









# TruVision Covert IP Camera Installation Manual

<b>Copyright</b>	© 2015 United Technologies Corporation Interlogix is part of UTC Building & Industrial Systems, a unit of United Technologies Corporation. All rights reserved.
<b>Trademarks and patents</b>	Trade names used in this document may be trademarks or registered trademarks of the manufacturers or vendors of the respective products.
<b>Manufacturer</b>	Interlogix 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
<b>Certification</b>	   
<b>FCC compliance</b>	<b>Class A:</b> This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
	<p>(1) This device may not cause harmful interference</p> <p>(2) This Device must accept any interference received, including interference that may cause undesired operation.</p>
	Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
<b>ACMA compliance</b>	<b>Notice!</b> 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.
<b>Canada</b>	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.
<b>European Union directives</b>	<b>12004/108/EC (EMC directive):</b> Hereby, UTC Fire & Security declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.
	<b>2012/19/EU (WEEE directive):</b> 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: <a href="http://www.recyclethis.info">www.recyclethis.info</a> .
	<b>2006/66/EC (Battery directive):</b> 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: <a href="http://www.recyclethis.info">www.recyclethis.info</a> .
<b>Contact information</b>	For contact information, see <a href="http://www.interlogix.com">www.interlogix.com</a> or <a href="http://www.utcssecurityproducts.eu">www.utcssecurityproducts.eu</a> .

# Content

## **Product overview 4**

## **Installation 4**

Installation environment 4

Package contents 5

Cable requirements 5

Camera description 6

Set up camera unit 9

Prepare covert holes with adhesive tape 11

Install lens 12

Complete the installation 18

Configuration 19

Access the SD card 19

Use the camera with an Interlogix NVR and TruVision Navigator 19

## **Specifications 19**

TruVision covert IP cameras 19

## **Pin definitions 20**

## Product overview

This is the installation manual for the following TruVision Covert IP camera models:

- TVA-1101 (1.3MPX IP ATM/covert camera, WDR, PAL)
- TVA-3101 (1.3MPX IP ATM/covert camera, WDR, NTSC)
- TVL-0101 (TruVision Covert Lens, 1.3MPx, Pinhole, 3.7mm@ F2.3, 2m cable)
- TVL-0102 (TruVision Covert Lens, 1.3MPx, L-shape, 3.7mm@ F2.3, 2m cable)
- TVL-0103 (TruVision Covert Lens, 1.3MPx, Cylinder, 4mm@ F2.0, 2m cable)
- TVL-0104 (TruVision Covert Lens, 1.3MPx, Pinhole, 3.7mm@ F2.3, 8m cable)
- TVL-0105 (TruVision Covert Lens, 1.3MPx, L-shape, 3.7mm@ F2.3, 8m cable)
- TVL-0106 (TruVision Covert Lens, 1.3MPx, Cylinder, 4mm@ F2.0, 8m cable)
- TVL-0107 (TruVision Covert Lens, 1.3MPx, L-shape, 2mm@ F2.0, 2m cable)
- TVL-0108 (TruVision Covert Lens, 1.3MPx, Cylinder, 2mm@ F2.0, 2m cable)
- TVL-0109 (TruVision Covert Lens, 1.3MPx, L-shape, 2mm@ F2.0, 8m cable)
- TVL-0110 (TruVision Covert Lens, 1.3MPx, Cylinder, 2mm@ F2.0, 8m cable)

## Installation

This chapter 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 or lens
- Mounting accessories
- Installation manual
- CD with Configuration Manual and TruVision Device Manager

### Note:

The ATM/covert camera has no lens in the product package. The lens needs to be purchased separately according to the application needs. Please notice that there are different cable length and form factor options.

---

**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 battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

---

## Cable requirements

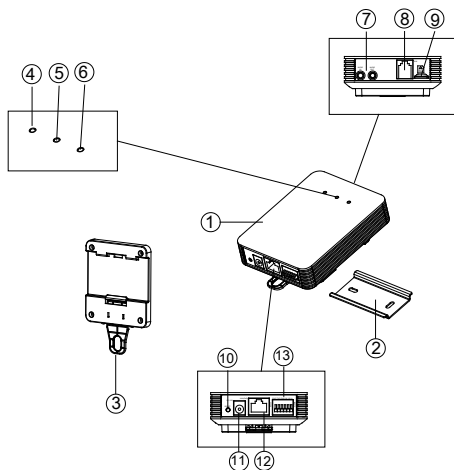
For proper operation, adhere to the following cable and power requirements for the cameras. Category 5 cabling or better is recommended. All network cabling must be installed according to applicable codes and regulations.

**Recommended power cable requirements to connect the camera:**

12 VDC power jack or PoE (802.3-af)

## Camera description

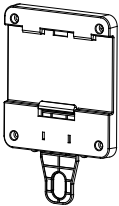
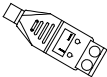
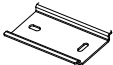



Figure 1: Covert IP camera description



### Covert camera unit:

- |                     |                           |
|---------------------|---------------------------|
| 1. Main unit        | 8. RJ-12 port             |
| 2. Mounting rack    | 9. Micro SD card slot     |
| 3. Mounting plate   | 10. Reset button          |
| 4. Power indicator  | 11. 12V DC Power port     |
| 5. Status indicator | 12. PoE and network port  |
| 6. Link indicator   | 13. RS-232 and alarm port |
| 7. Audio In/Out     |                           |

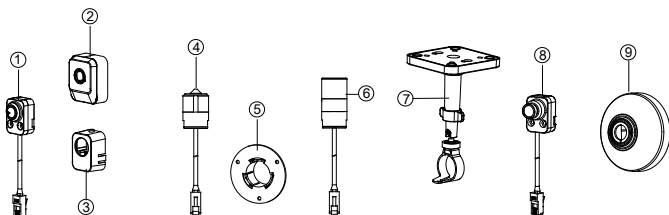
## Accessories

<p>Mounting plate</p> 	<p>12 VDC connector: DC jack socket to terminal connectors with positive and negative indicators.</p> 
<p>Mounting rack</p> 	<p>Drywall anchor, Ø7.5 x 24.5 mm (3 pcs)</p> 
<p>Screw A, Ø4 x 25 mm (3 pcs)</p> 	<p>Screw B, Ø2 x 6 mm (4 pcs)</p> 

**Table 1: LED Indicators**

LED	Color and Status	Indication
POWER	Solid red	Normal operation
	Unlit	Power Off
STATUS	Solid green	Camera works properly
	Unlit	Camera does not work properly.
LINK	Flashing amber	Network connection is functioning properly
	Unlit	No network connection

**Figure 2: Covert IP camera Lens and bracket description**

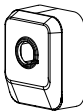






**Lens and brackets: (purchased separately)**




- |                                  |   |
|----------------------------------|---|
| 1. L-shape lens                  | 6. Cylinder lens                        |
| 2. L-shape lens cover            | 7. Cylinder lens mounting bracket       |
| 3. L-shape lens mounting bracket | 8. L-shape 2mm lens                     |
| 4. Pinhole lens                  | 9. L-shape 2mm lens surface mount cover |
| 5. Pinhole lens mounting bracket |   |

**Accessories**

**L-shape lens:**

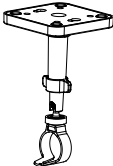


Cover 	Mounting bracket 
Adhesive tape (2 pcs, 1 mm and 4 mm) 	Screw A Ø4 x 25 mm (3 pcs) 
	Drywall anchor Ø7.5 x 24.5 mm (3 pcs) 

**Pinhole lens:**





Mounting bracket 	Drywall anchor Ø7.5 x 24.5 mm (3 pcs) 
	Screw A Ø4 x 25 mm (3 pcs) 



### Cylinder lens:

<p>Mounting bracket</p> 	<p>Drywall anchor <math>\varnothing 7.5 \times 24.5</math> mm (3 pcs)</p>  <hr/> <p>Screw A <math>\varnothing 4 \times 25</math> mm (3 pcs)</p> 
---	--

### L-shape lens (2 mm):

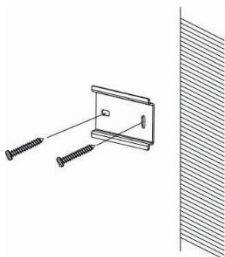
<p>Cover</p> 	<p>Adhesive tape</p> 
<p>Drywall anchor <math>\varnothing 7.5 \times 24.5</math> mm (3 pcs)</p> 	<p>Screw A <math>\varnothing 4 \times 25</math>mm (3 pcs)</p> 

## Set up camera unit

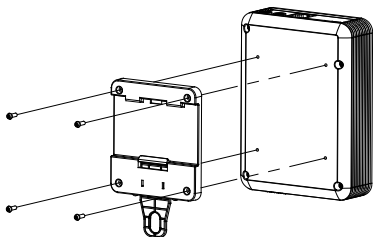
**Note:** If the light source where the camera is installed experiences rapid, wide-variations in lighting, the camera may not operate as intended.

### Install a camera block:

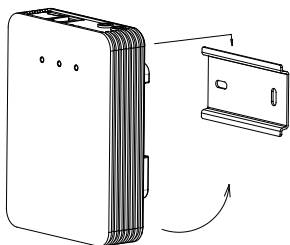
1. Prepare the mounting surface. The surface should be smooth and clean.
2. Fix the mounting rack on the mounting surface using the enclosed screws A.



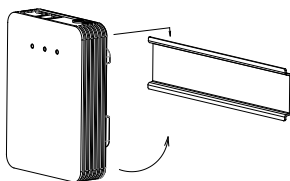
- Fix the mounting bracket on the rear panel of the camera block with the four enclosed screws B.



- Hook the top catch of the camera mounting bracket on the prepared rack. Then gently press the lower part of the camera block against the rack so that it snaps into position on the rack.



**Note:** If there is a standard rail installed, you can directly snap the camera block with mounting bracket on the prepared rail.



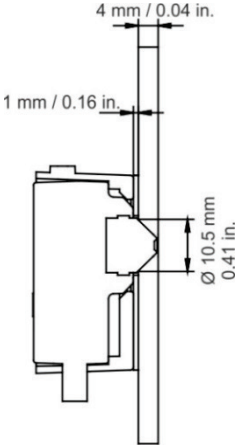
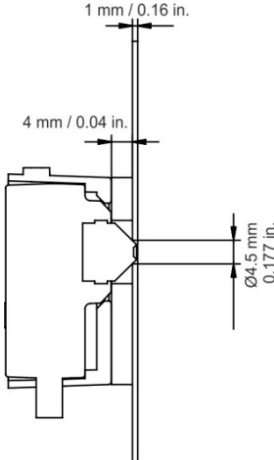
## Prepare covert holes with adhesive tape

**Note:** Before installing a covert lens, please ensure that the mounting surface is suitable for adhesive mounting.

### L-shape lens

There are two types of adhesive tape (1 mm and 4 mm) included in the package. Drill the covert hole to an appropriate diameter depending on the thickness of the mounting surface. Refer to Figure 3 below for details.

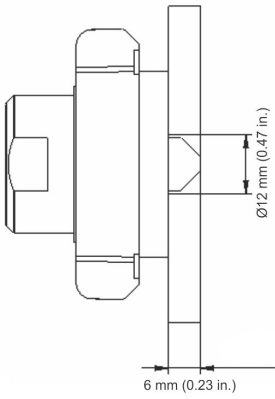
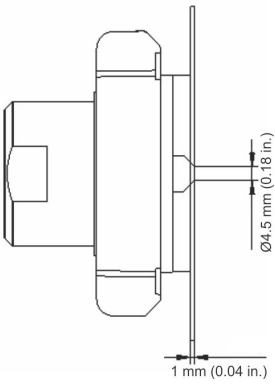
Figure 3: Covert hole for L-shape lens

4 mm thick wall	1 mm thin wall
<p data-bbox="119 438 502 515">When the mounting surface is around 4 mm thick, drill a covert lens hole that is 10.5 mm in diameter.</p> <p data-bbox="119 531 502 577">Use the enclosed 1 mm adhesive tape to adhere the bracket in place.</p> 	<p data-bbox="543 438 927 515">When the mounting surface is around 1 mm thick, drill a covert lens hole that is 4.5 mm in diameter.</p> <p data-bbox="543 531 927 577">Use the enclosed 4 mm adhesive tape to adhere the bracket in place.</p> 

### Pinhole lens

Adhesive tape is provided with the mounting bracket for pinhole lens. Drill the covert hole to an appropriate diameter depending on the mounting surface thickness. Refer to Figure 4 on page 12 for details.

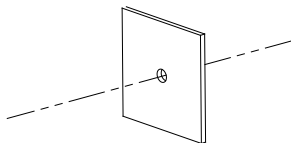
**Figure 4: Covert hole for pinhole lens**

6 mm thick wall	1 mm thin wall
<p data-bbox="122 181 487 263">When the mounting surface is around 6 mm thick, drill a covert lens hole that is 12 mm in diameter.</p> 	<p data-bbox="557 181 912 263">When the mounting surface is around 1 mm thick, drill a covert lens hole that is 4.5 mm in diameter.</p> 

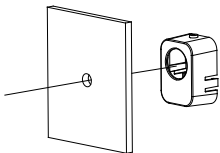
## Install lens

### L-shape lens for covert mounting:

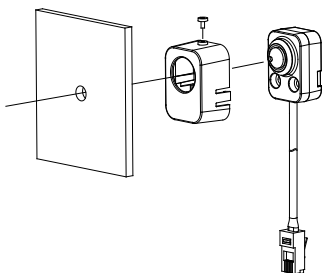
1. See section "Prepare covert holes with adhesive tape" on page 11 on preparing the covert hole. Keep the mounting surface clean and dry for the adhesive mounting.



2. Remove the protective film from the adhesive tape and firmly adhere the tape on the L-shaped mounting bracket. Align the bracket with the prepared covert hole and firmly adhere the bracket on the mounting surface.

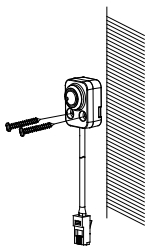


3. Insert the L-shape lens into the mounting bracket and fasten the locking screw to finish the installation.

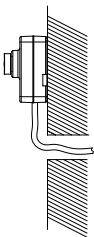


#### L-shape lens for surface mounting:

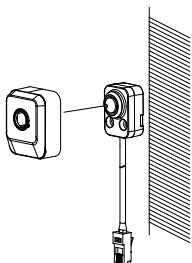
1. Fix the L-shape lens on the mounting surface with screws A.



2. Drill a cable hole in the mounting surface and pull the lens cable through the hole (optional).

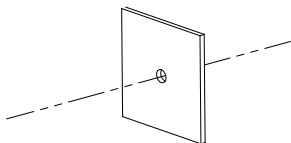


3. Cover the installed L-shape lens unit with the enclosed cover to finish the installation.

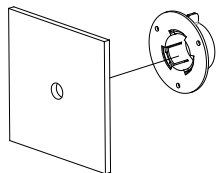


#### Pinhole lens for covert mounting:

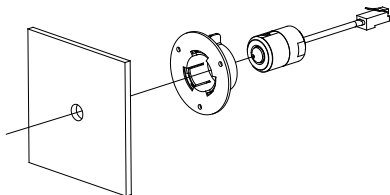
1. See section "Prepare covert holes with adhesive tape" on page 11 on preparing the covert hole. Keep the mounting surface clean and dry for the adhesive mounting.



2. Remove the protective film from the adhesive tape and firmly adhere the tape on the pinhole lens mounting bracket. Align the bracket with the prepared covert hole and firmly adhere it on mounting surface.



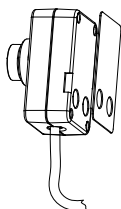
3. Insert the pinhole lens into the mounted bracket and adjust the lens position fitting with the mounting surface.



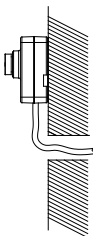
4. Twist the locking sleeve to lock lens in place.

**L-shape 2mm lens for surface mounting with a cover:**

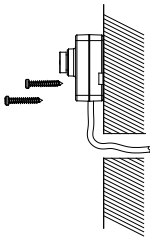
1. Remove the protective film from the served adhesive tape and firmly adhere the tape on the back of the lens.



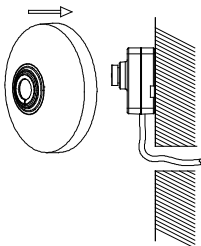
2. Drill a cable hole close to the lens mounting position and pull the lens cable through the hole. Then adhere the lens to the mounting surface.



3. Fix the lens on the mounting surface with screws A.

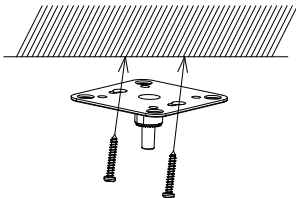


4. Cover the installed lens and cable with served round shape cover to finish installation.

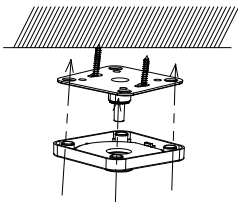


**Cylinder lens for bracket mounting:**

1. Fix the cylinder bracket mounting base to the ceiling with the two supplied screws.

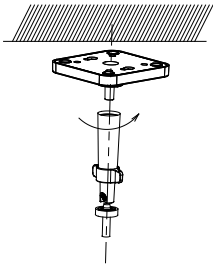


2. Hook the bracket cover to the mounting base.

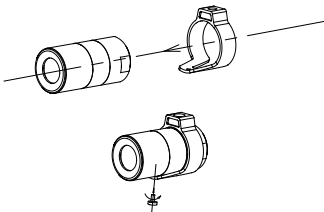


3. Screw the bracket to the installed mounting base.

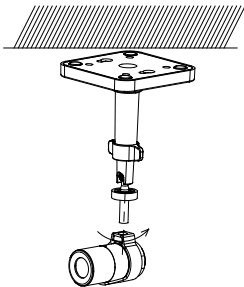




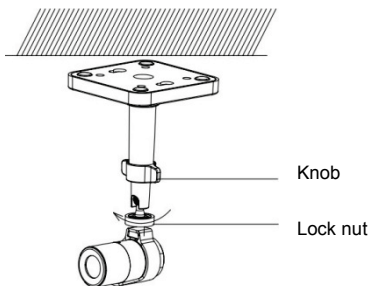
4. Insert the cylinder lens into the bracket holding circle and fasten the locking screw.



5. Attach the assembled cylinder lens with the holding circle to the installed bracket. Continue twisting until it is securely fastened.

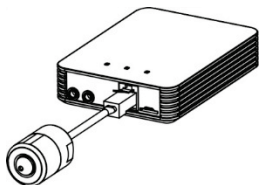


6. Loosen the knob to adjust the surveillance angle and then tighten the lock nut to complete the installation.



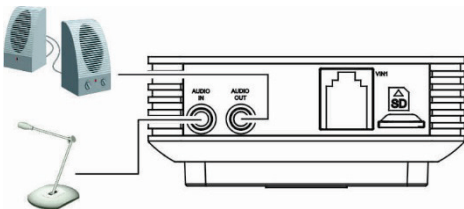
## Complete the installation

1. Connect the RJ-12 connector of lens cable to the camera block.

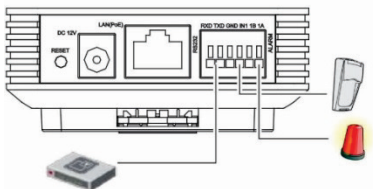


2. Connect an audio device.

Connect a 3.5 mm microphone and an audio output device to the AUDIO IN and AUDIO OUT interfaces.



3. Connect an ATM transition capture device or other device via the RS-232 port.
4. Connect alarm input/output devices.



## Configuration

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 Covert IP Camera Configuration Manual".

## Access the SD card

Insert a SD card up to 128GB for local storage as a backup in case the network fails. The card is not supplied with the camera.

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.

## Use the camera with an Interlogix NVR and TruVision Navigator

The camera can be connected to an Interlogix NVR or hybrid DVR or directly to TruVision Navigator. Please refer to the user manual of TruVision Navigator and/or NVR or hybrid DVR for instructions.

## Specifications

### TruVision covert IP cameras

---

#### Electrical

---

Voltage input 12 VDC  $\pm$  10%, PoE (IEEE 802.3af)

Power consumption Max. 6.5 W

---

#### Miscellaneous

---

Connectors DC jack flying lead, RJ45 flying lead

Operating temperature -30 to 60°C (-22°F to 140°F)

---

Dimensions 78 × 105 × 32 mm (3.07 × 4.13 × 1.25 in.)

---

Weight 210 g (0.46 lb.)

---









## 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 5: Straight-through cable**

1	White/Orange		White/Orange	1
2	Orange		Orange	2
3	White-Green		White-Green	3
4	Blue		Blue	4
5	White/Blue		White/Blue	5
6	Green		Green	6
7	White/Brown		White/Brown	7
8	Brown		Brown	8

**Figure 6: Cross-over cable**

1	White/Orange		White/Orange	1
2	Orange		Orange	2
3	White-Green		White-Green	3
4	Blue		Blue	4
5	White/Blue		White/Blue	5
6	Green		Green	6
7	White/Brown		White/Brown	7
8	Brown		Brown	8

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







