



# Quasar™ Mini-Dome CM-6405 / CM-6408 Quick Install Guide



## 1 Check Contents

Make sure all of the items above are included in the camera kit.

## 2 Select a Location

Select a suitable location to mount the camera.

Verify that the operating temperature range is in the following ranges, with no more than 90% non-condensing humidity:

- With heater: -55° C to 60° C (-67° F to 140° F)
- Cold start with heater: -55° C to 60° C (-67° F to 140° F)



### Warnings

- Placing a camera in a surrounding 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.

Be sure to have the required accessories and tools available and refer to the camera's installation and user guide as necessary.

Cables can enter the camera either through the rear of the camera via the mounting bracket or through a conduit hole on the side of the camera. If the cables enter through the rear, make sure that the location provides a suitable method for routing the cables.

CM-6405 / CM-6408 Quick Install Guide Revision 120

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This document does not contain any export-controlled information.

For further advice on positioning and orienting the camera, see the camera's installation and user guide.

### Supplying Power to the Camera

The camera can be powered by:

- A UL-listed L.P.S. (Limited Power Supply) unit, rated to a maximum temperature of 60° C:
  - 12 VDC, 1.21A minimum
  - 24 VAC, 50/60Hz, 1.2A minimum
- PoE (Power over Ethernet): 48 VDC, 0.27A minimum

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

## 3 Remove Cover and Separate Base



### Tip

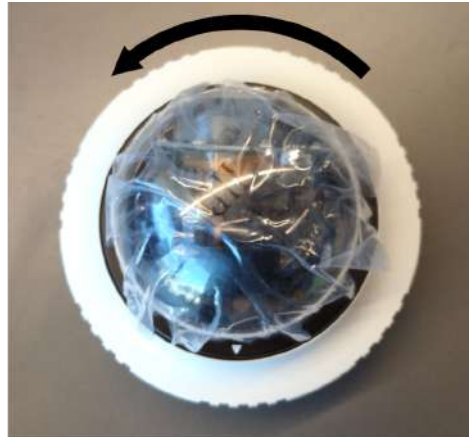
When unpacking the camera, do not remove the plastic sheet protecting the dome.

### To remove the dome cover:

- a. Using the Torx wrench, loosen the screw on the camera's outer circular ring that secures the dome cover to the camera base.
- b. While firmly holding the base, rotate the ring counterclockwise to loosen it.
- c. Carefully pull the ring and cover away from the base.



*Outer Ring Locking Screw*



*Loosen Ring*

### To separate the camera base from the mounting bracket:

- a. Using a screwdriver, loosen the two twist-lock screws securing the camera and its base to the mounting bracket.
- b. Gently pull the camera and its base away from the mounting bracket.

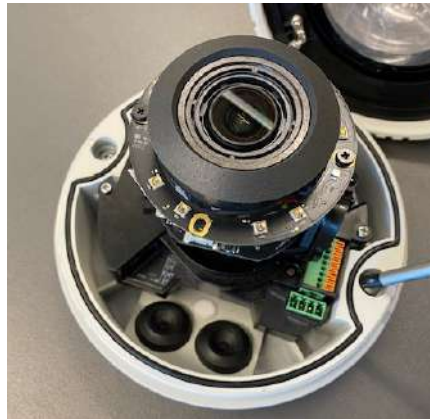
### Change the number of LEDs (optional)

The camera has a total of eight IR illumination LEDs. On the 3D lens assembly, there is a 4 / 8 (default) switch that determines the number of enabled IR LEDs. With the dome cover removed, you can change the switch setting.

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Separate Base from Bracket



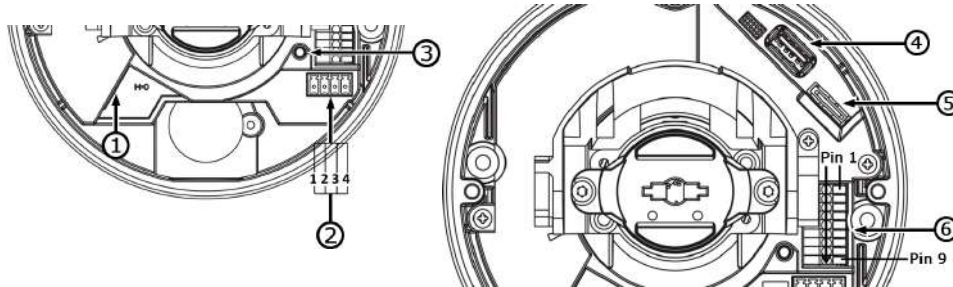
## 4 Connect the Camera

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.



Connectors

Connector		Connection
1	RJ-45 Two LEDs 	Attach a Cat 6 cable from the network switch to the RJ45 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. The green link LED indicates a good network connection. The orange activity LED flashes to indicate network activity.



### Warning

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.

Connector		Connection				
2	Four-pin power terminal block	1	24VAC -	3	12VDC -	If using a 24VAC or 12VDC power supply, connect it to the power terminal block connector according to the pin assignment shown.
		2	24VAC +	4	12VDC +	



### Warning

The power cord to the 12 VDC or 24 VAC power supply unit must be connected to a socket outlet with an earthing connector.

3	Default Button	To restore the camera to its factory defaults, use a proper tool to press the default button for at least 20 seconds.				
4	USB	Connects to Wi-Fi dongle (future release support)				
5	microSD Card Slot	For video clip and snapshot recording and file storage, insert a microSD / SDHC / SDXC card (minimum 8 GB, maximum 512 GB, Class 10) in the card slot. When the camera is powered on, do not remove the microSD card.				
6	Nine-pin terminal block	1	Audio In L	6	Alarm Out +	Attach wires from external devices to the terminal block connector for alarm and audio in/out according to the pin assignment shown.
		2	Audio In R	7	Alarm Out -	
		3	GND	8	Alarm In +	
		4	Audio Out L	9	Alarm In -	
		5	Audio Out R			



### Warnings

- Do not connect an external power supply to the nine-pin audio/alarm I/O terminal block 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.



### Tip

To make it easier to mount and install the camera, while the camera is on the bench or in the lab, you can [connect Ethernet and other cable patch cords to the camera's connectors and route them through the grommets on the base and through the mounting bracket](#). Then, you'll be able to mount and install the camera without separating the camera base from the mounting bracket a second time.

## 5 Configure for Networking

To discover the camera on the network, Teledyne FLIR recommends using the <% FLIR%> Discovery Network Assistant (DNA) tool. Version 2.3.0.20 or higher supports Quasar CM-6405 / CM-6408 cameras, does not require a license to use,

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	•	•
Configure DNS settings, MTU, and Ethernet speed		•
Change user credentials	•	•
Change video format	•	•
Configure more than one camera at the same time	•	

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.

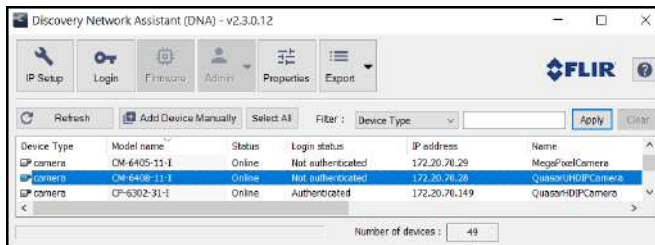
By default, DHCP is enabled on the camera and a DHCP server on the network assigns the camera an IP address. For example, if the camera is managed by Teledyne FLIR's Horizon or Meridian VMS and the VMS is configured as a DHCP server, the VMS automatically assigns the camera an IP address.

If the camera is managed by Teledyne FLIR's 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. The camera's default IP address is 192.168.0.250.

**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.




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

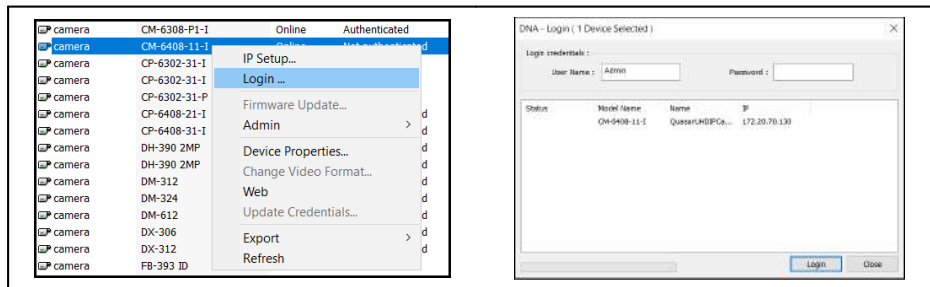
If this is the first time you are configuring the camera or if it is the first time after resetting the camera to its factory defaults, DNA automatically authenticates the camera with the default password for the camera's admin user (*admin*).

If the admin user password has been changed, you need to authenticate the camera.

In the DNA Discover List, right-click the camera and select **Login**.

In the **DNA - Login** window, type the password for the admin user. If you do not know the admin user password, contact the person who configured the camera's users and passwords.

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



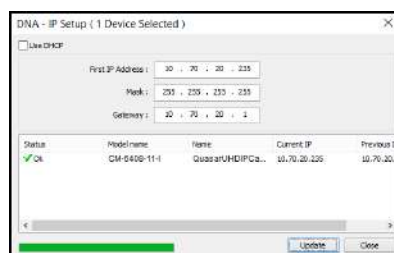
In the DNA Discover List, verify that the camera's status is *Authenticated*.

- c. Change the camera's IP address.

Right-click the camera and select **IP Setup**.

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**.

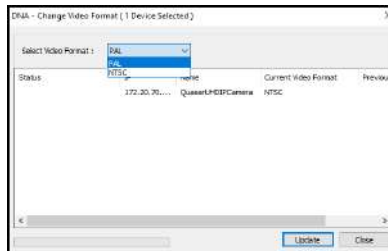


## 6 Change Video Format (Optional)

By default, NTSC is the camera's video format.

**To 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.
- c. Click **Update**, wait for **Ok** status to appear, and then click **Close**.



For more information about using the DNA tool to configure one or more cameras, see the DNA User Guide. While the software is open, click the Help icon .

For the camera's other default Video Configuration settings, see [7 Default Video Configuration Settings](#).

## 7 Re-attach Cover

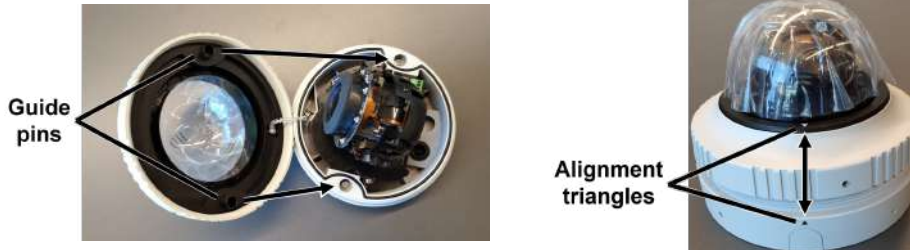
To prevent damaging the camera's internal components while moving it from the bench or lab to its mounting location, re-attach the dome cover to the base and then remove it again at the mounting location.

Before doing so, you can re-attach the camera base to the mounting bracket. Use a screwdriver to tighten the two twist-lock screws securing the camera and its base to the mounting bracket. If you do not re-attach the camera base to the mounting bracket, remember to bring the screwdriver to the mounting location.



**To re-attach the dome cover:**

- a. Using the two guide pins on the dome cover and the triangles on the cover and on the base, carefully align and position the dome cover onto the base.



- b. Securely tighten the outer ring.
- c. Lock the ring. Using the Torx wrench, tighten the screw on the outer ring that secures the cover to the base.

## 8 Fit Mounting Hardware

If required, install the mounting hardware for the camera according to the instructions for the hardware.

## 9 Remove Cover and Separate Base

Repeat the steps described in [4.2 Remove Cover and Separate Base](#).

## 10 Install Mounting Bracket

You can install the mounting bracket on standard electrical boxes or directly on a secure, flush, and vibration-free surface.

**To install the mounting bracket on a standard electrical box:**

Attach the bracket to the box using:

- The holes in the mounting bracket, according to the types of boxes engraved on the bracket
- The corresponding holes in the box
- Suitable bolts, washers, and nuts (not included in the camera kit)



**To install the mounting bracket directly on a surface:**

- a. Choose four widely spaced mounting holes on the bracket for optimum flat surface mounting.
- b. Using the bracket as a template to mark the surface, drill four anchor holes.
- c. (Optional) If necessary, drill a hole wide enough for routing cables.
- d. Hammer the four plastic screw anchors into the drilled holes.
- e. Insert the anchors and then attach the bracket to the surface using the four M4 25mm self-tapping screws included in the camera kit.

When tightening the screws, the holes in the mounting plate allow for making small adjustments to the bracket's position.

## 11 Route Cables and Connect the Camera

Cables can enter the camera from the side or from the rear.

### To route cables through the side of the camera:

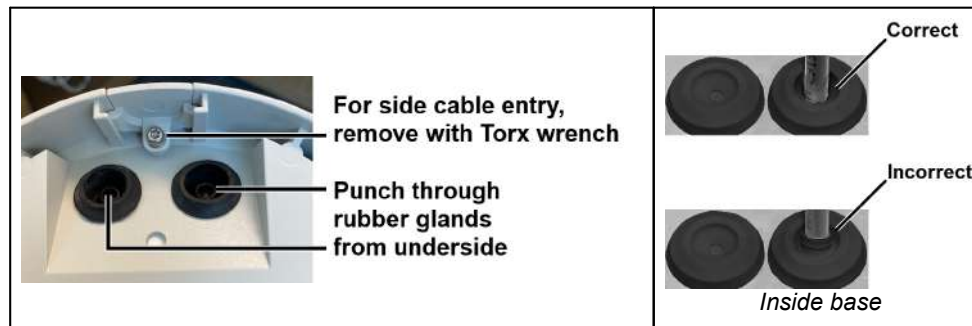
- a. Use the Torx wrench to loosen the screw securing the side conduit hole cover and remove the hole cover.
- b. Route cables through the hole.

### To route cables through the rear of the camera:

- a. Route cables through the hole in the mounting bracket.

### To route cables into the camera base:

- a. For each cable, use the Torx wrench to punch a hole in the center of the rubber glands in the the camera's base, from the underside.
- b. Route the cable through the hole in the grommet.
- c. Push the cables back through the seal so that the seal extends out of the base.



According to the information in [4 Connect the Camera](#), connect the camera.



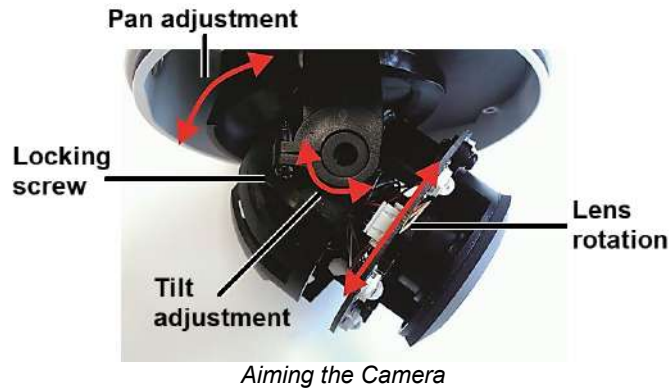
### Note

Connect the camera to a 24VAC or PoE power source as the primary power source, and then connect 12VDC as the secondary power source. If the primary power source fails, the camera seamlessly switches to 12VDC until the primary power source is restored.

## 12 Mount and Aim the Camera

- a. Make sure that the camera is facing the required field of view. Then, carefully re-attach the camera base to the mounting bracket. Use a screwdriver to tighten the two twist-lock screws securing the camera and its base to the mounting bracket.
- b. Aim the camera, which has three axes for adjusting the field of view:
  - o *Pan adjustment* – Rotate the lens base until satisfied with the field of view.
  - o *Tilt adjustment* – Loosen the screw locking the camera lens in its tilt angle. Tilt the lens until satisfied with the field of view. Then, tighten the screw.
  - o *Lens rotation* – Rotate the 3D assembly in the lens until satisfied with the field of view.





**Caution**

Do not rotate or tilt beyond the mechanical limits for each axis:

- Pan adjustment range: 356°
- Tilt adjustment range: ±80°
- Lens rotation range: ±98° – Rotating the 3D assembly in the lens beyond its mechanical limit can twist, disconnect, or break the camera's internal cables.

When adjusting the tilt and lens rotation for a CM-6408-11-I camera, at the camera's widest view (zoom = 1x) and at certain tilt angles, as shown at right, a small part of the camera can appear in the far upper-left corner of the field of view.

Tilt angle	Lens rotation angle range
20°	30°~45°
10°	10°~45°

c. Repeat the steps described in [4.6 Re-attach Cover](#).

### 13 Complete Camera Setup

Specify the camera's zoom and focus, and format the microSD card, using the camera's web page. Teledyne FLIR recommends using Microsoft Internet Explorer 11.0, with the ActiveX plug-in.

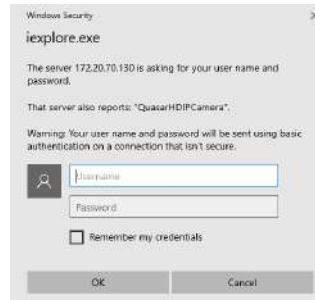
The camera's web page supports other browsers that do not support ActiveX. However, using another browser requires configuring MJPEG encoding for at least one of the camera's video streams; for more information, see the camera's installation and user guide.

a. Log in to the camera's web page.

In the DNA Discover List, double-click the camera.

In the Windows Security dialog box, type a user name and password. Both are case-sensitive.

**When logging in to the camera's web page for the first time** or for the first time after resetting the camera to its factory defaults, type *admin* for the user name and for the password.



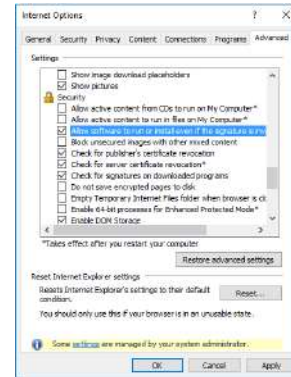
*Windows Security dialog box*

Then, specify a new password for the admin user. Use a strong password consisting of 8-64 characters. Passwords can include special characters @#~!\$&<>+\_-.,\*?.

Log back in using the new password.

- b. If the **User Account Control** dialog opens and prompts you to install the `install.cab` file, click **Yes**.

If ActiveX installation is not successful, in the Internet Explorer **Tools > Internet Options > Advanced Security** settings, select **Allow software to run or install even if the signature is invalid** and click **OK**. Try installing ActiveX again. After a successful ActiveX installation, uncheck the checkbox, and click **OK**.



If a popup message appears for running the ActiveX add-on, click **Allow**.

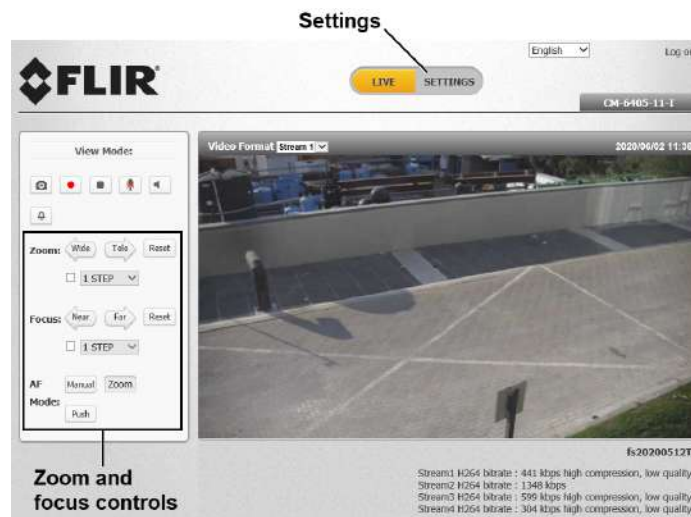
- c. Install the web player.



#### Note

If you have previously installed a web player application on the PC, you should delete the existing web player from the PC before accessing the camera. For information on how to install the new player, uninstall a previous player, and clear temporary Internet files, see the camera's installation and user guide.

The camera's web page opens.



- d. On the Live page, adjust the zoom or focus using the controls.

b. Format the microSD card.

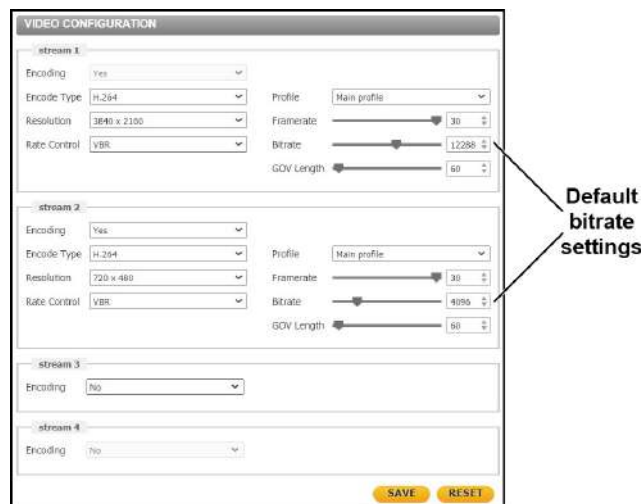
From the navigation bar, click **Settings**. Then, in the sidebar, click **System > Edge Recording > SD Card**.



Under Device Setting, you can select *vfat* (default) or *ext4* (recommended). Click **Format**.

## 14 Default Video Configuration Settings

The camera's default Video Configuration settings appear in the following image. **CM-6405**: 2688x1944 is the default stream1 resolution.



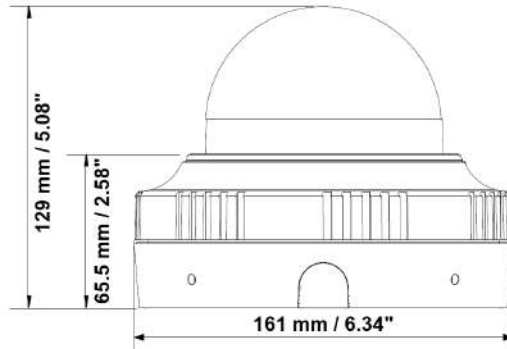
*Default Video Configuration Settings - CM-6408*

For more information about using the camera's web page to configure the camera, see the camera's installation and user guide.

## 15 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.

## 16 Camera Dimensions



## 17 Register the Product

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