Honeywell

HCD92534
True Day/Night
IR Camera

NTSC   PAL
HCD92534   HCD92534X

User Guide

Revisions

Issue	Date	Revisions
A	04/07	New document

Warnings

Installation and servicing should be performed only by qualified and experienced personnel to conform to all local codes and to maintain your warranty.

WARNING! **12 VDC/24 VAC models require the use of CSA Certified/UL Listed Class 2 power adapters to ensure compliance with electrical safety standards.**

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Caution To prevent electric shock and risk of fire hazards do not use power sources other than that specified.

Explanation of Graphical Symbols

CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THE UNIT.
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL	THIS SYMBOL INDICATES THAT IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS ACCOMPANY THIS UNIT.

FCC Compliance Statement

Information to the User: 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.

Caution   Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Manufacturer's Declaration of Conformance

The manufacturer declares that the equipment supplied with this guide is compliant with the essential protection requirements of the EMC directive 89/336/EEC and the Low Voltage Directive LVD 73/23 EEC, conforming to the requirements of standards EN 55013 for emissions.

Precautions

- Please ensure that your installation area can support the weight of the camera.
- Do not install the camera in extreme temperature conditions. Only use the camera where temperatures are between -13°F and 122°F (-25°C and 50°C). Be especially careful to provide ventilation when operating under high temperatures.
- Do not aim the camera towards an extreme light source to prevent damaging the CCD.
- Do not touch the camera bezel (front glass plate).
- Do not drop the camera or subject it to physical shock.
- Do not expose the camera to radioactivity.
- Do not use a strong or abrasive detergent when cleaning the camera.

Caution The light emitted from the near-infrared light emitting diodes provides illumination over a wide area. This light is not considered a risk to the unshielded human-eye. However, as with any light source, it is recommended that normal precautions be taken to avoid unnecessary exposure. For example, avoid staring into the beam or viewing directly with optical instruments at close range.
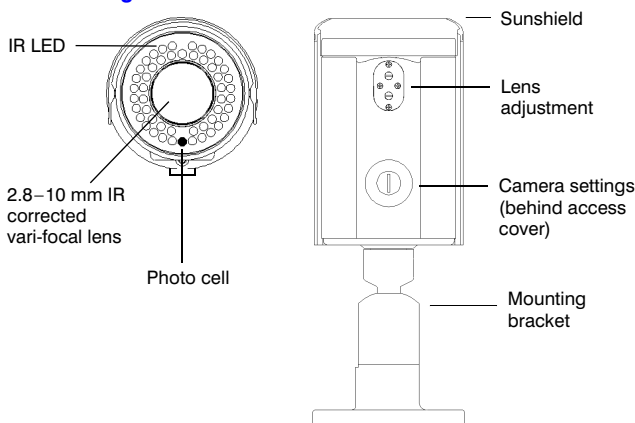
Note IR LEDs could be warm after prolonged use.

Contents

Introduction

The Honeywell HCD92534 Color IR camera is designed for exceptional value and performance and is ideally suited for use in day-to-day surveillance applications. The off-the-shelf feature set is designed for high picture quality in standard applications and the HCD92534 requires little to no adjustment after installation.

Figure 1   Camera Overview

IR LED

Sunshield

Lens adjustment

2.8–10 mm IR corrected vari-focal lens

Camera settings (behind access cover)

Photo cell

Mounting bracket

Features

- High resolution 530 TVL 1/3" CCD provides a high-quality picture in low-light conditions
- 49 IR LEDs for illumination up to 100 ft (32 m) depending on scene reflectivity
- 2.8–10 mm F1.3 IR corrected Vari-focal lens with external controls for zoom and focus
- External access for camera OSD menu and day night threshold controls
- Digital Noise Reduction (DNR) minimizes video noise in low light
- Digital Slow Shutter (DSS) for improved light sensitivity to extend the range of the light that the camera can detect in low-light conditions
- Automatic day/night switching with adjustable threshold level control
- 12 VDC or 24 VAC operation

Before You Begin

> Please read this guide carefully
> before you install the HCD92534
> True Day/Night camera.
> Keep this guide for future reference.

Unpack Everything

Check that the items received match those listed on the order form and packing slip. The HCD92534 packing box should include, in addition to this User Guide:

• One HCD92534 camera
• Four mounting screws
• One video test cable
• One allen wrench
• One adapter plate for 4S mounting box

If any parts are missing or damaged, contact the dealer you purchased the camera from or call Honeywell Customer Service (see the back of this manual).

Note You will also require a Phillips screwdriver and a flathead screwdriver to complete the installation.

Installation

The HCD92534 camera is designed for installation on a wall or ceiling. The HCD92534 is weather sealed for indoor or outdoor locations.

Attaching the Camera

1. Position the camera to the desired mounting location on a wall or ceiling. Be sure the location is solid on a flat, smooth surface (for example, a crossbeam).
2. Using the supplied mounting template, mark the four screw holes for installation.
3. Use four screws appropriate to your installation, screw the camera to the marked holes.

   The mounting bracket can be separated from the camera housing for easier installation. This is done by unscrewing and removing the thumb screw on the bracket. Replace and tighten the thumb screw after installation is complete.

Note To ensure a waterproof installation, the notch in the camera base that the power and video connections exit through should be facing down. If the power and video connections exit the top of the base (wall mounted only), water may pool in the camera base. Apply appropriate sealant around the notches and any other gaps between the camera base and the mounting surface.

Positioning the Camera

**Caution** Do not swivel and position the camera without the mounting bracket firmly in place.

Loosen the thumb screws and move the camera into position. Swivel the camera to capture the desired field of view. Tighten the thumb screws to set the position.

Lens Setup

Adjusting the Zoom and Focus of the Lens

The zoom and focus adjustment is accessible at the underside front end of the camera housing.

Figure 2   Lens Controller
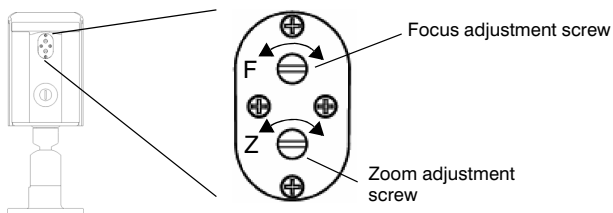
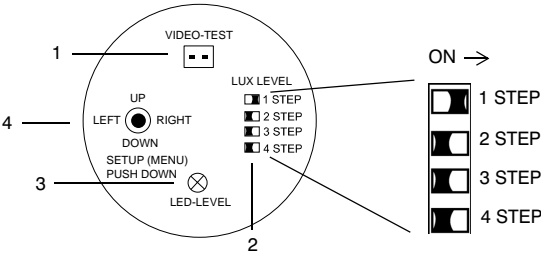Use a flathead screwdriver to adjust the zoom and/or focus.

To adjust the focus turn the focus screw counter-clockwise for near focus and clockwise for far.

Turn the zoom screw counter-clockwise for wide-angle and clockwise for tele-photo.

Camera Settings

Camera Functions

Figure 3   Camera Controller

Legend	
#	**Description**
1	Video-test monitor output connector
2	LUX-level adjustment DIP switches. Only one switch should be on at a time. They modify the point at which the lux threshold (level of light) changes the mode of operation (color or B/W).

STEP	Color to B/W (LED on)	B/W to Color (LED off)
1	11−12 lux	12−13 lux
2	8−9 lux	10−11 lux
3	6−7 lux	7−8 lux
4	1−3 lux	3−5 lux

3	LED-level adjustment screw. Increase (turn clockwise) or lower (turn counter-clockwise) the IR LED brightness in night (B/W) mode.
4	Camera OSD control (four position plus center push)

Press this control	To do this
UP, DOWN	Select a new item
LEFT, RIGHT	Select a menu item
SETUP (MENU)	Access a submenu

Connecting the Camera

1. Connect the BNC video output connector to the video-in connector on your monitor or video recorder.
2. Connect the camera to a power supply appropriate for your installation (12 VDC or 24 VAC).
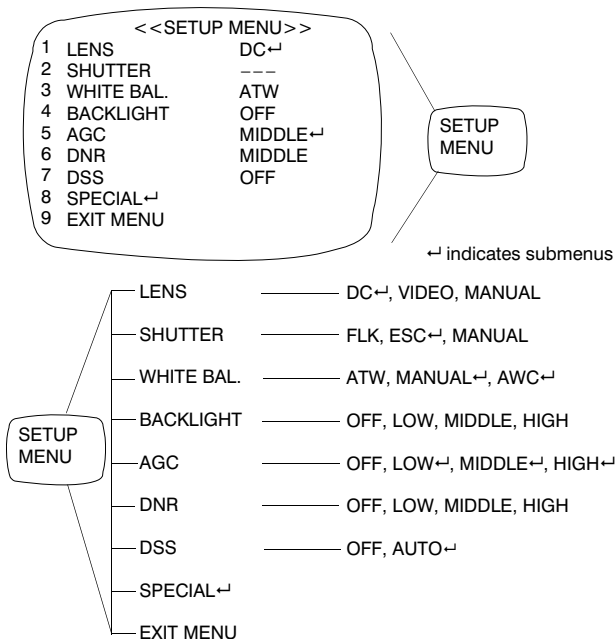
Programming

OSD Menu Structure

The HCD92534 menu system consists of one main SETUP MENU (see *Figure 4*) for easy camera programming.

Press down on the **SETUP (MENU)** control (see *Figure 3*) to display the SETUP menu.

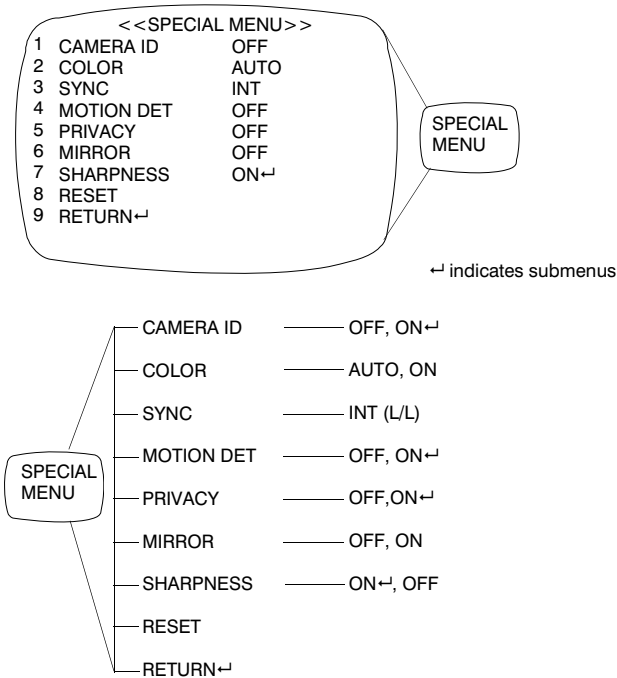**Figure 4   Menu Structure**

```
              <<SETUP MENU>>
  1  LENS              DC↵
  2  SHUTTER           –––
  3  WHITE BAL.        ATW
  4  BACKLIGHT         OFF              SETUP
  5  AGC               MIDDLE↵          MENU
  6  DNR               MIDDLE
  7  DSS               OFF
  8  SPECIAL↵
  9  EXIT MENU
```

↵ indicates submenus

```
           LENS ———————— DC↵, VIDEO, MANUAL

           SHUTTER —————— FLK, ESC↵, MANUAL

           WHITE BAL. ——— ATW, MANUAL↵, AWC↵

           BACKLIGHT ————— OFF, LOW, MIDDLE, HIGH
SETUP
MENU       AGC ——————————  OFF, LOW↵, MIDDLE↵, HIGH↵

           DNR —————————— OFF, LOW, MIDDLE, HIGH

           DSS ——————————  OFF, AUTO↵

           SPECIAL↵

           EXIT MENU
```

SETUP Menu Functions

	Menu Item	Option	Description
1	LENS	DC↵ VIDEO MANUAL	Selects Lens type (the HCD92534 only supports DC mode at this time; choosing any other mode may cause incorrect/unpredictable camera operation).
2	SHUTTER	FLK ESC↵ MANUAL	Adjusts shutter settings. Flickerless mode (FLK) reduces on-screen flickering. Electronic Shutter Control (ESC) adjusts brightness level on screen. Manual mode allows you to adjust the shutter speed from 1/60-1/120,000 of a second (NTSC), or 1/50-1/120,000 (PAL). FLK is the only option available when the camera lens is set to the recommended DC mode.
3	WHITE BAL. (White Balance)	ATW MANUAL↵ AWC↵	Controls color on the screen. Select Auto Tracing White Balance (ATW) when the color temp is 2400°K-12000°K (for example when under a fluorescent light, or outdoors). Manual mode allows you to increase or decrease the red or blue factor on screen. Auto White Balance Control (AWC) automatically adjusts the white balance to your specific environment.
4	BACKLIGHT	OFF LOW MIDDLE HIGH	Provides light level control to overcome severe backlighting conditions.
5	AGC (Automatic Gain Control)	OFF LOW↵ MIDDLE↵ HIGH↵	Adjusts value of AGC gain. Increase the GAIN level to brighten the picture (noise/distortion may develop).
6	DNR (Digital Noise Reduction)	OFF LOW MIDDLE HIGH	Reduces noise/distortion on the screen. Increasing the DNR level reduces noise but may introduce video artifacts. DNR is deactivated if AGC is turned off.
7	DSS (Digital Slow Shutter)	OFF AUTO↵	Automatically provides a clear image under low-light conditions. You can control the maximum low-light magnification from 2x to 128x (increasing magnification may cause noise/distortion). DSS is deactivated when SHUTTER is set to FLK mode.
8	SPECIAL↵		Takes you to the SPECIAL menu (see next section).
10	EXIT		Exits the SETUP menu and returns to video monitoring.

SPECIAL Menu

1. On the SETUP menu, press the menu control **UP** or **DOWN** and then select **SPECIAL**.
2. Press the **SETUP (MENU)** control to access the SPECIAL menu.

Figure 5   SPECIAL Menu

```
        <<SPECIAL MENU>>
1   CAMERA ID        OFF
2   COLOR            AUTO
3   SYNC             INT
4   MOTION DET       OFF
5   PRIVACY          OFF
6   MIRROR           OFF
7   SHARPNESS        ON↵
8   RESET
9   RETURN↵
```
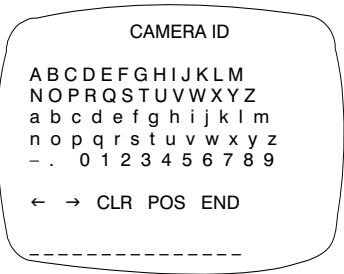
SPECIAL
MENU

↵ indicates submenus

SPECIAL
MENU

CAMERA ID ———— OFF, ON↵

COLOR ———— AUTO, ON

SYNC ———— INT (L/L)

MOTION DET ———— OFF, ON↵

PRIVACY ———— OFF,ON↵

MIRROR ———— OFF, ON

SHARPNESS ———— ON↵, OFF

RESET

RETURN↵

SPECIAL Menu Functions

	Menu Item	Option	Description
1	CAMERA ID	OFF ON↵	Sets a name to be displayed on the monitor. See *Adding a Camera Title Display*.
2	COLOR	AUTO ON	Sets the camera to either automatic color/black and white or full-time color mode.
3	SYNC	INT L/L↵	Synchronizes the vertical interval sync pulse of your camera with other equipment to reduce the effect of picture roll on the monitor. In Line Lock (L/L) mode you can adjust the phase from 0−360°.
4	MOTION DET	OFF ON↵	Detects moving objects on screen, and displays MOTION DETECTED along with the number of movements counted. Allows you to select the area on screen you want to observe. See *Motion Detection Setup*.
5	PRIVACY	OFF ON↵	Allows you to mask certain areas of the screen from observation.
6	MIRROR	OFF ON	Produces a horizontal mirror image on screen.
7	SHARPNESS	ON↵ OFF	Sharpens the image on screen. You can adjust the sharpness level from 0−31 (excessive sharpening may cause picture noise to develop).
8	RESET		Restores all factory default settings.
9	RETURN↵		Returns to the main SETUP menu.

Adding a Camera Title Display

To add a camera title:

1. On the SPECIAL menu, select **CAMERA ID** and then press **SETUP (MENU)**.

Figure 6   Adding Camera Title

```
            CAMERA ID

   A B C D E F G H I J K L M
   N O P R Q S T U V W X Y Z
   a b c d e f g h i j k l m
   n o p q r s t u v w x y z
   −  .   0 1 2 3 4 5 6 7 8 9

   ←   →  CLR  POS  END

   _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
```

2. Press the menu control **UP**, **DOWN, LEFT, or RIGHT** to select a character, then press **SETUP (MENU)** to accept it. The character is saved and the title cursor at the bottom of the screen moves to the next position. You can use the ← → symbols to go back or forward in the title name to make changes, and you can also select CLR to delete the entire title and start again.
3. Repeat *step 2* until your camera title is complete.
4. Select POS to position where you would like the camera title to be located on screen. Select the position using the menu control, then press **(SETUP) MENU** to confirm the position.
5. Select **END** when you are finished.

Sync Control/Line-lock Setup

This screen allows you to synchronize the vertical interval sync pulse of your camera with other equipment to reduce the effect of picture roll on the monitor. Linelock mode is only available when using 24 VAC power.

Figure 7   Sync Control Setup

```
              <SYNC. CONTROL>


    SYNC            INT (L/L)
```
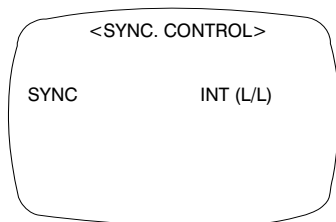
Menu Item	Description
INTERNAL	When line lock is not required.
LINELOCK	Adjust the vertical phase (VPH):
	VPH: 000−359 (factory default is 0)
RETURN	Press **MENU** to return to the SETUP MENU.

Motion Detection Setup

Set up to four areas of the screen to detect moving objects. The screen will display MOTION DETECTED along with the number of movements counted.

Figure 8   Motion Detection Setup

```
            MOTION DETECTION

AREA SEL        AREA 1
AREA STATE      ON
TOP             |..|................| 10
DOWN            |........|..........| 25
LEFT            |...|...............| 20
RIGHT           |........|..........| 40


           Press SET to Return
```

Menu Item	Option	Description
AREA SEL	AREA 1 AREA 2 AREA 3 AREA 4	Select which of the four motion detection grids top left, top right, bottom left, bottom right) you would like to modify.
AREA STATE	ON OFF	Choose whether to activate or deactivate the selected grid.
TOP DOWN LEFT RIGHT		Press **LEFT** or **RIGHT** menu control to alter the dimensions of the selected grid.

Privacy Mode Setup

Set up to four areas of the screen for privacy mode (that is, the camera will not record video in these areas).

Figure 9   Privacy Mode Setup

```
                    PRIVACY

    AREA SEL        AREA 1
    AREA STATE      ON
    AREA TONE       |...............|...|  80
    TOP             |..|................|  10
    DOWN            |........|..........|  25
    LEFT            |...|...............|  20
    RIGHT           |........|..........|  40

              Press SET to Return
```
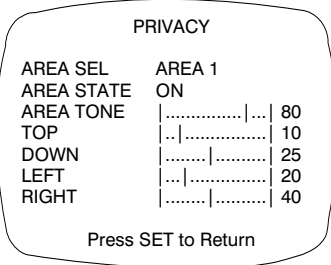
Menu Item		Description
AREA SEL	AREA 1	Select which of the four masking grids (top left, top right, bottom left, bottom right) you would like to modify.
	AREA 2	
	AREA 3	
	AREA 4	
AREA STATE	ON	Choose whether to activate or deactivate the selected grid.
	OFF	
AREA TONE		Press **LEFT** or **RIGHT** menu control to change the shade of the masking grids.
TOP		Press **LEFT** or **RIGHT** menu control to alter the dimensions of the selected grid.
DOWN		
LEFT		
RIGHT		

Warranty and Service

Subject to the terms and conditions listed on the Product warranty, during the warranty period Honeywell will repair or replace, at its sole option, free of charge, any defective product returned prepaid.

In the event you have a problem with any Honeywell product, please call Customer Service at 1.800.796.CCTV (North America only) for assistance or to request a **Return Merchandise Authorization (RMA)** number. For Europe and the United Kingdom, please contact your Honeywell dealer.

Be sure to have the model number, serial number, and the nature of the problem available for the technical service representative.

Prior authorization **must** be obtained for all returns, exchanges, or credits. **Items shipped to Honeywell without a clearly identified Return Merchandise Authorization (RMA) number may be refused**.

Specifications

	HCD92534 (NTSC)	HCD92534X (PAL)
Operational		
Image Sensor	1/3" CCD	
Video Standard	NTSC	PAL
Scanning System	525/60 lines	625/50 lines
Number of Pixels (H x V)	768 x 494	752 x 582
Minimum Illumination	0 lux, operates in complete darkness	
Horizontal Resolution	Greater than 530 TVL	
Video Output	1 Vp-p @ 75 Ohms	
Sync System	12 VDC: Internal	
	24 VAC: Internal/Line lock	
S/N Ratio	50 dB or more (AGC off)	
Auto Gain Control	Off/On, selectable	
ALC	Adjustable level control	
Automatic Electronic Shutter	1/60– 1/120,000 sec	1/50– 1/120,000 sec
Lens Type	2.8-10 mm Vari-focal Auto Iris, IR corrected, F1.3	
Horizontal Field of View	99°–27°	
White Balance	ATW/AWC/Manual	
BLC:	Off/On, selectable	
Gamma:	0.45	
Line Lock Phase Adjustment	Adjustable Line lock vertical phase	

	HCD92534 (NTSC)	HCD92534X (PAL)
IR LEDs	850 nm, 49 LEDs	
IR Illumination Distance	75 ft (24 m)−110 ft (33.5 m), depending on scene reflectivity	
Digital Noise Reduction	Off/Low/Middle/High	
Digital Slow Shutter	x2−x128	
Electrical		
Input Voltage	12 VDC/24 VAC	
Input Range	11−16 VDC, 17−28 VAC	
Surge Suppression	1.5 kW transient	
Power Consumption	15 W (max) with IR LEDs on	
Mechanical		
Dimensions	See diagram on next page	
Weight:	2.8 lb (1.27 kg)	
Construction	Housing: brushed and anodized aluminum with sunhood	
	Finish: brushed and anodized aluminum	
Connector	Main Video Output: BNC connector	
	Aux Video Output: 2-pin connector for video test cable	
	Power Input: Tinned leads	
Environmental		
Temperature:	Operating: -13°F to 122°F (-25°C to 50°C)	
	Storage: -35°F to140°F (-35°C to 60°C)	
Relative Humidity	0% to 85%, non-condensing	
Rating	IP66	
Regulatory		
Emissions:	FCC, CE (EN55013)	
Immunity:	CE (EN50130-4)	
Safety:	EU: 73/23/EEC LVD	

Dimensions

11.22"
(285.0 mm)

3.94"
(100.0 mm)
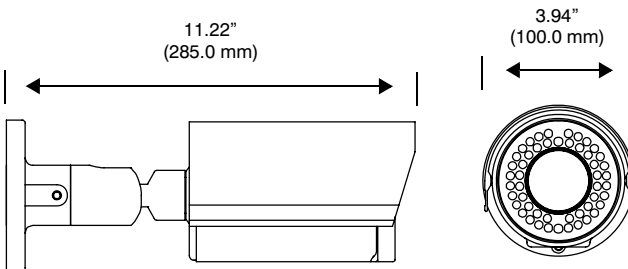
Mounting Template

Figure 10   Mounting Template

Scale 1:1

Mounting screw
holes (8/32 inch
diameter)
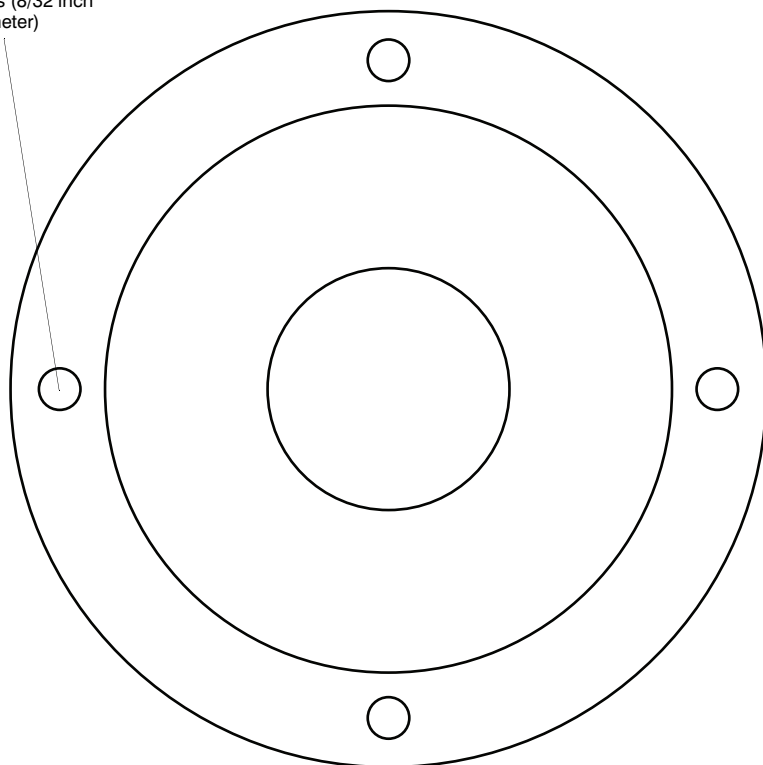
See "Attaching the Camera" on page 10 for information on using the mounting template.

Note   The camera enclosure should be mounted on a flat, smooth surface.

Honeywell

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