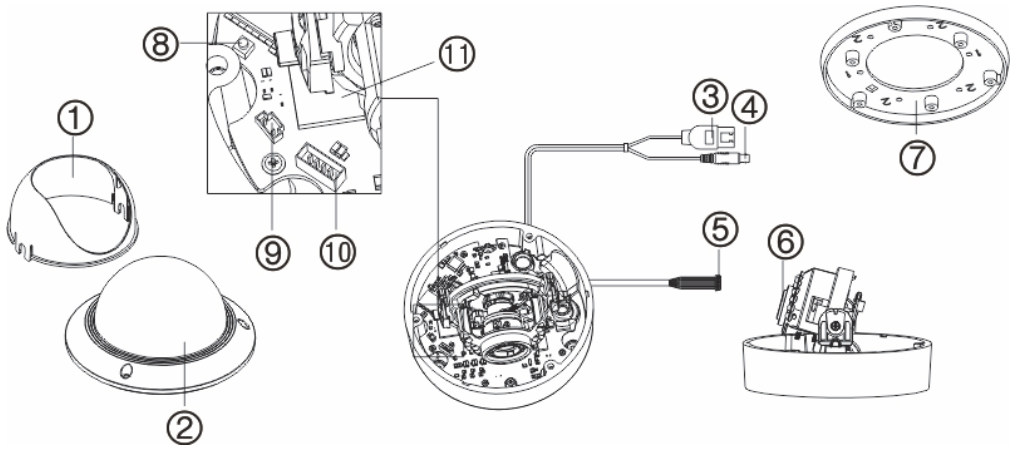

1. Base
2. Lens
3. Dome liner
4. Housing
5. Ethernet RJ45 and BNC cable
6. Safety cable

**Figure 3: IP wedge camera**




1. Cover
2. Lens
3. SD card
4. Ethernet RJ45 PoE port
5. Power supply
6. Base
7. Serial port
8. Reset button
9. Converter pan

**Figure 4: IP VF dome camera**




1. Dome liner
2. Housing
3. Ethernet RJ45 PoE port
4. Power supply
5. Audio and alarm cables
6. Lens
7. Mounting plate
8. Reset button
9. Analog video output
10. Serial port
11. SD card

## 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 ceiling using the appropriate fasteners. See “Mounting the bullet camera” on page 13.
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 Camera Configuration Manual”.

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

## Accessing the SD card

Insert a Micro SD card with up to 64GB for local storage as a backup in case, for example, the network fails (see Figure 1 on page 9). The card is not supplied with the camera.

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

Video and log files stored on the Micro SD card can only be accessed via the web browser. You cannot access the card using TruVision Navigator or a recording device.

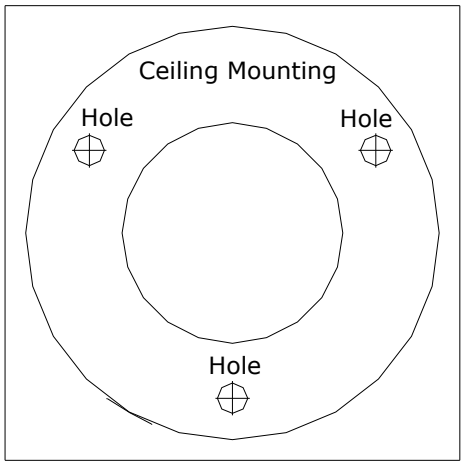
**Note**: There is no Micro SD card slot in the bullet and indoor mini dome cameras.

## Mounting the bullet camera

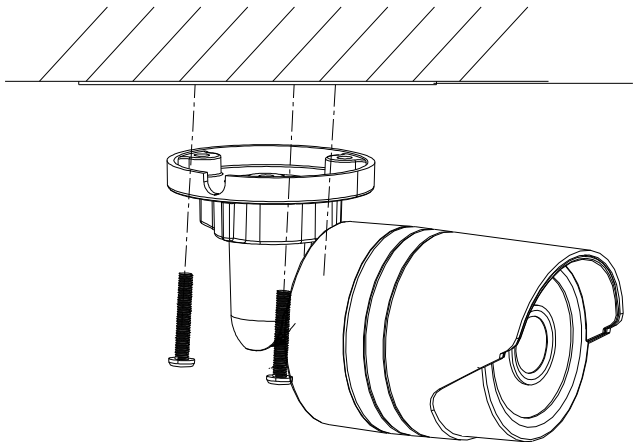
Mount the camera on a ceiling or wall.

### To mount the bullet camera:

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




2. Secure the mounting base to the ceiling or wall with the supplied screws.



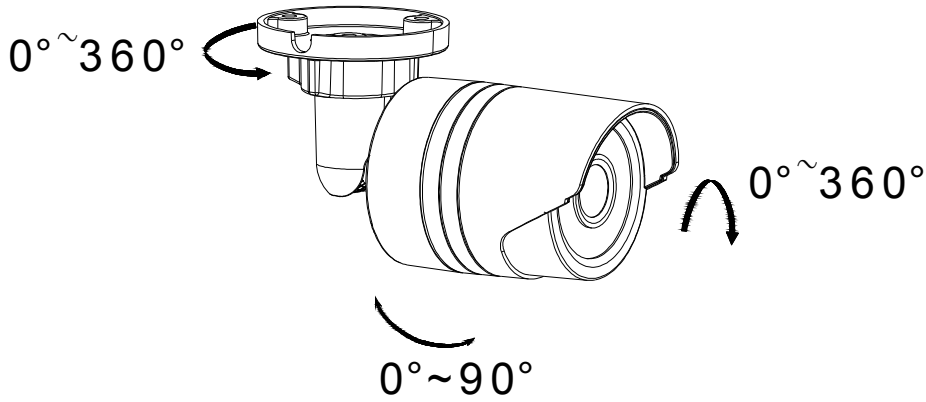
3. Loosen the adjustable nuts on the bracket, and adjust the camera from P/R/T (pan/rotate/tilt) direction.

   P Direction: 0 to 360°adjustable.

   T Direction: 0 to 90°adjustable.

   R Direction: 0 to 360°adjustable

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

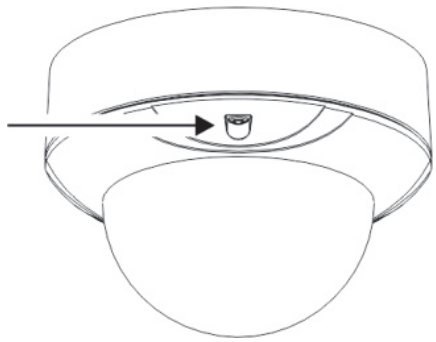



## Mounting the VF dome camera

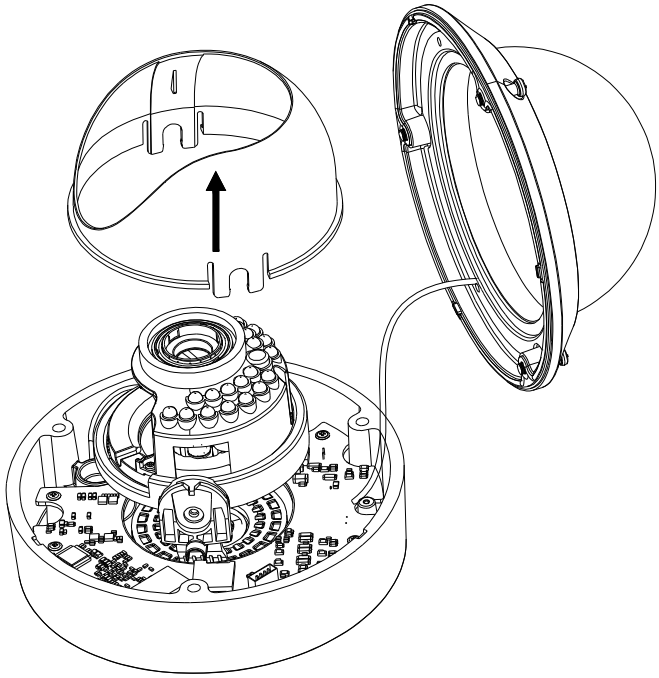
### To mount the VF dome camera on a ceiling or wall:

1. Loosen the three screws on the edge of the lower dome with screw driver.

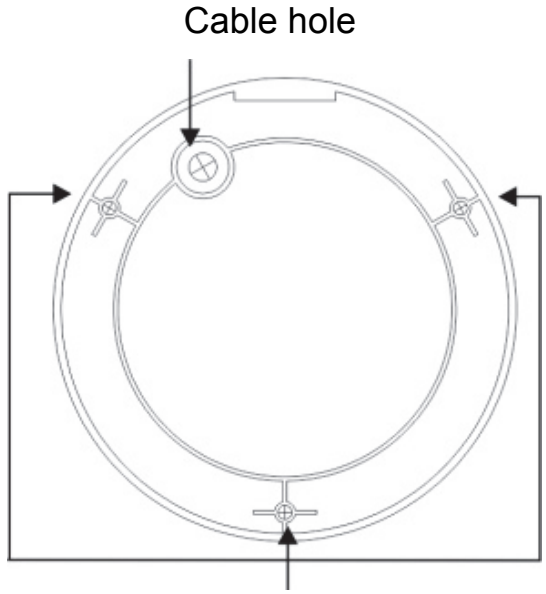
   Screws



2. Open the lower dome and remove the black inner liner.

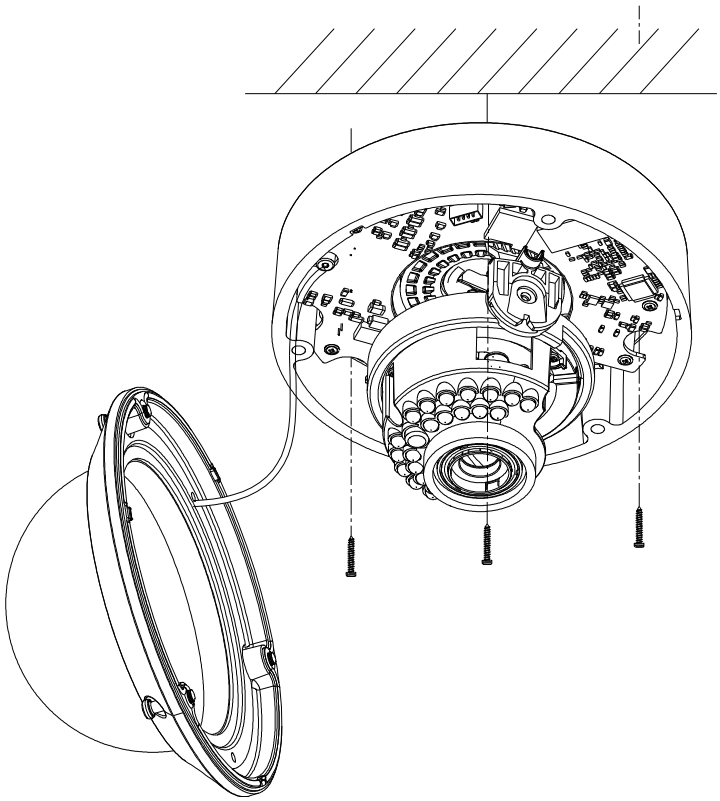


3. Drill the three screw holes on the ceiling with the supplied drill template.



4. If you want to route the cables inside the ceiling, drill a cable hole in the ceiling or wall using the drill template.

5. Attach the camera to the ceiling or wall by aligning the housing holes with those in the ceiling. Secure the camera with the supplied screws as shown below.



6. Route the cables through the cable hole.

   **Note**: If required, you can route cables through the side screw opening of the camera

7. Connect the video output connector to the monitor. Connect the power connector to the power supply.

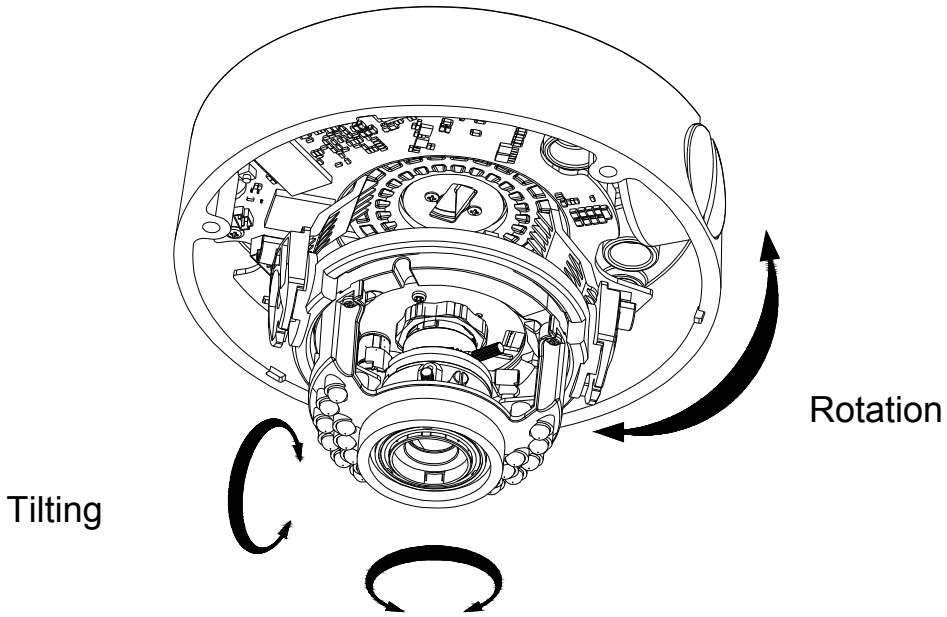
8. Adjust the image and focus.

   1) Three-axis adjustment.
      View the camera image using the monitor. Hold the panning table and pull out slightly to adjust the

panning position of the camera. Rotate the tilting axes to adjust the tilting position of the camera. Rotate the lens table to adjust the azimuth angle of the image.

2) 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.

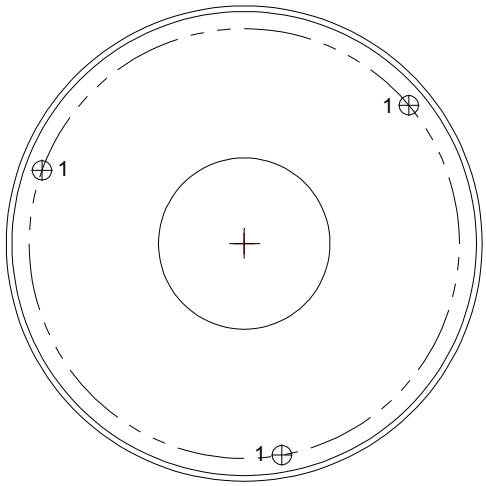
3) Tighten the zoom lever.
Loosen the focus lever and move the lever between F(Far) and N(Near) to obtain the optimum focus. Tighten the focus lever.



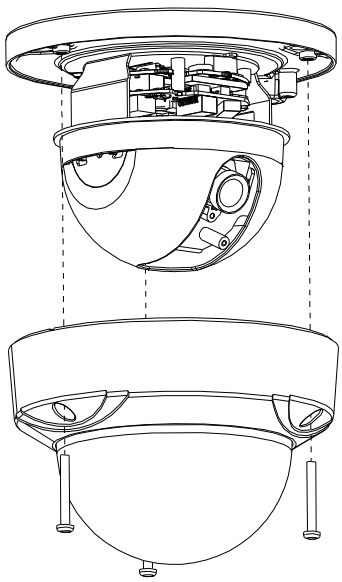
# Mounting the indoor mini dome camera

## To mount the indoor mini dome camera on a ceiling:

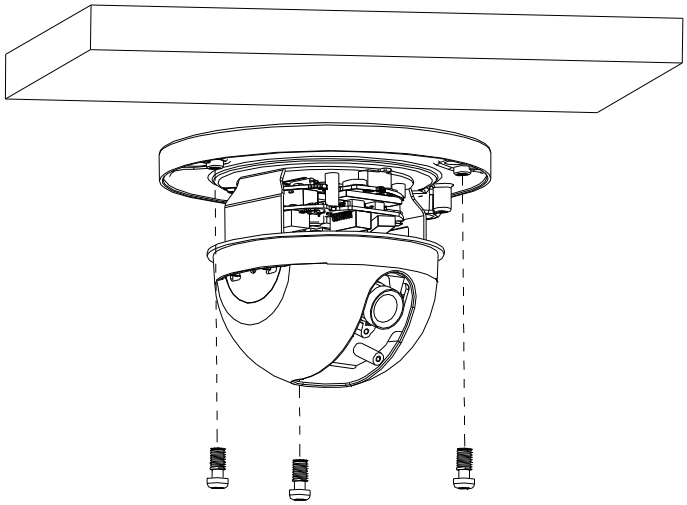
1. Drill the screw holes on the ceiling with the supplied drilling template. If you need to route the cables from the bottom of the camera, cut a cable hole in the ceiling.



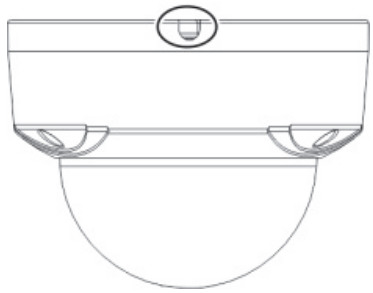

2. Using the supplied hex wrench, loosen the set screws to remove the dome enclosure.



3. Fix the mounting base onto the ceiling with screws.

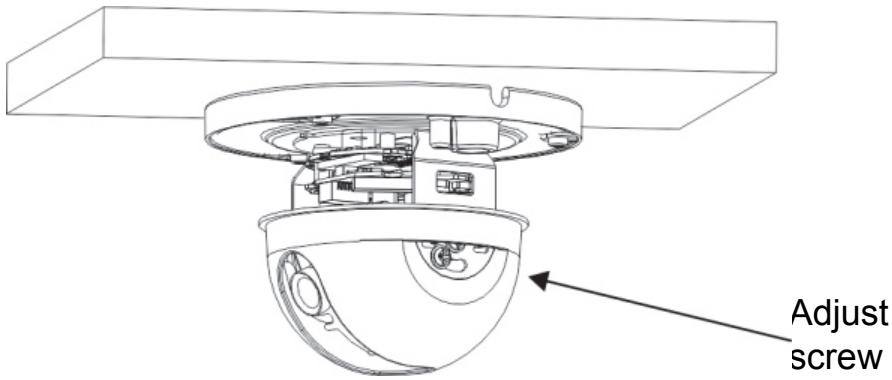


**Note**: If required, you can route cables through the side opening of the mounting base.

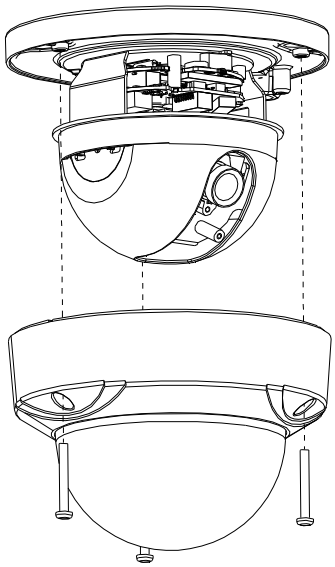


4. Loosen the tilt lock screws, and adjust the tilting position in a range of 65 degrees. Retighten the tilt lock screws.

   Rotate the dome liner to adjust the panning position in a range of 360 degrees to obtain the desired surveillance angle.



5. Reinstall the lower dome and tighten the screws.

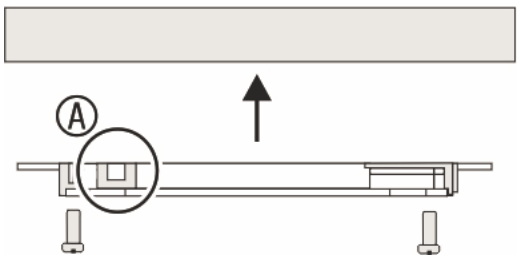


## Mounting the wedge dome camera

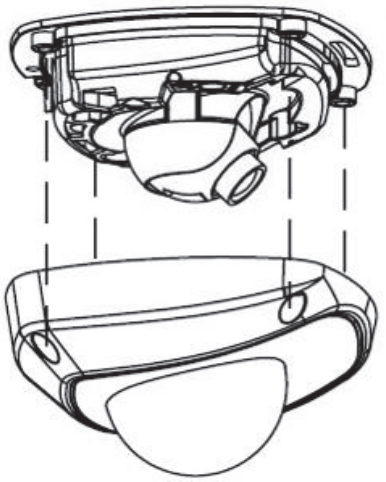
### To mount the wedge dome camera on a ceiling:

1. Drill the screw holes on the ceiling with the supplied drilling template. To route the cables from the base of the camera, cut a cable hole in the ceiling.
2. Fix the converter pan to the ceiling (optional).

   **Note**: If required, you can remove the tabs (A) on the side of the converter pan to pass the cables through.




3. Loosen the set screws with a hex wrench (supplied) to remove the dome enclosure.



4. Fix the camera base to the converter pan or mounting surface.
5. Re-attach the dome enclosure to the camera.

## Using the camera with an Interlogix NVR or Hybrid DVR or another system

Please refer to the NVR/DVR 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 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 | Φ 60 × 153 mm (2.3” × 6.0”) |
| Weight | 373 g (0.82 lbs) |
| Environmental rating | IP66 |

## TruVision IP indoor mini dome

| **Electrical** | |
|---|---|
| Voltage input | PoE (IEEE 802.3af) |
| Power consumption | Max. 5 W |
| **Miscellaneous** | |
| Connectors | RJ45 flying lead |
| Operating temperature | -30 to +60 °C (-22 to +140 °F) |
| Dimensions (L × W × H) | Φ 111 × 82 mm (4.4” × 3.2”) |
| Weight | 370 g (0.81lbs) |

## 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°F to +140°F) |
| Dimensions (L × W × H) | 98 × 89 × 329 mm<br>(3.86 ×3.49 × 12.94 in.) |
| Weight | 407 g (0.89 lb) |
| Environmental rating | IP66 |

## TruVision IP VF mini 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°F to 140°F) |
| Dimensions (L × W × H) | Φ 140 × 100 mm (Φ 5.51” × 3.94”) |
| Weight | 767 g  (1.69 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 3: Straight-through cable**

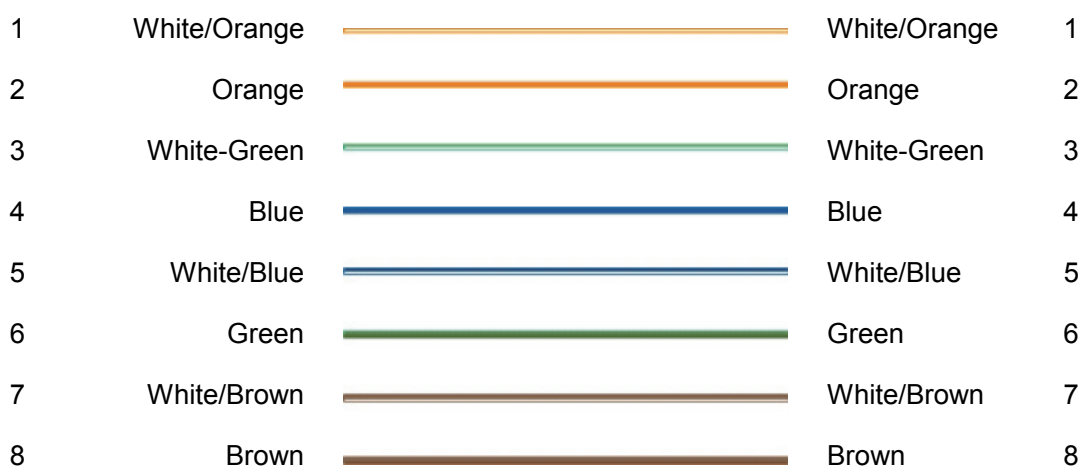
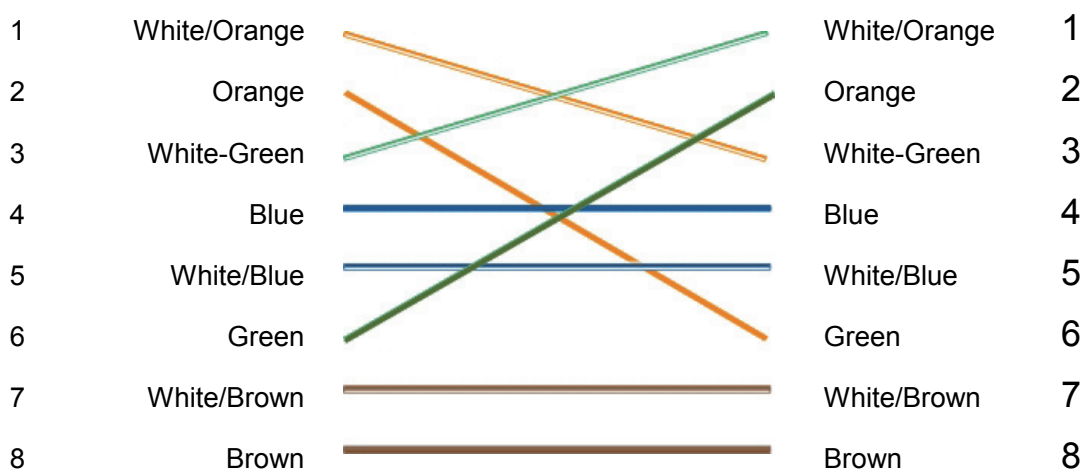



**Figure 4: Cross-over cable**



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