



180° Panoramic WDR



360° Panoramic WDR

## **Surround**Video<sup>®</sup> WDR

**AV12186DN** 12-Megapixel H.264 WDR 180° Panoramic IP Camera

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN/AV12366DN SurroundVideo® Installation Manual

### Inside the box:

- A. Arecont Vision AV12186DN camera
- B. Mounting template
- C. Security L-key
- D. 1.5mm Hex L-key
- E. Power cable
- F. I/O Cable
- G. 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. Screws by themselves can be used in wood.*

### Not included but needed:

- #2 Phillips head screw driver

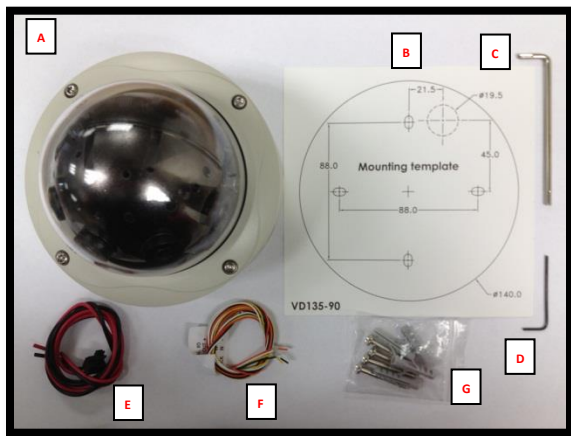


Image 1

### How to Mount the Camera

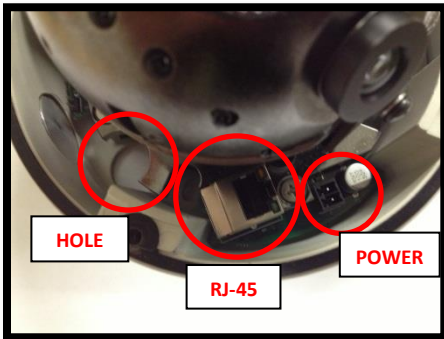
1. Remove camera and hardware from the box.
2. Using the Mounting template, prepare the mounting provisions for camera installation. *NOTE: the 19.5mm diameter hole on the Mounting template is where the Ethernet cable will be exiting the AV12186DN camera, align accordingly. If using the side conduit hole, please see **step 7** below.*
3. Using Security L-key, loosen the four (4) screws securing the dome cover (**Image 2**). Remove vandal resistant dome cover. *NOTE: Do not remove screws from the dome cover.*



Image 2

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

4. Run Ethernet cable through the hole on the bottom of the camera (**Image 3**) and plug it into the RJ45 port.
5. If the camera is powered by a separate outside AC or DC power source, run the supplied power cable through the hole and connect it to 2-pos. AC/DC power connector inside the camera (**Image 3**). *NOTE: Make sure that your installation of wires complies with Electrical Code of the local government, where the camera is installed and no bare wires are exposed.*
6. Align the holes in the camera with the prepared holes on the mounting surface. Attach the camera to the mounting surface with the wood screws or any optional hardware suitable for the mounting surface.
7. If you are using the side conduit opening, remove the conduit plug by first removing the socket set screw using 1.5mm Hex L-key (**Image 4**).



**Image 3**



**Image 4**



**Image 5**

## **Adjust Camera Tilt, Pan and Focus:**

8. To adjust the gimbal tilt, use #2 Phillips screwdriver to loosen two screws on both sides of the Gimbal, no more than two full turns (**Image 5**)  
**CAUTION: Do not remove the screws!**

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**CAUTION:** Make sure the sensor cables are freely moving in cable slot, the correct way to tilt the Gimbal is shown on Image 6.



Image 6

9. Adjust the gimbal tilt as required and tighten the screw from **step 8** shown in **image 7**



Image 7

10. To adjust the gimbal pan simply rotate the gimbal. The friction ring at the bottom of the gimbal doesn't require any hardware.

**NOTE:** Grab gimbal by the brackets, not the ball to avoid direct contact with lenses not to damage them or leave fingerprints on glass.



Image 8

11. Adjust the gimbal pan as required shown in **image 8**
12. To adjust each lens tilt angle, loosen two set screws on the top shell via #1 Phillips screwdriver. Adjust each lens tilt angle as required and tighten two set screws shown in **Image 9**.

**NOTE:** The travel range for each lens tilt angle is 14°

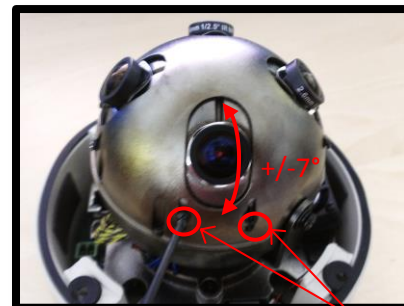


Image 9

Set Screws

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

- To focus each of four lenses, remove the lens cap and focus the lens as shown in **Image 10-1** (AV12366DN) and **Image 10-2** (AV12186DN) *NOTE: the wave washer underneath the lens prevents it from losing focus in vibration.*
- Remove the protective film from the camera dome. *NOTE: be cautious not to scratch the vandal-resistant dome cover.*
- Secure the vandal dome cover to the camera as shown in **Image 2**.



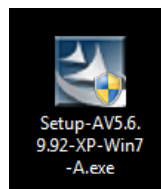
**Image 10-1 (AV12366DN)**



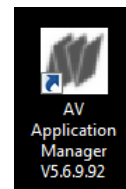
**Image 10-2 (AV12186DN)**

## Camera Installation:

- Install the AV100 application manager Software as shown in **Image 11** (found on the CD).
- Run the AV100 application manager by double clicking on the icon as shown in **Image 12** (found on your desktop).



**Image 11**



**Image 12**

- Select “Run” next to “Setup Cameras” from the AV100 application manager as shown in **Image 13** and wait for “Arecont Vision Camera Installer” window to appear as shown in **Image 14**.



**Image 13**

- Click “Mode” tab to select desired install mode on Arecont Vision Camera Installer as shown in **Image 14**.

*NOTE 1: Advanced Mode: (Default setting) software will automatically discover but allow manual update of the IP address. See “AV100*

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

Installation Manual” (found on the CD) for details on Advanced Mode.

NOTE 2: Basic Mode: software will automatically discover and change / assign IP address to match PC subnet if they are not locked.

NOTE3: User can verify camera model number and FW version of all cameras as shown in Image 11.

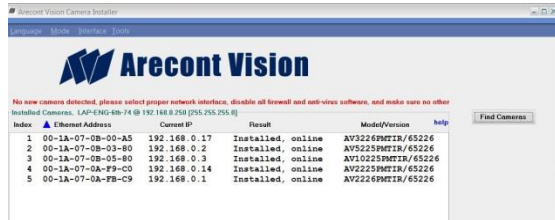


Image 14

20. Select “Find Cameras” on Arecont Vision Camera Installer as shown in **Image 14**
21. Confirm all cameras connected to the network switch appear in the upper window.
22. Repeat **Step 24** if all of the cameras do not appear in the upper window.

**CAUTION:** If the software does not find a camera, the software utility may be blocked by the anti-virus or Windows® firewall. Before turning them off, please consult your IT manager.

NOTE : Double click the camera model on the Camera Installer as shown in **Image 15** to access the camera web interface.

See “AV Camera Web Page User Manual” (found on the CD) for details on the web interface.

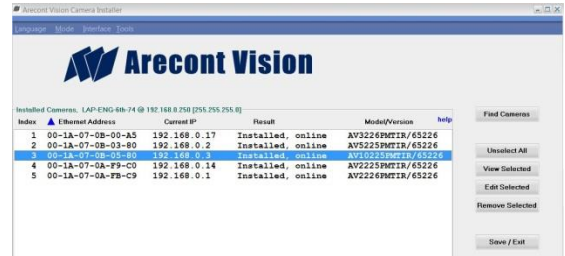


Image 15

23. When all cameras appear, select “Save/Exit.” The AV100 application will appear.
24. From the “AV100 Application Manager” menu, select “Run” to view live images.

NOTE: See the “AV100 Installation Manual” (found on CD) for details on camera configurations.



# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## Image equalization (exposure reference) instructions: (AV12186DN/AV12366DN)

1. Launch the camera webpage
2. Click “Setting” and select the desired channel to be the cameras “Exposure Reference Channel” (see **Image 16**). Setting an *Exposure Reference Channel* will reduce the color and brightness variations among channels. Channel numbers are shown in **Image 17**.

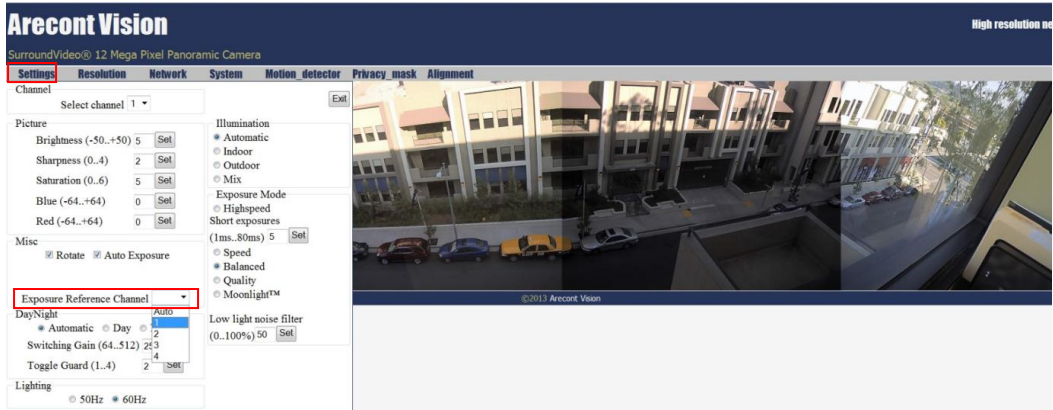


Image 16

*NOTE: The default setting for the “Exposure Reference Channel” is “Auto”, which means that each channel is automatically adjusted to provide the best WDR scene. This may cause variations from image to image, however the camera is providing the best image for each channel. When different channels are under different lighting conditions, there will be some color or brightness variation among the channels. See below for an example on how to adjust different reference channels to minimize brightness and color differences.*

*NOTE: Using Exposure Reference Channel Setting may result in abnormal noise which can't be resolved!*

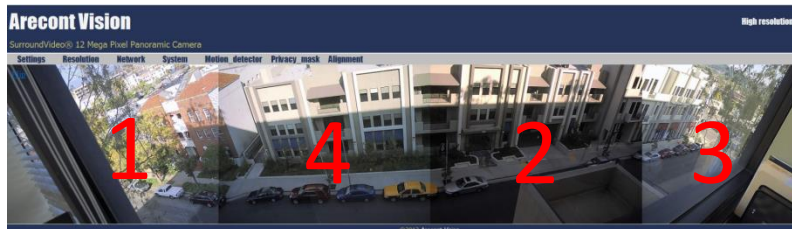
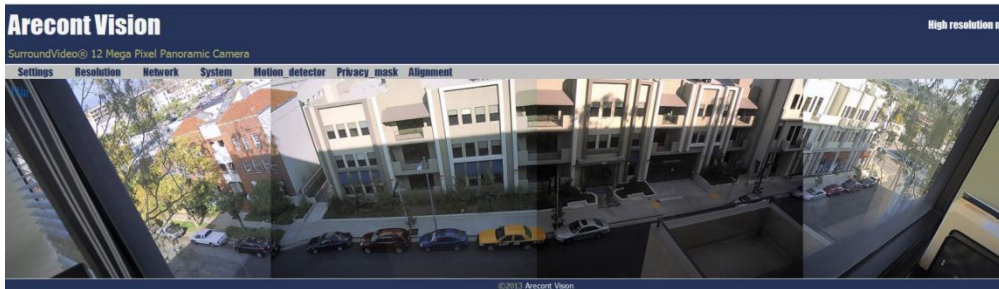


Image 17

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

- Exposure Reference Channel set as “Auto”



- Exposure Reference Channel set as Channel “1”



- Exposure Reference Channel as Channel “2”

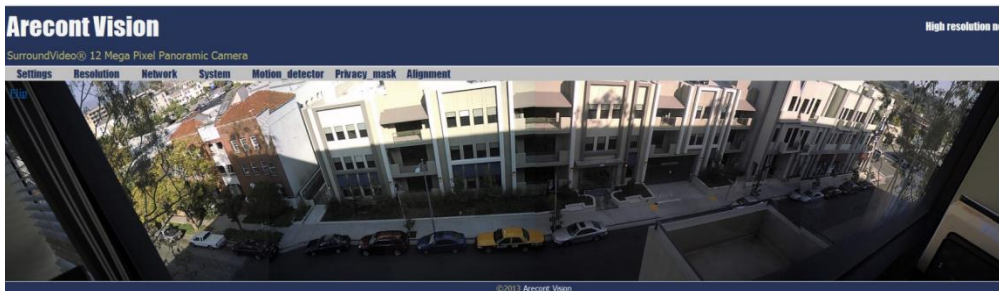


Image 18



# Arecont Vision SurroundVideo® WDR Camera Installation Manual

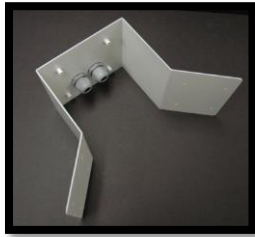
Since AV12186DN/AV12366DN cameras utilize the same housing as MegaDome®, it also shares the same accessories.

Please check MegaDome installation manual for more detail.

**MD-CMT**



**MD-CRMA**



**SV-EBA**



**MD-WMT2**



**MD-CAP**



**SV-JBA FOR  
MD-WMT2**



**MD-PMA**



**Image 19**

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / MegaDome® Pendant Mount (MD-CMT) Installation Instructions

### Inside the box:

- A. Top shield
- B. Pendant Mount
- C. Mounting template
- D. Pack of four (4) machine screws (#8-32 ½")
- E. Pack of four (4) small machine screws (M4 8mm)
- F. Pack of four (4) screws and four (4) anchors
- G. Large round rubber gasket
- H. Smaller square rubber gasket
- I. One double sided hex key

### Not included but needed:

- J. #2 Phillips head screw driver

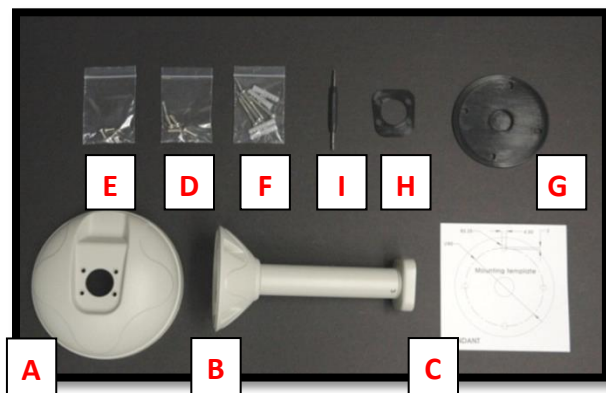


Image 20

1. Remove Pendant Mount and hardware from the box.



Image 21



Image 22

2. Using Mounting template, prepare the mounting provisions for camera installation.
3. Place small gasket onto pendant dome as shown in **image 21**.
4. Attach Dome to Pendant as shown in **Image 22** using four machine screws provided.
5. Install large round rubber gasket onto Pendant as shown in **image 22**. Be sure to align the holes appropriately.
6. Run Ethernet Cable and outside power cable (if necessary) through the Pendant.
7. Attach Pendant to the ceiling using the four wood screws provided or any optional hardware suitable for the mounting surface.
8. For installation of the camera, please reference "**Mounting the Camera**".

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / MegaDome® Wall Mount (MD-WMT2) Installation Instructions

### Inside the box:

- A. Wall mount
- B. Top shield
- C. Mounting template
- D. One double sided hex key
- E. Pack of four (4) machine screws (#8-32 1/2")
- F. 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. Screws by themselves can be used in wood.*

### Not included but needed:

- #2 Phillips head screw driver

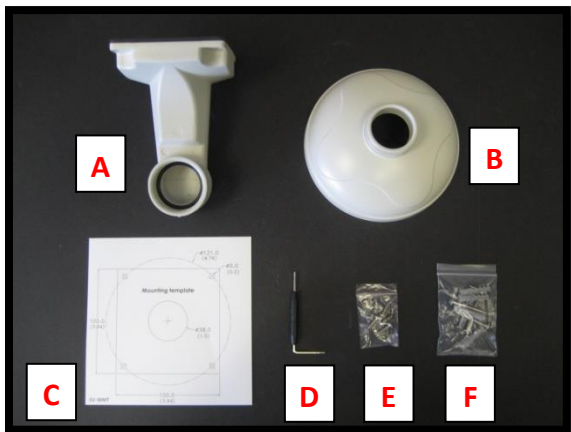


Image 23

1. Remove Wall Mount and hardware from the box.



Image 24

2. Using the mounting template, prepare the mounting surface.
3. Install Top Shield on Wall Mount as shown in **image 24**.
4. Fasten the socket set screw using double side hex key.
5. Run Ethernet Cable and outside power cable (if necessary) through the Wall Mount.
6. Attach Wall Mount to the wall using drywall screws or any optional hardware suitable for the mounting surface.
7. For installation of the camera, please reference "**Mounting the Camera**".

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / MegaDome® Wall Mount Cap (MD-CAP) Installation Instructions

### Inside the box:

- A. Wall Mount Cap (MD-CAP)
- B. Pack of four (4) machine screws

### Not included but needed:

- 1½" NPT Pipe nipple
- 1½" NPT Coupling
- 1½" NPT Flange
- #2 Phillips head screw driver

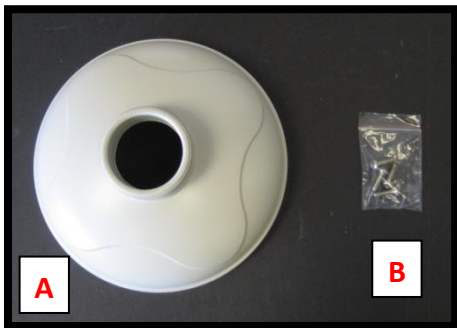


Image 25

1. Remove Wall Mount Cap from the box.
2. Assemble Wall Mount Cap, 1½" Coupling, 1½" Pipe nipple and 1½" Flange as a Pendant Mount shown in **image 26**.

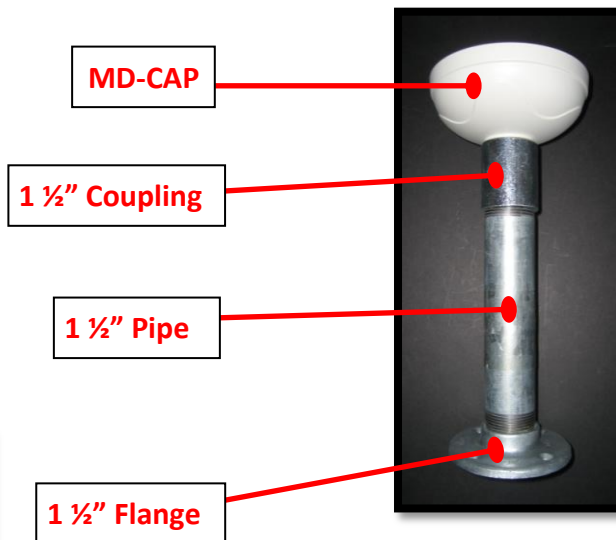


Image 26

3. Run Ethernet Cable and outside power cable (if necessary) through the Pendant.
4. Attach Pendant to the ceiling using four wood screws or any optional hardware suitable for the mounting surface
5. For installation of the camera, please reference "**Mounting the Camera**".

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / Junction Box Adapter (SV-JBA) for MD-WMT2 Installation Instruction

### **Caution:**

***SV-JBA should always be used with a wall mount, MD-WMT2, for outdoor installation. SV-JBA can only be installed with MD-WMT2 wall mount. It does not work with camera dome, older MD-WMT mount or MD-CMT!***

### **Inside the box:**

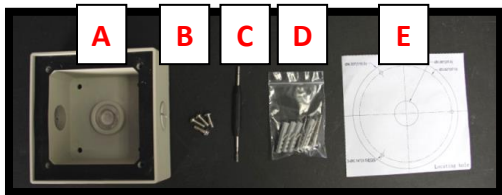
- A. Junction Box Adapter
- B. Pack of four (4) machine screws (#8-32 1/2")
- C. One double-sided hex key
- D. Pack of four (4) screws and four anchors

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

- E. Mounting template

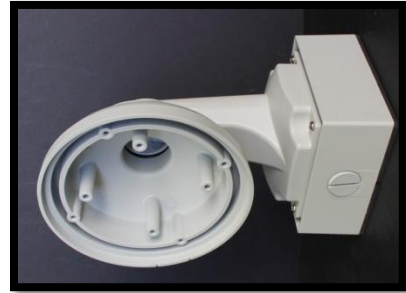
### **Not included but needed:**

- #2 Phillips head screwdriver
- Wall Mount, MD-WMT
- 3/4" NPT Conduit (if necessary)



**Image 27**

1. Remove junction box adapter and hardware from the box



**Image 28**

2. Remove the conduit plug by first removing the socket set screw using the provided hex key (C).
3. Attach the junction box adapter to the wall using drywall screws or any optional hardware suitable for the mounting surface.
4. Attach the wall mount to junction box adapter then attach cap to the wall mount as shown in **Image 28**.
5. Connect 3/4" 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.**"



# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / MegaDome® Flush Mount Adapter (MD-FMA) Installation Instructions

### Inside the box:

- A. Flush Mount Adapter
- B. White Trim Ring  
Pack of four (4) machine screws (#8-32 1/2") and one (1) I-Blot
- C. Mounting template

### Not included but needed:

- #2 Phillips head screw driver

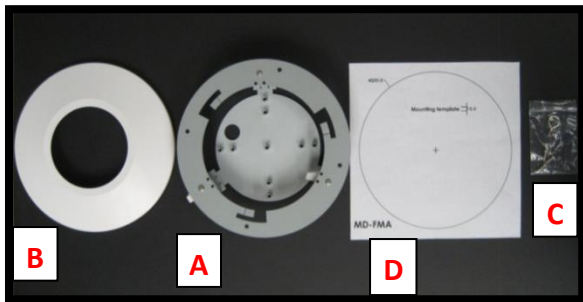


Image 29

1. Remove Flush Mount Adapter, Trim Ring and hardware from the box
2. Attach Dome to Flush Mount Adapter as shown in **Image 30**. Please reference "**Mounting the Camera**", if needed.
3. Using the Mounting template, cut a hole in surface for mounting.
4. Insert Flush Mount Adapter into the hole.

5. Screw the "lever screws" until the FMA is snugly installed, as shown in **Image 30**. The "Support Arm" will ride down the screw to compress the mounting surface. *NOTE: Do not over-torque the lever screws*
6. Attach the Trim Ring to the Flush Mount Adapter by rotating clockwise as show in **Image 31**.



Image 30



Image 31

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / Electrical Box Adapter (SV-EBA) Installation Instructions

### Caution:

*SV-EBA can only be installed with MD-WMT2 wall mount. It does not work with camera dome, older MD-WMT mount or MD-CMT!*

### Inside the box: (Accessory Sold Separately)

- A. Electrical Box Adapter  
Pack of four (4) machine screws (#8-32 7/16")

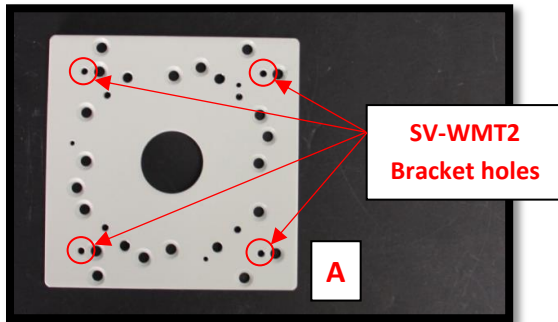


Image 32

### Not included but needed:

- Common electrical box, such as single gang box, double gang box, or square electrical boxes shown in **Image 333-1~4**.
56. Remove the electrical box adapter and hardware from the box.
57. Attach the wall mount bracket, SV-WMT2, to the electrical box adapter.

58. Attach electrical box adapter to electrical box.

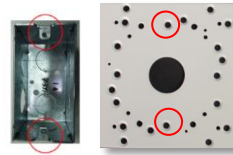


Image 33-1 Single gang box

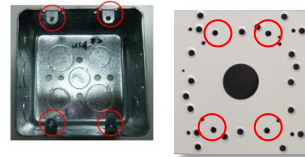


Image 33-2 Double gang box

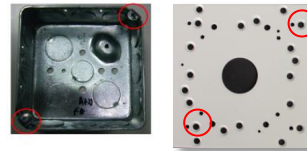


Image 33-3 Square box

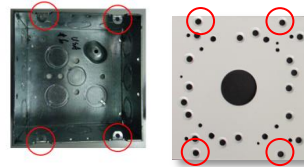


Image 33-4 Square box

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / MegaDome® Electrical Box Adapter (MD-EBA) Installation Instructions

### Caution:

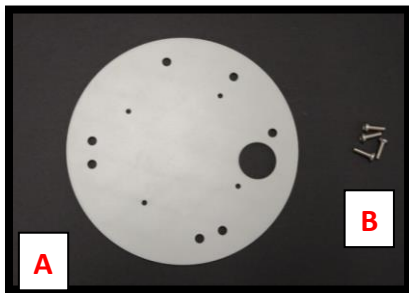
*MD-EBA can only be installed with camera dome, older MD-WMT mount or MD-CMT! MD-EBA doesn't work with MD-WMT2 wall mount*

### inside the box:

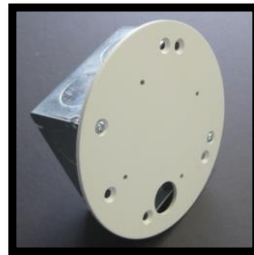
- B. Electrical Box Adapter
- C. Pack of four (4) machine screws (M4 10mm)

### Not included but needed:

- #2 Phillips head screw driver
- Common Electrical Box, such as single gang box, double gang box or square electrical box.



**Image 34**



**Image 35**



**Image 36**

1. Remove Electrical Box Adapter and hardware from the box.
2. Attach Electrical Box Adapter to Electrical Box as shown in **Image 35**.
3. Attach Dome to Electrical Box Adapter as shown in **Image 36**. Please reference "**Mounting the Camera**", if needed.

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

## AV12186DN / AV12366DN / MegaDome® Pole Mount Adapter (MD-PMA) Installation Instructions

### Inside the box:

- A. Pole Mount Adapter
- B. 2x Compress Fittings
- C. 2x Small Steel Straps
- D. 2x Large Steel Straps
- E. Pack of four (4) machine screws #8-32 5/8"

### Not included but needed:

- #2 Phillips head screw driver
- MegaDome® Wall Mount Adapter

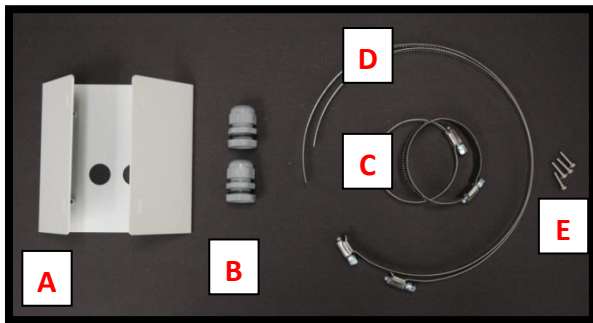


Image 37

1. Remove Pole Mount Adapter, Compress Fittings, Steel Straps and hardware from the box.
2. Install Compress Fittings to Pole Mount Adapter as shown in **Image 38**.
3. Attach MegaDome® Wall Mount Adapter to Pole Mount Adapter as shown in **Image 39**

4. Run Ethernet Cable and outside power cable (if necessary) through the Compress Fittings and MegaDome® Wall Mount.
5. Use the supplied two Steel Straps to attach the Pole Mount Adapter to the pole and tighten the compression screws as shown in **Image 36**
6. Attach Dome to Wall Mount Adapter. Please reference "**Mounting the Camera**", if needed.
7. Tighten the Compress Fittings to seal the wiring holes.



Image 38

Compression  
Screws



Image 39

Wall  
Mount  
Adapter

# Arecont Vision SurroundVideo® WDR Camera Installation Manual

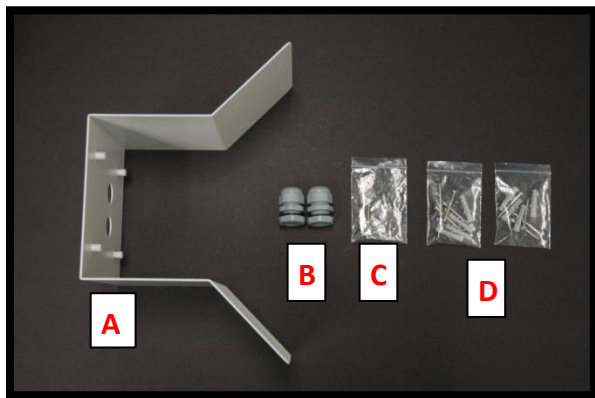
## AV12186DN / AV12366DN / MegaDome® Corner Mount Adapter (MD-CRMA) Installation Instructions

### Inside the box:

- A. Corner Mount Adapter
- B. 2x Compression Fittings
- C. Pack of four (4) machine screws #8-32  
5/8"
- D. 2x Packs of four (4) wood screws and four  
(4) dry wall anchors

### Not included but needed:

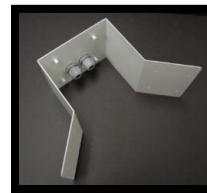
- #2 Phillips head screw driver
- MegaDome® Wall Mount Adapter



**Image 40**

1. Remove Corner Mount Adapter, Compress Fitting and hardware from the box.
2. Install Compress Fittings to Corner Mount Adapter as shown in **Image 41**.

3. Attach Wall Mount Adapter to Corner Mount Adapter as shown in **Image 42**.



**Image 41**



**Image 42**

4. Run Ethernet Cable and outside power cable (if necessary) through the Compress Fittings and MegaDome® Wall Mount.
5. Using screws (or other hardware), attach the Corner Mount Adapter to an exterior 90° corner wall.
6. Attach Dome to Wall Mount Adapter. Please reference "**Mounting the Camera**", if needed.
7. Tighten the Compress Fittings to seal the wiring holes.



# Arecont Vision SurroundVideo® WDR Camera Installation Manual

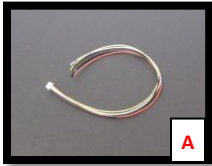
## AV12186DN / AV12366DN / MegaDome® I/O Cable Connection

### Inside the box:

- A. I/O Cable

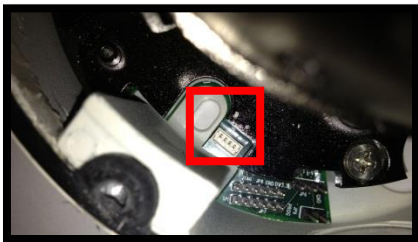
### Not included but needed:

- Flat head screw driver



**Image 43**

1. Run the I/O cable through the hole in the bottom of the camera and plug it into the 4-pin connector as shown in **image 44**. *NOTE: The connector requires certain insertion force. Please, use a flat head screwdriver to push receptacle in. Make sure not to damage wire insulation.*



**Image 44**

### **Electrical Characteristics:**

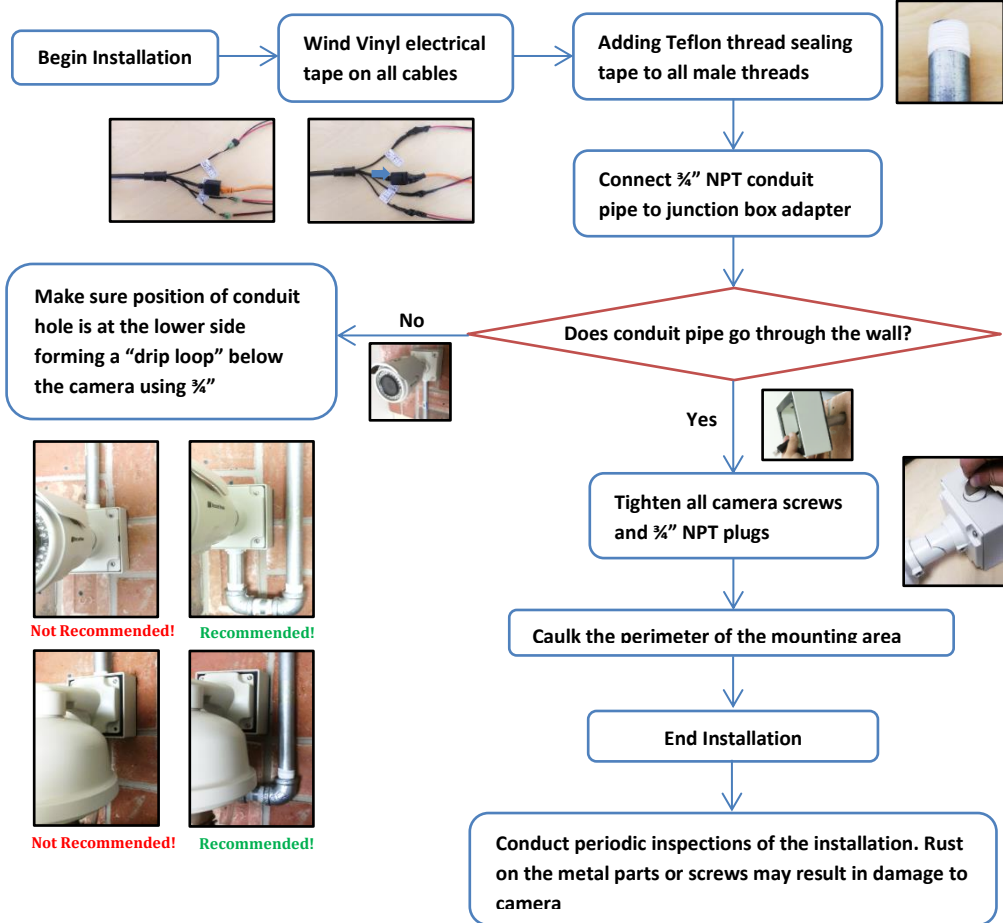
		<b>Min</b>	<b>Max</b>
Input voltage (V) (measured between + and – terminals)	ON	2.9	6.3
	OFF	0	1.3
Output current (mA) (measured between + and – terminals) Applied Voltage Range: 0 - 80V	ON	-	50
	OFF	-	0.1

**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 de-bouncing circuit. Duration of any input signal should be at least 5 ms to comply with the requirements of the de-bouncing circuit.

**Table 2**

Orange	OUT +
Yellow	OUT –
White	IN +
Black	IN -

# Installation Best Practices



Leading the Way in **Megapixel Video**



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