# Quasar™ Hemispheric Mini-Dome with Edge AI Analytics Camera


**Items Included in Kit (images not to scale)**

## 1 Check Contents

**Tip** When unpacking the camera, do not remove the plastic sheet protecting the dome.

Make sure all of the items below are included in the camera kit:

| Item | | Qty |
|---|---|---|
| CM-6412 camera base with cover, mounting bracket, and system cables attached | | 1 |
| Bag containing surface mounting and connection hardware | Security Torx wrench | 1 |
| | Self-tapping screw | 3 |
| | Plastic anchor | 3 |
| | Four-pin alarm I/O terminal block plug | 1 |
| Bag containing waterproof Ethernet cable connector and parts | | 1 |
| Bag containing dessicant | | 1 |
| Printed quick install guide (this document) | | 1 |

# 2 Select a Location

**Warnings**

- Placing a camera in an environment subject to extremely high temperature can result in an explosion or the leakage of flammable liquid or gas.
- Subjecting the camera to extremely low air pressure can result in an explosion or the leakage of flammable liquid or gas.
- The camera must be installed by qualified personnel and the installation should conform to all local codes.

The camera can be mounted outdoors or indoors.

Verify that the operating temperature falls within the following ranges, with 10-90% non-condensing humidity: without heater -10º C to 55º C (15º F to 130º F); with heater -30º C to 55º C (-22º F to 130º F).

**Tip**

To support video analytics (VA), mount the camera so that it can accurately detect and classify objects. For VA mounting and scene considerations, see the camera's installation and user guide.

Make sure you have the required accessories and tools. Make sure that the location provides a suitable method for routing cables to and from the camera.

# 3 Configure for Networking

To discover the camera on the network, Teledyne FLIR recommends using the FLIR Discovery Network Assistant (DNA) tool, which does not require a license to use, and is a free download from the Teledyne FLIR website. After downloading the DNA ZIP file, extract it.
You can configure the camera using the DNA tool, the camera's web page, or a supported VMS.

| | DNA tool | Camera's web page |
|---|---|---|
| Discover camera IP address | • | |
| Configure IP address, mask, and gateway | • | • |
| Change user credentials | • | • |
| Configure DNS settings, MTU, and Ethernet speed | | • |
| Change video format | • | • |
| Configure more than one camera at the same time | • | |

While the software is open, click the Help icon .

For information about using the camera's web page to configure the camera, see the camera's installation and user guide. For information about using a supported VMS to configure the camera, see the VMS documentation.

By default, DHCP is enabled on the camera and a DHCP server on the network assigns the camera an IP address. If the camera cannot connect to a DHCP server, the camera's default IP address is 192.168.0.250. For example, if the camera is managed by FLIR Horizon or Meridian VMS and the VMS is configured as a DHCP server, the VMS automatically assigns the camera an IP address.

If the camera is managed by FLIR Latitude VMS or is on a network with static IP addressing, you can manually specify the camera's IP address using the DNA tool or the camera's web page.

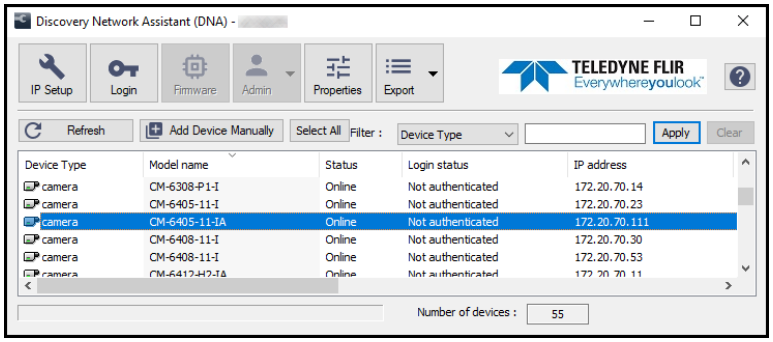
**To manually specify the camera's IP address using the DNA tool:**

a. Make sure the camera and the PC are on the same LAN segment.

b. Run the DNA tool (DNA.exe) by double-clicking .

   The Discover List appears, showing compatible devices on the LAN segment and their current IP addresses.

c. In the DNA Discover List, verify that the camera's status is Online.




If this is the first time you are configuring the camera or if it is the first time after resetting the camera to its factory defaults, DNA automatically logs in to the camera with user name *admin and* its default password (*admin*).

If the *admin* user's password is not the default password, you need to authenticate the camera.

1. In the DNA Discover List, select the camera and then click **Login** 

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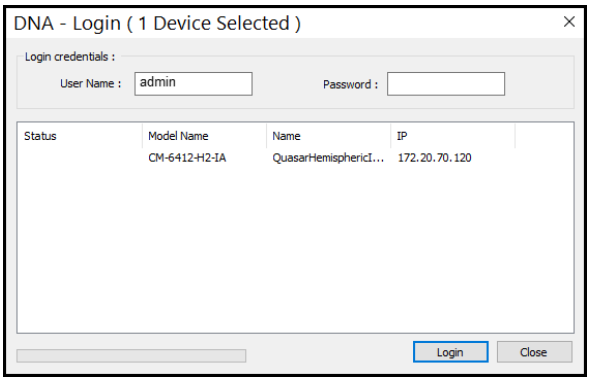
2. In the **DNA - Login** window, type *admin* or the name of any user assigned Admin privileges; and the password.

   If necessary, contact the person who configured the camera's users.



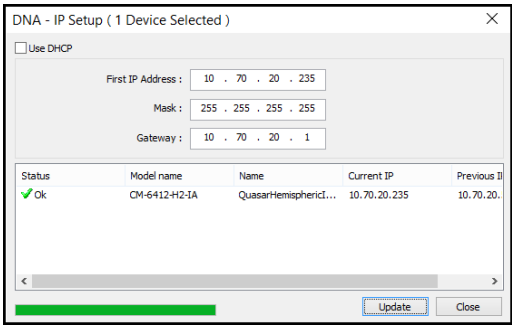

3. Click **Login**, wait for ✔ Ok status to appear, and then click **Close**.

d. Verify that the camera's Login status is Authenticated.

e. Change the camera's IP address.

   1. Right-click the camera and select **IP Setup**.
   2. In the **DNA - IP Setup** window, clear *Use DHCP* and specify the camera's *IP address*. You can also specify the *Mask* (default: 255.255.255.0) and *Gateway*.

      Then, click **Update**, wait for ✔ Ok status to appear, and then click **Close**.

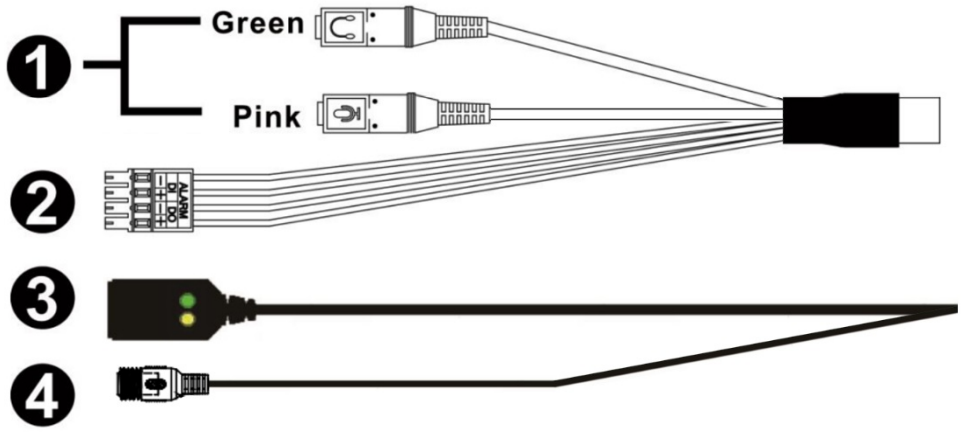


# 4 Connect the Camera

To install the camera, Teledyne FLIR recommends connecting the camera on a bench or in a lab and configuring it for networking before mounting and aiming it. However, circumstances can dictate adjusting the sequence of the steps. For example, you can mount the camera before configuring it for networking, or connect the camera before mounting it.

**Warning**

The camera itself does not have a power on/off switch. Do not supply power to the camera until you have completely finished connecting it.




*System Cables*

| Connectors | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Pink | Female 3.5mm audio in (line in) | 2 | Pin 1 | Alarm In – | 3 | Black | RJ-45 for Ethernet / PoE |
| | | | | Pin 2 | Alarm In + | | | |
| | Green | Female 3.5mm audio out (line out) | | Pin 3 | Alarm Out – | 4 | Black | 12V DC |
| | | | | Pin 4 | Alarm Out + | | | |

a. Attach male 3.5mm plugs on cables from audio I/O devices to the appropriate connectors.

b. Attach wires from external devices to the included four-pin alarm I/O terminal block plug according to the pin assignment above. Then, attach the plug to the connector.

c. Attach a Cat 6 cable from the network switch to the RJ-45 connector for a 10/100/1000 Mbps Ethernet and IEEE 802.3af class 0 PoE connection. Ethernet is required for streaming video and for configuring the camera.

   Next to the RJ-45 connector on the system cable, the green link LED indicates a good network connection. The orange activity LED flashes to indicate network activity.

d. (Optional) If using a 12V DC power supply, connect it to the 12V DC connector.
e. (Optional) Insert a microSD / SDHC / SDXC card into the slot inside the camera body (maximum 1 TB). For information about accessing the slot and the camera's default button, see the camera's installation and user guide.

## 4.1 Supplying Power to the Camera

**Supplying Power to the Camera**

| Source | Max. Power Consumption |
|---|---|
| 12V DC UL-listed L.P.S. (Limited Power Supply) unit | 11.16 W |
| PoE IEEE 802.3af | 12.95 W |

For assistance with purchasing a power supply, contact Teledyne FLIR.

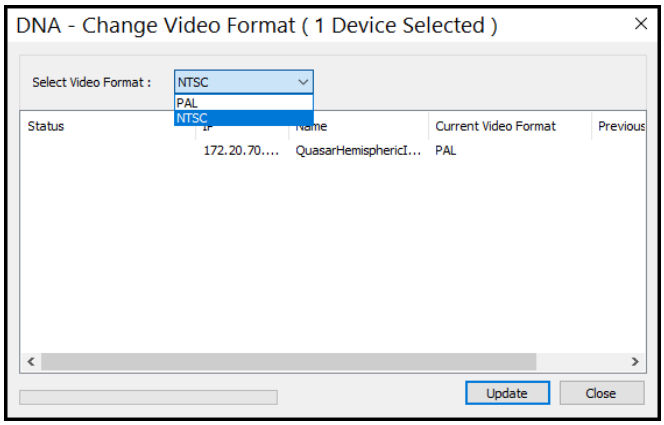
**Note**

Connect the camera to a PoE power source as the primary power source, and then connect 12V DC as the secondary power source. If the primary power source fails, the camera seamlessly switches to 12V DC until the primary power source is restored.

**Warnings**

- Do not connect an external power supply to the four-pin alarm I/O terminal block plug or connector.
- The PoE unit and all interconnected equipment must be installed indoors within the same building, including all PoE-powered network connections, as described by Environment A of the IEEE 802.3af standard.
- The power cord to the 12V DC power supply unit must be connected to a socket outlet with an earthing connector.
- This product contains a battery that is soldered to the PCB. There is a risk of explosion if the battery is replaced by an incorrect type. **Do not replace the battery.** The battery should be disposed of in accordance with the battery manufacturer's instructions.

# 5 Change Video Format (Optional)




By default, NTSC is the camera's video format. You can change the camera's video format to PAL using the DNA tool.

a. In the DNA Discover List, right-click the camera and select **Change Video Format**.
b. In the **Change Video Format** window, select PAL. This changes the camera's video format to Linear 50 FPS PAL.
c. Click **Update**, wait for ✔ Ok status to appear, and then click **Close**.

# 6 Install Mounting Hardware (Optional)

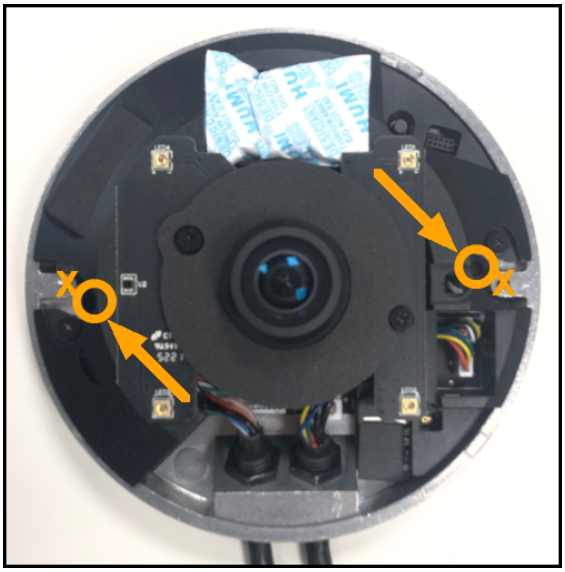
Using the hardware included in the camera kit, you can mount the camera onto a suitable surface. For information about other mounting options, including the list of Teledyne FLIR mounting accessories that support the camera, see the camera's installation and user guide.

If you are using mounting hardware not included in the camera kit, install it according to the installation instructions for the hardware. If necessary, adapt the instructions in this guide to those instructions.

# 7 Mount and Connect the Camera

a. Using the Torx Security wrench included in the camera kit, loosen the two screws that secure the camera cover to the camera base. Then, remove the cover.
b. Place the camera on the surface at the mounting location.
c. On the surface, mark the position of the two mounting screw holes.

*Screws Securing Cover to Base*

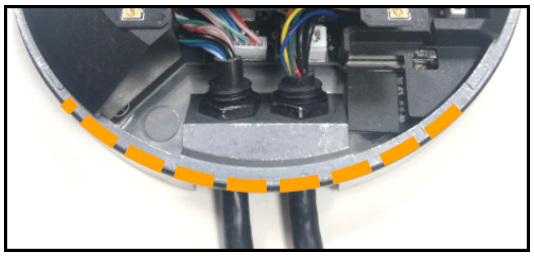


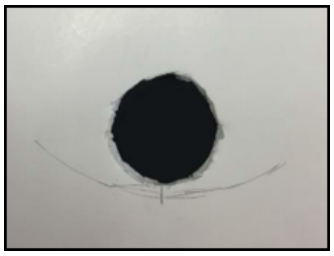
*Mounting Screw Holes*

d. Route the cables.

**If you are routing the system cables into the mounting surface:**

1. Along the bottom edge of the camera, draw a curved line.
2. On the surface, mark a spot 20mm above the center of the curved line.
3. Using the marked spot as the center, draw and then drill a circular hole with a 30mm diameter (15mm radius) for Ethernet and other cables.
4. At each marked mounting screw hole, drill a hole slightly smaller than the plastic screw anchors included in the camera kit. Then, insert the plastic screw anchors into the drilled holes.
5. Route Ethernet and other cables from the mounting surface through the hole.





**If you are routing the system cables through the conduit hole:**

1. Carefully remove the hole cover, which is secured in place by adhesive.
2. Route the system cables through the hole into the conduit.


**If you are using mounting hardware:** You can route the system cables into the hardware.

If possible, route an unterminated Ethernet cable to the mounting surface and through the hole. Otherwise, to waterproof the connection, you need to remove the RJ-45 plug from the cable.

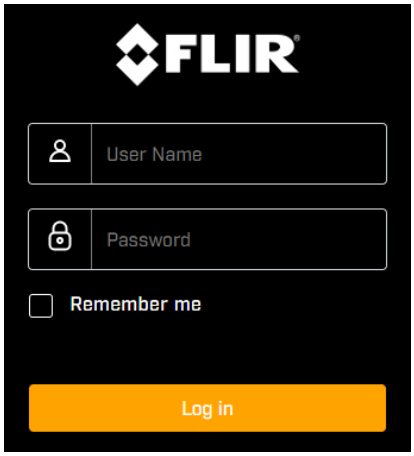
e. Connect the camera according to the information in 3 Connect the Camera. For information about waterproofing the connections, see the camera's installation and user guide. Then, finish routing the connected cables.
f. Attach the camera base to the mounting surface. Align the camera's two mounting screw holes with the plastic screw anchors in the mounting surface and use two of the self-tapping screws included in the camera kit.
g. Re-attach the camera cover. Using the Torx Security wrench included in the camera kit, tighten the two screws that secure the camera cover to the camera base.

# 8 Complete Camera Setup

To complete camera setup — for example, to configure the camera's fisheye lens features or to format the microSD card — you need to access the camera's web page with the default *admin* user or with another user assigned Admin or Expert privileges. The camera web page supports the latest version of Google Chrome® and other popular web browsers.

**To access the camera's web page:**

a. Do one of the following:
   - In the Teledyne FLIR Discovery Network Assistant (DNA) tool, double-click the camera in the Discover List.
   - Type the camera's IP address in a browser's address bar (when the PC and the camera are on the same network). If you do not know the camera's IP address, you can use the DNA tool to discover it.

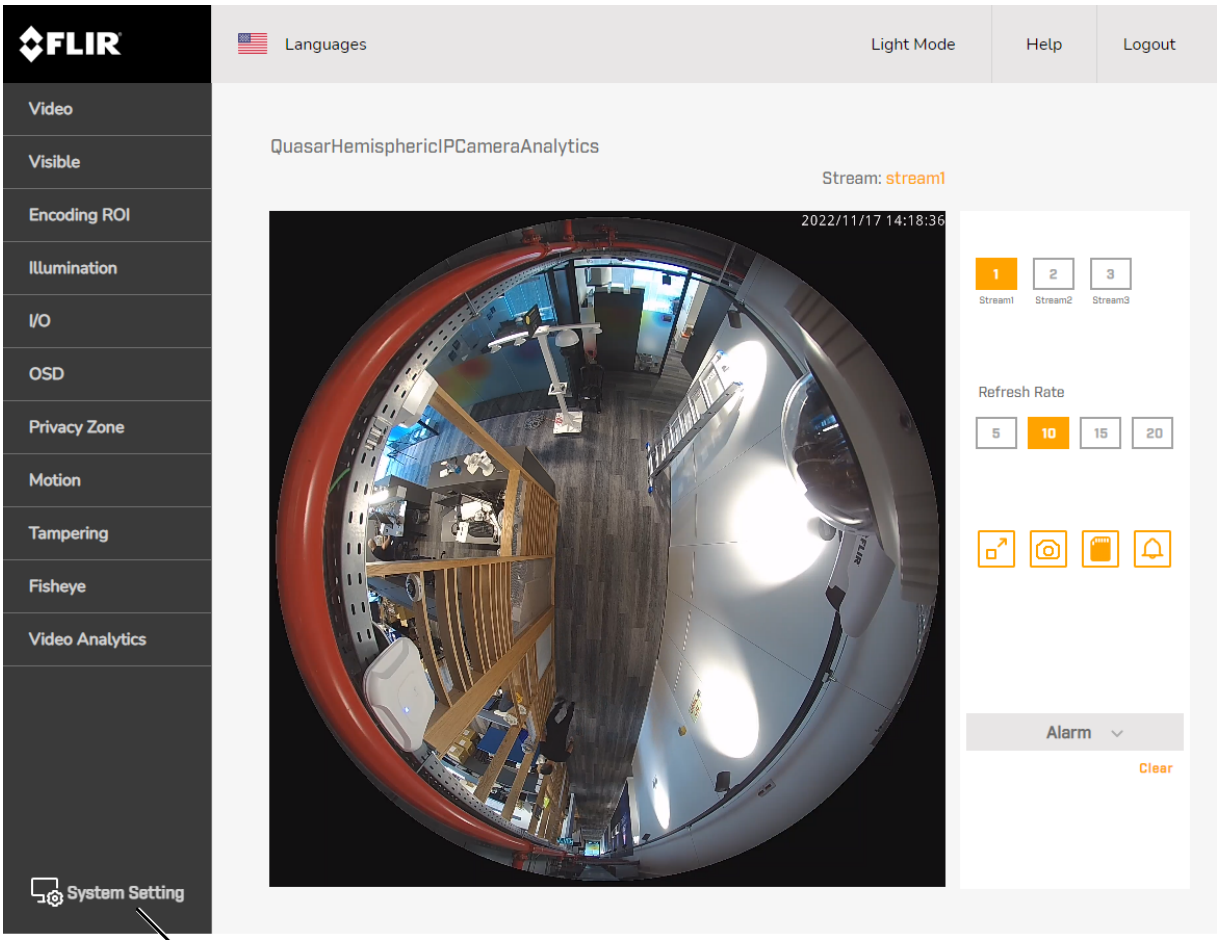



b. On the login screen, enter a user name and password. If necessary, contact the person who configured the camera's users and passwords.

When logging in to the camera for the first time or for the first time after resetting the camera to its factory defaults:

1. Log in with user name *admin* and the default password, *admin*.
2. Specify a new password for *admin*:
   - must be 8-64 characters
   - can include the following special characters: @#~!$&<>+_-.,*?
   - cannot include four-digit sequences (for example, 1234)
   - cannot include four repeating characters (for example, aaaa)
3. Log back in using the new password.

The camera's View Settings home page opens.




**System Settings**

*View Settings Page - Light Mode*

**To format the microSD card:**

a. Click **System Settings**. Then, open the SD Card page.

b. Under SD Format, select *vfat* (default) or *ext4* (recommended).

c. Click **Format**.

### Additional Configuration Steps

Depending on installation and use, completing camera setup can also consist of configuring the camera's video analytics; and configuring or modifying the default video stream and visible picture settings; network security settings; and alarm settings.

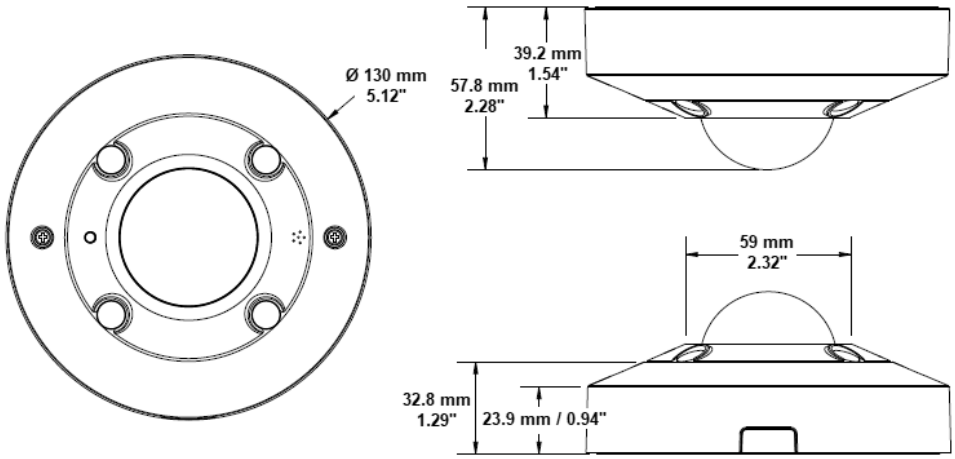
Many configuration steps can be performed before or after mounting the camera. However, some of them can or should only be performed after mounting the camera. For example, configure the camera's video analytics after mounting the camera.

For more information about configuring the camera, see the camera's installation and user guide.

# 9 Attach the Camera to a Supported VMS

After mounting the camera and discovering or defining its IP address, use VMS Discovery/Attach procedures to attach the camera to a supported VMS.

# Camera Dimensions




# Register the Product

Register the product at https://customer.flir.com.
For warranty information, see https://www.flir.com/support-center/warranty/security/flir-security-product-warranties/.