

MicroBullet®

Installation Manual

Models

1080p

AV2325DNIR

AV2326DNIR

3 Megapixel

AV3325DNIR

AV3326DNIR



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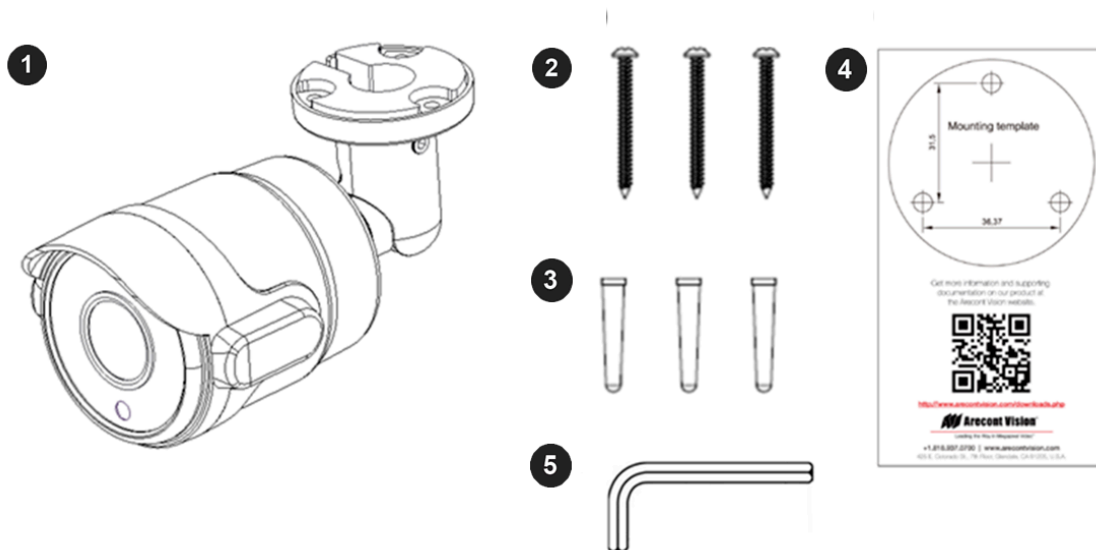


CAUTION!

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 MicroBullet® camera
2	3x M4x25mm Wood/ Metal Sheet Screw
3	3x M4x25mm Drywall/ Masonry Mounting Anchors
4	1x Camera Mounting Template
5	1x L Key
	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 MicroBullet® multi-megapixel camera series delivers 1080p or 3-megapixel resolutions in an extremely compact design. These true day/ night cameras are available with a 2.8-8mm motorized lens, day/night mechanical IR cut filter, and integrated IR LEDs. MicroBullet is ideal for applications with normal to challenging lighting conditions regardless of the time of day.

MicroBullet megapixel IP cameras deliver professional surveillance, with ease of installation and set-up for a wide variety of requirements. The remote focus and zoom motorized lens allows users to simply click “Short-range Focus” or “Full-range Focus”, saving installers time and end users money. For applications with strong backlighting, reflections from wet flooring or puddles, or contrast due to fog, mist, or glare, wide dynamic range 1080p and 3MP models are available. MicroBullet features CorridorView™ for better coverage of hallways and corridors, and SNAPstream™ (Smart Noise Adaptation and Processing) to reduce bandwidth without impacting image quality.

MicroBullet megapixel IP cameras are IP66 rated for both indoor and outdoor applications. All models feature an impact resistant cast-aluminum housing capable of withstanding the equivalent of 55 kg (120 lbs) of force. The MicroBullet is ONVIF (Open Network Video Interface Forum) Series S and PSIA (Physical Security Interoperability Alliance) compliant, providing interoperability between network video products regardless of manufacturer.

Installation

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

1. Determine a secure location to mount the camera.
2. Use the template, anchors, and screws provided to prepare the mounting provisions for the camera installation.
3. Install four supplied dry wall anchors using the supplied mounting template.
4. Align four supplied screws with the dry wall anchors and MicroBullet camera into place as shown in Figure 1.

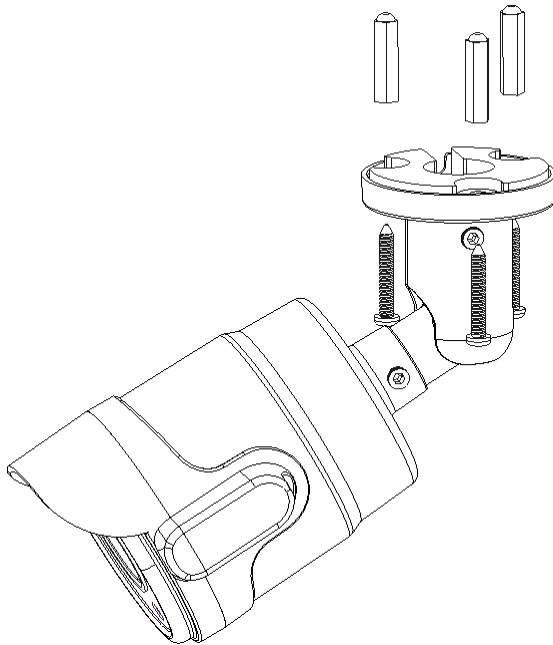


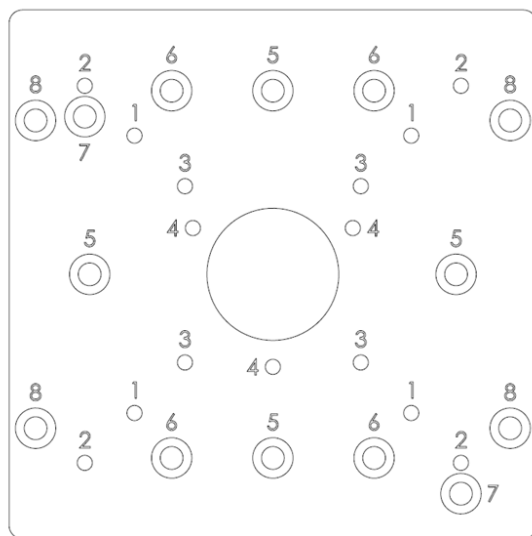
Figure 1

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

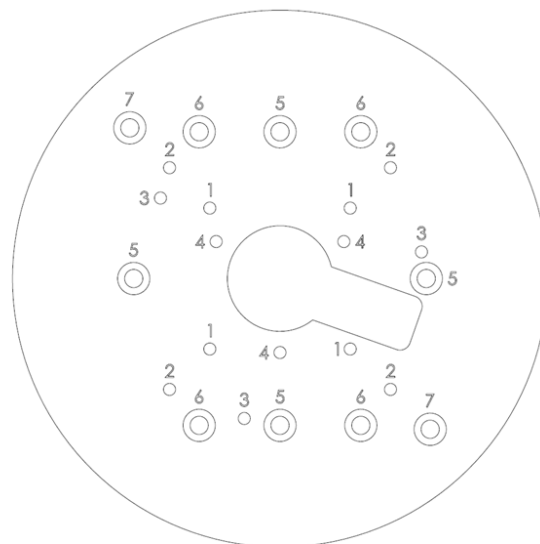
Electrical Box Adapter

AV-EBAS(sold separately) and MCD-EBA(sold separately) are used to attach the camera to a common single, double or square electrical box.

1. Use the supplied machine screws from AV-EBAS/ MCD-EBA, match the mounting holes on AV-EBAS/ MCD-EBA with the threaded holes on the electrical box. Ensure every threaded hole is matched with a mounting hole.
2. Attach AV-EBAS/ MCD-EBA to the user supplied electrical box.
3. Attached MicroBullet camera to AV-EBAS/ MCD-EBA. Match the mounting holes on MicroBullet camera with the threaded holes (#4) on AV-EBAS/ MCD-EBA as shown in Figure 2. Ensure every threaded hole is matched with a mounting hole.



AV-EBAS



MCD-EBA

Figure 2: AV-EBAS and MCD-EBA

Adjusting the Pan, Tilt and Focus

1. Loose Hex screws on the camera bracket with the supplied Hex screw L-key, and then adjust the pan, tilt, and rotation position to obtain the desired field of view as shown in Figure 3.

NOTE: Do not remove the screws!

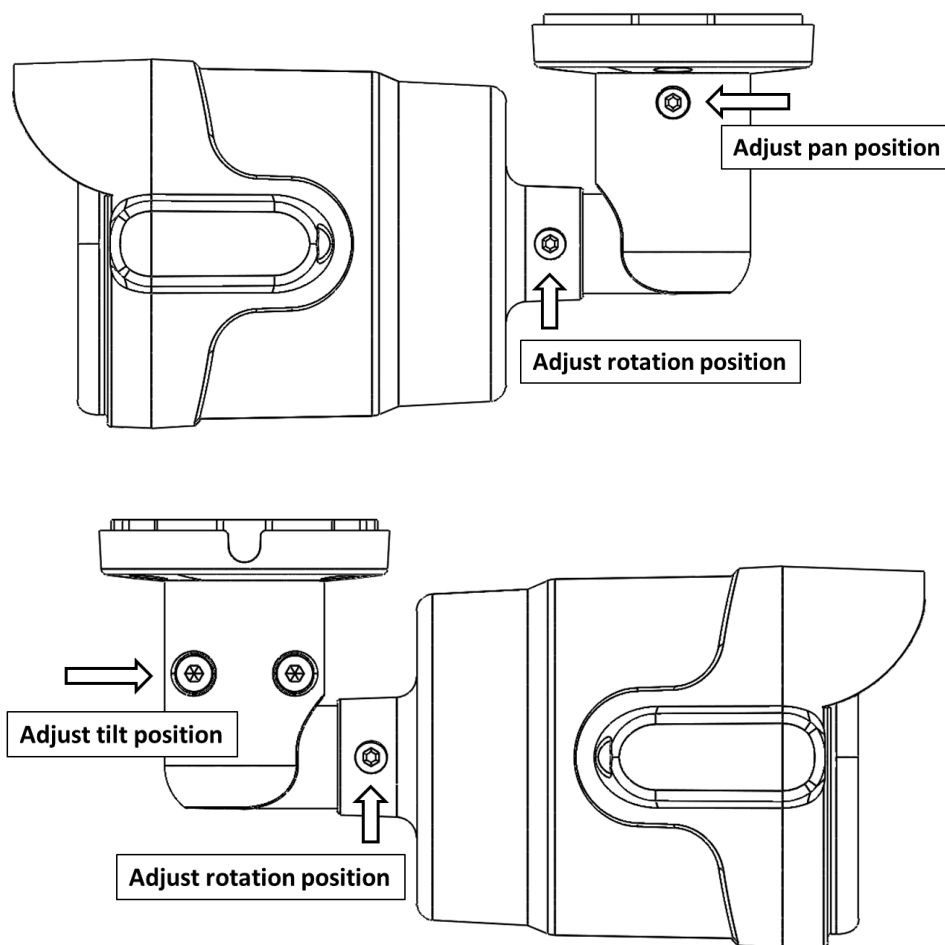


Figure 3: Loose Hex screws on the camera bracket to adjust the field of view

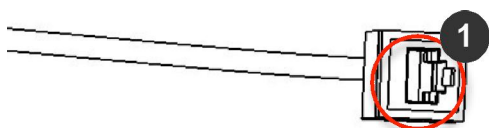
2. To adjust the zoom and focus, see the Remote Zoom/ Focus Section of this manual.

Camera Power Up



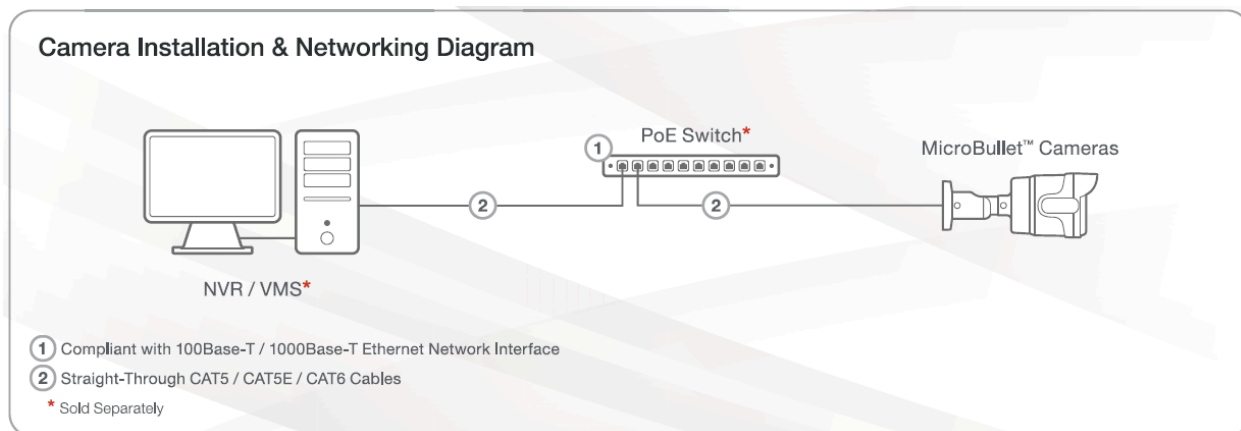
This product should be installed by a qualified service technician in accordance with the National Electrical Code (NEC 800 CEC Section 60) or applicable local code.

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

2. Connect the PoE switch to your computer's network port using an Ethernet cable.



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.

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 MicroBullet cameras support RTSP, RTP/TCP, RTP/UDP, HTTP, DHCP, TFTP, QoS, IP version 4 (IPv4), IP version 6 (IPv6), 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.

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.

IPv6 – This camera supports the IPv6 internet-layer protocol for packet-switched internetworking across multiple IP networks. IPv6 uses 128-bit addresses, which allows for many more devices and users on the internet as well as extra flexibility in allocating addresses and efficiency 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 (Figure 2).

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

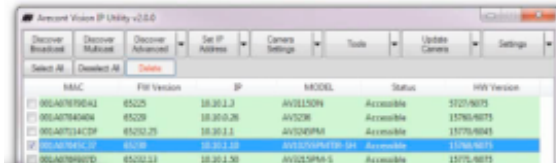


Figure 1: Double click via AV IP Utility

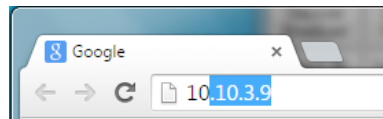
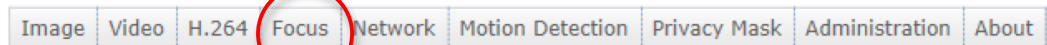


Figure 2: Type the camera IP address

2. Scroll to the Focus Tab section.



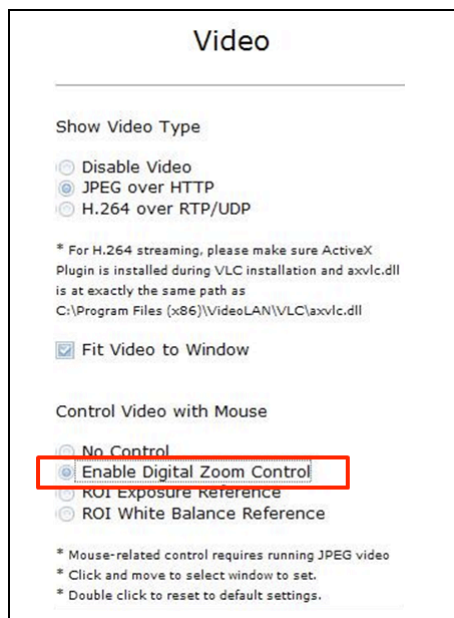
NOTE: Additional information regarding the Arecont Vision® web interface is found separately in the [AV IP Utility Web Browser Manual](#) via the Arecont Vision website.

3. Click the Full-range Focus button. The camera begins to autofocus with the lens stopping at the best overall point of focus.
4. For an additional focus, click the manual focus buttons (+20, +5, +1, -20, -5, -1).

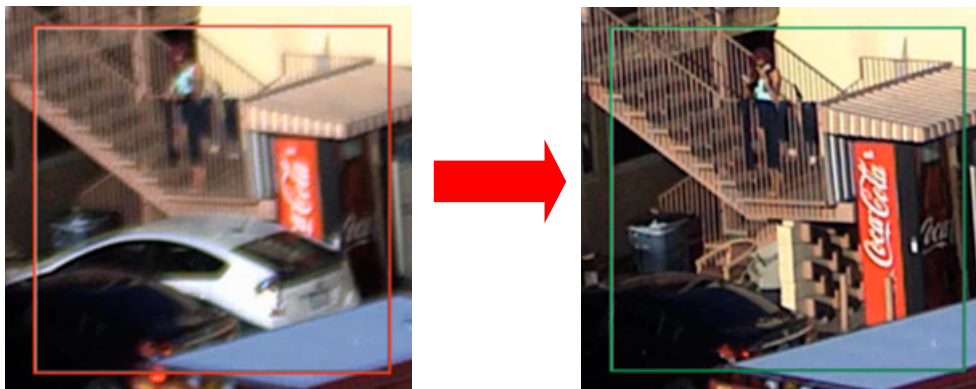


Refined Remote Focus

1. For a more refined, detailed focus, scroll to the Video Tab section and select “Enable Digital Zoom Control” radial button.



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. Scroll to the Focus Tab section and make sure enable “View Focus Window”.
5. Left click and drag to highlight the area within the zoomed window you created.
6. Click the 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.
8. For an additional focus, click the manual focus buttons (+20, +5, +1, -20, -5, -1).

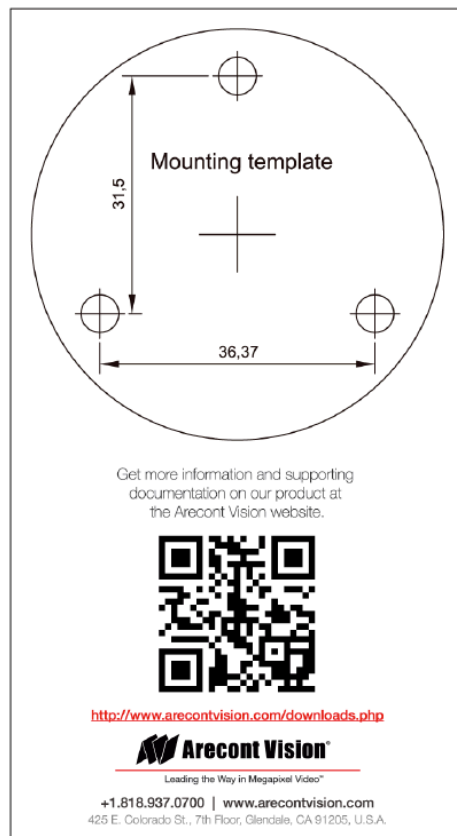


9. When satisfied with the camera's focus setting, scroll to the Video Tab section and select "Enable Digital Zoom Control" radial button.
10. Double click the image; the video returns to the full field of view.

AV IP Utility Focus Tab

Menu	Feature	Description
<div> Zoom & Focus </div> <div> <input checked="" type="checkbox"/> View Focus Window </div> <div> Zoom: </div> <div> +20 +5 +1 -20 -5 -1 </div> <div> <input type="checkbox"/> Enable Auto Focus after Zoom </div> <div> Focus: </div> <div> +20 +5 +1 -20 -5 -1 </div> <div> Full-range Focus </div> <div> Short-range Focus </div> <div> Stop </div> <div> <small>* A GREEN focus window indicates moving toward optimal</small> <small>* A RED focus window indicates moving away from optimal</small> <small>* A YELLOW focus window indicates no change</small> <small>* The focus window will turn GREY when complete</small> </div>	View Focus Window	Allows the user to drag the box to the area where need to be focused on.
	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.

Mounting Template



Unit: mm

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).