

# Installation Manual

## MegaBall® 2 PM Models

### (Remote Zoom, Remote Focus, P-iris)

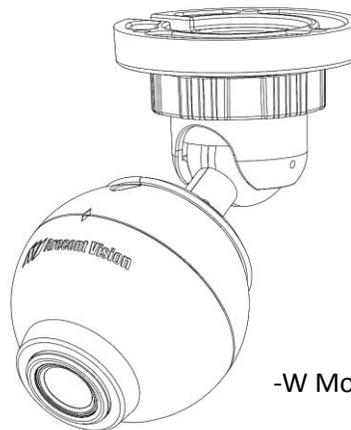
AV2245PM-W

AV2246PM-W

AV3245PM-W

AV3246PM-W

AV5245PM-W



-W Models

AV2245PM-D

AV2245PM-D-LG

AV2246PM-D

AV2246PM-D-LG

AV3245PM-D

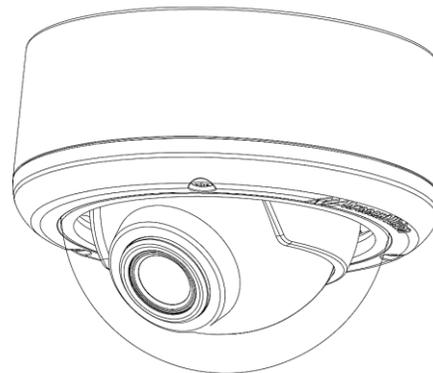
AV3245PM-D-LG

AV3246PM-D

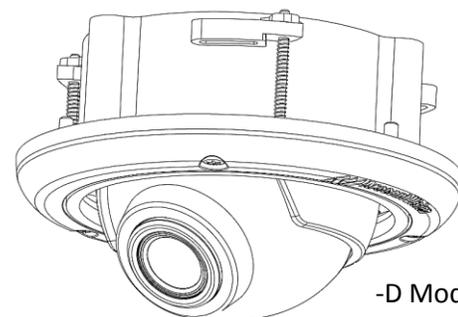
AV3246PM-D-LG

AV5245PM-D

AV5245PM-D-LG



-D Models



-D Models (In-ceiling)



### MegaBall® 2 Panomorph Models

AV5245DN-01-W

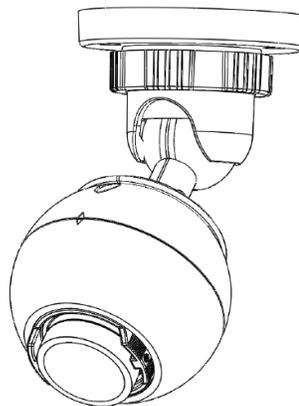
AV5245DN-01-WA

AV5245DN-01-D

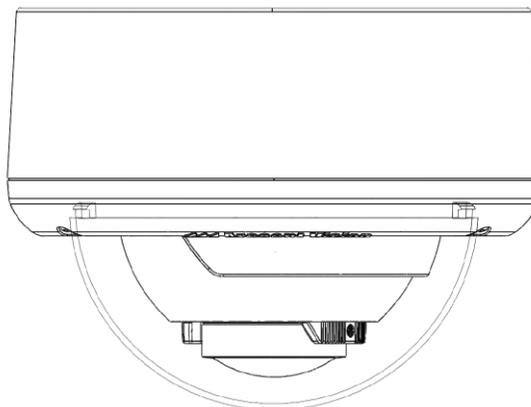
AV5245DN-01-DA

AV5245DN-01-D-LG

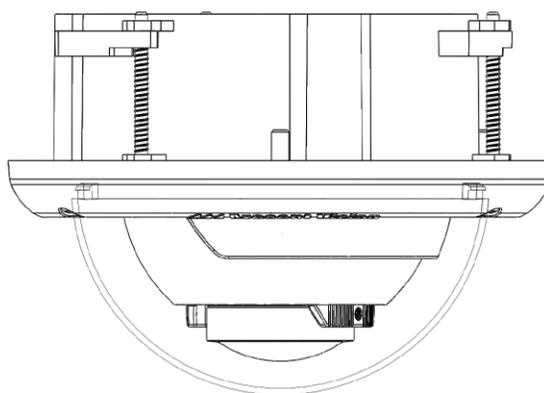
AV5245DN-01-DA-LG



-W Models



-D Models



-D Models (In-ceiling)

### MegaBall™ 2 Installation

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### Package Contents

#### MegaBall™ 2 Wall Mount Version (-W)

- A. Arecont Vision MegaBall™ 2 camera with wall mount (indoor use only)
- B. Mounting template
- C. CD with AV100 software and user manuals (license key required for recording)
- D. Pack of three (3) screws and three (3) anchors

*NOTE: Anchors and screws are good to be used for concrete, wall block and red bricks.*

*NOTE: Screws by themselves can be used in wood.*

#### MegaBall™ 2 Dome Version (-D)

- A. Arecont Vision MegaBall™ 2 camera with in-ceiling mount (indoor use only)
- B. Surface mount (preassembled on dome)
- C. O-ring (preassembled on bezel)
- D. Dome cover (Bubble)
- E. CD with AV100 software and user manuals (license key required for recording)
- F. Security L-Key
- G. Pack of three (3) screws and three (3) anchors

*NOTE: Anchors and screws are good to be used for concrete, wall block and red bricks.*

*NOTE: Screws by themselves can be used in wood.*

- H. Mounting template

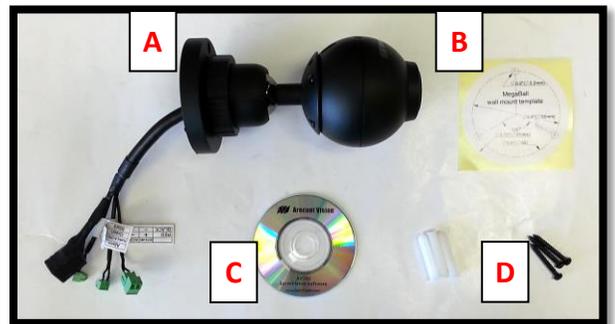


Image 1-1

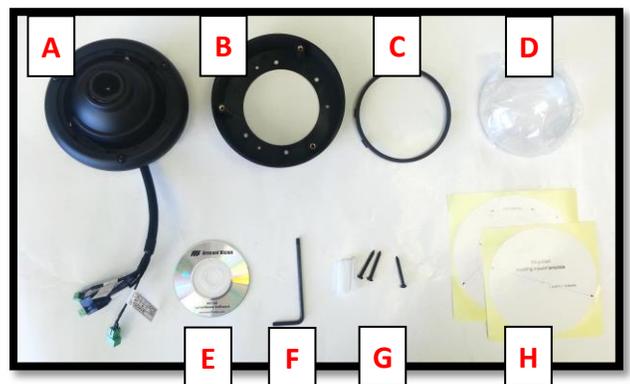


Image 1-2

## Notes:



1. Camera Operating Temperature -5°C (23°F) to +50°C (122°F)
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.

## Warranty Information

### 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 [ArecontVision.com](http://ArecontVision.com)



## Install MegaBall<sup>™</sup> 2 Wall Mount Camera (-W Models)

### Mounting the Camera:

1. Remove the camera and hardware from the box.
2. Using the mounting template, prepare the mounting surface for camera installation.
3. Plug the Ethernet cable into the MegaBall<sup>™</sup> 2 PoE female RJ45 connector. (Image 2)

*NOTE: If the camera will be powered via PoE, please skip to step 5.*

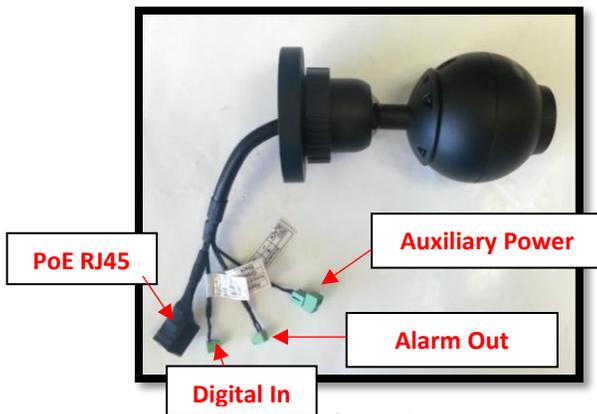


Image 2

4. If the camera will be powered by an AC 24V or DC 12-48V power supply, connect external power with pigtail cable connector.

*NOTE 1: Ensure that the polarity of the DC input on the camera matches the way that the wires are installed in the connector shown in Image 2.*

*NOTE 2: AC power does not have polarity.*

5. Align the holes on the camera wall mount with the prepared holes on the mounting surface. Attach the camera to the mounting surface with the wood screws or any other hardware suitable for the mounting surface.

### Adjusting the Tilt, Pan, Z-Axis (yaw):

6. To adjust the camera tilt, pan or z-axis (yaw), loosen the ring on the wall mount bracket as shown in Image 3 then adjust as necessary and retighten the ring.



Image 3

*NOTE: The 3-axis bracket allows 360° camera body rotation, 90° tilt and 360° bracket rotation for easy installation in any location. (Image 4)*



Image 4

*CAUTION: Adjusting the camera without loosening the bracket ring may result in scratches on the bracket joint. Incorrect installation practices are not covered under warranty!*

## Install MegaBall™ 2 Dome Version (-D Models)

### Mounting the Camera:

1. Remove the camera and hardware from the box.
2. Using the mounting template, prepare the mounting surface for camera installation.
3. Plug Ethernet cable into the MegaBall™ 2 PoE female RJ45 connector. (Image 5)

*NOTE: If the camera will be powered via PoE, please skip to step 5.*

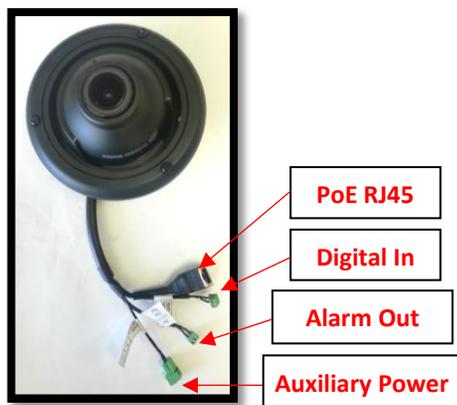


Image 5

4. If the camera will be powered by an AC 24V or DC 12-48V power supply, connect auxiliary power to terminal block on pigtail cable connector.

*NOTE 1: Ensure that the polarity of the DC input on the camera matches the way that the wires are installed in the connector shown in Image 5.*

*NOTE 2: AC power does not have polarity.*

5. Using the provided Security L-key (Image 1F), loosen the three (3) screws securing the dome cover (Image 6). Remove the vandal resistant dome cover.

*NOTE: Do not remove the screws from the dome cover.*



Image 6

6. Loosen the three (3) machine screws (Image 7) and remove the in-ceiling mount camera from the surface mount housing.

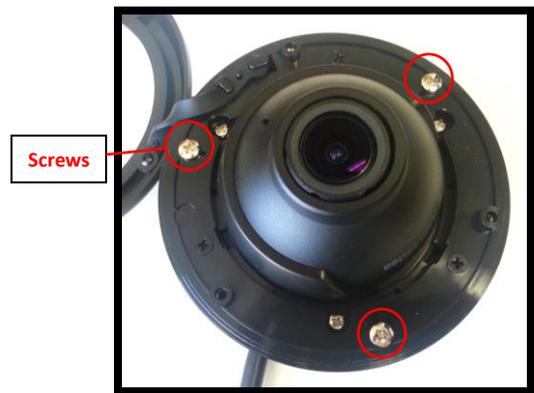


Image 7



### In-ceiling Mount Installation (Optional)

7. Using the mounting template, cut a hole in the surface for mounting.
8. Insert the in-ceiling mount camera into the hole.
9. Tighten the “lever screws” until the flush mount is snug, as shown in Image 8. The “Support Arm” will ride down the screw to compress the mounting surface.

*NOTE: Do not over-torque the lever screws.*

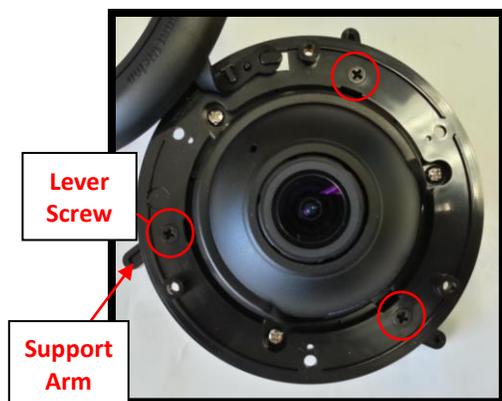


Image 8

### Surface mount installation

10. Align the holes in the surface mount with the prepared holes on the mounting surface with the wood screws or any optional hardware suitable for the mounting surface.
11. Attach the in-ceiling camera to the surface mount, using the three machine screws as shown on Image 7.

### Adjusting the Tilt, Pan, Z-Axis (Yaw):

12. To adjust the camera tilt, pan or z-axis (yaw), loosen the 3 set screws on the in-ceiling mount as shown in Image 9. Then adjust as necessary and retighten the 3 set screws.

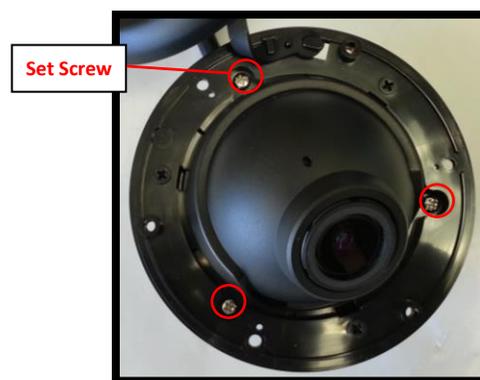


Image 9

*NOTE : The 3-axis in-ceiling camera allows 360° camera body rotation, 90° tilt, and 360° camera sleeve rotation for easy installation in any location as shown in Image 10.*

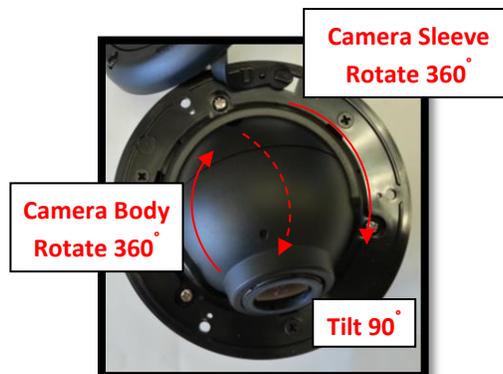


Image 10

### Adjusting focus on Panomorph lens (DN-01 models only)

13. Loosen two set screws on focus ring by provided security L-key (Image 1-2F on Page 4) as shown in image 11



Image 11

14. Loosen two set screws on the front shell of Megaball 2 camera by provided security L-key (Image 1-2F on Page 4) as shown in image 12



Image 12

15. To focus AV5245DN-01 camera, rotate focus ring as needed to get best focus position as shown in Image 13.



Image 13

*NOTE: Ellipse maybe not symmetrical at best focus position as shown in Image 14*

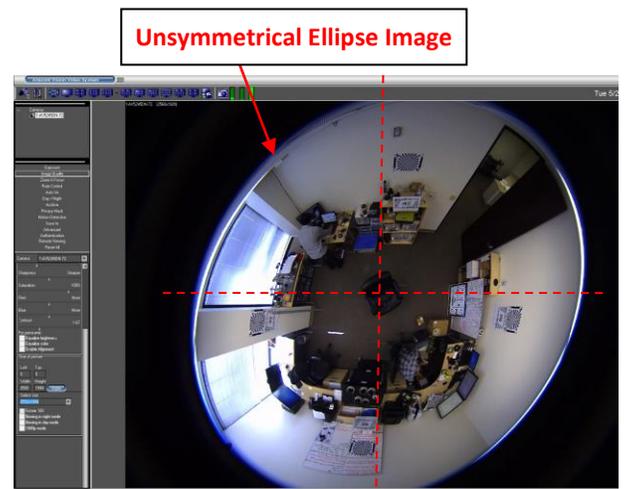


Image 14

16. Rotate lens as needed to get ellipse symmetrical as shown in Image 15.



Image 15

*NOTE: To get properly dewarping image from ImmerVision Enables® software, Ellipse needs to be symmetrical as shown in Image 16.*

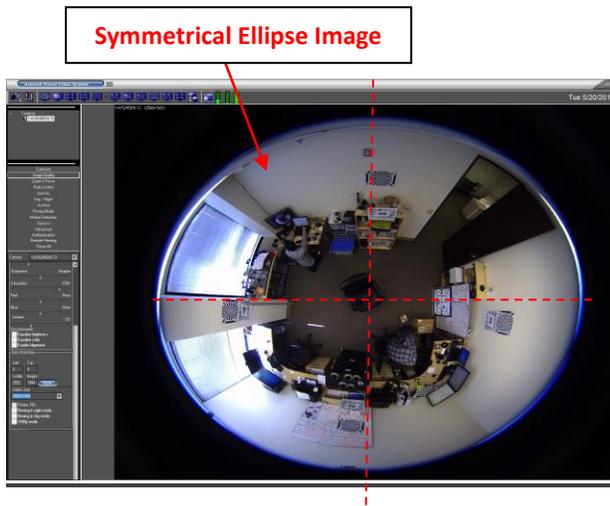


Image 16

17. Tighten two set screws on focus ring by provided security L-key (Image 1-2F on Page 4) as shown in image 11

18. Tighten two set screws on the front shell of Megaball 2 camera by provided security L-key (Image 1-2F on Page 4) as shown in image 12

### Dewarping from ImmerVision Demo viewer (DN-01 models)

19. Run the ImmerVision demo viewer. (Image 17, found on the CD).

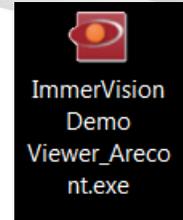


Image 17

20. Choose Arecont from camera list as shown in image 18.

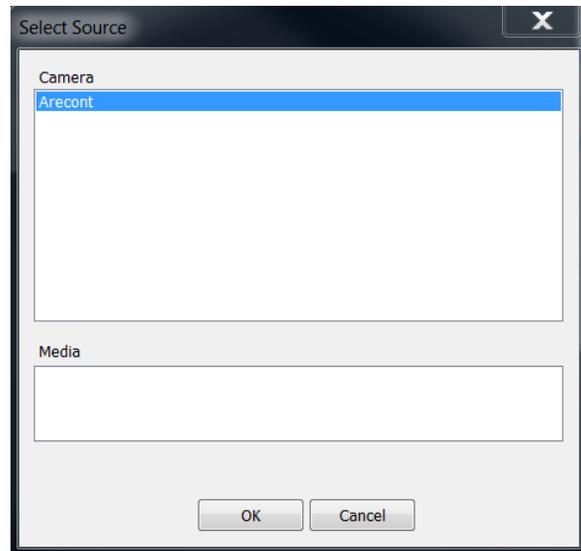


Image 18

21. Choose A8TRT lens option as shown in image 19.



Image 19

22. Choose camera installation method as shown in image 20.

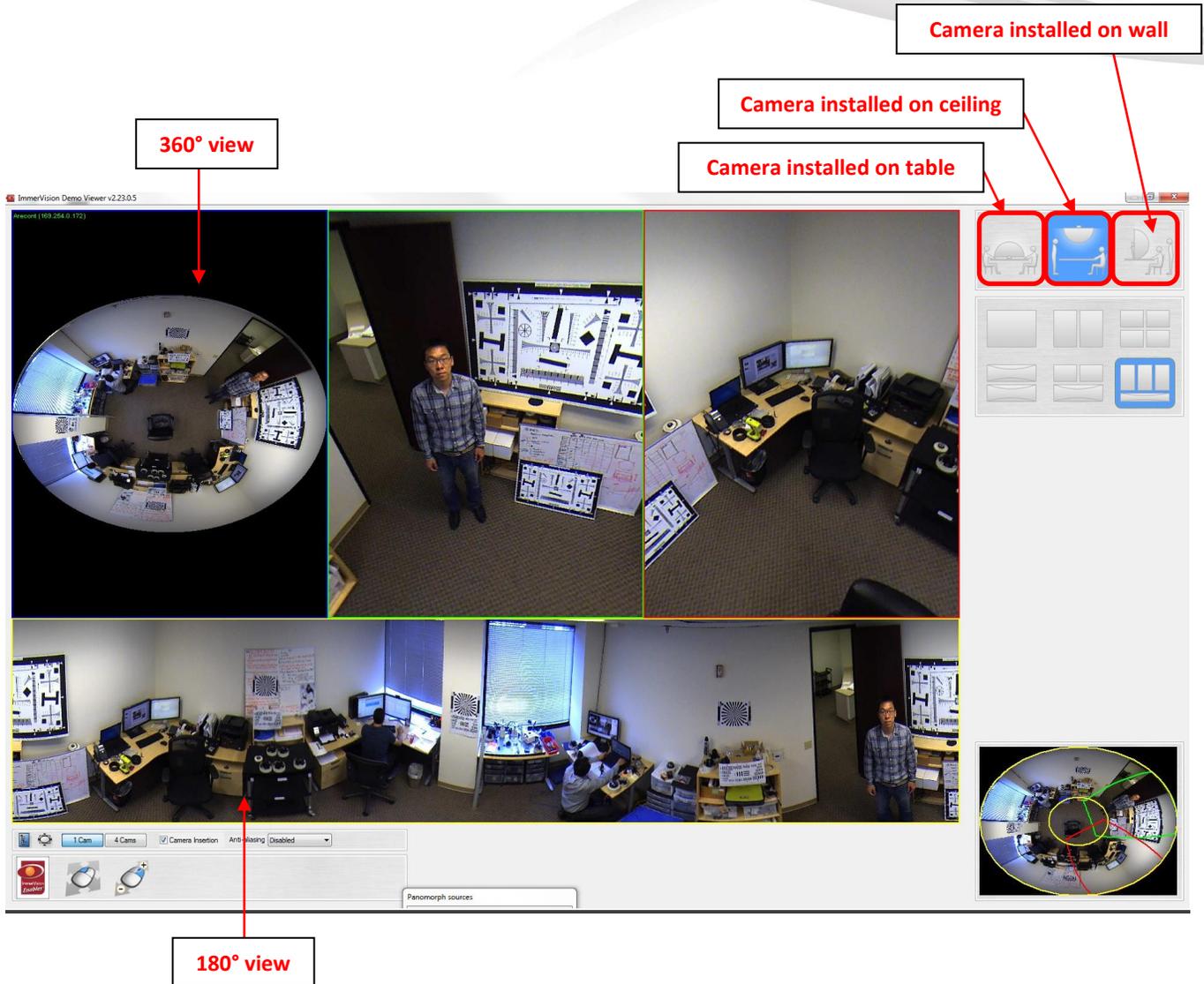


Image 20

*NOTE: Arecont Vision AV5245DN-01 models use Immervision **A8TRT** Panomorph lens and can be dewarped by Arecont Vision certified video management systems as shown in Table 1*

	Video Management Systems	Version
	Milestone	Corporate 6.1 Enterprise 8.5e Professional 8.5e Expert 6.1 Express 1.5e Essential 2.5e
	Genetec	Security Center 5.4
	Exacq	Exacq Vision 5.7
	Axxon	Axxon Next
	Luxriot	VMS 2.4
	March Networks	Command 1.6
	Nice	Nice Vision 2.7
	NUUO	Crystal
	QNAP	VioStor 5.0
	Salient	4.3.1
	Video Insight	VMS 5.5

Table 1

*NOTE: Immervision Demo Viewer only support JPEG format instead of H.264 and maximum frame rate is 7 fps*

*NOTE: By using Arecont Vision certified video management systems, AV5245DN-01 frame rate can reach to 14 fps at both H.264 and JPEG formats.*



## Dome Cover (Bubble) Installation (Optional):

23. Remove the O-ring (Image 1D on Page 4) from the bezel by pushing on the 4 drift pins on the back of bezel shown in Image 21.
24. Attach the provided dome cover (Image 1D on Page 4) to the bezel as shown in Image 22.



Image 21



Image 22

25. Remove the protective film from the bubble.

*NOTE: Take precaution not to scratch the bubble.*

26. Secure the dome cover to the camera using the provided Security L-Key (Image 1F on Page 4)



## Adjusting the Remote Focus and Zoom: (PM models only)

27. To adjust focus or zoom, open the camera web interface and click the “Focus” tab as shown in image 23.
28. To manually adjust zoom, click the “+20”, “+5”, “+1”, “-20”, “-5”, “-1” buttons to zoom in and out, adjusting the field of view.

*NOTE 1: “+20” zooms in 20x further than “+1”*

*NOTE 2: If the “Enable Auto Focus after zoom” option is checked as shown in image 23, the focus will automatically be adjusted when zoom is changed.*

29. Set up a focus area (if necessary) by drawing a rectangle with the mouse (by left-clicking and dragging the mouse to a desired zoom size) shown in Image 23.
30. To automatically adjust focus, choose “Full-range Focusing” or “Fast Focusing” depending on the image clarity as shown in image 23.
31. If the image is completely out of focus, choose “Full-range Focusing” to scan the full focus range and find the best focus position.
32. If the image is slightly out of focus, choose “Short-range Focusing” to fine tune and quickly get a precise focus position to save time.
33. 31. To manually focus, click the “+20”, “+5”, “+1”, “-20”, “-5”, “-1” buttons to fine tune the focus.

## Zoom & Focus

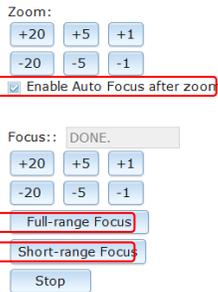
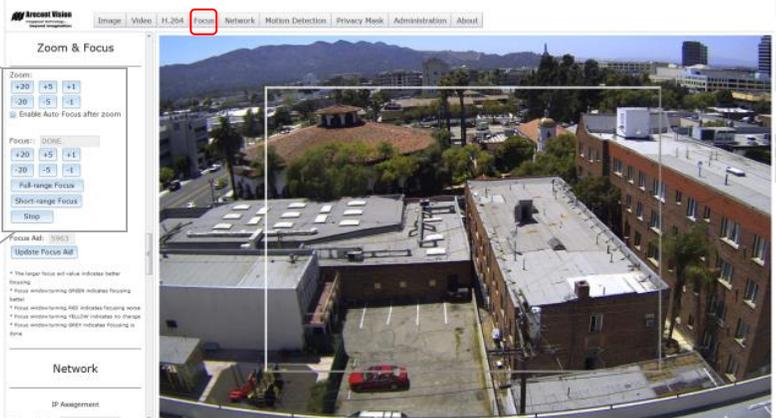


Image 23



## Adjusting P-Iris: ( PM models only)

*Note: If “Enable P-Iris” is unchecked, the iris will be fully open to the maximum. It may result in less sharpness and artificial color under strong light condition.*

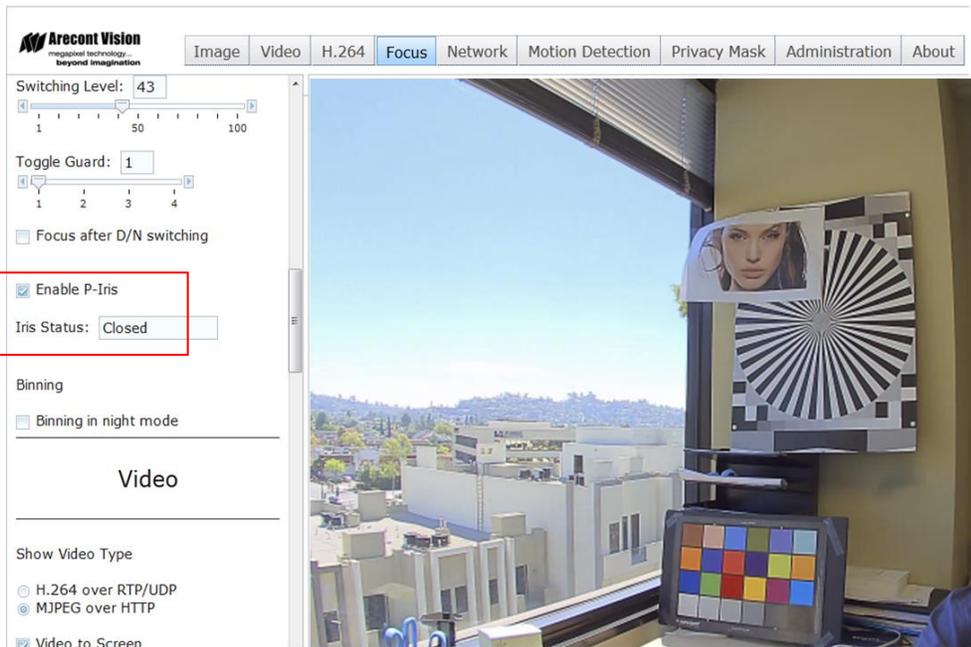


Image 24

**Optional: Connecting Alarm I/O:**

34. To use the Alarm I/O, connect the alarm I/O to the pigtail cable connector as shown in Image 2.

*NOTE: Table 2 shows the electrical characteristics and Table 3 shows cable color for digital I/O.*

Electrical Characteristics:		Min	Max	Camera
Input voltage (V) (measured between + and - terminals)	ON	2.9	6.3	IR & DN Versions
	OFF	0	1.3	
Output current (mA) (measured between + and - terminals) Applied Voltage Range: 0 - 80V	ON	-	50	DN version Only
	OFF	-	0.1	

Table 2

*NOTE: Both the input and the output are electrically isolated from the rest of the camera's electrical circuitry via general-purpose photo couplers. The input is additionally protected with a serial 250 Ohm resistor and a debouncing circuit. Duration of any input signal should be at least 5ms to comply with the requirements of the debouncing circuit.*

Yellow	Digital IN +
Red	Digital IN -
Green	Digital OUT +
Black	Digital OUT -

Table 3

## Software Installation

35. Install the AV100 or AV200 application manager Software found on the CD.

*NOTE: you can download latest version AV100 and AV200 and installation manual on website*

<http://www.arecontvision.com/software.php>

## Wall Mount (D4S-WMT-B or D4S-WMT) Installation Instructions (Sold Separately)

### Inside the box:

- A. Wall mount ( Fits ¾" NPT Standard)
- B. Pack of three (3) machine screws
- C. Pack of four (4) screws and four (4) anchors

*NOTE: Anchors and screws are good to be used for concrete, wall block and red bricks.*

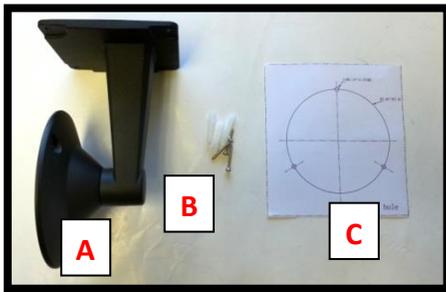
*NOTE: Screws by themselves can be used in wood.*

- D. Mounting template

*NOTE: D4S-WMT-B color is black and D4S-WMT color is light grey.*

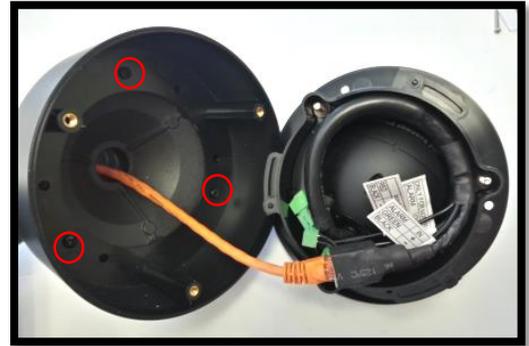
### Not included but needed:

- #2 Phillips screw driver



**Image 25**

1. Remove wall mount and hardware from the box.
2. Using the mounting template, prepare the mounting provisions for camera installation.
3. Attach surface mount (**Image 1B on Page 4**) to wall mount as shown in **Image 26** using three machine screws provided.



**Image 26**

4. Run Ethernet cable through the wall mount
5. Attach wall mount to the wall using screws or any optional hardware suitable for the mounting surface.
6. Connect Ethernet cable with Megaball pigtail cable as shown on **Image 27**



**Image 27**

7. For installation of the camera, please reference "**Mounting the Camera**".



## Junction Box Adapter (SV-JBA) Installation Instruction (Sold Separately)

### Inside the box:

- A. Junction Box Adapter
- B. Pack of four (4) machine screws
- C. One double-sided hex key
- D. Pack of four (4) screws and four (4) anchors

*NOTE: Anchors and screws are good to be used for concrete, wall block and red bricks.*  
*NOTE: Screws by themselves can be used in wood.*

- E. Mounting template

### Not included but needed:

- #2 Phillips screwdriver
- Wall Mount, MD-WMT
- ¾" NPT Conduit (if necessary)



Image 28

1. Remove junction box adapter and hardware from the box
2. Remove the conduit plug by first removing the socket set screw using the provided hex key (C) as shown on **Image 29**.
3. Attach the junction box adapter to the wall using screws or any optional hardware suitable for the mounting surface.

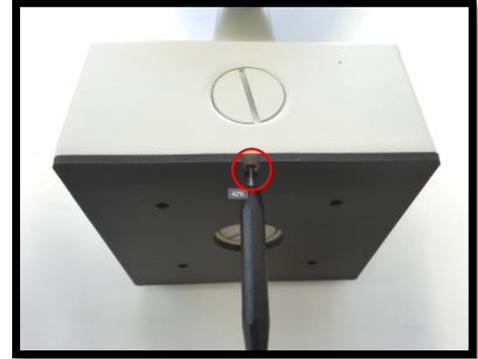


Image 29



Image 30

4. Attach the wall mount to junction box adapter then attach cap to the wall mount as shown in Image 30.
5. Connect ¾" NPT Conduit to the junction box adapter.
6. Run Ethernet cable and outside power cable (if necessary) through the Junction Box Adapter and Wall Mount.
7. For installation of the camera, please reference "**Mounting the Camera.**"



# Electrical Box Adapter (SV-EBA) Installation Instructions (Sold Separately)

## Inside the box:

- A. Electrical Box Adapter
- B. Pack of four (4) machine screws

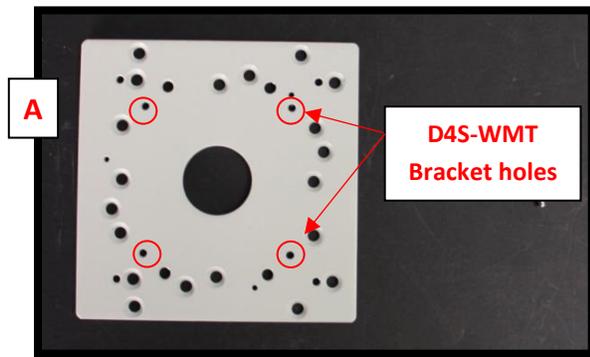


Image 31

## Not included but needed:

- #2 Phillips head screwdriver
  - Common electrical box, such as single gang box, double gang box, or square electrical boxes shown in **Image 32-1~4**.
1. Remove the electrical box adapter and hardware from the box.
  2. Attach the wall mount bracket to the electrical box adapter.
  3. Attach adapter to electrical box.

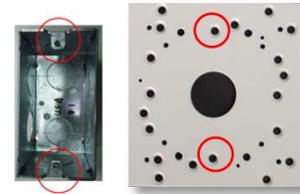


Image 32-1 Single gang box

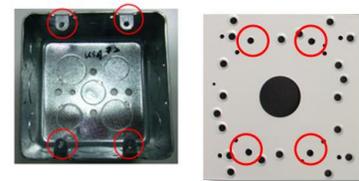


Image 32-2 Double gang box



Image 32-3 Square box

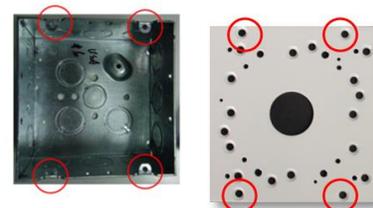


Image 32-4 Square box



### LED Indicators

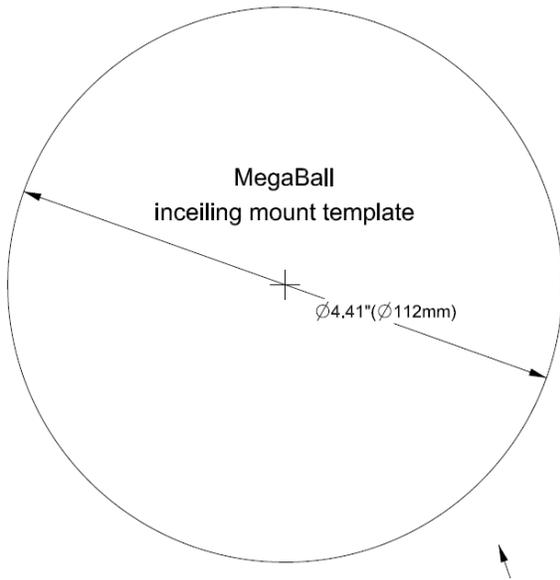
LED	Status	Description
Green	Flashing	Camera has been accessed. Normal operation.
	Solid	N/A
	None	No Connection.

### Support

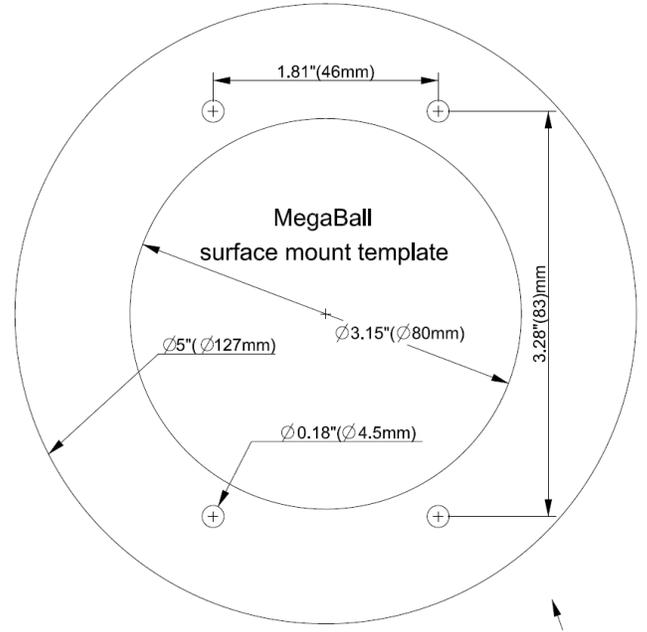
1. Arecont Vision FAQ Page Located at [ArecontVision.com](http://ArecontVision.com)
2. Check the following before you call:
  - ✓ Restore camera to factory default with AV100, AV200 or the camera webpage.
  - ✓ Upgrade to the latest firmware by visiting [ArecontVision.com](http://ArecontVision.com).
  - ✓ Isolate the camera on a dedicated network and test with AV100 or 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](http://Support.ArecontVision.com)**
  - 2. Phone : 1.818.937.0700 (option #1)**
  - 3. Email : [support@arecontvision.com](mailto:support@arecontvision.com)**

# Mounting Template

## MegaBall Dome ( In-ceiling) (-D)



## MegaBall Dome Surface mount (-D)



## MegaBall Wall Mount (-W)

