

Contera® Outdoor Dome

Installation Manual

1080p 5MP AV02CLD-100 AV05CLD-100





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About Our Warranty

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. 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.

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 the specification in the applicable documentation; (c) all licensed programs accompanying the Product (the "Licensed Programs") will materially conform with applicable specifications.



Contera Outdoor Dome IP Megapixel Cameras

Camera Overview

The Contera® Outdoor Dome megapixel camera features 1080p and 5-megapixel (MP) resolution for optimum performance. The Contera Outdoor Dome combines a day/night mechanical IR cut filter with an integrated motorized remote focus and zoom precision iris (P-iris) lens for excellent, optimal image quality.

Regardless of the time of day, the Contera Outdoor Dome is prepared for any lighting condition. For applications with poor lighting conditions, Enhanced WDR™ (wide dynamic range) at 120dB provides the best visual balance to shaded and bright light conditions.

For clear color images in low-light, NightView[™] offers strong low-light sensitivity for capturing details in extremely poor-lit scenes. Built-in Smart IR LED illumination automatically adjusts output in response to the distance of an object in view to prevent over-exposure when the object is very close to the camera. Arecont Vision® was the first to bring H.264 to the mainstream market and recently developed SNAPstream[™] (Smart Noise Adaptation and Processing) technology for reducing bandwidth without impacting image quality. Today we are proud to offer our next generation H.265 with SNAPstream+[™] smart codec capable of delivering high quality video while saving over 50% of the data rate to reduce or prevent strain on the network.

The SD card slot supports up to 256GB of storage capacity for convenient onboard storage. The camera's power can be supplied via a Power-over- Ethernet (PoE - IEEE 802.3af) compliant network cable connection. The Contera Outdoor Dome is 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 Contera Outdoor Dome is ONVIF (Open Network Video Interface Forum) Profile S and G compliant, providing interoperability between network video products regardless of manufacturer.



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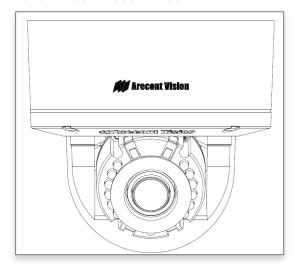
CAUTION!

- 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

Description	QTY
AV02CLD-100/ AV05CLD-100 IP camera	1
Mounting Template	1
Accessory Pack	1

AV02CLD-100/ AV05CLD-100





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 Contera® Outdoor Dome camera has been designed to provide installers with flexible mounting options such as ceilings, walls, poles or corners.

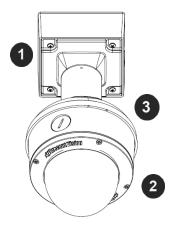
NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet properly seated flush with the camera housing.

NOTE: The camera is suggested to be covered by a minimum 5.6" (14cm) overhang eave.



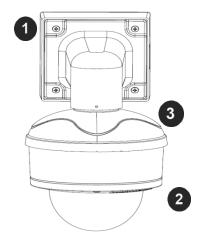
Ensure you have the proper compatible mounting parts prior to starting your installation:

Pendant mount



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

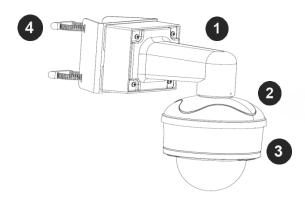
Wall mount





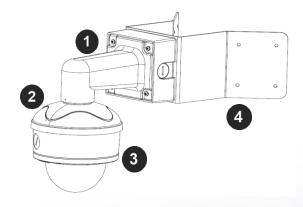
Reference #	Wall Mount Components Required	
1	Wall mount (AV-WMJB-W) with integrated junction box	
2	Contera® Outdoor Dome camera	
3	MD-CAP-W mounting cap	

Pole mount



Reference #	Pole Mount Components Required	
1	Wall mount (AV-WMJB-W) with integrated junction box	
2	MD-CAP-W mounting cap	
3	Contera® Outdoor Dome camera	
4	AV-PMA corner mount adapter	

Corner mount





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



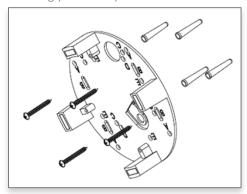
Surface Mount

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

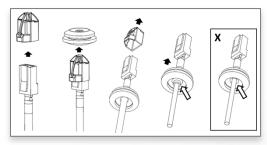
- 1. Use the template, anchors, and screws provided to prepare the mounting provisions for the camera installation
- 2. Use the supplied security L-key, to loosen the four (4) tamper resistant screws securing the dome cover. Do not remove screws from the dome cover.



- 3. Remove the protective foam and discard.
- 4. Install four supplied dry wall anchors using the supplied mounting template.
- 5. Align four supplied screws (4pcs #8-16 11/4" tapping screws) with the dry wall anchors and screw mounting plate into place.



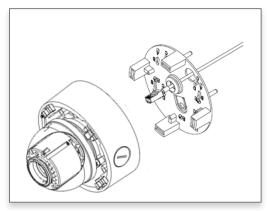
6. Prepare the network cable with the supplied grommet and insertion tool.





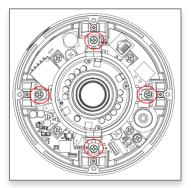
NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet is properly seated flush with the camera housing.

7. Align the hole on the camera with the hole on mounting plate, and install the grommet on camera housing.



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 ¾" NPT standard. Ensure NPT port is facing downward.

8. Fasten securely four captive screws.



- 9. Attach the Dome Cover to the Contera® Outdoor Dome camera and fasten securely four captive screws.
- 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!

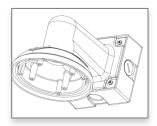


Wall Mount

For a proper wall mount installation, the AV-WMJB-W wall mount and MD-CAP-W 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.

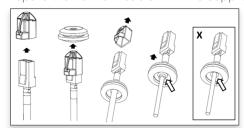
 NOTE: The thread size for Top shield, pendant pole and mount is 1.5" NPT.



- 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-W with the supplied screws.



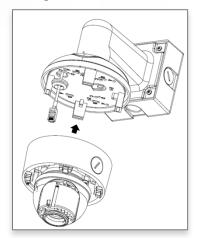
6. Prepare the network cable with the supplied grommet and insertion tool.



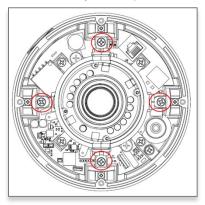
NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet is properly seated flush with the camera housing.



7. Align the hole on the camera with the hole on mounting plate, and install the grommet on camera housing.



8. Fasten securely four captive screws.



- 9. Attach the Dome Cover to the Contera® Outdoor Dome camera and fasten securely four captive screws.
- 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-W 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 the cap, pendant pole and mount together.

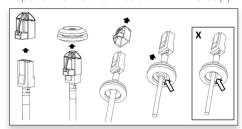
 NOTE: The thread size for Top shield, pendant pole and mount is 1.5" NPT.



- 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 wall mount. Ensure the gasket is seated properly.
- 5. Attach the mounting plate to the MD-CAP-W with the supplied screws.



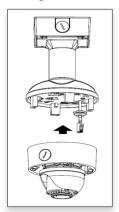
6. Prepare the network cable with the supplied grommet and insertion tool.



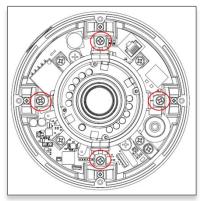
NOTE: When mounting the camera outdoors or in a wet environment, use of supplied grommet is recommended. Ensure the grommet is properly seated flush with the camera housing.



7. Align the hole on the camera with the hole on mounting plate, and install the grommet on camera housing.



8. Fasten securely four captive screws.



- 9. Attach the Dome Cover to the Contera® Outdoor Dome camera and fasten securely four captive screws.
- 10. To configure the camera, reference the camera discovery, set-up and configuration section.



CAUTION!

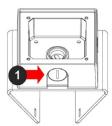
The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in water and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

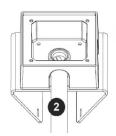


Pole Mount

For a pole mount installation, the AV-WMJB-W wall mount, AV-PMA pole mount, and MD-CAP-W 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.
- 4. Remove the conduit plug on the junction box adapter and connect ¾" NPT conduit to the junction box adapter.



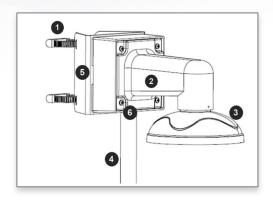


Reference #	Description	
1	Remove conduit plug	
2	Connect ¾" NPT conduit to junction box adapter (ensure use of water seal tape)	

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 Junction Box Adapter. Ensure the gasket is seated properly.
- 6. Attach the Wall Mount Adapter (AV-WMJB-W) to the Pole Mount Adapter (AV-PMA) .





Reference #	Description
1	Steel straps with compression screws
2	AV-WMJB-W wall mount
3	MD-CAP-W mount cap
4	Conduit pipe
5	AV-PMA pole mount adapter
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.
- 8. To attach the camera to the Wall Mount Adapter (AV-WMJB-W), reference the Installation and Wall Mount section.
- 9. To configure the camera, reference the camera discovery, set-up and configuration section.



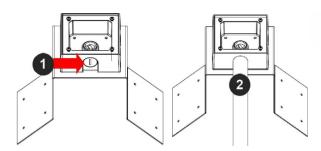
CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in 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-W wall mount, AV-CRMA corner mount, and MD-CAP-W 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.
- 4. Remove the conduit plug on the junction box adapter and connect ¾" NPT conduit to the junction box adapter.

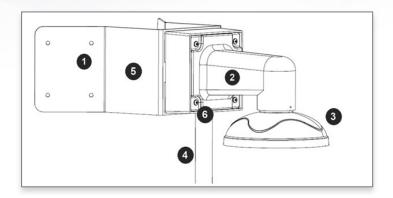


Reference #	Description
1	Remove conduit plug
2	Connect 3/4" NPT conduit to junction box adapter (ensure use of water seal tape)

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 Junction Box Adapter. Ensure the gasket is seated properly.
- 6. Attach the Wall Mount Adapter (AV-WMJB-W) to the Corner Mount Adapter (AV-CRMA).





Reference #	Description	
1	Attach corner mount adapter to exterior 90 corner wall	
2	AV-WMJB wall mount	
3	MD-CAP-W mount cap	
4	Conduit pipe	
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.



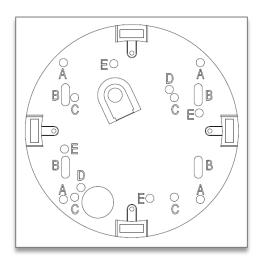
CAUTION! The captive screws must be used to properly secure the dome cover and camera housing. Failure to use the captive fastener may result in serious injury. When mounting the dome cover to the camera housing, ensure that the gasket is properly seated and not folded. Failure to do so may result in 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.

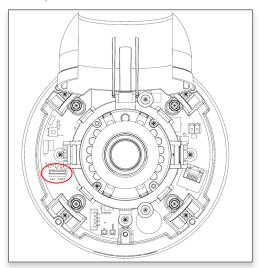
- 1. Using the supplied machine screws, match the mounting holes on the electrical box adapter with the threaded holes on the electrical box. Ensure every threaded hole is matched with a mounting hole.
- 2. Attach the electrical box adapter to the user supplied electrical box.



SD Card

Insert an SD card (user supplied) into the SD card slot until it locks in place. The location of the SD card slot is located on the main board. The SD card can only be set-up via the Web Interface.

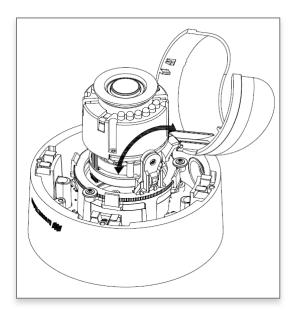




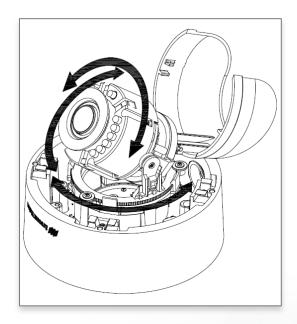


Adjusting the Pan, Tilt and Focus

- 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.

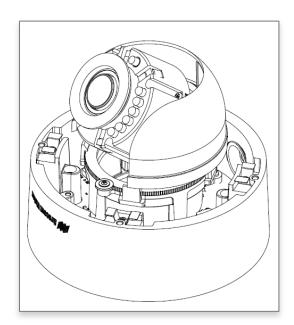


4. Adjust the pan, and tilt/rotate the lens module to obtain the desired field of view.





- 5. To configure the zoom/focus function, reference the "Zoom and Focus" section of the camera discovery, set-up and configuration.
- 6. Install the shroud back on the camera gimbal





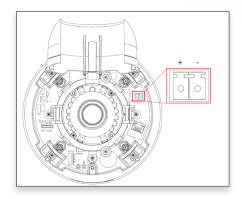
Camera Power Up



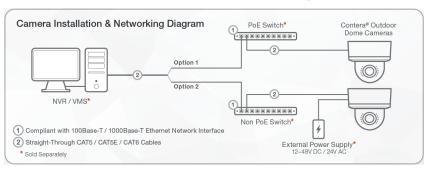
CAUTION! This product should be installed by a qualified service technician in accordance with the National Electrical Code (NEC 800 CEC Section 60) or applicable local code. Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application.

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.

- 1. Connect the camera to a PoE port on 100Mbps network PoE switch using an Ethernet cable.
- 2. If the camera is powered by an outside power supply, connect the power wires from the external power supply (12~48VDC or 24VAC) to the power connector.



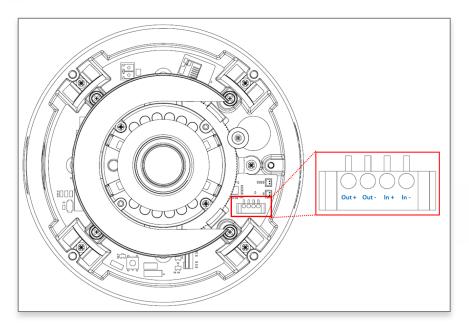
3. Connect the PoE switch to your computer's network port using an Ethernet cable.



LED	Status	Description
Green	Quick Flashing	Link has been established
	Slow Flashing	Normal operation
None	None	No Connection



Alarm I/O Functions



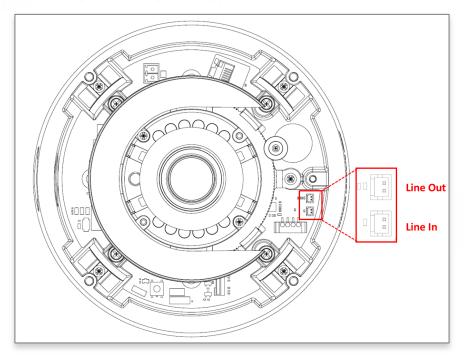
Connect the Alarm In (DI) connector to the alarm input sensor, and connect Alarm Out (DO) connector to the alarm output signal. To avoid any damaged, please follow the specification of the part as below:

Alarm In (Wet Contact)	Alarm Out (Wet Contact)	
V sense	V sense	I sense
4.2V±30%	0-80V	50mA (max)



Audio Kit AV-1AK Installation Instructions

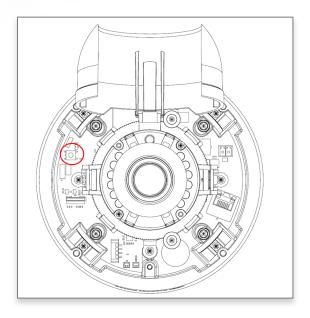
(Accessory Sold Separately)



- 1. Run the audio cable connection jack cables through the hole on the bottom of the camera and connect them to the connectors on the circuit board.
- 2. Connect the line-in signal to LINEIN (Line In), and connect an active speaker with a built-in amplifier to LOUT (Line Out) via the in-line jack.
- 3. Enable Audio function on the camera web interface.



Reset to Factory Default



- 4. Press and hold the reset button for 2 to 5 seconds and release the reset button. The camera has been reset to the factory default except the network settings.
- 5. Press and hold the reset button for more than 5 seconds and release the reset button. The camera has been reset to the factory.
- 6. Or, user can reset the camera to factory default via camera web interface or AV IP Utility



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/softwares.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.

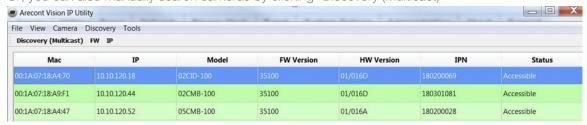
The AV IP Utility tool is compatible with all Contera® cameras. The user manual for the software is included on the CD that came with your camera or available on our website.

Camera Discovery

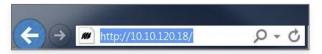
1. Locate and double click the AV IP Utility shortcut on the desktop.



2. When the AV IP Utility is launched, it will automatically search the Contera cameras on the network. Or, you can also manually search cameras by clicking "Discovery (Multicast)"



3. You can access the camera web user interface by typing the camera IP address on the preferred web browser.





Web Interface Navigation



The entire menu categories are located on the top of the web interface, and clicking on any one of the buttons will cause left side of the page to jump to the settings section for the selected button.

The following are the camera settings available on the top of the web interface:

The following are the camera settings available on the top of the web interface:

- Image
 - Basic Image Settings
 - WDR (Wide Dynamic Range) Settings
 - IR Control
 - OSD (On-Screen Display)
 - ROI (Regions of Interest)
- Zoom and Focus
 - Zoom/ Focus Control
- Video & Audio
 - Main Stream Configuration
 - Sub Stream Configuration
 - Third Stream Configuration
 - Audio
- Network
 - · IP Assignment
 - QoS (Quality of Service)
 - UPnP (Universal Plug and Play)
 - RTSP (Real Time Streaming Protocol)
 - DDNS (Dynamic DNS)
 - SNMP (Simple Network Management Protocol)
 - SSL (Secure Sockets Layer)
 - FTP (File Transfer Protocol)
 - 802.1x
- Privacy Mask
- Event
 - Motion Detection
 - Alarm Handler
 - Digital I/O
 - Tamper Detection
 - FTP Upload Handler
 - SMTP (Simple Mail Transfer Protocol) Notification
 - Network Storage



- System Options
 - Firmware Upgrade
 - Reboot & Restore Settings
 - Date/Time
- Administration
 - Administrator settings
 - Viewer Management
- About
- Support



Zoom and Focus



Menu	Feature	Description
Zoom & Focus	Manual Zoom/ Focus: +20, +5, +1, -20, -5, -1	Numbers indicate the level of Zooming/ focusing in order to adjust the field-of-view.
Zoom: +20 +5 +1 -20 -5 -1 Enable Auto Focus After Zoom	Enable Auto Focus Zoom	Camera will do Auto Focus after changing zoom lens group position.
Focus : DONE. +20 +5 +1	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.
-20 -5 -1 Full-range Focus Short-range Focus	Short-range Focus	Best for scenes that are slightly of out of focus. The camera quickly fine-tunes for a precise focus position.
Stop Reset Zoom and Focus Position	Stop	Stops any command in progress.
	Reset Zoom and Focus Position	Resets Zoom and Focus lens groups to zero position



Image

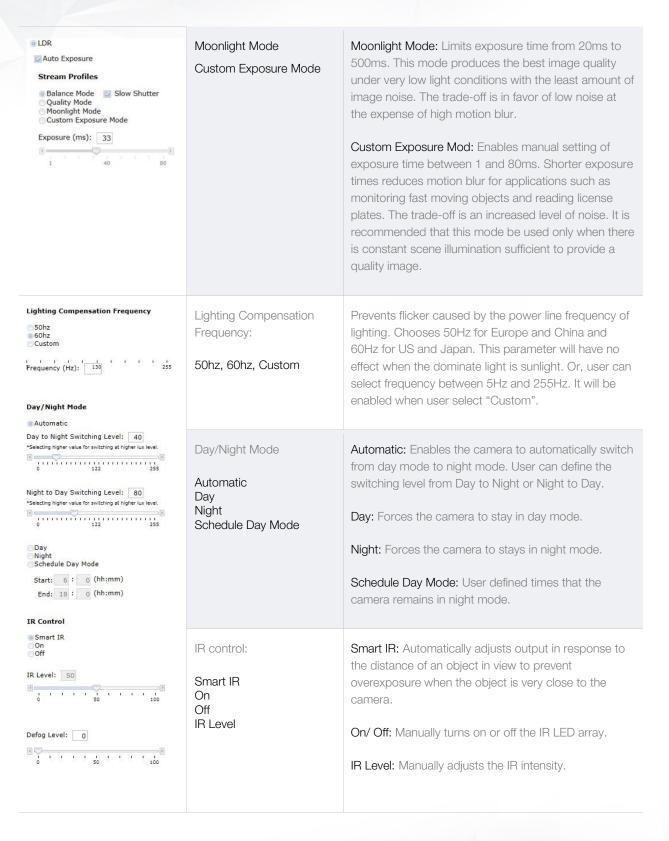


Menu	Feature	Description
Image Brightness: 0	Brightness	Controls the overall brightness of the camera image and works in conjunction with the exposure controls to maintain the image brightness.
Sharpness: 2	Sharpness	Controls sharpness and edge definition of the image. Setting this to lower levels may make overall image appear a bit softer while causing lines and edges in the image to look smoother.
Saturation: 3	Saturation	Controls the color saturation of the image.
1 1 1 1 1 1 1 0 1 0 1 2 3 4 5 6	Contrast	Manually controls Gamma level (affects the overall luminance of the image).
Contrast: 50 Hue: 50	Hue	Configures the overall hue of the image, the range is 0 ~ 100. Increasing the value will adjust the image hue towards red. Decreasing the value will adjust the image hue towards blue.
Rotate Image © 0 90 180 270	Rotate Image: 0, 90, 180, 270	Digitally rotates image 0°, 90°, 180°, or 270°.
Mirror Image ☐ Flip Vertically ☐ Flip Horizontally ☑ Auto White Balance	Mirror Image: Flip Vertically Flip Horizontally	Flips the image horizontally (flip left-to-right) or vertically (flip top-to- bottom). They can be selected at the same time.
	Auto White Balance	Checkbox enables the automatic white balance feature of camera, which will automatically remove unrealistic color cast so that white color is rendered white in the image.



Menu	Feature	Description
WDR Mode Auto HDR: 10 Turn off in low light Turn off in B/W DWDR	Auto	Auto detects bright backlight, glare or high contrast lighting and automatically selects the WDR level. Note: WDR enabled will decrease the FPS of 5MP camera.
	HDR	Manually adjusts the intensity of backlight compensation. Note: WDR enabled will decrease the FPS of 5MP camera.
	Turn off in low light	Disables WDR backlight compensation when the light levels drop for better nighttime image quality.
	Turn off in B/W	Disables WDR backlight compensation when the camera is in night mode for better nighttime image quality.
	DWDR	Digital WDR (DWDR) is to enhance dark areas by adjusting the gamma value. This will not impact FPS of 5MP camera.
● LDR ☑ Auto Exposure Stream Profiles ⑥ Balance Mode ② Cuality Mode ⑥ Moonlight Mode ⑥ Custom Exposure Mode Exposure (ms): 33	LDR	Will not combine long and short exposures into one frame, resulting in better low light performance.
	Auto Exposure	Automatically adjusts illumination and exposure values.
	Stream Profiles: Balance Mode -Slow Shutter Quality Mode	Balanced Mode: Limits exposure time from 0.1ms to 66ms. The camera will keep highest FPS when Slow Shutter is unchecked. Quality Mode: Limits exposure time from 0.1ms to 200ms. This mode is a good compromise between
		reducing noise and motion blur under most lighting conditions, but with an increase in motion blur under low light conditions.







	Defog Level	Compensates for fog or clouds in the scene in the scene.
OSD Camera Name Contera Network Camera	Camera Name	Specifies a name for the camera. The maximum length is 32 characters.
Background Translucent Transparent Text color: White Text Overlay	Background Translucent Transparent	Configures the background color of the text overlay. The options are Translucent (light grey) or Transparent.
Top Left OFF Top Right OFF	Text Color	Options are Black, White, Green, or Yellow.
Bottom Left OFF Bottom Right OFF Apply	Text Overlay Off Date/Time Camera Name Camera Name + Date/Time Custom Text	There are four content positions (Top Left, Top Right, Bottom Left and Bottom Right) to display the text overlay. Date/ Time: Displays the current date/time. It will force the camera to synchronize the date/time information. Camera Name: Displays the camera name you set. Camera Name + Date/Time: Displays both camera name and date/time information. Custom Text: Displays a customized text.
"Create custom regions of interest by enabling zones below and selecting the desired quality level. Then create the ROI by dragging the mouse over the live image and press "Save Area" or "Del Area". Stream: Main Stream V ROI Zone 1: Enable Medium V Save Area Del Area ROI Zone 2: Enable Medium V Save Area Del Area ROI Zone 3: Enable Medium V Save Area Del Area ROI Zone 4: Enable Medium V Save Area Del Area ROI Zone 5: Enable Medium V Save Area Del Area	ROI (Regions of Interest)	ROI (Regions of Interest) is used to select which areas will be monitored and recorded with higher image quality while using lower image quality for other non-ROI zones to save bandwidth and storage. To setup the ROI: 1. Select Main Stream or Sub Stream 2. Enable zones (up to five zones) and select the desired quality level (High, Medium, or Low). 3. Create the ROI by dragging the mouse over the live image 4. Press Save Area or Del Area.





Video & Audio



Menu	Feature	Description
Video Show Video Type Disable Video MPEG over HTTP H.264 over RTP/UDP * For H.264 streaming, please make sure ActiveX Plugin is installed during VLC installation and axvlc.dll is at exactly the same path as C:\Program Files (x86)\VideoLAN\VLC\axvlc.dll Fit Video to Window Control Video with Mouse	Show Video Type: Disable Video MJPEG over HTTP H.264 over RTP/UDP	Disable Video: Disables live video on the screen. MJPEG over HTTP: This radio button is the default browser display option. No plug in is required as most browsers can decode MJPEG images. H.264 over RTP/UDP: Displays video using H.264. If viewing this way for the first time you will see the following prompt to download the necessary browser plug –in to display the video in the browser using this compression.
No Control PTZ ROI Exposure Reference Mouse-related control requires running MIPEG video Click and move to select window to set. Double click to reset to default settings.	Fit Video to Window	Scales the full field of view image to fit the browser window. When in default unselected images will be displayed in the browser at VGA resolution.
	Control Video with Mouse No Control PTZ ROI Exposure Reference	Radio buttons control various functions using the mouse to select them on screen. Whichever function is selected can be controlled by left clicking in the image with the mouse and dragging to select an image region relevant to the corresponding control function. No Control: Disables mouse control of these functions. PTZ: Zooms in the selected region. Double clicks on the image will restore the image to default. ROI Reference: Creates a custom exposure reference using the selected region to customize backlight.



Resolution Left: 0 Top: 0 Right: 1920 Bottom: 1080 Preview Apply	Resolution: Left Top Right Bottom	Controls the image size and image cropping features. Left, Top, Right, and Bottom numeric fields set custom image size cropping and crop area coordinates in pixels. Supported values are 0 to maximum resolution in pixels (maximum varies based on the sensor resolution being cropped)
Main Stream Video Compression H.265 H.264 Resolution 1920x1080 1280x720	Video Compression: H.265 H.264	Radio buttons to select the desired compression.
© 960x540 Enable SNAPstream+™ © Variable Bitrate @ Maximum Bitrate (64-8000 kbps): 5000	Resolution	Radio buttons to select the desired resolution. Options vary based on the sensor resolution being used.
H.264 Quality (110): 3 *10 - lowest quality, 1 - highest quality Frames Per Seconds: 30 (0~30) GOP Length: 15 (1~120) Apply * "Apply" will apply changes for all three streams settings to the camera.	Enable SNAPstream+™	Enables the SNAPstream+ feature on camera. This feature utilizes both Smart GOP and Smart ROI to reduce bitrate without impacting the image quality. Smart GOP sets GOP to automatically increase when no moving objects are detected. Smart ROI will increase the bitrate of moving objects and make them clearer.
	Variable Bitrate	Maintains the Quality setting configured. There may be variation in the bit rate output from the camera using this mode.
	Maximum Bitrate	Maintains variable bit rate control and maintains the bitrate under the rate limit you set to. It can be set from 64 kbps to 8000 kbps.



Sub Stream Video Compression H.265 H.264 Resolution 1920x1080 1280x720 960x540 640x480 640x360 320x240	H.264 Quality	H.264 image quality setting for variable bit rate control. Setting a lower value results in higher image quality, higher value results in lower image quality.
Enable SNAPstream+™ ○ Variable Bitrate ⑥ Maximum Bitrate (64-8000 kbps): 2850 H.264 Quality (110): 7 *10 - lowest quality, 1 - highest quality Frames Per Seconds: 10 (0~30) * If both Nain Steam and Sub Stream set to 1080P, the Thirld Stream Will be terminated, and the FPS of Sub Stream can be set up to 20fps. GOP Length: 30 (1~120)	Frames Per Seconds	Frame rate adjustment for the camera video stream. Note: For 5MP models, FPS will be up to 50% of specified FPS if WDR is enabled. Note: For 5MP models, if both main and sub stream set to full resolution, the maximum FPS of the main stream is up to 15 FPS.
Apply * "Apply" will apply changes for all three streams settings to the camers.	GOP Length	Specifies how many frames between two consecutive I-Frames.
Third Stream Video Compression MPJEG Resolution 640x360	Video Compression: MPJEG	The third stream is designed for the live view on web interface, and the only option of Video Compression is MPJEG.
Frames Per Seconds: 30 (0~30) Quality Low Mid High	Resolution	The third stream is designed for the live view on web interface, and the only option of Resolution is VGA.
Apply * "Apply" will apply changes for all three streams settings to the camera.	Frames Per Seconds	Frame rate adjustment for the camera video stream.
	Quality: Low Mid High	Adjusts the compression level for JPEG images
Audio In Volume High Middle Low Audio Out Volume High Middle Low	Audio In Audio Out Volume: High Middle Low	Enables the Audio In/ Audio Out features on the camera. Specifies the volume level of Audio In/ Audio Out: High, Middle, or Low.



Network



N	lenu	Feature	Description
Net	twork		DHCP: If checked, the camera will attempt to obtain its IP address from the DHCP server available on the network.
IP Address: Subnet Mask: Default Gateway: Port HTTP: Second HTTP Port: HTTPS: DNS	192.168.1.168 255.255.255.0 192.168.1.254 80 (80,1024~65535) 8080 (8080,1024~65535) 443 (443,1024~65535)	IP Assignment: DHCP IP Address Subnet Mask Default Gateway	IP Address: Sets the current IP address of the camera. Subnet Mask: Once set, the camera will use these mask bits to determine if a destination is from a different network Default Gateway: Once set, the camera will use send traffic to the specified gateway if the destination is on a different network
Primary DNS: 192.168.1.1 Secondary DNS: 192.168.1.2	Port: HTTP Second HTTP Port HTTPs	HTTP: The port default is 80. It is used to access the camera via the web browser. Second HTTP port: Sets an alternative HTTP port. This port can be useful when the standard HTTP port (80) is not appropriate for this camera. HTTPs: The port default is 443. It can be used when you use HTTPs.	
	Port: Primary DNS Secondary DNS	Configures the Primary and Secondary DNS.	
IPv6 Settings Enable IPv6 Link-Local: IPv6 Address: Address Prefix: Default Route: Router Advertisement	64 (0~127)	IPv6 Settings: Enable IPv6 IPv6 Address Address Prefix Default Route Router Advertisement DNS	Enable IPv6: Enables IPv6 function. Manually configures IPv6 address, Address prefix, Default route, and DNS server address. Router Advertisement: Enables Router Advertisement



QoS	Enable QoS	Enables quality of service.
Enable QoS Video QoS (0-63): 34 Management DSCP (0-63): 0	Video QoS	Sets DSCP value for video traffic.
	Management DSCP	Sets DSCP value for non-video traffic.
UPnP ☑ Enable UPnP	Enable UPnP	Enables Universal Plug and Play function.
RTSP Port: 554 (554, 1025~65535)	Port	Configures the port number for stream 1 to stream 3. The range is 554/1025~65535.
Enable RTSP Unicast Stream1 Enable RTSP Stream1 Metadata Path1: stream1 Link for external media players: insp/#0.10.120.18554/stream1	Enable RTSP Unicast Stream	Enables RTSP Unicast for stream 1 (Main stream), stream 2 (Sub Stream), and stream 3 (Third Stream)
☑ Enable RTSP Unicast Stream2 Enable RTSP Stream2 Metadata Path2: stream2 Link for external media players:	Enable RTSP Stream metadata	Enables RTSP stream metadata for stream 1(Main stream), stream 2(Sub Stream), and stream 3(Third Stream)
risp://10.10.120.18:554/stream2 Enable RTSP Unicast Stream3 Enable RTSP Stream3 Metadata	Path	Configures the pathname for each stream.
Path3: stream3 Link for external media players: rtsp://10.10.120.18.554/stream3	Link for external media players	Copies the link from here for external media players
Multicast Multicast Stream1 Enable RTSP Multicast Stream Always Multicast	Enable RTSP Multicast Stream	Enables RTSP Multicast stream for stream 1 (Main stream), stream 2 (Sub Stream), and stream 3 (Third Stream)
Video IP: 225.24.164.112 Video Port: 5000 (1025~65535) Audio IP: 226.24.164.112	Always Multicast	Enables the video streams to start multicast steaming without using RTCP
Audio Port: 5002 (1025~65535) Meta IP: 227.24.164.112 Meta Port: 5004 (1025~65535) Path: stream1m	Video IP Video Port	Configures the multicast address and the port number to stream video.



	Audio IP Audio Port Meta IP Meta Port	Configures the multicast address and the port number to stream audio. *This function is supported depends on models. Configures the multicast address and the port number to the HTML meta.
	Path	Configures the URL address of the video stream.
	TTL	Configures the time-to-live threshold of the multicast datagram before it is discarded by the router.
DDNS	Enable DDNS	Enables DDNS service
Enable DDNS Host Name: DDNS Server: DynDNS User Name: Password: Password Confirmation:	Host Name	Specifies the Host name registered with the DDNS server
	DDNS Sever	Selects one of the pubic DDNS severs from the dropdown menu. Options are DynDNS, NO-IP, and Twi-DNS.
	User Name	Specifies the user name of the DDNS account.
	Password	Specifies the password of the DDNS account.
	Password Confirmation	Confirms the password of the DDNS account.
SNMP	No SNMP Sever	Disables SNMP function
No SNMP Server SNMP V2c Community String: public	SNMP v2c	Enables SNMP version 2 support



Trap Configuration Address: 192.168.1.200 Community String: public	Community String	Specifies the name of the community to access to SNMP information.
SNMP User: initial Authentication: Password: None Privacy: None Password: Trap Configuration	Trap Configuration: Address Community String	Specifies the destination IP address to send SNMP trap messages.
Address: 192.168.1.200 Download MIB	SNMP v3	Enables SNMP version 3 support.
	SNMP User	Specifies the user name of the SNMP v3.
	Authentication Password	Selects one of the Authentication modes from the dropdown menu. Options are None, MD5, and SHA. Specifies the Password for the Authentication.
	Privacy Password	Selects one of the encryption methods for SNMP v3 from the dropdown menu. Options are DES and AES. Specifies the Password for the encryption.
	Trap Configuration: Address	Specifies the destination IP address to send SNMP trap messages.
	Download MIB	Clicks to download MIB file for SNMP.
SSL	Mode:	Disable: Support for HTTP only.
Mode : Disable Optional Certificate : No certificate has been installed	Disable Optional	Optional: Support for HTTP and HTTPs both.
Action : Install New Certificate	Certificate	Shows the current status of the Certificate
CA Certificate : Browse Upload Client Certificate : Browse Upload	Install New Certificate CA Certificate Client Certificate	 Locate CA Certificate and Client Certificate and click Upload. Click Install New Certificate to upload the Certificate.



FTP Enable User name: adminftp Password: •••• Confirm: •••• Max. Connection (1~10): 10	Enable	Enables FTP access to the camera. Note: This function is only available when a SD card is installed. You can access files in the SD card via FTP.
	Password Confirm	Specifies and confirms the password to access the FTP.
	Max. Connection	Specifies the maximum number of FTP connections to the IP camera.
Protocol: Enable: Apply	Protocol	The default is None to disable 802.1 x functions. You can select one of the protocol options from the dropdown menu. The supported protocols are EAP-MD5, EAP-TLS, EAP-TTLS or EAP-PEAP. After the protocol has been selected, manually configures the username, password and other required.
		configures the username, password and other required information.



Privacy Mask



Menu	Feature	Description
Privacy Mask	Enable Privacy Mask	Creates a privacy mask on the image so the selected areas will not be visible.
Enable Privacy Mask * Left click and drag to set mask * Right click and drag to erase mask		



Event



Menu	Feature	Description
Motion Detection *	Enable	Turns on and off on-camera motion detection
☑ Enable Extended Zone Size: 8	Extend	Enables the extended motion detection and motion detection zones increase from default 64 to 1024 for enhanced motion detection sensitivity.
2 8 15	Zone Size	Adjusts the size of motion detection zones.
Detail: 2 Level Threshold: 15 Motion Sensitivity, %: 30 * Left click and move to select window to set mask. * Right click and move to select window to reset mask.	Detail	Sets the size of each zone displayed by the motion detection grid contains sub zones the number of which is set by the zone size setting up to 32x32 (pixels). This setting configures the sensitivity of the motion detection to the size of objects in the image moving through the zone. Higher values will trigger motion only for larger objects moving through the zone, lower values will cause detection of smaller objects in the zone (increasing sensitivity to smaller size objects moving through the image).
	Level Threshold	Sets the sensitivity to brightness changes between dark and light objects within each grid zone. As an example "Detail" will set the size of the object detected within the zone, "level" sets the duration that movement must be maintained to trigger motion detection. Lower settings can increase false motion alarms caused by image noise, higher settings will require more movement to trigger a motion event.
	Motion Sensitivity	Sets the sensitivity to sudden overall brightness changes in the image.
Alarm Handler Enable Alarm Detection Alarm Schedule *This function is supported depends on models.	Enable Alarm Detection	Enables Alarm Detection (Alarm In) function.



	Alarm Schedule	Configures the alarm schedule by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is enabled, while a light grey color indicates that the alarm schedule is disabled. Alternatively, you can manually enter numbers to configure the hours and minutes from start to end for all weekdays. S: Click "S" to set up a 24-hour schedule for a particular day. D: Click "D" to clear the previous schedule for a particular day.
Digital I/O Trigger Alarm Detection	Trigger Alarm Detection	When a signal is detected from Alarm in, the Alarm out will be triggered.
Trigger Motion DetectionTrigger Tamper Detection	Trigger Motion Detection	When a motion detection event is detected, the Alarm out will be triggered.
Type N.O. ✓ Off Time 0 (0~30s)	Trigger Tamper Detection	When a tamper detection event is detected, the Alarm out will be triggered.
*This function is supported depends on models.	Туре	Selects the type: N.O (Normal Open) or N.C (Normal Close)
	Off Time	Specifies the alarm duration
Tamper Detection ☐ Enable Tampering Detection	Enable Tampering Detection	Enables Tampering Detection function.
Tampering Schedule Sensitivity Medium Medium Medium Mediu	Tampering Schedule	Configures the alarm schedule by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is enabled, while a light grey color indicates that the alarm schedule is disabled.
		Alternatively, you can manually enter numbers to configure the hours and minutes from start to end for all weekdays.
		S: Click "S" to set up a 24-hour schedule for a particular day.
		D: Click "D" to clear the previous schedule for a particular day.



FTP Upload Handler Remote Server Host Address: Port: (21, 1025~65535) Username: Password:	Sensitivity Remote Server Host Address Port Username Password	Configures the sensitivity level of Tampering Detection: High, Medium, and Low. Host Address: Specifies the host name or IP address of the FTP server. Port: Specifies the port number of the FTP server. Username: Specifies the login username of the FTP server. Password: Specifies the login password of the FTP server.
FTP Upload Handler Enable Trigger Event Trigger Alarm Detection Trigger Motion Detection Trigger Tampering Alarm Trigger Scheduled	FTP Upload Handler Enable Trigger Event	Enables and selects a desired trigger source. The options are Trigger Alarm Detection*, Trigger Motion Detection, Trigger Tampering Alarm, and Trigger Scheduled. *This function is supported depends on models.
SMTP Notification SMTP Notification Handler From: Trigger Alarm Detection Trigger Motion Detection Trigger Tampering Alarm	SMTP Notification Handler	From: Specifies the email address of the sender Selects a desired trigger source. The options are Trigger Alarm Detection, Trigger Motion Detection, and Trigger Tampering Alarm.
Host Address: Port: 25 (1~65535) Username: Password: Authentication: NO_AUTH Recipient List Enable No Email Alarm Motion Tampering 1 2 3 3	SMTP Server Host Address Port Username Password Authentication	Host Address: Specifies the host name or IP address of the SMTP server. Port: Specifies the port number of the SMTP server. Username: Specifies the login username of the SMTP server. Password: Specifies the login password of the SMTP server. Authentication: Specifies the authentication mode of the SMTP sever. The options are NO_AUTH, SMTP_PLAIN, LOGIN and TLS_TLS.
6	Recipient List	Specifies the email address to send the email when selected events are triggered by Alarm, Motion, or Tamper. A maximum of 10 email addresses can be configured.



Network Storage Login Certificate Username:	Login Certificate	Specifies the login Username and Password for the network storage sever.
Recipient Setup Network Storage Status: Network Address: Folder Name: Record Type: Mount and Remove Network Storage Mount Remove Network Storage Handler Enable Trigger Event Trigger Motion Detection Trigger Tampering Alarm Trigger Scheduled	Recipient Setup Network Storage Status Network Address Folder Name Record Type Mount and Remove Network Storage	Network Storage Status: Displays the current status of the connection with the network storage server. (not_mounted or ok) Network Address: Specifies the IP address of the network storage server. Folder Name: Specifies the folder name on the network storage server. Recoding Type: Specifies the desired action when an event is triggered. The options are Snapshot and Video. Mount: Sets up a network connection with the network storage server. All the video recordings or snapshots from event triggers will be uploaded to the network storage server. After the setting is complete, the Network Storage Status field will display "ok". Remove: Deletes the previous setting. After the setting is removed, the Network Storage Status field will display "not_mounted".
	Network Storage Handler	Enables and selects a desired trigger source. The options are Trigger Alarm Detection*, Trigger Motion Detection, Trigger Tampering Alarm, and Trigger Scheduled. *This function is supported depends on models.
SD Card Enable Trigger Alarm Detection Trigger Motion Detection Trigger Tampering Alarm Manual Record	Enable	Enables and selects a desired trigger source. The options are Trigger Alarm Detection*, Trigger Motion Detection, Trigger Tampering Alarm, and Manual Record. *This function is supported depends on models.



SD Card Information Available Storage 0 MBytes Format SD Card Usage 0% (0/0 MBytes) Status not_mounted Format SD Card Overwrite when storage full Record Type Video V Usage Status

SD Card Information

Available Storage

Overwrite when storage full Record Type

Available Storage: Displays the available storage of the SD card if it is installed.

Format SD Card: Erases all the data stored on the SD

Usage: Displays the total storage that has been used now.

Status: Displays the status whether the SD card is installed or not. (not_mounted or ok)

Overwrite when storage full: Enables overwriting the SD card if the storage is full.

Recoding Type: Specifies the desired action to record a stream. The options are Snapshot and Video.



System Options



Menu	Feature	Description
System Options	Firmware Upgrade	Clicks Browse to choose the firmware upgrade file, and then clicks Upgrade.
Firmware Upgrade Please select a file to update: File Name : Browse Upgrade Download Log	Download Log	Records all the status information of the camera in list format. Downloads the log file to the computer as a text file. Note: The log file is protected by a password. Please
Download		contact with Arecont Vision technical support team.
Reboot & Restore Settings Reboot the Camera Restore to Factory Default Settings Except Network Settings Restore to Factory Default Settings	Reboot & Restore Settings Reboot the Camera Restore Factory Default Settings Except Network Settings Restore to Factory Default Settings	Reboot the Camera: Reboots the camera. Restore Factory Default Settings Except Network Settings: Restores all settings to factory default except the network settings. Restore to Factory Default Settings: Restores all settings to factory default.
Get Time from: NTP Server Computer System Time Zone: America V Los_Angeles V NTP Server: time.nist.gov Apply NTP Server Configuration Update Time from the Computer * Select NTP Server option to syncronize time with the NTP server and enter server configuration. * Select Computer System option to syncronize time with the computer system via camera web page. * Set up appropriate gateway before configuring the NTP server.	Get Time from NTP Server Computer System	NTP Server: Synchronizes the date/time information with defined NTP server. After setting up the desired Time zone and NTP Server, clicks Apply NTP Server Configuration. Note: Please make sure set up appropriate gateway before configuring the NTP server. Computer System: Synchronizes the date/time information with current computer's date/time. Once this option selected, clicks Update Time from the computer.
	Time Zone	Specifies the country/ city of the time zone from the drop down menu.
	NTP Server	Specifies the desired NTP server



Administration



Menu	Feature	Description
Administration	Access Control	Passwords can be up to 16 letters, digits and symbols, excluding following symbols for passwords without encoding # $\%$ & ' " < > /[] {}_() = . + ,
Access Control (Passwords can be up to 16 letters, digits and symbols, excluding following symbols for passwords without encoding # % & ' * < > / [] { } _ () = . Administrator Username: admin Admin Password: Confirmation: Set Erase	Administrator Username Admin Password Confirmation Set/ Erase	Username: The username of Administrator is admin and cannot be changed. Admin: full access to all camera settings and live video. Admin Password: Specifies the password for the administrator. Confirmation: Re-enters the password for the password validation.
Viewer Management User List: New User Delete User User Information User Name: Viewer Password: Confirmation: Access Level: Set Erase		Set/ Erase: Saves or removes the password. Note: If admin password was set but has been lost, it can be erased by AV IP Utility using the key file. Please contact Arecont Vision technical support to obtain the key file required to perform this function. Or, if the camera has a reset button, you can also reset to Factory default for removing the password.



Viewer Management

User List
User Name
Viewer Password
Confirmation
Access Level
Set/ Erase

User List: Displays current user accounts created on the camera. Clicks New User/ Delete User to create or remove a user account.

User Name: Specifies the user name. It must be at least five and up to sixteen characters.

Viewer Password: Specifies the password for the viewer.

Confirmation: Re-enters the password for the password validation.

Access Level: Defines the authorization level for the user: Admin or Viewer.

Set/ Erase: Save or removes the password.



About



Menu	Feature	Description
About Model Name: AV02CMB-100 Firmware: 35100.25 Serial Number: 180301081 MAC Address: 00-1a-07-18-a9-f1	About	Displays the information of the camera: Model Name, Firmware, Serial Number, and MAC Address.

Support



Menu	Feature	Description
• Resources • Online Support Request • Firmware Downloads • Software Downloads • Technical Updates • Product Selector • Downloads	Support	Provides several useful hyperlinks for users who would like to get more information of the camera.



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