

MegaDome[®] UltraHD

Installation Manual

Models:

12 Megapixel

- AV12ZMD-401

Contents

Package Contents.....	3
Camera Overview.....	6
Installation	7
Surface Mount.....	10
Wall Mount	13
Pendant Mount.....	16
Pole Mount.....	19
Corner Mount	21
Electrical Box Adapter	23
Adjusting the Pan, Tilt and Focus.....	24
Auxiliary I/O Functions.....	25
Camera Power Up.....	30
Reset to Factory Default	32
Camera Discovery, Setup, and Configuration	33
Network Protocols.....	33
General Remote Focus	34
Refined Remote Focus.....	35
AV IP Utility Focus Tab	37
Mounting Templates	38
Support	39

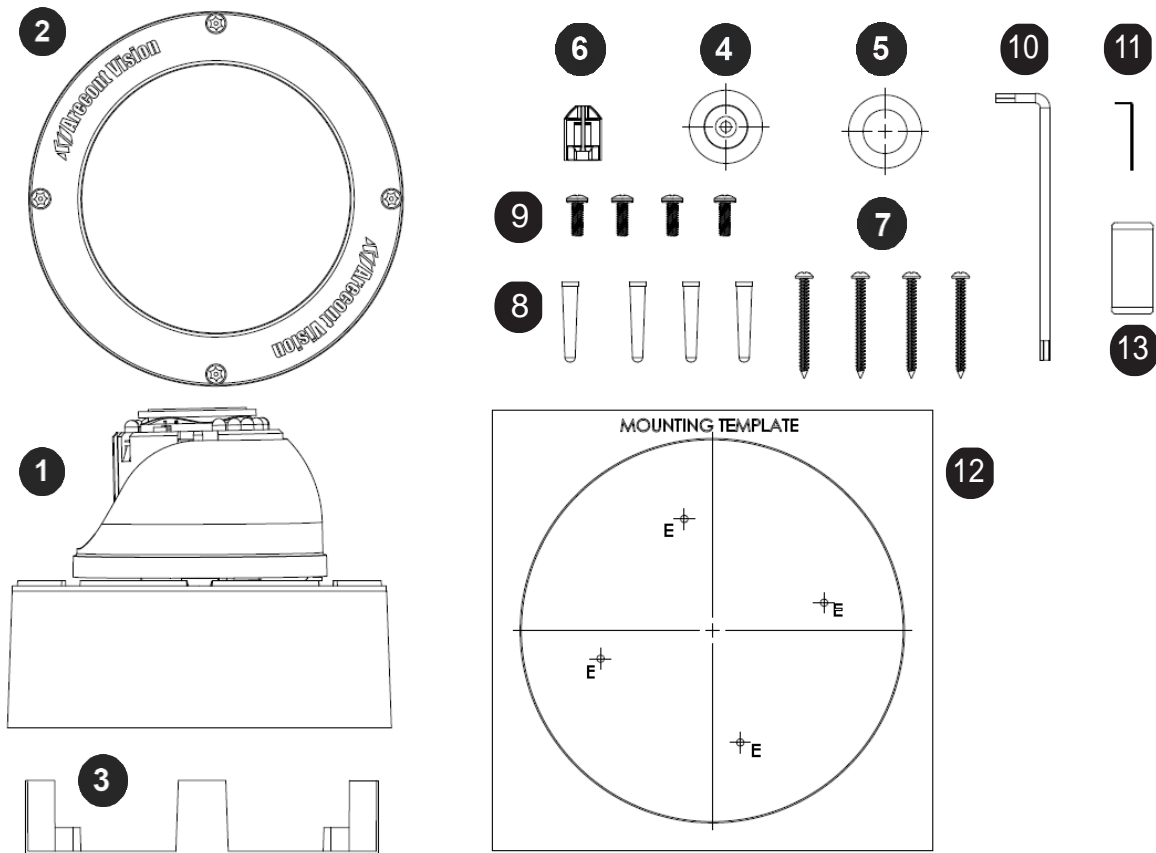


CAUTION!

1. Do not attempt to service a damaged unit yourself. Refer all servicing to qualified service personnel.
2. Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application.
3. Always use hardware e.g. screws, anchors, bolts, locking nuts etc. which are compatible with mounting surface and of sufficient length and construction to insure a secure mount.

Package Contents

This equipment should be unpacked and handled with care. The original packaging is the safest container in which to transport the unit and can be used if returning the unit for service. The packaging contains:



Reference #	Description
1	1x Arecont Vision MegaDome® UltraHD camera
2	1x Dome Cover
3	1x Mounting Plate
4	1x Grommet with Through Hole
5	1x Grommet without Through Hole
6	1x Insertion Tool
7	4x #6-32 1.0" Wood/ Metal Sheet Screw
8	4x #6-32 1.0" Drywall/ Masonry Mounting Anchors
9	4x #8-32 0.5" Machine Screw
10	1x Security L-key
11	1x Set Screw L-key
12	1x Mounting Template
13	1x Magnetic core
	1x I/O cable
	1x AC & DC auxiliary power cable
	1x CD with Manual and Software

Warranty Information

Global (3 Year) Limited Warranty

ARECONT VISION warrants to Purchaser (and only Purchaser) (the "Limited Warranty"), that: (a) each Product shall be free from material defects in material and workmanship for a period of **thirty-six (36) months** from the date of shipment (the "Warranty Period"); (b) during the Warranty Period, the Products will materially conform with the specification in the applicable documentation; (c) all licensed programs accompanying the Product (the "Licensed Programs") will materially conform with applicable specifications. Notwithstanding the preceding provisions, ARECONT VISION shall have no obligation or responsibility with respect to any Product that (i) has been modified or altered without ARECONT VISION's written authorization; (ii) has not been used in accordance with applicable documentation; (iii) has been subjected to unusual stress, neglect, misuse, abuse, improper storage, testing or connection; or unauthorized repair; or (iv) is no longer covered under the Warranty Period. ARECONT VISION MAKE NO WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, OTHER THAN THE EXPRESS LIMITED WARRANTIES MADE BY ARECONT VISION ABOVE, AND ARECONT VISION HEREBY SPECIFICALLY DISCLAIMS ALL OTHER EXPRESS, STATUTORY AND IMPLIED WARRANTIES AND CONDITIONS, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT AND THE IMPLIED CONDITION OF SATISFACTORY QUALITY. ALL LICENSED PROGRAMS ARE LICENSED ON AN "AS IS" BASIS WITHOUT WARRANTY. ARECONT VISION DOES NOT WARRANT THAT (I) THE OPERATION OF THE PRODUCTS OR PARTS WILL BE UNINTERRUPTED OR ERROR FREE; (II) THE PRODUCTS OR PARTS AND DOCUMENTATION WILL MEET THE END USERS' REQUIREMENTS; (III) THE PRODUCTS OR PARTS WILL OPERATE IN COMBINATIONS AND CONFIGURATIONS SELECTED BY THE END USER; OTHER THAN COMBINATIONS AND CONFIGURATIONS WITH PARTS OR OTHER PRODUCTS AUTHORIZED BY ARECONT VISION OR (IV) THAT ALL LICENSED PROGRAM ERRORS WILL BE CORRECTED.

For RMA and Advance Replacement information visit <http://www.arecontvision.com>

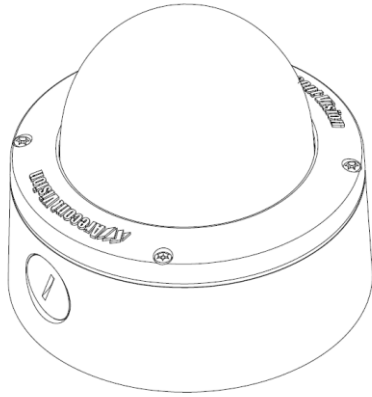
Camera Overview

The 12MP/4K/1080p MegaDome® UltraHD “tri-mode” network camera is part of the new generation of Arecont Vision’s MegaDome cameras. This fully compliant implementation of H.264 (MPEG-4, Part 10) provides full 3968 x 1922 megapixel resolution at video frame rates of 20 frames per second (fps) at 12MP, 30fps while in 4K (8.3MP), and 60fps while in 1080p (2.1MP). The MegaDome UltraHD camera series provides an all-in-one solution with integrated 12MP day/night camera, remote focus, remote zoom, P-Iris, 4.4–10mm lens, in an installer-friendly IP66 water/dust ingress rated housing, and vandal resistant, IK-10 rated dome enclosure.

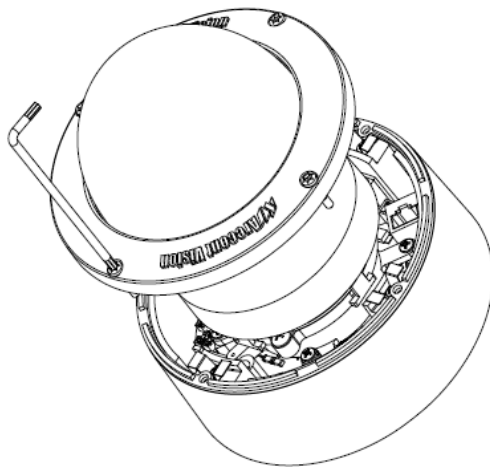
Features include SNAPstream™ (Smart Noise Adaptation and Processing) to reduce bandwidth without impacting image quality, NightView™ for strong low light performance, non-integer scaling, privacy masking, extended motion detection, flexible cropping, forensic zooming, multicasting and Power over Ethernet (PoE - IEEE 802.3af). Built with Arecont Vision massively-parallel MegaVideo® processing technology, the camera series offers more than 27-times the resolution of standard resolution IP cameras. It offers the ability to output full real-time frame rates and deliver high-quality megapixel imaging for both indoor and outdoor applications.

Installation

1. Determine a secure location to mount the camera.
2. Use the supplied security L-key, to loosen the four (4) screws securing the dome cover.



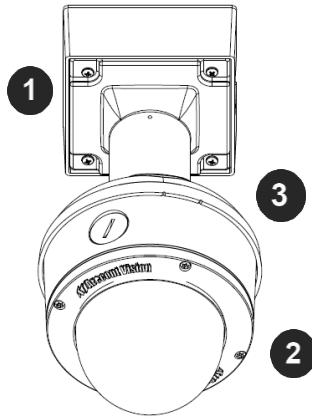
3. Remove the dome cover and protective foam. Do not remove screws from the dome cover.



The MegaDome® UltraHD camera has been designed to provide installers with flexible mounting options such as ceilings, walls, poles or corners.

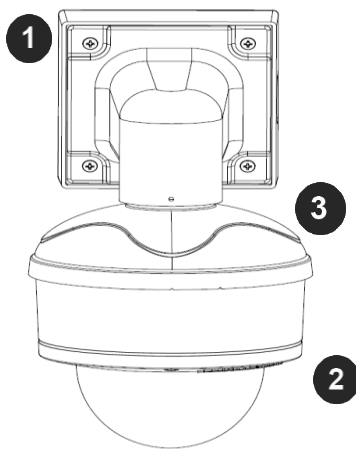
NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet properly seated flush with the camera housing.

Ensure you have the proper compatible mounting parts prior to starting your installation:



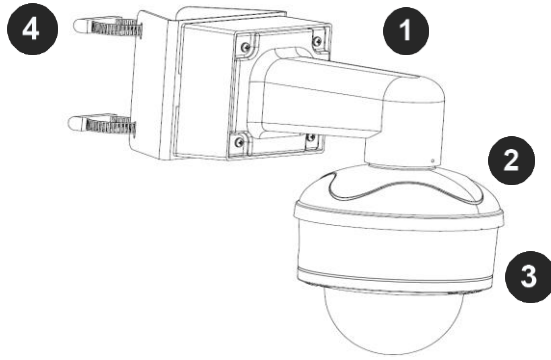
Pendant mount

Reference #	Pendant Mount Components Required
1	Pendant mount (AV-PMJB) with integrated junction box
2	MegaDome® UltraHD camera
3	MD-CAP mounting cap



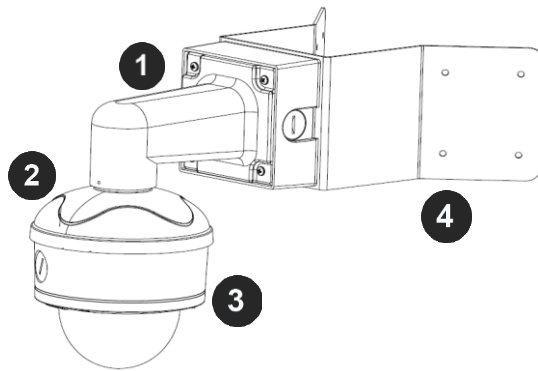
Wall mount

Reference #	Wall Mount Components Required
1	Wall mount (AV-WMJB) with integrated junction box
2	MegaDome® UltraHD camera
3	MD-CAP mounting cap



Pole mount

Reference #	Pole Mount Components Required
1	Wall mount (AV-WMJB) with integrated junction box
2	MD-CAP mounting cap
3	MegaDome® UltraHD camera
4	AV-PMA pole mount adapter



Corner mount

Reference #	Corner Mount Components Required
1	Wall mount (AV-WMJB) with integrated junction box
2	MD-CAP mounting cap
3	MegaDome® UltraHD camera
4	AV-CRMA corner mount adapter

4. Use the Arecont Vision software AV IP Utility located on the CD or available for download at our website (www.arecontvision.com) for camera discovery and setup (see Instruction Manual located on the CD or available on our website).

Surface Mount

The MegaDome® UltraHD camera can be directly attached onto hard ceilings or walls including wood, plastic, metal and concrete.

1. Use the template, anchors, and screws provided to prepare the mounting provisions for the camera installation.
2. Use the supplied security L-key, to loosen the four (4) tamper resistant screws securing the dome cover as shown in Figure 1. Do not remove screws from the dome cover.

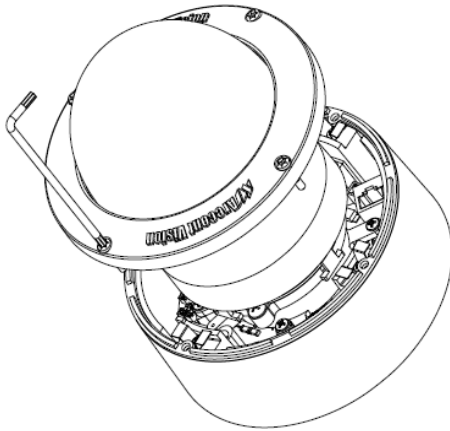


Figure 1

3. Remove the protective foam and discard.
4. Install four supplied dry wall anchors using the supplied mounting template.
5. Align four supplied screws with the dry wall anchors and screw mounting plate into place as shown in Figure 2.

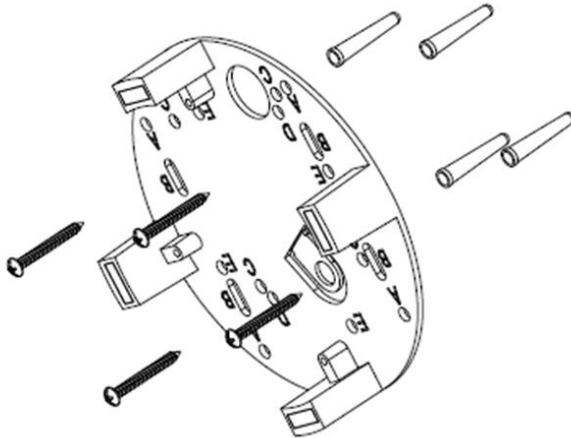


Figure 2

6. Prepare the network cable with the supplied grommet and insertion tool as shown in Figure 3.

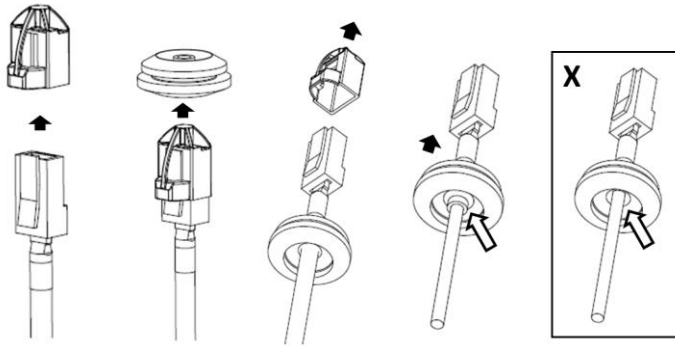


Figure 3

NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet is properly seated flush with the camera housing.

- Align the hole on MegaDome® UltraHD camera with the hole on mounting plate, and install the grommet on camera housing as shown in Figure 4.

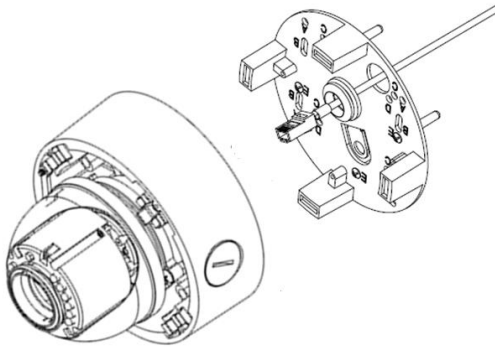


Figure 4

NOTE: If using the side connection of the NPT port, you need to install the supplied grommet without a through hole on the camera housing, and remove the cap covering the side entrance, otherwise; leave the cap in place. If using the NPT port, always use Teflon tape around the threads to ensure proper sealing. The conduit fits 3/4" NPT standard. Ensure NPT port is facing downward.

- Fasten securely four captive screws as shown in Figure 5.

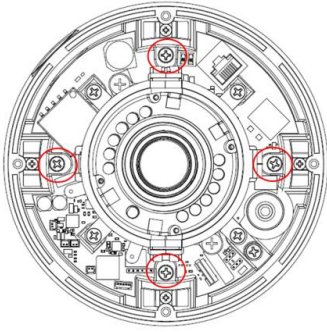


Figure 5

9. Attach the Dome Cover to the MegaDome® UltraHD camera and fasten securely four captive screws.

NOTE: When attaching the Dome Cover, make sure the IR foam on the lens not block the field of view.

10. To configure the camera, reference the camera discovery, set-up and configuration section.



CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in water and dust ingress. Water damage from improper installation is not covered by the warranty!

Wall Mount

For a proper wall mount installation, the AV-WMJB wall mount and MD-CAP wall mount cap are required (sold separately). A wall mount should only be attached onto hard ceilings including wood, plastic, metal, and concrete.

1. Using the Mounting template, prepare the mounting provisions for the camera installation.
2. Connect wall mount cap and wall mount as shown in Figure 1.

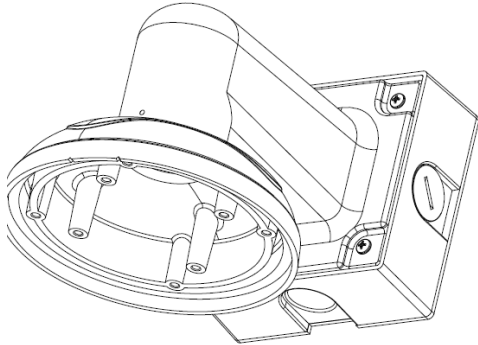


Figure 1: Attach wall mount cap to the wall mount

NOTE: The thread size for Top shield, pendant pole and mount is 1.5" NPT.

3. Attach the wall mount to the wall using the four drywall screws provided or any optional hardware suitable for the mounting surface.
4. Run the Ethernet Cable and outside power cable (if necessary) through the supplied rubber gasket and then through the wall mount. Ensure the gasket is seated properly.
5. Attach the mounting plate to the MD-CAP with the supplied screws as shown in Figure 2.

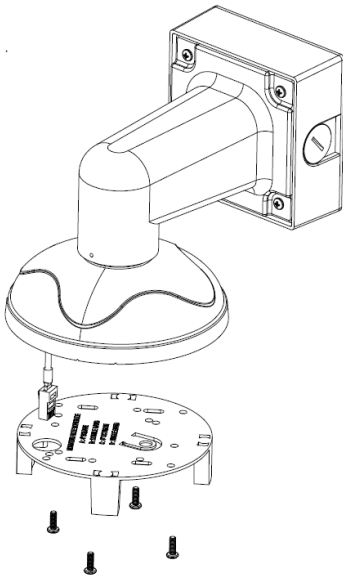


Figure 2

6. Prepare the network cable with the supplied grommet and insertion tool as shown in Figure 3.

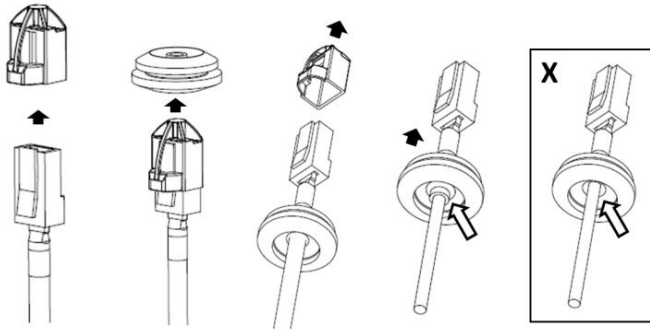


Figure 3

NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet is properly seated flush with the camera housing.

- Align the hole on MegaDome® UltraHD camera with the hole on mounting plate, and install the grommet on camera housing as shown in Figure 4.

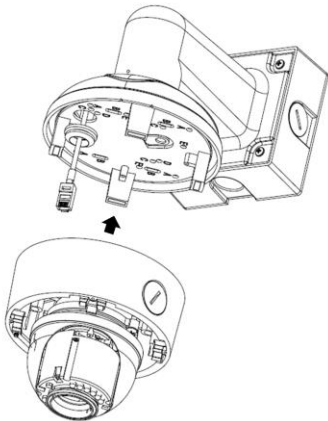


Figure 4

- Fasten securely four captive screws as shown in Figure 5.

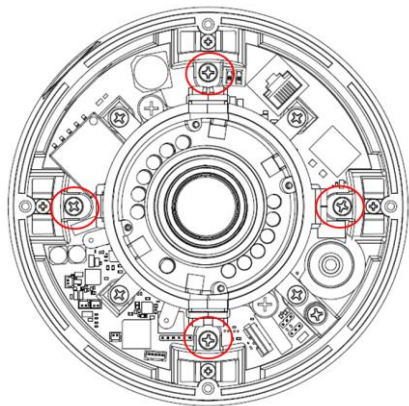


Figure 5

- Attach the Dome Cover to the MegaDome® UltraHD camera and fasten securely four captive screws as shown in Figure 6.

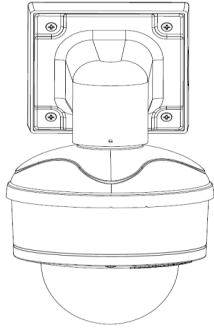


Figure 6

NOTE: When attaching the Dome Cover, make sure the IR foam on the lens not block the field of view.

10. To configure the camera, reference the camera discovery, set-up and configuration section.



CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in water and dust ingress. Water damage from improper installation is not covered by the warranty!

Pendant Mount

For a proper pendant mount installation, the AV-PMJB pendant mount and MD-CAP mounting cap are required (sold separately). A pendant mount should only be attached onto hard ceilings including wood, plastic, metal, and concrete.

1. Using the mounting template, prepare the mounting provisions for the camera installation.
2. Connect top shield, pendant pole and mount together as shown in Figure 1.

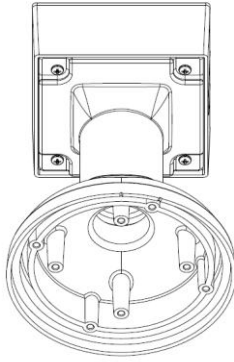


Figure 1: Attach the mount cap and pendant mount

NOTE: The thread size of top shield, pendant pole and mount is 1.5" NPT.

3. Attach the pendant mount to the ceiling using the four wood screws provided or any optional hardware suitable for the mounting surface.
4. Run the Ethernet Cable and outside power cable (if necessary) through the supplied rubber gasket and then through the pendant. Ensure the gasket is seated properly.
5. Attach the mounting plate to the MD-CAP with the supplied screws as shown in Figure 2.

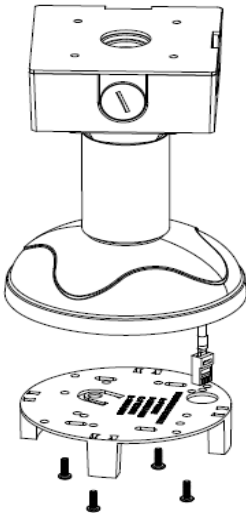


Figure 2

6. Prepare the network cable with the supplied grommet and insertion tool as shown in Figure 3.

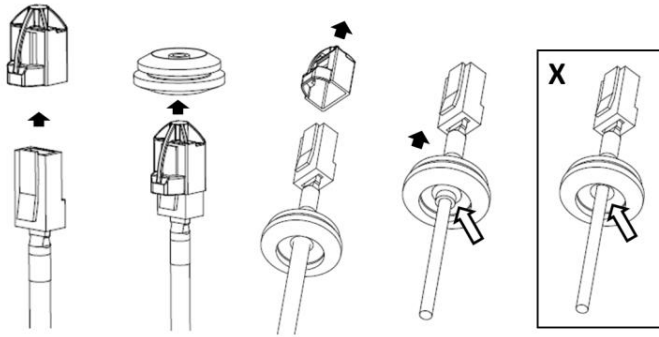


Figure 3

NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet is properly seated flush with the camera housing.

- Align the hole on MegaDome® UltraHD camera with the hole on mounting plate, and install the grommet on camera housing as shown in Figure 4.

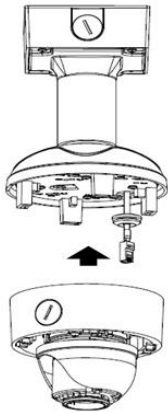


Figure 4

- Fasten securely four captive screws as shown in Figure 5.

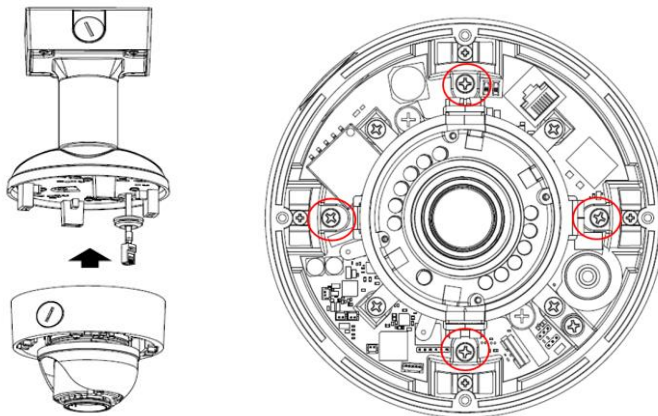


Figure 5

9. Attach the Dome Cover to the MegaDome® UltraHD camera and fasten securely four captive screws as shown in Figure 6.

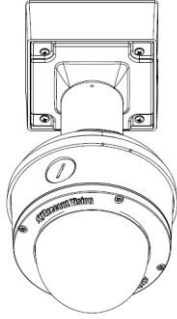


Figure 6

NOTE: When attaching the Dome Cover, make sure the IR foam on the lens not block the field of view.

10. To configure the camera, reference the camera discovery, set-up and configuration section.



CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in water and dust ingress. Water damage from improper installation is not covered by the warranty!

Pole Mount

For a pole mount installation, the AV-WMJB wall mount, AV-PMA pole mount, and MD-CAP mount cap are required (sold separately). A pole mount should only be attached onto hard ceilings including wood, plastic, metal, and concrete.

1. Using the mounting template, prepare the mounting provisions for the camera installation.
2. Connect the wall mount cap and wall mount.
3. Attach the Junction Box Adapter to the Pole Mount Adapter as shown in Figure 1.
4. Remove the conduit plug on the junction box adapter and connect $\frac{3}{4}$ " NPT conduit to the junction box adapter (Figure 1).

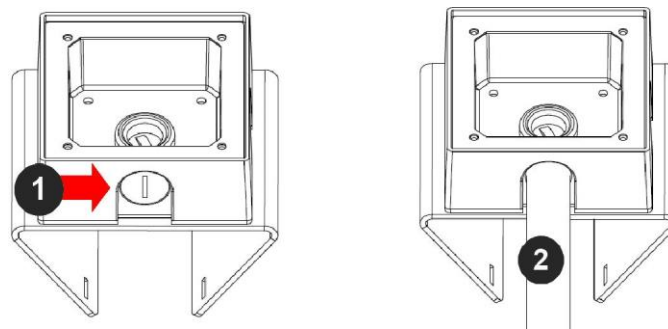


Figure 1: Attach conduit to AV-JBA junction box adapter

Reference #	Description
1	Remove conduit plug
2	Connect $\frac{3}{4}$ " NPT conduit to junction box adapter (ensure use of water seal tape)

NOTE: Use silicon or water pipe seal tape to make sure no water leakage between conduit pipe and junction box adapter.

5. Run the Ethernet cable and outside power cable (if necessary) through the supplied rubber gasket and then through the Junction Box Adapter and AV-WMJB, Wall Mount Adapter. Ensure the gasket is seated properly.
6. Attach the Wall Mount Adapter (AV-WMJB) to the Pole Mount Adapter (AV-PMA) as shown in Figure 2.

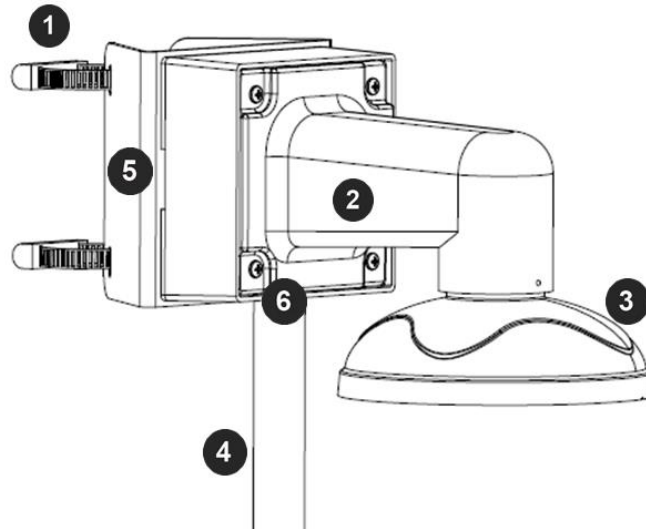


Figure 2: Attach wall mount adapter to pole mount adapter

Reference #	Description
1	Steel straps with compression screws
2	AV-WMJB wall mount
3	MD-CAP mount cap
4	Conduit
5	AV-PMA pole mount
6	Apply Teflon water seal tape to the thread of 3/4" NPT pipe to avoid water leakage

7. Use the supplied two Steel Straps to attach the Pole Mount Adapter to the pole and tighten the compression screws as shown in Figure 2.
8. To attach the camera to the Wall Mount Adapter (AV-WMJB), reference the Installation and Wall Mount section.
9. To configure the camera, reference the camera discovery, set-up and configuration section.



CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in water and dust ingress. Water damage from improper installation is not covered by the warranty!

Corner Mount

For a corner mount installation, the AV-WMJB wall mount, AV-CRMA corner mount, and MD-CAP mount cap are required (sold separately). A corner mount should only be attached onto hard corner surfaces including wood, plastic, metal, and concrete.

1. Using the Mounting template, prepare the mounting provisions for the camera installation.
2. Connect the wall mount cap and wall mount.
3. Attach the Junction Box Adapter to the Corner Mount Adapter as shown in Figure 1.
4. Remove the conduit plug on the junction box adapter and connect $\frac{3}{4}$ " NPT conduit to the junction box adapter as shown in Figure 1.

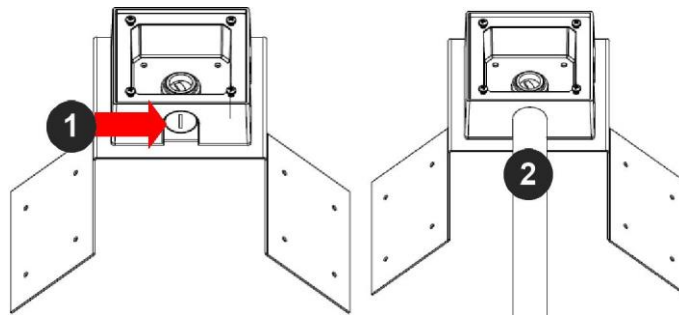


Figure 1: Attach conduit to SV-JBA junction box adapter

Reference #	Description
1	Remove conduit plug
2	Connect $\frac{3}{4}$ " NPT conduit to junction box adapter (ensure use of water seal tape)

NOTE: Use silicon or water pipe seal tape to make sure no water leakage between conduit pipe and junction box adapter.

5. Run the Ethernet cable and outside power cable (if necessary) through the supplied rubber gasket and then through the Junction Box Adapter and AV-WMJB, Wall Mount Adapter. Ensure the gasket is seated properly.
6. Attach the Wall Mount Adapter (AV-WMJB) to the Corner Mount Adapter (AV-CRMA) as shown in Figure 2.

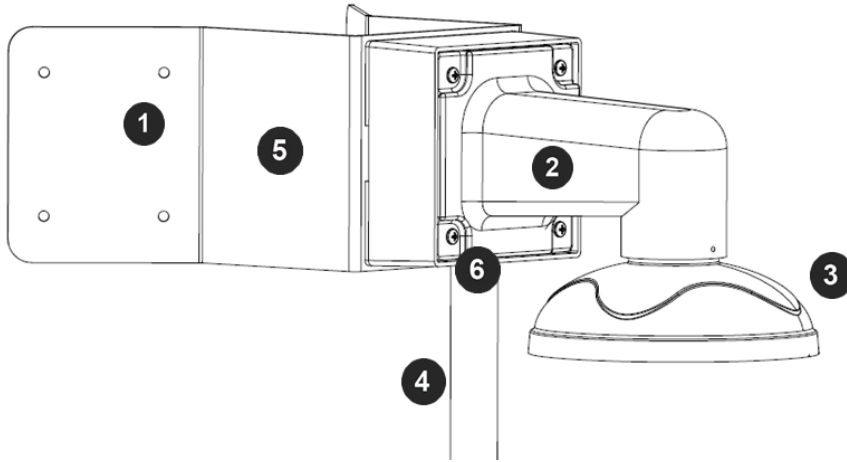


Figure 2: Attach corner mount adapter to exterior corner wall

Reference #	Description
1	Attach corner mount adapter to exterior 90 degree corner wall
2	AV-WMJB wall mount
3	MD-CAP mount cap
4	Conduit
5	AV-CRMA corner mount adapter
6	Apply Teflon water seal tape to the thread of 3/4" NPT pipe to avoid water leakage

7. Using the screws provided (or other hardware), attach the Corner Mount Adapter to an exterior 90 degree corner wall.
8. To attach the camera to the Wall Mount Adapter (AV-WMJB), reference the Installation and Wall Mount section.
9. To configure the camera, reference the camera discovery, set-up and configuration section.



CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in water and dust ingress. Water damage from improper installation is not covered by the warranty!

Electrical Box Adapter

The mounting plate is used to attach the camera to a common single, double or square electrical box.

1. Using the supplied machine screws, match the mounting holes on the mounting plate with the threaded holes on the electrical box. Ensure every threaded hole is matched with a mounting hole.
2. Attach the mounting plate to the user supplied electrical box as shown in Figure 1.

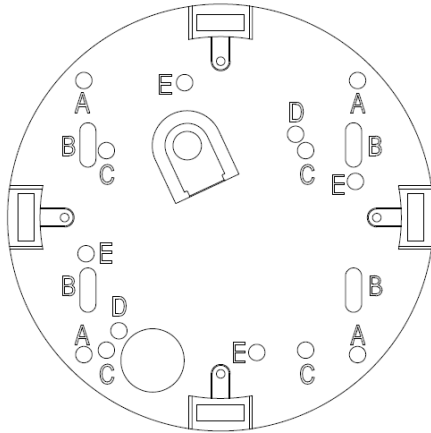


Figure 1: Attach the mounting plate to common electrical box

Adjusting the Pan, Tilt and Focus

1. Remove the dome cover by loosening the captive fasteners with the supplied security L-key screwdriver.
2. Power on the camera to adjust the pan, tilt and focus.
3. Remove the shroud from the camera gimbal, and then loose two Philips head screws and loose one set-screw with the supplied set screw L-key, and then adjust the pan and tilt to obtain the desired field of view as shown in Figure 1. NOTE: Do not remove the screws!

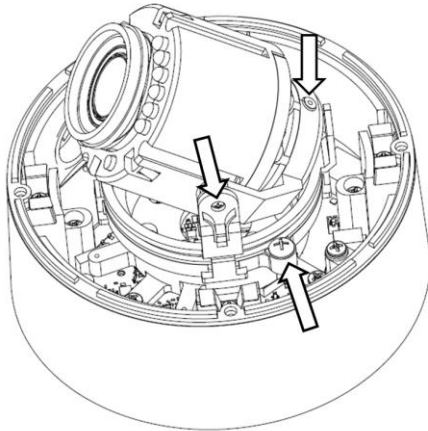


Figure 1: Loose camera head to adjust the field of view

4. Lock the camera head in place by fastening securely two Philips head screws and one set-screw back. NOTE: Do not over torque the screws.
5. Install the shroud back on the camera gimbal as shown in Figure 2.

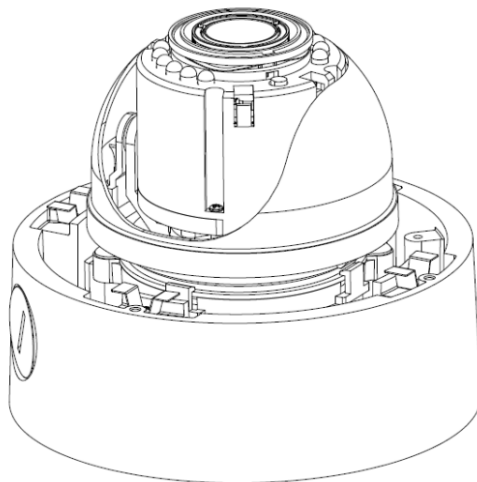


Figure 2

NOTE: Make sure align locking features of the shroud with mating parts on the camera gimbal as shown in Figure 3.

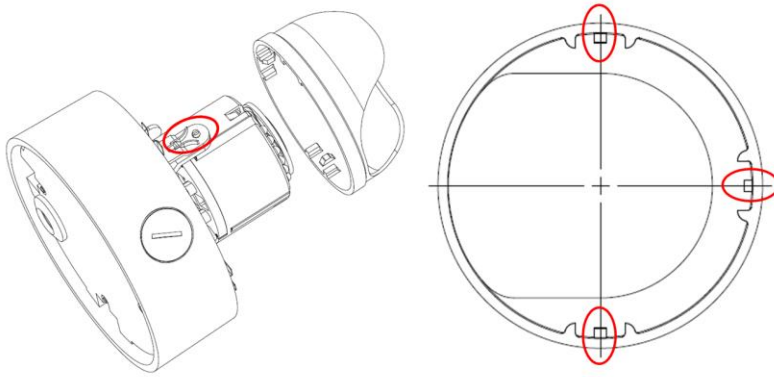


Figure 3

6. To adjust the zoom and focus, see the Remote Zoom/ Focus Section of this manual.

Auxiliary I/O Functions

The auxiliary input and output are accessible after removing dome cover as shown in Figure 1.

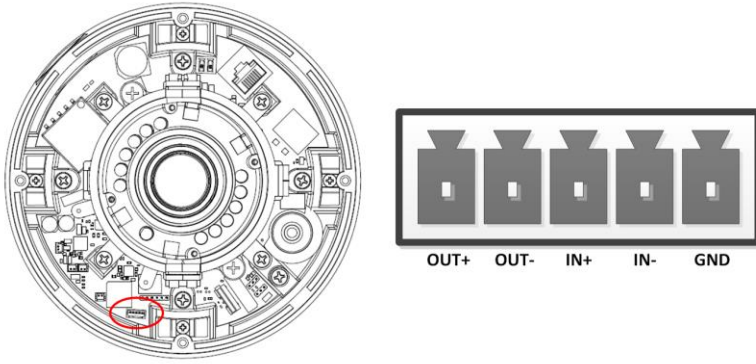


Figure 1

The output consists of an optically coupled solid state relay (SSR) and the input has an optocoupler. Both the SSR and optocoupler have an isolation voltage of 1500 VRMS between the external terminals and internal camera circuitry. The input is further protected with a serial 250Ω resistor and a debouncing circuit.

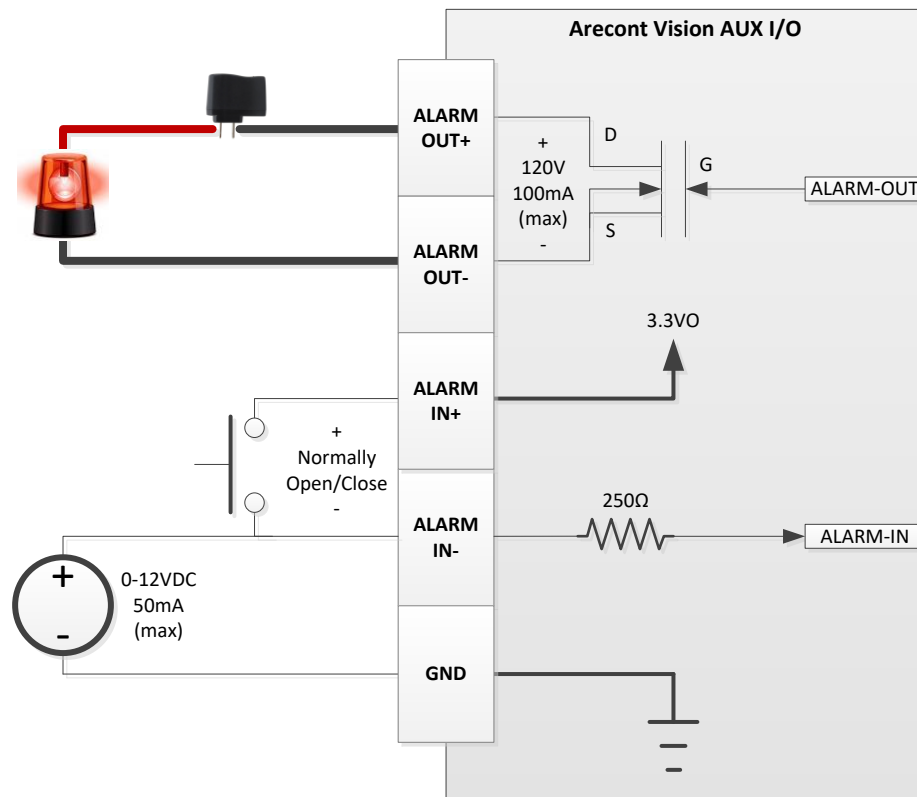


Figure 2: AUX I/O use case example

OUTPUT Relay Control and Function

The camera has an output for activating an external device. The camera supports both transient and continuous relay operation. You can operate the relay during an active connection using the API command set. Typical applications include turning on lights or activating doors and locks.

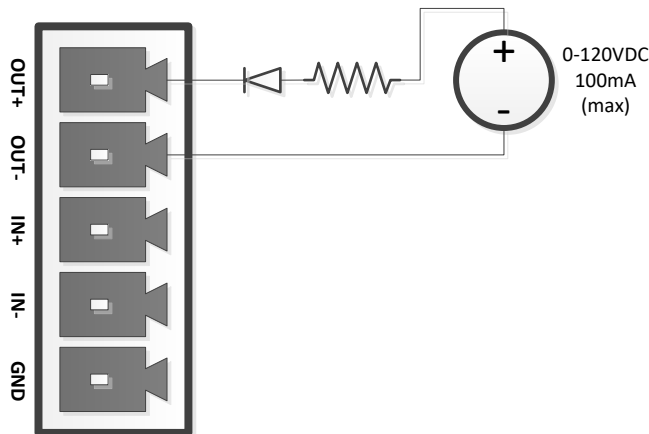


Figure 3: Relay wiring with power source to the camera

Camera output can be turned on/off with the following command:
[http://camera_ip/set?auxout=\(\"on\"|\"off\"\)](http://camera_ip/set?auxout=(\)

The following table shows the output control and electrical characteristics:

Output Control				
Terminals	External Status	Camera Status	Max Voltage	Max Current
OUT+ & OUT-	OPEN	OFF	120V	-
	CLOSED	ON	-	100mA

INPUT Alarm Control and Detection

The input optocoupler supports two ways to connect external unsupervised alarms to Arecont Vision camera. **Only one of the following two schemes should be used at any given time.**

OPTION-1: UNSUPERVISED ALARM DETECTION

In this scheme the IN+ & IN- terminals can be used for external signaling devices, such as door contacts or motion detectors. Both normally open and normally closed devices are supported as shown in Figure 4:

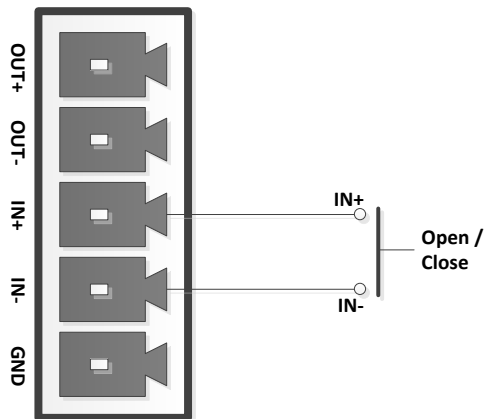


Figure 4

Figure 5 illustrates the unsupervised alarm conditions:

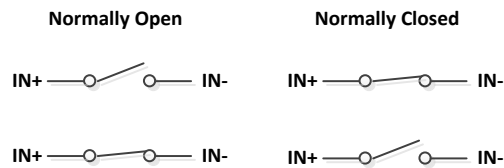


Figure 5

The following table shows how camera detects unsupervised alarms:

Input Unsupervised Alarms		
Terminals	External Status	Camera Status
IN+ & IN-	OPEN	OFF
	CLOSE	ON

Camera status can be read with the following command:

http://camera_ip/get?auxin

OPTION-2: INPUT VOLTAGE DETECTION

In this scheme the IN- & GND terminals can be tied to an external power source. The camera can detect a range of voltage to trigger an internal alarm on/off condition.

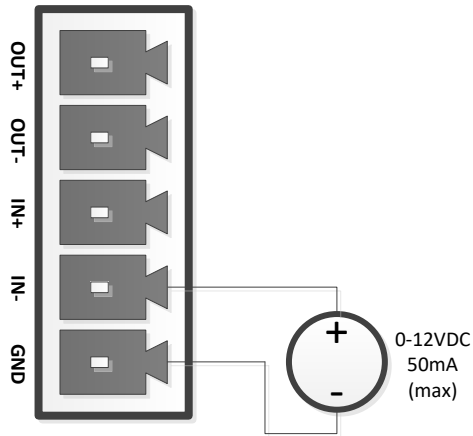


Figure 6

The following table shows the input voltage range and electrical characteristics:

Input Voltage Detection				
Terminals	External Status	Camera Status	Voltage Range	Current Range
IN- & GND	OFF	OFF	0-1V	0-2mA
	ON	ON	2-12V	10-50mA

The status of the camera can be read with the following command:

http://camera_ip/get?auxin

Camera Power Up



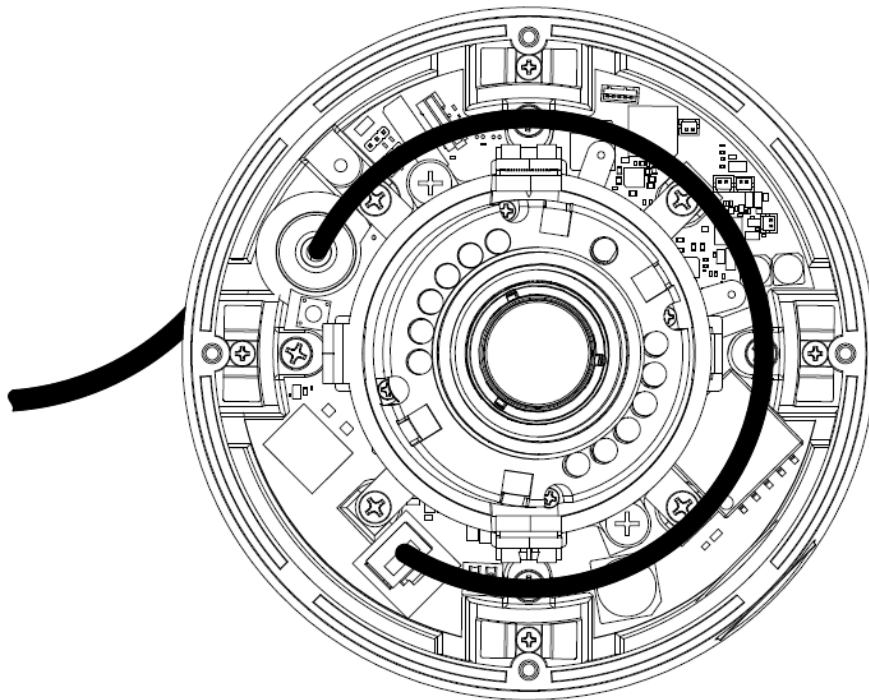
This product should be installed by a qualified service technician in accordance with the National Electrical Code (NEC 800 CEC Section 60) or applicable local code.

1. Connect the camera to a PoE port on 100Mbps network PoE switch using an Ethernet cable as shown in the image below.



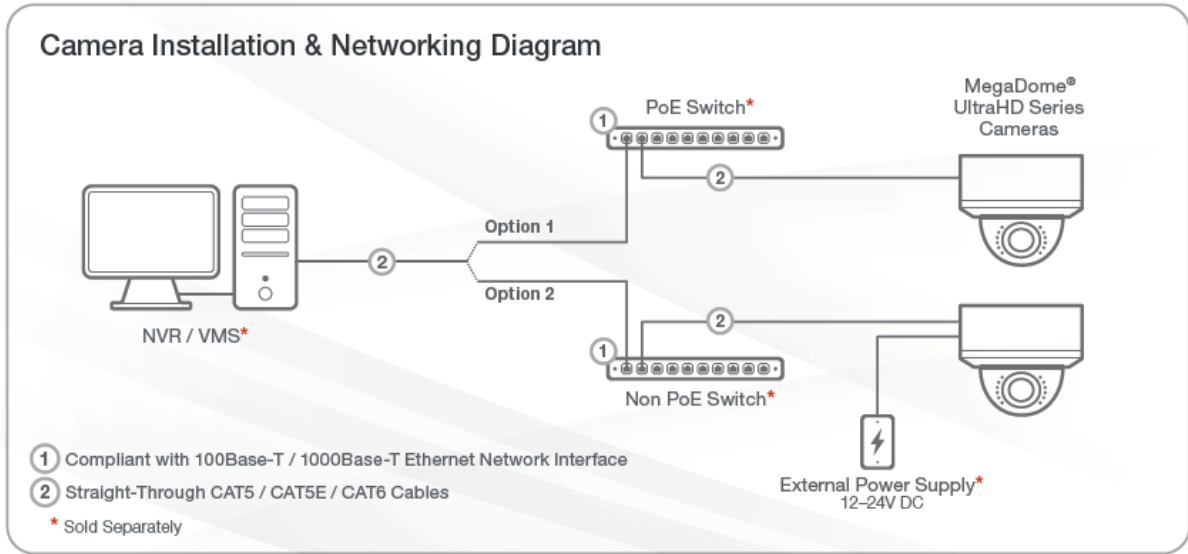
Reference #	Description
1	PoE Connector

NOTE: Recommend to route the Ethernet cable as shown in the image below



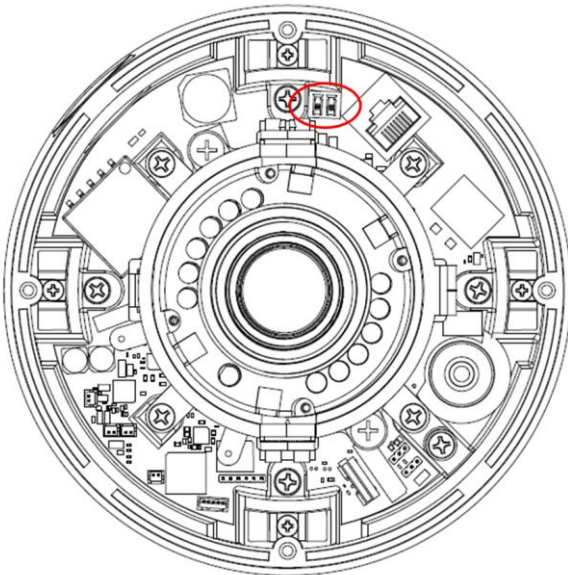
2. If the camera is powered by an outside power supply, 12-24 VDC, connect the power cable.
3. Connect the PoE switch to your computer's network port using an Ethernet cable.

Camera Installation & Networking Diagram



Auxiliary Power

If the camera is powered by a separate outside DC power source, run the supplied power cable through the access hole on the camera housing and connect the power cable to the 2-position connector on the main camera board. The approximate location of the 2-position connector is circled below.



NOTE: Cameras using auxiliary power with 802.1x enabled may need to manually power cycle the camera to reconnect to the network.

CAUTION! Make the connections inside a watertight compartment. Isolate unused power wires individually.



After connections are made, ensure that the watertight compartment is tightly closed and cables and conduits are properly sealed to prevent ingress of water.

NOTE: A yellow LED on the rear of the camera illuminates after a few seconds.

- The flashing yellow LED indicates that a link to your computer has been established.
- A green LED will blink when the camera has been accessed.

LED	Status	Description
Yellow	Flashing	Link has been established.
	Solid	Normal Operation.
Green	Flashing	Camera has been accessed. Normal operation.
	Solid	N/A
None	None	No Connection.

NOTE: Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application.

Reset to Factory Default

1. Press and hold the reset button as shown in Figure 1 for 10 seconds and release the reset button. The camera has been reset to the factory default. If the camera is not connected to DHCP server, the default IP address is 192.168.0.80
2. Also can reset to factory default via camera web interface or AV IP Utility

NOTE: Additional information regarding the Arecont Vision® web interface is found separately in the **AV IP Utility Web Browser Manual** via the Arecont Vision website.

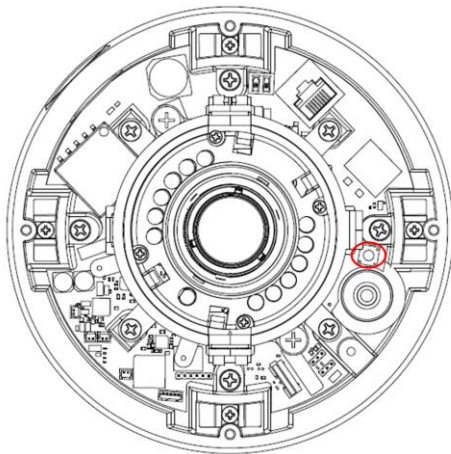


Figure 1: Reset Button

System Requirements

Computer with Windows XP/Vista/7 operating system, network access, and Microsoft Internet Explorer web browser version 9.0 or later (32-bit).

Camera Discovery, Setup, and Configuration

For camera discovery and setup, the AV IP Utility is recommended. The software can be found on the CD included with your camera or at: <http://www.arecontvision.com/software.php>.

The AV IP Utility has the ability to provide multiple discovery options, including broadcast and multicast, check the status of a camera, change camera settings, import and export camera settings via a .csv file, and update firmware and/or hardware from virtually anywhere with a network connection.

Whether used for large installations that require an update to multiple settings, or smaller installations where only one camera needs changed, the AV IP Utility tool is efficient and convenient for mass or single camera uploads.

The AV IP Utility tool is compatible with all Arecont Vision® megapixel cameras. The user manual for the software is included on the CD that came with your camera or available on our website.

Network Protocols

The Arecont Vision MegaDome® UltraHD cameras support RTSP, RTP/TCP, RTP/UDP, HTTP, HTTPs, DHCP, TFTP, QoS, IP version 4 (IPv4), and 802.1x.

RTSP – Cameras communicate with video management systems over Real Time Streaming Protocol. Do not change the RTSP port unless you are sure your VMS does not use the default setting.

RTP/TCP – The Real-time Protocol/Transmission Control Protocol is best suited for applications that require high reliability, and transmission time is relatively less critical.

RTP/UDP – The Real-time Protocol/User Datagram Protocol is used for live unicast video, especially when it is important to always have an up-to-date video stream, even if some images are dropped.

HTTP – The Hypertext Transfer Protocol is an application protocol for distributed, collaborative, hypermedia information systems.

HTTPs – Hypertext Transfer Protocol Secure: encrypts and authenticates communication between Web server and browser.

DHCP – The Dynamic Host Configuration Protocol allows network administrators to centrally manage and automate the assignment of IP addresses. DHCP should only be enabled if using dynamic IP address notification, or if the DHCP can update a DNS server.

TFTP – The Trivial File Transfer Protocol is a simple, lock-step, File Transfer Protocol which allows a client to get from or put a file onto a remote host. TFTP lacks security and most of the advanced features offered by more robust file transfer protocols such as File Transfer Protocol.

QoS – Quality of Service guarantees a certain level of a specified resource to selected traffic on a network. A QoS-aware network prioritizes network traffic and provides a greater network reliability by controlling the amount of bandwidth an application may use.

IPv4 – The MicroDome G2 supports the IPv4 internet-layer protocol for packet-switched internetworking across multiple IP networks. IPv4 uses 32-bit addressing which allows for devices and users on the internet for routing traffic.

802.1x – The IEEE 802.1x standard provides a general method for authentication and authorization in IEEE-802 networks. Authentication is carried out via the authenticator, which checks the transmitted authentication information using an authentication server and approves or denies access to the offered services (LAN, VLAN or WLAN) accordingly.

General Remote Focus

1. To control the remote focus via the web interface, double click the camera within the AV IP Utility (Figure 1) or open your preferred web browser and type the camera's IP address (Fig 2).

NOTE: For supporting H.264 streaming on a webpage, the recommended browsers are Internet Explorer and Firefox.

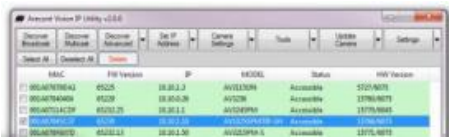


Figure 1: Double click via AV IP Utility

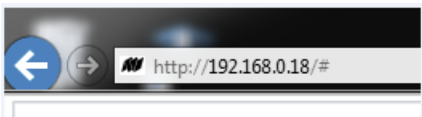


Figure 2: Type the camera IP address

2. Click Zoom & Focus under Camera Tab



NOTE: Additional information regarding the Arecont Vision® web interface is found separately in the [AV IP Utility Web Browser Manual](#) via the Arecont Vision website.

3. Click the Full-range Focus button. The camera begins to autofocus with the lens stopping at the

best overall point of focus.

Arecont Vision
Leading the Way in Megapixel Video™

Camera | Video Settings | Network | System Options | Admin | About | Support

THIS POSITION: 0 13 27

Zoom & Focus

Zoom: +20 +5 +1
-20 -5 -1

Focus: +20 +5 +1
-20 -5 -1
Full-range Focus
Short-range Focus
Stop

Select Focus Window

Enable Digital Zoom Control

* Mouse-related control requires running MJPEG video

* Left click and drag to select focus window. Right click to clear window. Double click for default window.

* Left click and drag to select zoom window. Double click for default settings.

Refined Remote Focus

1. Enable Digital Zoom Control for a more refined, detailed focus

Arecont Vision
Leading the Way in Megapixel Video™

Camera | Video Settings | Network | System Options | Admin | About | Support

THIS POSITION: 0 13 27

Zoom & Focus

Zoom: +20 +5 +1
-20 -5 -1

Focus: +20 +5 +1
-20 -5 -1
Full-range Focus
Short-range Focus
Stop

Select Focus Window

Enable Digital Zoom Control

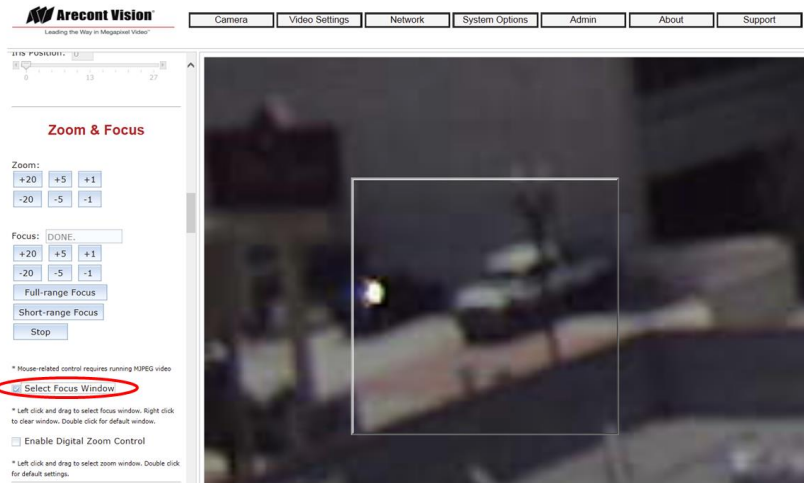
* Mouse-related control requires running MJPEG video

* Left click and drag to select focus window. Right click to clear window. Double click for default window.

* Left click and drag to select zoom window. Double click for default settings.

2. Choose an area that has a lot of objects or an area you have an interest in seeing more details. Left click and drag the box to the area where you want to see finer details. The image zooms in.
3. Repeat until you are able to see pixelization of the image.
4. Enable Focus Window. support@arecontvision.com

5. Left click and drag to highlight the area within the zoomed window you created.



6. Click Short-range Focus button.
7. The camera proceeds to go through the short range adjustment around the original focus. It stops at the best point of focus using the new reference area. When the box around the image illuminates green, the camera has completed the focus. For an additional focus, press the manual focus buttons (+20, +5, +1, -20, -5, -1).

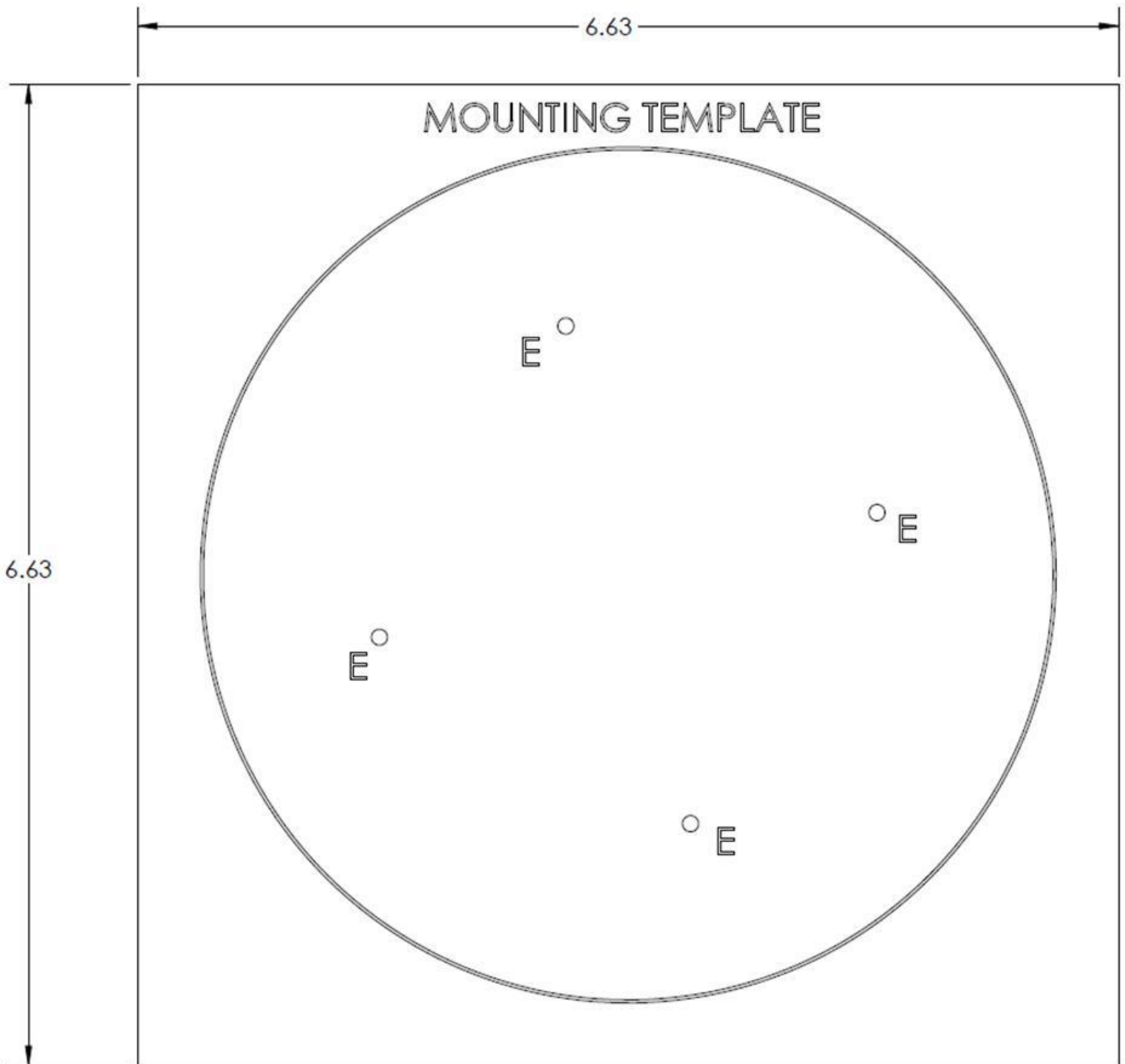


8. When satisfied with the camera's focus setting, click Enable Digital Zoom Control.
9. Double click the image; the video returns to the full field of view.

AV IP Utility Focus Tab

Menu	Feature	Description
<p>Zoom & Focus</p> <p>Zoom:</p> <p>+20 +5 +1 -20 -5 -1</p> <p>Focus: <input type="text"/></p> <p>+20 +5 +1 -20 -5 -1</p> <p>Full-range Focus Short-range Focus</p> <p>Stop</p> <p><small>* Mouse-related control requires running MJPEG video</small></p> <p><input type="checkbox"/> Select Focus Window</p> <p><small>* Left click and drag to select focus window. Right click to clear window. Double click for default window.</small></p> <p><input type="checkbox"/> Enable Digital Zoom Control</p> <p><small>* Left click and drag to select zoom window. Double click for default settings.</small></p>	Manual Zoom/ Focus: +20, +5, +1, -20, -5, -1	Numbers indicate the level of Zooming/ focusing in order to adjust the field-of-view.
	Full-range Focus	Best for scenes that are completely out of focus. The camera automatically scans the full focus range of the scene to find the best focus position.
	Short-range Focus	Best for scenes that are slightly of out of focus. The camera quickly fine-tunes for a precise focus position.
	Stop	Stops any command in progress.
	Select Focus Window	Allows the user to drag the box to the area where need to be focused on.
	Enable Digital Zoom Control	Allows the user to drag the box to the area where need to see finer details.

Mounting Templates



Unit: Inches

Support

1. Arecont Vision FAQ Page Located at ArecontVision.com
2. Check the following before you call:
 - Restore camera to factory default with AV200 or the camera webpage.
 - Upgrade to the latest firmware by visiting ArecontVision.com.
 - Isolate the camera on a dedicated network and test with AV200.
 - Swap the “troubled” camera with a known good camera to see if the problem follows the camera or stays at the location.
3. Contact Arecont Vision Technical Support one of three ways:
 1. Online Portal: Support.ArecontVision.com
 2. Phone: 1.818.937.0700 (option #1)
 3. Email: support@arecontvision.com
4. Use the Arecont Vision software AV IP Utility located on the CD or available for download at our website (www.arecontvision.com) for camera discovery and setup (see Instruction Manual located on the CD or available on our website).