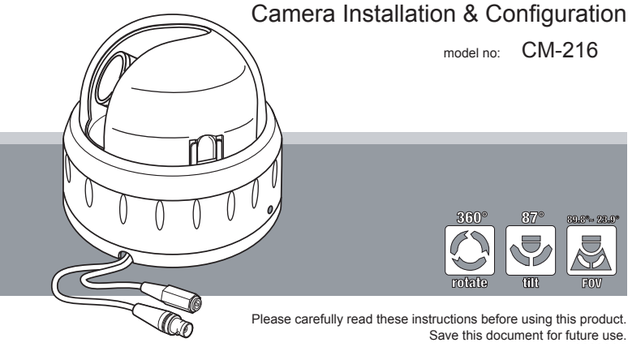
OpenEye®

# Wide Dynamic Range Indoor Dome Camera

## Camera Installation & Configuration

model no: CM-216




Please carefully read these instructions before using this product.
Save this document for future use.
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# General Specifications

| Model No. | CM-216 |
|---|---|
| Image Sensor | Pixim Seawolf 1/3" |
| Imaging DSP | Pixim Seawolf |
| IP Rating | IP55 |
| Type / Format | NTSC/PAL |
| Wide Dynamic Range | Yes |
| Minimum Illumination | 0.6 Lux @ F1.4 (50 IRE), 0.3 Lux @ F1.4 (30 IRE) |
| Day / Night | Digital Day / Night |
| Resolution | 540 TVL |
| Service Monitor Jack | Yes |
| S/N Ratio | >50dB |
| Focal Length | 3.3 ~ 12 mm |
| Iris Control | Automatic |
| Synchronization | Internal / Line Lock |
| Video Output | 1.0Vpp 75Ω BNC Unbalanced |
| White Balance | AWB, ATW |
| Auto White Balance Range | 2800K ~ 9100K (Normal), 2000K ~ 11,000K (Ex Range) |
| Backlight Compensation | Full Range |
| Auto Gain Control | Yes |
| Operating Temperature | 14˚ ~ 122˚ F (-10˚ ~ 50˚C) |
| Heater | No |
| Power Consumption | 2.88W Max |
| Rated Amperage | 0.24A (12vDC) / 0.12A (24vAC) |
| Imput Voltage | 12vDC / 24vAC (± 10%) |
| Weight | 0.6 lbs (0.27 kg) |
| Dimensions | Dome : ø3.9" (100 mm) x H: 2.1" (55 mm)<br>Housing: ø4.7" (120 mm) x H: 1.9" (50 mm) |
| Housing / Dome Cover | White / Clear |

# Hardware Kit Contents

- Wall anchors (x3)
- D5 screws (x3)
- T6 screw (x1)
- ¾" cable entry sealing plug
- Torx Driver
- Quick Install Adapter
- Wire-Ended Power Adapter Lead

# Regulatory Compliance

**Emissions** FCC part 15 Class B
CE: EN55011
ICES-003
EN55022
CISPR 11
CISPR22
ANSI C63.4

**Immunity** CE: EN50130-4

**FCC COMPLIANCE:**
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in as residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try \to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

**CISPR 22 WARNING:**
This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

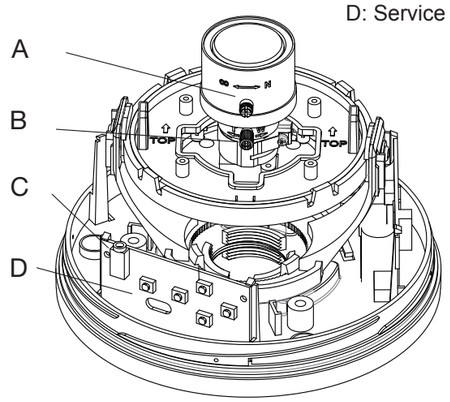
**POWER SUPPLY REQUIREMENTS:**
For use with listed Audio/Video product and only connected to 15W or less power supply.
*Power supply should be a NEC Class 2 / LPS Supply.

**EQUIPMENT MODIFICATION CAUTION:**
Equipment changes or modifications not expressly approved by the manufacturer, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

This class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

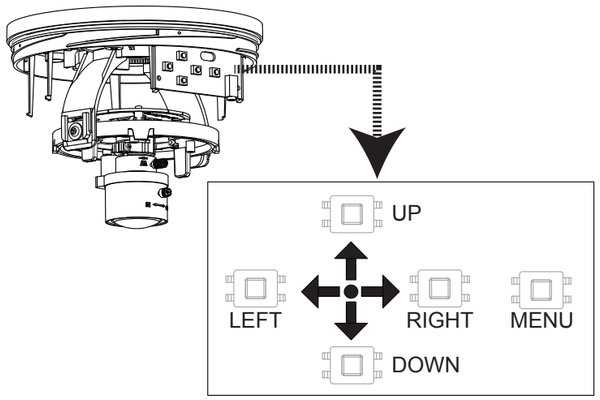
# Camera Overview

A: Focus Adjuster
B: Field of View Adjuster
C: Service Monitor Jack
D: Service Board




# Camera Adjustments

The following illustration shows the service board which allows you to control the On Screen Display (OSD) and make any programming changes required.




# Adjusting the Camera

With the exception of the Focus (A) and Field of View (B) controls on the camera, all settings are made using the keys on the OSD Service Board. When making adjustments using the OSD Service Board, the camera must have power and be connected to a video display.

1. Press and hold the MENU key for three seconds to access the top level menu.
2. Use the arrow keys on the service board to navigate the OSD menu and use the MENU key to confirm your selections.
3. When you have completed the camera configuration, you must select EXIT to save your changes.
4. If necessary, you can reset the camera to the factory default settings by selecting RESET in the OSD menu.

# Camera OSD Menu

- Presets
  - WD-Normal
  - Indoor
  - Normal
  - Outdoor
- Exposure
  - Day/Night Setup
    - D/N Control
      - AUTO
        - D/N Threshold
        - D/N Limit
        - D/N Delay
      - D/N Switch
      - Off
      - On
    - Night Mode
      - B/W + Burst
      - B/W
    - Shutter Mode
      - Auto
      - Off
- White Balance
  - Mode
    - ATW Normal
    - ATW Extended
    - AWB
      - Manual
        - Kelvin
        - R/B
- Viewing
  - PTZ
  - FLIP
  - Monitor
    - LCD
      - GAMMA
    - CRT
- Setup
  - Iris
    - Lens Select
      - Manual/DC
    - DC Gain
    - All Threshold
  - Video I/O
    - Video Standard
      - PAL/NTSC
      - V-Phase
  - SYNC
    - LL
    - INT
    - INT2
  - Title
    - Title Display
      - On/Off
    - Camera Title
    - Title Position
      - Up-Left
      - Up-Center
      - Up-Right
      - Down-Left
      - Down-Right
  - Meter Mode
    - Normal
    - Backlight
    - Normal Meter Presets
      - Presets
        - WD-Normal
        - Safe Area
        - CTR Spot
        - Lower 1/3
    - Adjust Normal Zones
      - Enable Zones
        - WD-Normal
        - Safe Area
        - CTR Spot
        - Lower 1/3
      - Adjust WD-Normal
      - Adjust Safe Area
      - Adjust CTR Spot
      - Adjust Lower 1/3
- Save/Restore
  - Restore User Settings
  - Save User Settings
  - Restore Factory Settings
  - Reset Camera
  - System Info
- Exit Menu

# Installation

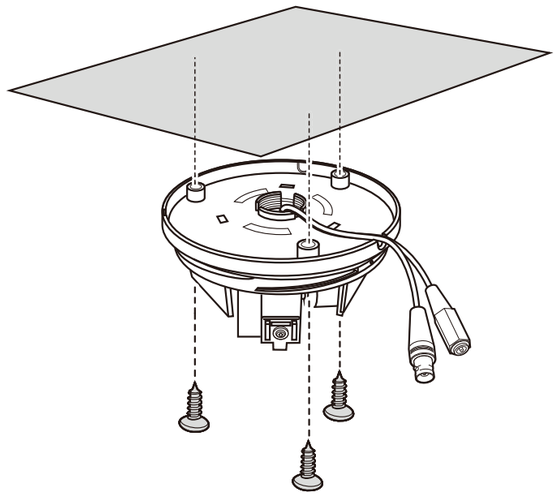
## Precautions

- Do not attempt to dismantle the camera module mounted within the dome. There are no user serviceable parts in the camera module. Refer servicing to a qualified professional.
- Handle the camera with care. Do not abuse the camera. Avoid striking or shaking it. Improper handling and storage could damage the camera.
- Do not operate the camera beyond its temperature or power source rating. Refer to the environmental information provided in this document.

## Emissions

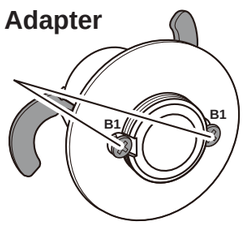
- FCC COMPLIANCE: This equipment complies with Part 15 of the FCC rules for intentional radiators and Class B digital devices when installed and used in accordance with the instruction manual. Following these rules provides reasonable protection against harmful interference from equipment operated in a commercial area. This equipment should not be installed in a residential area as it can radiate radio frequency energy that could interfere with radio communications, a situation the user would have to fix at their own expense.

## A Mount with screws

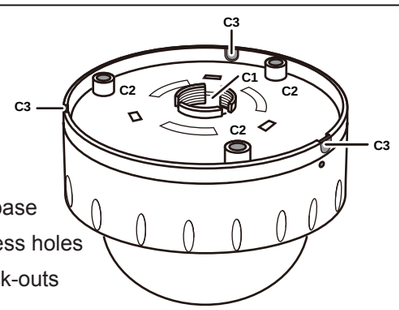


## B Use Quick Mount Adapter

Loosen screws, but not remove them,to first extend the locking arms. Then tighten the screws sufficiently to compress the arms to adjust to the mounting surface; however, DO NOT OVERTIGHTEN.




## C

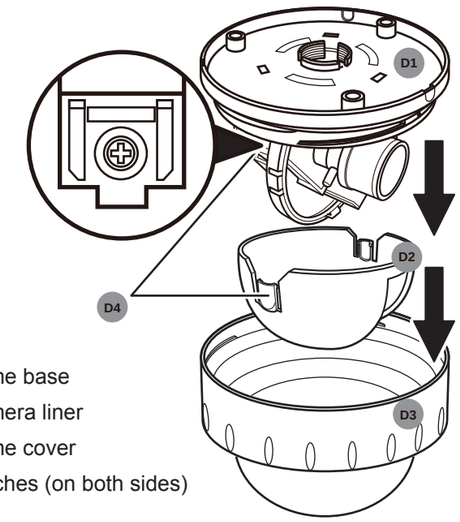



C1: Threaded base

C2: Screw access holes

C3: Cable knock-outs

## D




D1: Dome base

D2: Camera liner

D3: Dome cover

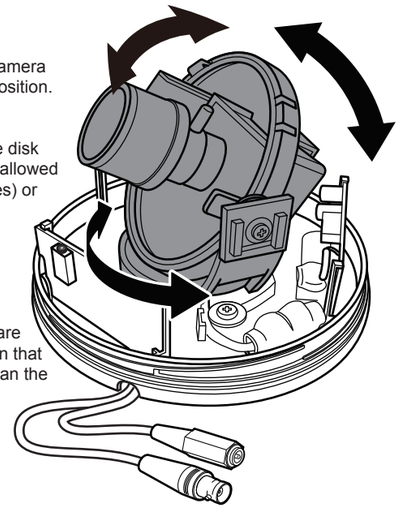
D4: Notches (on both sides)

## E

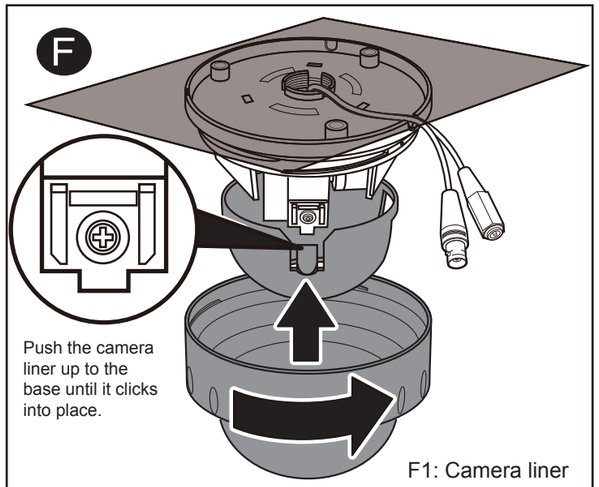
Rotate and pan the camera base to the desired position.

DO NOT rotate/tilt the disk beyond its maximum allowed range (350/80 degrees) or damage may occur.

Make sure the wires are arranged in a direction that allows you to rotate/pan the disk smoothly.



## F

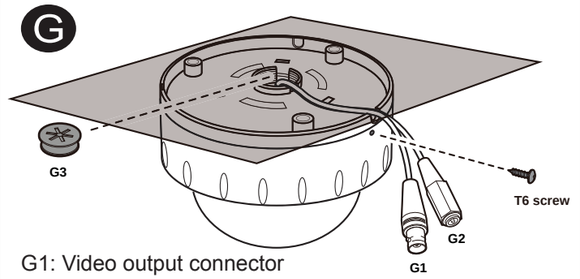


Push the camera liner up to the base until it clicks into place.

F1: Camera liner

F2: Dome cover

## G

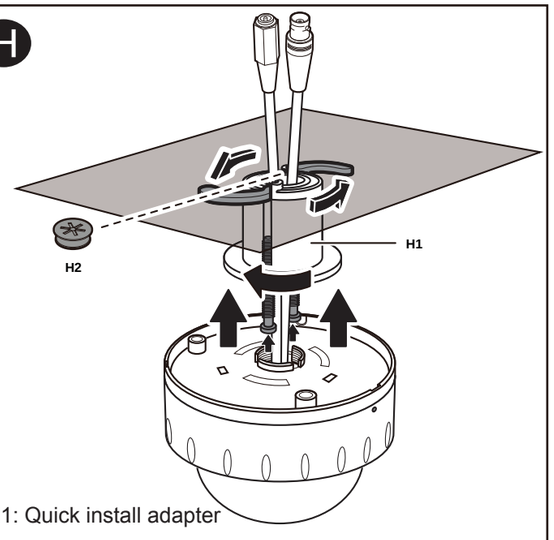



G1: Video output connector

G2: Power input connector

G3: Cable entry sealing plug (¾")

## H




H1: Quick install adapter

H2: Cable entry sealing plug (½")

# Installation Instructions

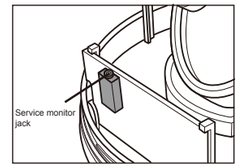
1. **Remove the dome cover and the camera liner**
   Gently turn the dome cover counter-clockwise to unlock and pull free of the dome base. Remove the camera liner by gently pulling it free of the two notches (D4) in the camera base (see fig. D).

2. **Use the template to mark-out and prepare the mounting area**
   When mounting the dome to a ceiling or wall using screws, first knock out the screw access holes (C2) that correspond to the template marks "D5". This can be done by using a cross-point screwdriver. When mounting the dome to a ceiling using the quick install adapter, use the template to cut a hole as the circle marked "T5" with a hole cutter.

3. **Open the required knock-out panel**
   Use a sharp knife or side cutter pliers to cut one of the side knock-outs (C3) to the size required to allow cable entry. Be careful not to hurt yourself or damage the camera when using knives and side cutter pliers.

4. **Mount the dome enclosure**
   Using one of the mounting schemes discussed on this sheet (either using screws or the quick mount adapter), fix the dome enclosure in place.

5. **Connect the wiring**
   Feed the pre-connected main lead (that feeds to the connections G1 and G2) through the appropriate point and connect it to your video out and power in cables.The service monitor jack is provided for temporary video connection when focusing the camera.




6. **Adjust the camera position**
   You can adjust the focusing position by rotating and panning the camera base (see fig. E).

7. **Install the camera liner**
   Carefully fit the camera liner (F1) over the camera base so that it snaps into place as shown in fig. F and does not obstruct the camera lens.

8. **Complete installation**
   Insert the 3/4" cable entry sealing plug (G3) in the dome base, then push the cables (G1 and G2) through the dome base and the 3/4" cable entry sealing plug (G3). Make sure the plug is properly installed in the camera base. Replace the dome cover (F2) and rotate to close it as shown in fig. F. Use the supplied T6 screw to secure the cover and prevent tampering (see fig. G).

9. **Complete installation (quick install adapter)**
   Insert the 1/2" cable entry sealing plug (H3) in the quick install adapter (H1) and insert the adapter the hole cut using the provided template as a guide. Use the screws on the adapter to adjust the position of the two locking arms (B1) on the quick install adapter and adjust to the mounting surface. Push the cables through the opening (H1) and 1/2" cable entry sealing plug (H2). Make sure the plug is properly installed in the camera base. Thread the dome onto the quick install adapter. This takes about 1 1/2 turns. DO NOT OVERTIGHTEN.

# Template

## Surface mount (in wall or ceiling)

### Using Quick Install Adapter

- Cut a 1.3" (35mm) hole in the mounting surface as indicated on the template (T5).

### Using Screws

- Drill three 1/4" (7.5mm) holes as indicated on the template (D5) and insert a wall anchor in each hole. Use the supplied D5 screws to attach the camera.

## Cable Access

- The cables are threaded through the base knockout (shown in C1). It is threaded for use with the quick install adapter.
- When mounting the dome on a surface using the three D5 screws, use one of the side knockouts as indicated by C3 for cable entry. See the Installation Instructions for instructions on opening the required knock-out panel.