Contera IP® Outdoor Dome

Installation Manual

1080p	5MP
AV02CLD-200	AV05CLD-200

AV COSTAR

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About Our Warranty

Global (3 Year) Limited Warranty

AV COSTAR 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. AV COSTAR 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.

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ConteraIP Outdoor Dome Megapixel Cameras

Camera Overview

The ConteraIP® Outdoor Dome megapixel camera features 1080p and 5-megapixel (MP) resolution for optimum performance. The ConteraIP 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 ConteraIP 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. AV Costar 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 MicroSDXC card slot supports up to 1TB 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 ConteraIP Outdoor Dome is IP66 rated for both indoor and outdoor applications. All models feature an impact resistant cast-aluminum housing.

The ConteraIP Outdoor Dome is ONVIF (Open Network Video Interface Forum) Profile S, G, and T compliant, providing interoperability between network video products regardless of manufacturer.

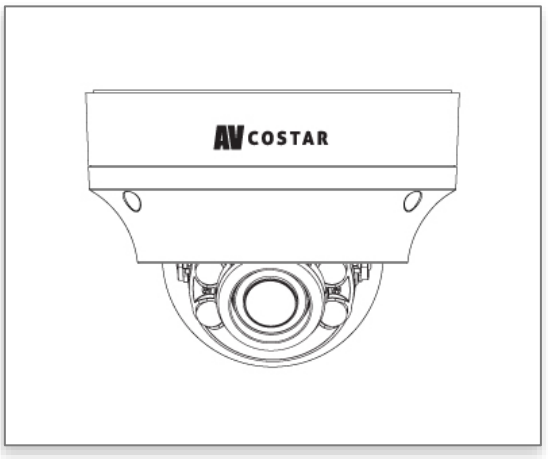
CAUTION!

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.

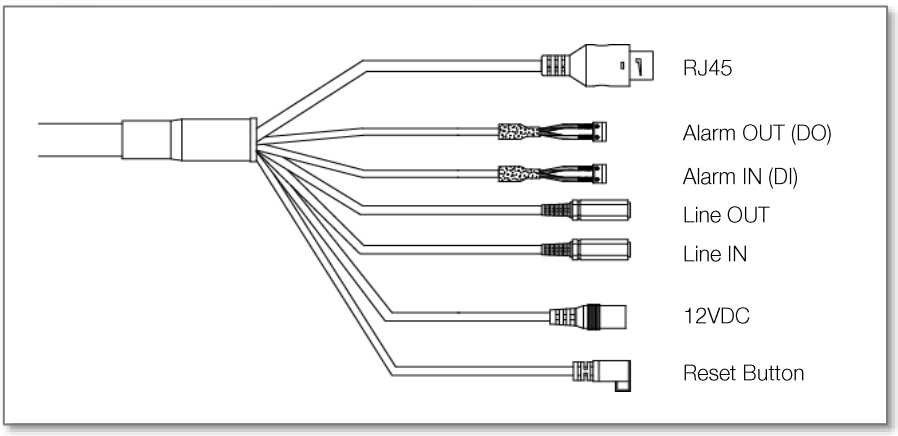
Package Contents

Description	QTY
AV02CLD-200/ AV05CLD-200 IP camera	1
Mounting Template	1
Accessory Pack	1

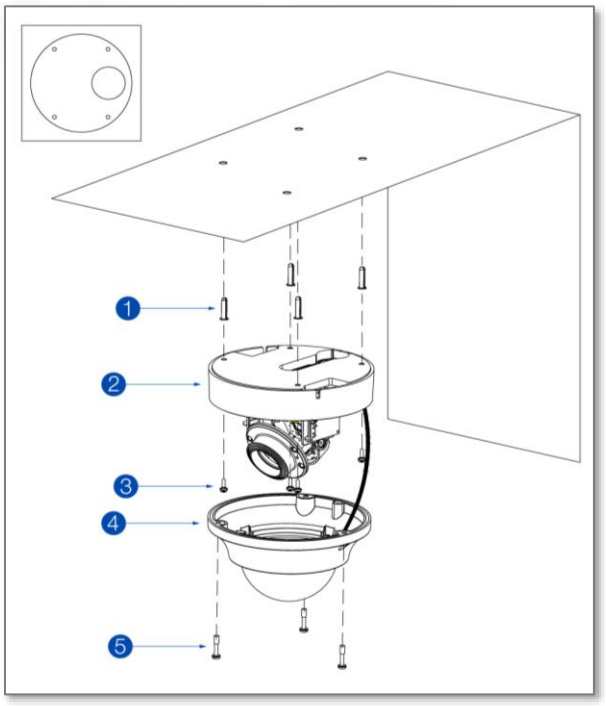
- AV02CLD-200/ AV05CLD-200



- Cables

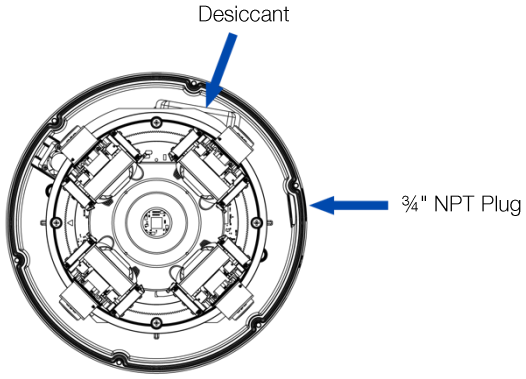

RJ45
Alarm OUT (DO)
Alarm IN (DI)
Line OUT
Line IN
12VDC
Reset Button

Installation



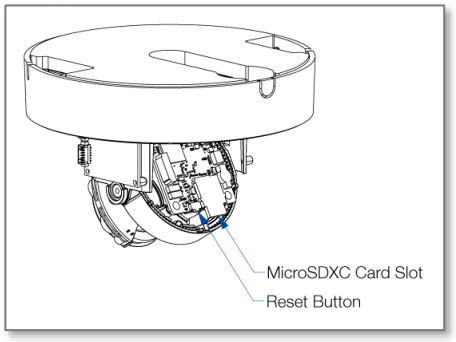
No.	Description
1	Supplied Drywall Anchors
2	ConteraIP Outdoor Dome Camera
3	Supplied Screws
4	Camera Dome Cover
5	Camera Dome Screws

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. Remove the camera dome cover by hand
5. Remove desiccant from sealed container and install in the recommended position as below.

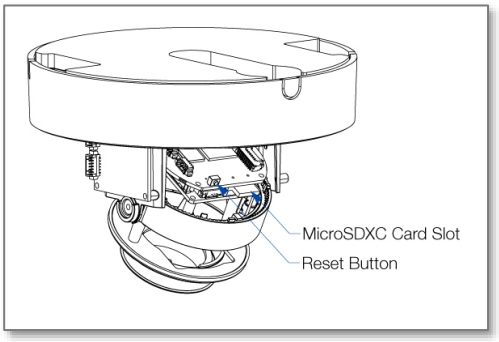


6. Connect the network, power, audio, and alarm cables as required.

7. (If necessary) Install a MicroSDXC card in the camera
    a. *Note: You can access files in the SD card via FTP.*

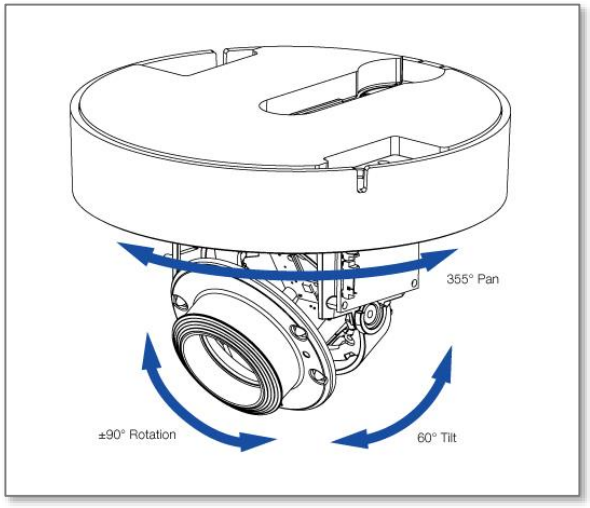


2MP (1080p) Models

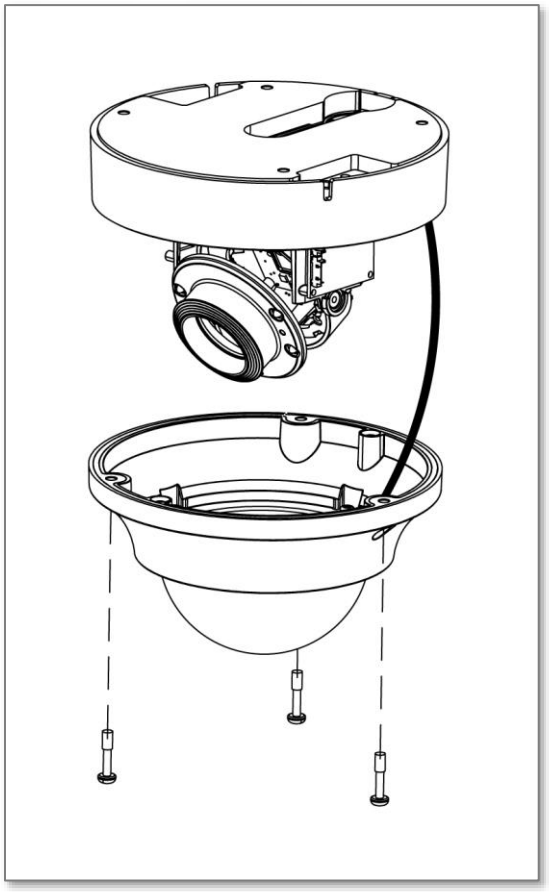


5MP (1080p) Models

8. Align three supplied screws with the dry wall anchors and screw the ConteraIP Indoor Dome camera into place.
9. To configure the camera, reference the camera discovery, set-up and configuration section.
10. Follow below instruction to adjust the Pan/ Tilt and rotate the gimbal for the desired field of view.



11. To adjust the zoom and focus, see the “Zoom and Focus” Section of this manual. Install the camera dome cover back once you finish all the above steps.



Accessories

AV Costar offers various mounting solutions for the ConteraIP Outdoor Dome series of cameras that provide wall, pendant, and corner mounting options. Please visit the camera models' webpage on www.avcostar.com or contact your local sales representative for information on all accessories.

Model Number	Description
AV-CRMA-W	Corner Mount Adapter (AV Costar White)
AV-PMA-W	Pole Mount Adapter (AV Costar White)
AV-PMJB-W	Pendant Mount Bracket with Standard Junction Box (AV Costar White) (Fits Cap 1.5" NPT, Box Fits 3/4" NPT)
AV-WMJB-W	Wall Mount Bracket with Standard Junction Box (AV Costar White) (Fits Cap 1.5" NPT, Box Fits 3/4" NPT)
CLD-CAP-W	Mounting Cap for ConteraIP Outdoor Dome (AV Costar White)
CLD-FMA-W	ConteraIP Outdoor Dome Flush Mount Adapter (White)

Camera Power Up

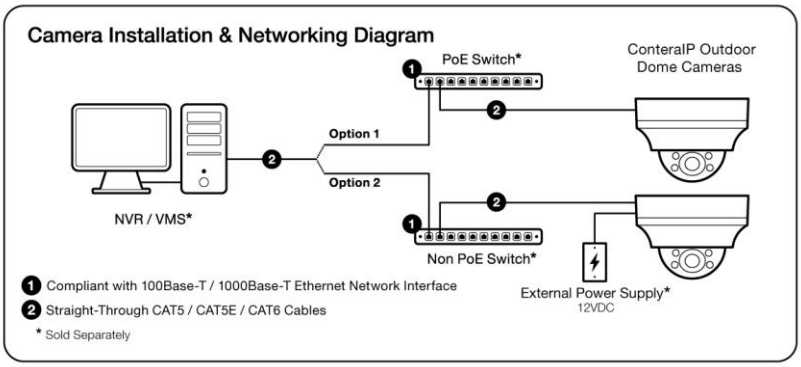
CAUTION! This product should be installed by a qualified service technician in accordance with the National Electrical Code (NEC 800 CEC Section 60) or applicable local code. Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities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

CAUTION! Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

ATTENTION! Risque d'explosion si la batterie est remplacée par un type incorrect. Mettre au rebus les Batteries usagées selon les instructions.

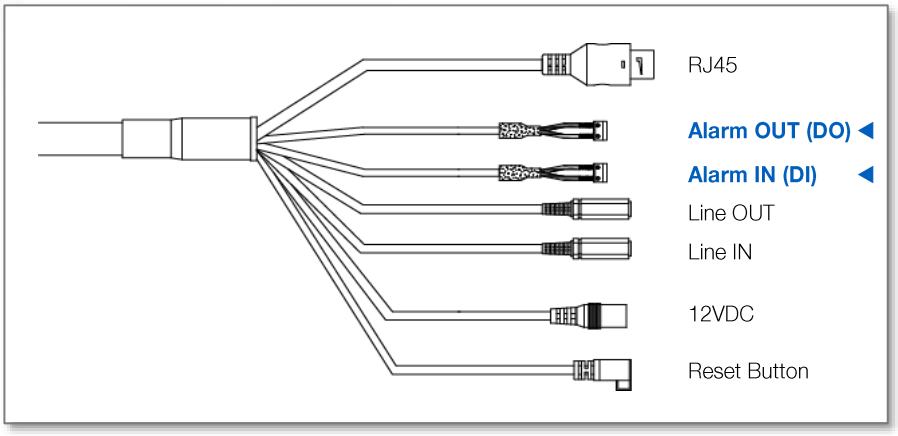
1. Connect the camera to a PoE port on 100Mbps network PoE switch using an Ethernet cable.
2. If the camera is powered by an outside power supply, connect the power wires from the external power supply (12VDC) to the power connector.
3. Connect the PoE switch to your computer's network port using an Ethernet cable.

NOTE: This product is intended to be supplied by a Listed Power Adapter or DC power source, rated 12VDC (Max. 7W), or PoE 48VDC (Max. 9W), Tma = 50ºC (1080p Models) or rated 12VDC (Max. 8.5W), or PoE 48VDC (Max. 10.5W), Tma = 50ºC (5MP Models).
For assistance with purchasing the power source, please contact AV Costar for further information. Ensure the power cord connection of the power adapter at the socket-outlet provides an earthing connection.



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

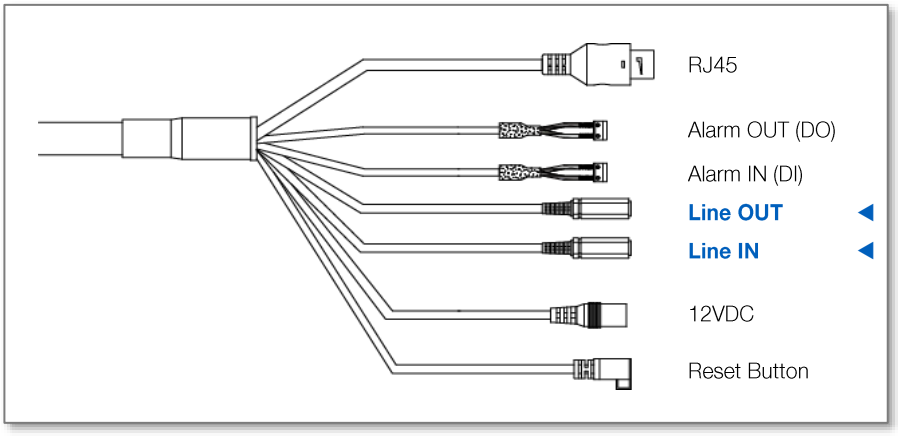
Alarm I/O Functions



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 (Dry Contact)	Alarm Out (Dry Contact)	
V sense	V sense	I sense
5V±5%	3.3V±5%	10mA (max)

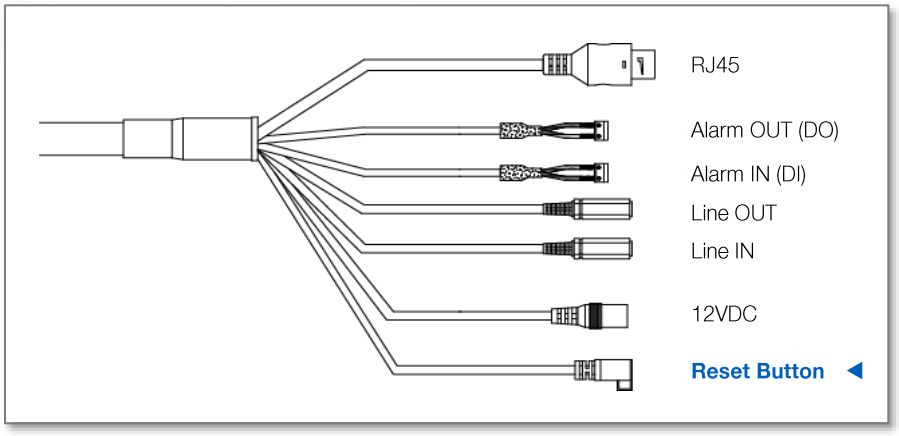
Audio



Connect the Line In connector to an audio devices output such as a microphone, and connect the Line Out connector to an audio devices input such as a speaker.

NOTE: The Line In audio input requires the source to have amplification.

Reset to Factory Default



1. Press and hold the reset button for 2 to 5 seconds and release the reset button. The camera will reset to factory default except the network settings.
2. Press and hold the reset button for more than 5 seconds and release the reset button. The camera will reset to the factory default settings.
3. Additionally, a 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 Costar Camera Utility is recommended. The software can be found by scanning the QR code on the camera's box or at: http://www.arecontvision.com/softwares.php

The Costar Camera Utility can discover cameras, 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.

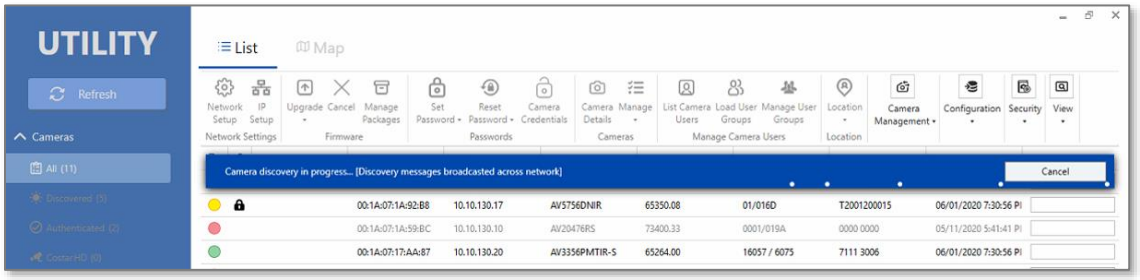
Whether used for large installations that require an update to multiple settings, or smaller installations where only one camera needs a change, the Costar Camera Utility tool is efficient and convenient for mass or single camera uploads.

The Costar Camera Utility is compatible with all AV Costar and CostarHD cameras. The user manual for the software is available on our website.

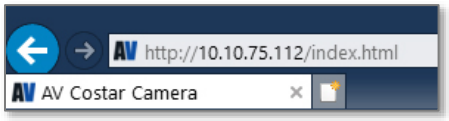
Camera Discovery

1. Locate and double click Costar Utility shortcut on the desktop and login.

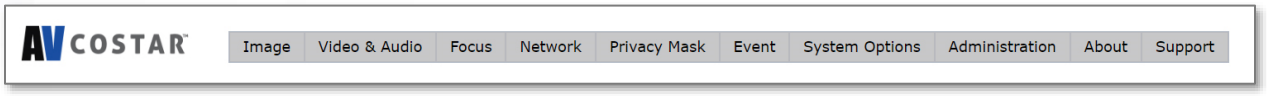
2. When the Costar Camera Utility is launched, it will automatically search the network for AV Costar and CostarHD cameras on the network and over a time interval. You can also manually search cameras by clicking the "Refresh" button.



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:

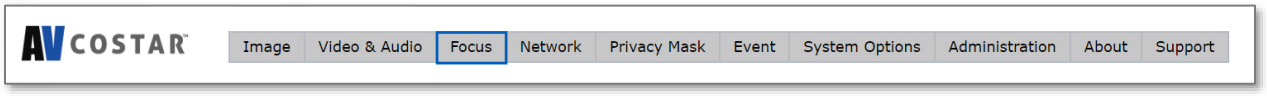
The following are the camera settings available on the top of the web interface:

- **Image**
  - Basic Image Settings
  - WDR (Wide Dynamic Range) Settings
  - Day/Night Mode
  - IR Control
  - OSD (On-Screen Display)
  - ROI (Regions of Interest)
- **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
  - LDAP
- **Privacy Mask**
- **Event**
  - Motion Detection
  - Alarm Handler
  - Digital I/O
  - Tamper Detection
  - FTP Upload Handler

- SMTP (Simple Mail Transfer Protocol) Notification
- Network Storage
- SD Card

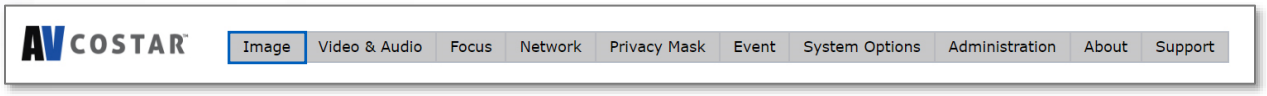
- **System Options**
  - Firmware Upgrade
  - Reboot & Restore Settings
  - Date/Time
- **Administration**
  - Administration settings
  - Viewer Management
- **About**
- **Support**

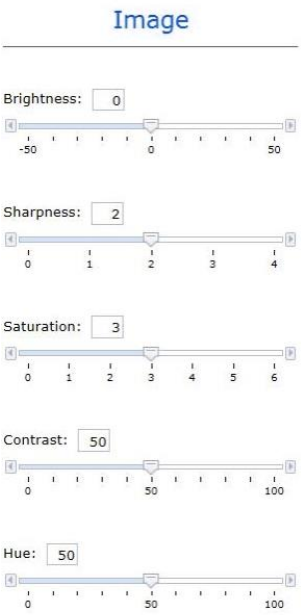
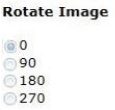
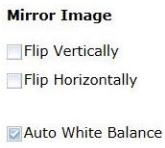
Zoom and Focus

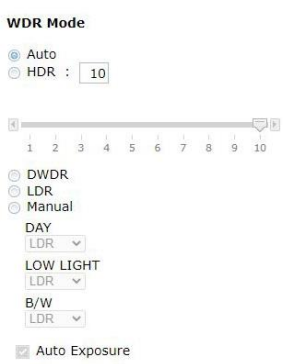


Menu	Feature	Description
	Manual Zoom/ Focus: +20, +5, +1, -20, -5, -1	Numbers indicate the level of Zooming/ focusing in order to adjust the field-of-view.
	Enable Auto Focus Zoom	Camera will do Auto Focus after changing zoom lens group position.
	Full-range Focus	Best for scenes that are completely 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.
	Reset Zoom and Focus Position	Resets Zoom and Focus lens groups to zero position

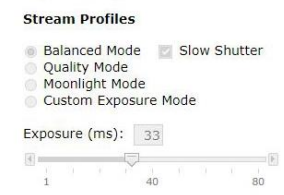
Image



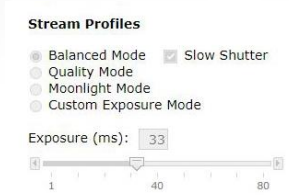
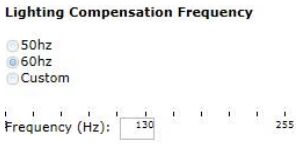
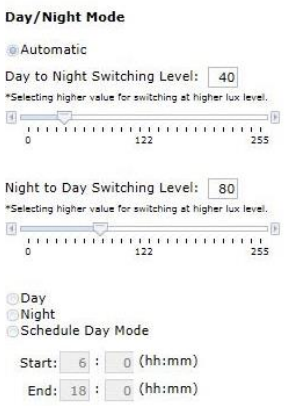
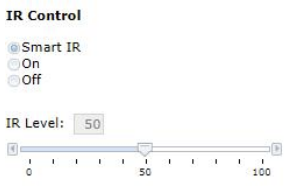
Menu	Feature	Description
	Brightness	Controls the overall brightness of the camera image and works in conjunction with the exposure controls to maintain the image brightness.
	Sharpness	Controls sharpness and edge definition of the image. Setting this to lower levels may make overall image appear a bit softer while causing lines and edges in the image to look smoother.
	Saturation	Controls the color saturation of the image.
	Contrast	Manually controls Gamma level (affects the overall luminance of the image).
	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	Digitally rotates image 0°, 90°, 180°, or 270°.
	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.

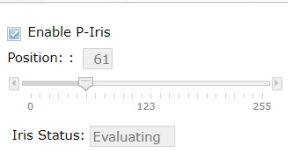


Auto	Auto detects bright backlight, glare or high contrast lighting and automatically selects the WDR level.
HDR	Manually adjusts the intensity of backlight compensation.
DWDR	Digital WDR (DWDR) is to enhance dark areas by adjusting the gamma value.
LDR	Will not combine long and short exposures into one frame, resulting in better low light performance.
Manual DAY LOW LIGHT B/W	Allows manual configuration of WDR by selecting the WDR level for the three lighting environment types (DAY, LOW LIGHT, B/W). The choices for each lighting environment are the same as the choices above LDR, AUTO, HDR, DWDR. Note: Manually adjust the HDR backlight compensation in the main HDR section above before selecting HDR for a lighting environment.
Auto Exposure	Automatically adjusts illumination and exposure values.



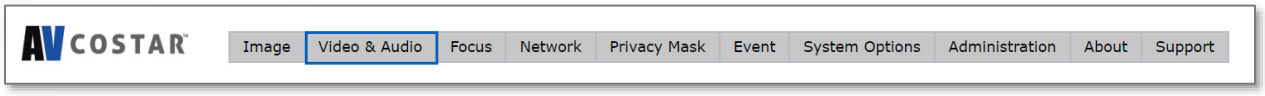
Stream Profiles: Balance Mode -Slow Shutter Quality Mode	Balanced Mode: Limits exposure time from 0.1ms to 66ms. The camera will keep highest FPS when Slow Shutter is unchecked. Quality Mode: Limits exposure time from 0.1ms to 200ms. This mode is a good compromise between reducing noise and motion blur under most lighting conditions, but with an increase in motion blur under low light conditions.

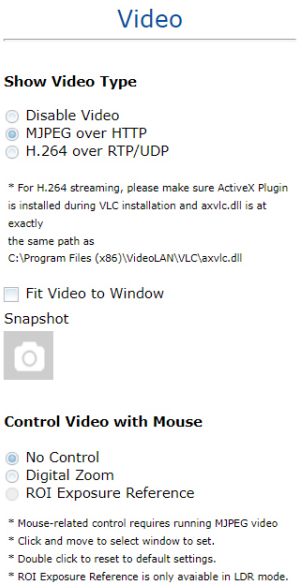
	Moonlight Mode Custom Exposure Mode	Moonlight Mode: Limits exposure time from 20ms to 500ms. This mode produces the best image quality under very low light conditions with the least amount of image noise. The trade-off is in favor of low noise at the expense of high motion blur. Custom Exposure Mod: Enables manual setting of exposure time between 1 and 80ms. Shorter exposure times reduces motion blur for applications such as monitoring fast moving objects and reading license plates. The trade-off is an increased level of noise. It is recommended that this mode be used only when there is constant scene illumination sufficient to provide a quality image.
	Lighting Compensation Frequency: 50hz, 60hz, Custom	Prevents flicker caused by the power line frequency of lighting. Chooses 50Hz for Europe and China and 60Hz for US and Japan. This parameter will have no effect when the dominate light is sunlight. Or, user can select frequency between 5Hz and 255Hz. It will be enabled when user select “Custom”.
	Day/Night Mode Automatic Day Night Schedule Day Mode	Automatic: Enables the camera to automatically switch from day mode to night mode. User can define the switching level from Day to Night or Night to Day. Day: Forces the camera to stay in day mode. Night: Forces the camera to stay in night mode. Schedule Day Mode: User defined times that the camera remains in night mode.
	IR control: Smart IR On Off IR Level	Smart IR: Automatically adjusts output in response to the distance of an object in view to prevent overexposure when the object is very close to the camera. On/ Off: Manually turns on or off the IR LED array. IR Level: Manually adjusts the IR intensity.

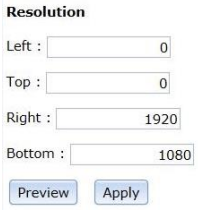
	Enable P-Iris Position Iris Status	Enables P-Iris for precise iris control.

	Camera Name	Specifies a name for the camera. The maximum length is 32 characters.
	Background Enable Font Border	Enables a border for the text overlay.
	Text Color	Options are Black, White, Green, or Yellow.
	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.
	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.

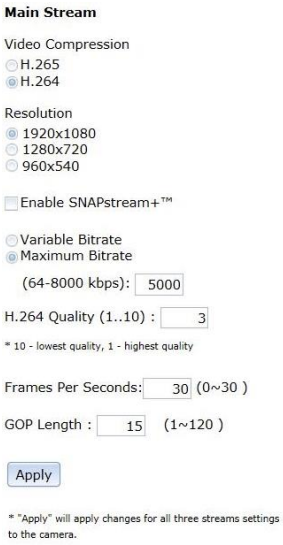
Video & Audio



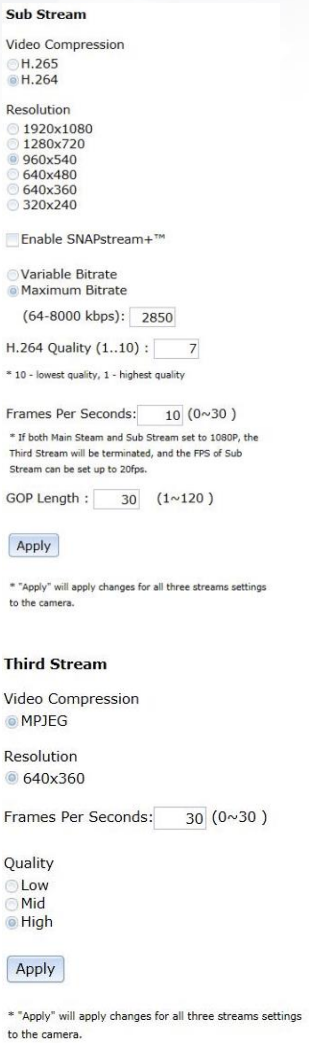
Menu	Feature	Description
	Show Video Type: Disable Video MJPEG over HTTP H.264 over RTP/UDP	Disable Video: Disables live video on the screen. MJPEG over HTTP: This radio button is the default browser display option. No plug in is required as most browsers can decode MJPEG images. H.264 over RTP/UDP: 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.
	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.
	Snapshot	Takes a snapshot of the current video.
	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.



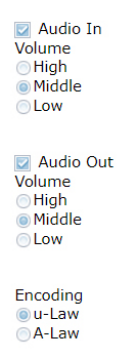
Resolution: Left Top Right Bottom	Controls the image size and image cropping features. Left, Top, Right, and Bottom numeric fields set custom image size cropping and crop area coordinates in pixels. Supported values are 0 to maximum resolution in pixels (maximum varies based on the sensor resolution being cropped)



Video Compression: H.265 H.264	Radio buttons to select the desired compression.
Resolution	Radio buttons to select the desired resolution. Options vary based on the sensor resolution being used.
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.
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.

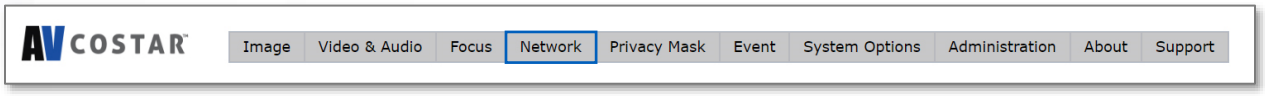


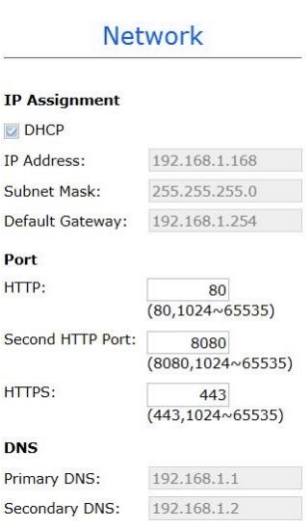
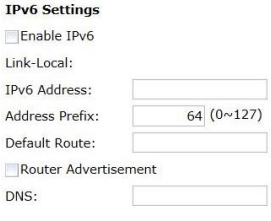
Frames Per Seconds	Frame rate adjustment for the camera video stream. Note: For 2MP models, FPS will be up to 50% of specified FPS if WDR is enabled.
GOP Length	Specifies how many frames between two consecutive I-Frames.
Video Compression: MPJEG	The third stream is designed for the live view on web interface, and the only option of Video Compression is MPJEG.
Resolution	The third stream is designed for the live view on web interface, and the only option of Resolution is VGA.
Frames Per Seconds	Frame rate adjustment for the camera video stream.
Quality: Low Mid High	Adjusts the compression level for JPEG images

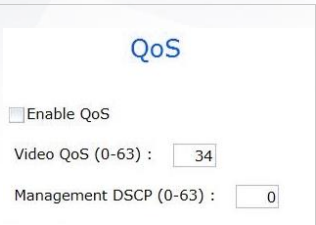


Audio In Audio Out Volume: High Middle Low Audio In u-Law A-Law	Enables the Audio In/ Audio Out features on the camera. Specifies the volume level of Audio In/ Audio Out: High, Middle, or Low. Specifies the encoding algorithm: u-Law or A-Law.

Network



Menu	Feature	Description
	IP Assignment: DHCP IP Address Subnet Mask Default Gateway	DHCP: If checked, the camera will attempt to obtain its IP address from the DHCP server available on the network. 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
	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 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

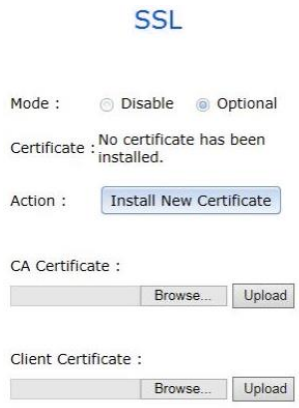
	Enable QoS	Enables quality of service.
	Video QoS	Sets DSCP value for video traffic.
	Management DSCP	Sets DSCP value for non-video traffic.
	Enable UPnP	Enables Universal Plug and Play function.
	Port	Configures the port number for stream 1 to stream 3. The range is 554/1025~65535.
	Enable RTSP Unicast Stream	Enables RTSP Unicast for stream 1(Main stream), stream 2(Sub Stream), and stream 3(Third Stream)
	Enable RTSP Stream metadata	Enables RTSP stream metadata for stream 1 (Main stream), stream 2 (Sub Stream), and stream 3 (Third Stream)
	Path	Configures the pathname for each stream.
	Link for external media players	Copies the link from here for external media players
	Enable RTSP Multicast Stream	Enables RTSP Multicast stream for stream 1 (Main stream), stream 2 (Sub Stream), and stream 3 (Third Stream)
	Always Multicast	Enables the video streams to start multicast steaming without using RTCP
	Video IP Video Port	Configures the multicast address and the port number to stream video.

Audio IP Audio Port	Configures the multicast address and the port number to stream audio. *This function is supported depends on models.
Meta IP Meta Port	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.

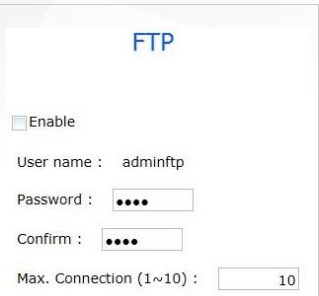
Enable DDNS	Enables DDNS service
Host Name	Specifies the Host name registered with the DDNS server
DDNS Sever	Selects one of the pubic DDNS severs from the dropdown menu. Options are DynDNS, NO-IP, and Twi-DNS.
User Name	Specifies the user name of the DDNS account.
Password	Specifies the password of the DDNS account.
Password Confirmation	Confirms the password of the DDNS account.

No SNMP Sever	Disables SNMP function
SNMP v2c	Enables SNMP version 2 support
Community String	Specifies the name of the community to access to SNMP information.

Trap Configuration: Address Community String	Specifies the destination IP address to send SNMP trap messages.
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.

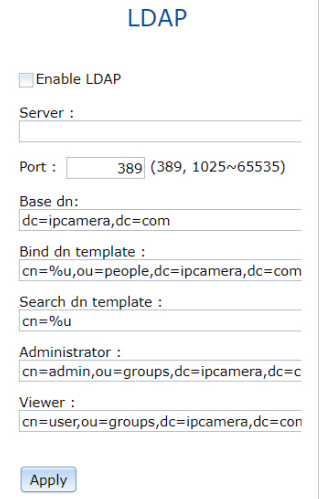


Mode: Disable Optional	Disable: Support for HTTP only. Optional: Support for HTTP and HTTPs both.
Certificate	Shows the current status of the Certificate
Install New Certificate CA Certificate Client Certificate	1. Locate CA Certificate and Client Certificate and click Upload. 2. Click Install New Certificate to upload the Certificate.
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.



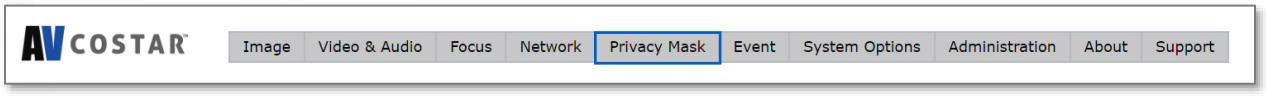
Password Confirm	Specifies and confirms the password to access the FTP.
Max. Connection	Specifies the maximum number of FTP connections to the IP camera.

Protocol	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 information.



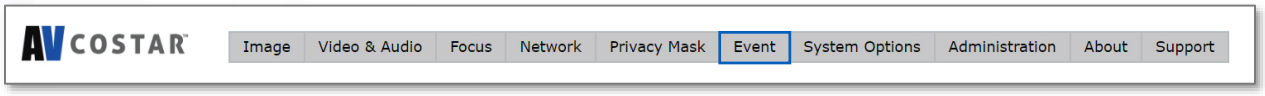
Enable LDAP	Enables LDAP service.
Server	Specifies the IP address of the LDAP server.
Port	Specifies the port address of the LDAP server. Default port is 389.
Base dn	Specifies the starting point an LDAP server uses when searching for user's authentication within the Directory.
Bind dn template	Identifies the username that will be used to do the searching and request the authentication
Search dn template	Defines at which node the search originates
Administrator	Specifies the administrator
Viewer	Specifies the viewer user

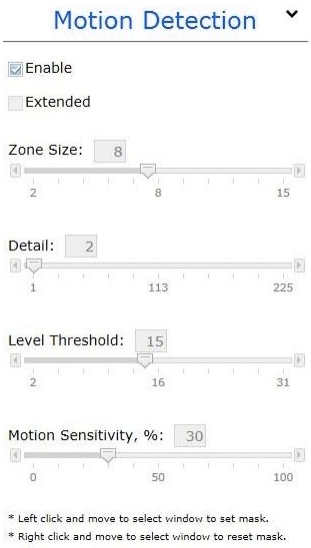
Privacy Mask



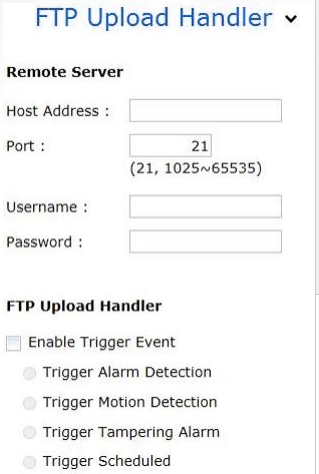
Menu	Feature	Description
	Enable Privacy Mask	Creates a privacy mask on the image so the selected areas will not be visible.

Event



Menu	Feature	Description
	Enable	Turns on and off on-camera motion detection
	Extend	Enables the extended motion detection and motion detection zones increase from default 64 to 1024 for enhanced motion detection sensitivity.
	Zone Size	Adjusts the size of motion detection zones.
	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.
 *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.
 *This function is supported depends on models.*	Trigger Alarm Detection	When a signal is detected from Alarm in, the Alarm out will be triggered.
	Trigger Motion Detection	When a motion detection event is detected, the Alarm out will be triggered.
	Trigger Tamper Detection	When a tamper detection event is detected, the Alarm out will be triggered.
	Type	Selects the type: N.O (Normal Open) or N.C (Normal Close)
	Off Time	Specifies the alarm duration
	Enable Tampering Detection	Enables Tampering Detection function.
	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.
	Sensitivity	Configures the sensitivity level of Tampering Detection: High, Medium, and Low.

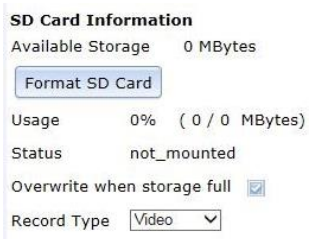


Remote Server Host Address Port Username Password	Host Address: Specifies the host name or IP address of the FTP server. Port: Specifies the port number of the FTP server. Username: Specifies the login username of the FTP server. Password: Specifies the login password of the FTP server.
FTP Upload Handler Enable Trigger Event	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 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.
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.
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.
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	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.*

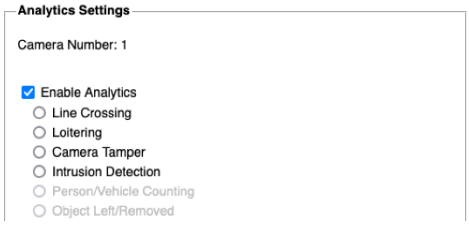
Enable	Enables and selects a desired trigger source. The options are Trigger Alarm Detection*, Trigger Motion Detection, Trigger Tampering Alarm, and Manual Record. **This function is supported depends on models.*

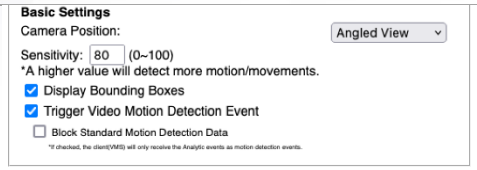


SD Card Information Available Storage Format SD Card Usage Status	Available Storage: Displays the available storage of the SD card if it is installed. Format SD Card: Erases all the data stored on the SD Card. Usage: Displays the total storage that has been used now. Status: Displays the status whether the SD card is installed or not. (not_mounted or ok)

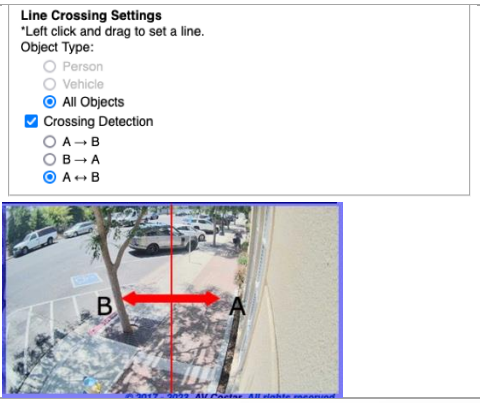
	Overwrite when storage full Record Type	Overwrite when storage full: Enables overwriting the SD card if the storage is full. Recoding Type: Specifies the desired action to record a stream. The options are Snapshot and Video.

Video Analytics

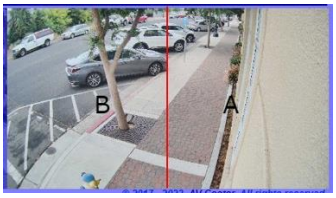
Menu	Feature	Description
Analytics Settings		
	Camera Number	Indicates which camera sensor is currently being configured. A blue outline is also placed around the current camera sensor. To select a different camera sensor, click on the desired camera preview.
	Enable Analytics Line Crossing Loitering Camera Tamper Intrusion Detection Person/Vehicle Counting Object Left/Removed	Enables and selects a desired Analytic function. The options are Line Crossing, Loitering, Camera Tamper, Intrusion Detection, Person/Vehicle Counting,* Object Left/Removed.* Line Crossing: Detects objects that cross a virtual line. Loitering: Detects objects that remain in a user-specified area beyond a specified time. Camera Tamper: Detects attempts to partially or completely block the lens or field of view, or drastic changes to the camera angle. Intrusion Detection: Detects objects that move into a user specified area. Person/Vehicle Counting*: Performs a continuous, multidirectional count of people, vehicles, or all objects. Object Left/Removed*: Continuously monitors a specified area to detect objects that have been left/removed. * Optional Advanced License Required

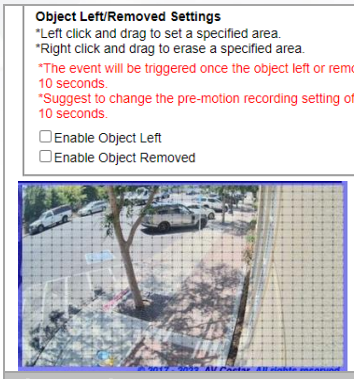


Basic Settings Camera Position	When selecting the correct position for analytics care should be taken to avoid the following: 1. Objects that are too small (<10% of the image). 2. Objects that are too large (>40% of the image). 3. Objects that can be hidden from view. Angled View: Typically used for wall or corner mounts looking down. Useful for general intrusion. Top Down View: Typically used for vertical ceiling mounts. Primarily used for line crossing or directional movement. Horizontal View: Typically used for horizontal wall mounts at a lower height. It is not recommended for most situations since objects can be hidden from view.
Sensitivity	Specify the desired trade-off between true detections and false alarms to minimize the effects from the background motions. 1. For night/low contrast scenes the sensitivity should be increased to 90-95. 2. For bright/noisy/sharp videos it should be lowered to 60-75. To minimize the effects of noise, Sensitivity can be reduced so that only more prominent objects will be detected and trigger events.
Display Bounding Boxes	If checked, the video on the Web UI will display a bounding box around a valid object. **NOTE:** Bounding boxes will not overlay on video streams. They are displayed in the camera web UI only.
Trigger Video Analytic Event	If enabled, Video Analytic Events will be treated as motion data. If Block Standard Motion Detection Data is enabled, the client (VMS) will only receive the Analytic events as motion detection events.



Line Crossing Settings Object Type Person Vehicle All Objects Crossing Detection A —> B A <— B A <—> B	1. Left click and drag a line on the live video. 2. Select a desired Object Type* to trigger events. The options are Person, Vehicle and All Objects. 3. Select a desired crossing direction to trigger events. The options are A —> B, A <— B, A <—> B. 4. Click Apply. * Optional Advanced License Required

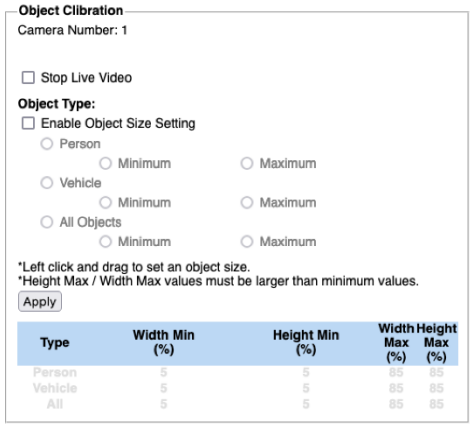
Loitering Settings *Left click and drag to set a specified area. *Right click and drag to erase a specified area. *5 Seconds is the lowest time allowed for trigger Minimum Loitering Time(Sec): 5 	Loitering Settings Minimum Loitering Time (Sec)	1. Left click and drag to draw a virtual area. 2. Right click and drag to erase a virtual area. 3. Specify the amount of time an object must be in the area to trigger the event. Click Apply.
Camera Tamper Settings ☐ Triggered by Light Changes Sensitivity: 60 (0~100)	Camera Tamper Settings Triggered by Light Changes	If enabled, lights turning on/off will be treated as a tamper event.
	Sensitivity	Sets the sensitivity to detect the tamper event due to the sudden changes in the image.
Intrusion Detection Settings *Left click and drag to set a specified area. *Right click and drag to erase a specified area. Object Type: ○ Person ○ Vehicle ◉ All Objects 	Intrusion Detection Settings Object Type: Person Vehicle All Objects	1. Left click and drag to draw a virtual area. 2. Right click and drag to erase a virtual area. 3. Select a desired Object Type* to trigger events. The options are Person, Vehicle and All Objects. 4. Click Apply. * Optional Advanced License Required
Person/Vehicle Counting Settings *Left click and drag to set a line. *Count incoming and outgoing objects that cross a specified line. Object Type: ○ Person ○ Vehicle ◉ All Objects Event Count: A -> B: 0 B -> A: 0 ☑ Trigger event if count is greater than: A -> B: 0 B -> A: 0 ☑ Reset Event Count ○ Every Day ○ Every Week ◉ Every Month 1 day Monday 0 hour 0 min Reset Event Count 	Person/Vehicle Counting Settings Object Type: Person Vehicle All Objects Event Count: A —> B B —> A Trigger event if count is greater than: A —> B B —> A Reset Event Count Every Day Every Week Every Month	1. Left click and drag to draw a virtual area. 2. Right click and drag to erase a virtual area. 3. Select the Object Type* that will trigger the analytic. 4. Select an object crossing direction count to trigger events. An event will be created when the counts for A —> B or A <— B reach a count greater than the number entered in the field. 5. Choose whether or not to Reset Event Count. When checked, the Event Count will be reset at the selected interval. 6. Click Apply * Optional Advanced License Required



Object Left/Removed Settings
Enable Object Left
Enable Object Removed

1. Left click and drag to draw a virtual area.
2. Right click and drag to erase a virtual area.
3. Select Enable Object Left or/and Enable Object Removed.
4. Click Apply

Object Calibration



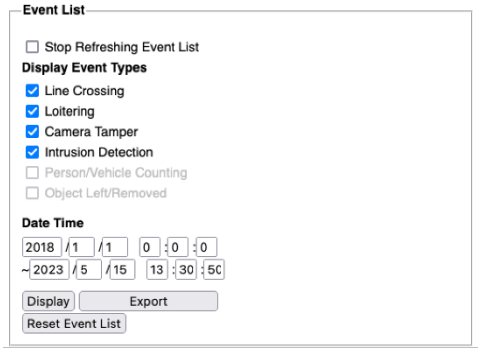
Stop Live Video
Object Type
Enable Object Size Setting
- Person
- Vehicle
- All Objects

Click Stop Live Video to perform object calibration.
Enable Object Size Setting to start object calibration.

1. Select Minimum to specify the minimum object size of the target.
2. Left click and drag to set the object size.
3. Select Maximum to specify the maximum object size of the target.
4. Left click and drag to set the object size.
5. Click Apply

NOTE: It is recommended to set minimum object size to half the width and height of the average object and maximum object size to ~130% the width and height of the average object.

Event List



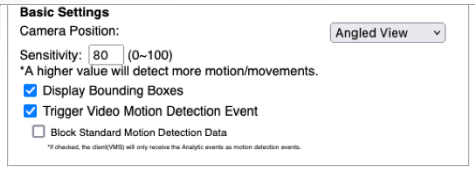
Event List
Stop Refreshing Event List
Display Event Types
Date Time
Reset Event List

Click Stop Refreshing Event list to pause new events from being displayed.

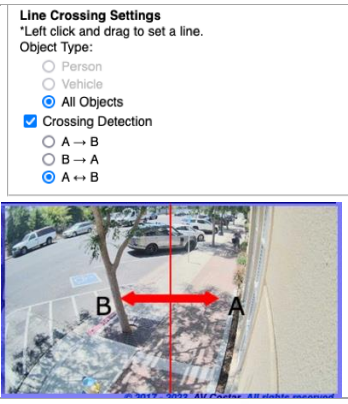
1. Select desired event type under Display Event Types. The options are Line Crossing, Loitering, Camera Tamper, Intrusion Detection, Person/Vehicle Counting*, Object Left/Removed*.
2. Specify a start time and end time for events you want to search for in Date Time fields.
3. Click the Display button.

Click Reset Event List button to reset the current event list.

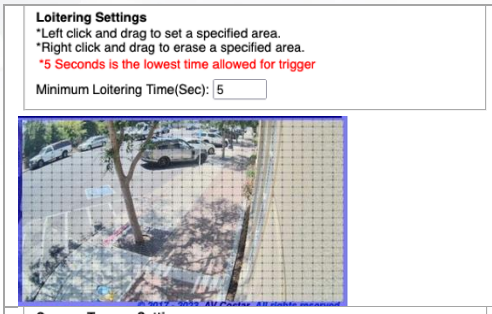
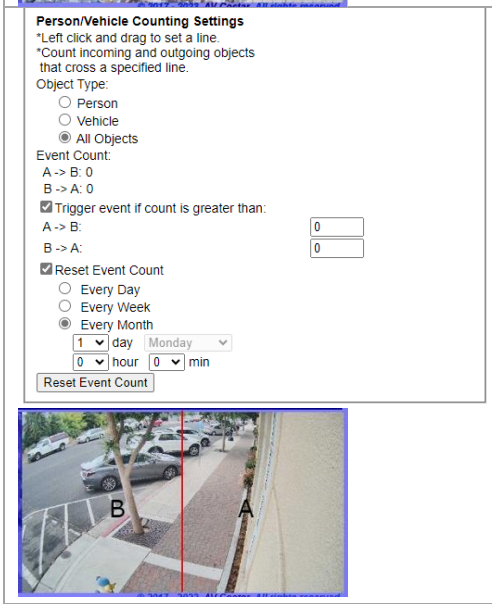
* Optional Advanced License Required

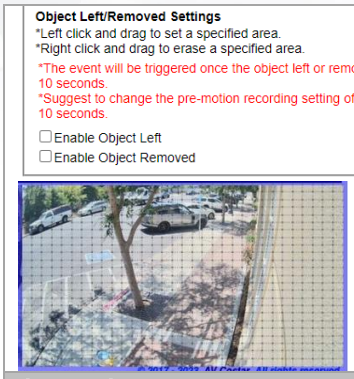


Basic Settings Camera Position	When selecting the correct position for analytics care should be taken to avoid the following: 1. Objects that are too small (<10% of the image). 2. Objects that are too large (>40% of the image). 3. Objects that can be hidden from view. Angled View: Typically used for wall or corner mounts looking down. Useful for general intrusion. Top Down View: Typically used for vertical ceiling mounts. Primarily used for line crossing or directional movement. Horizontal View: Typically used for horizontal wall mounts at a lower height. It is not recommended for most situations since objects can be hidden from view.
Sensitivity	Specify the desired trade-off between true detections and false alarms to minimize the effects from the background motions. 1. For night/low contrast scenes the sensitivity should be increased to 90-95. 2. For bright/noisy/sharp videos it should be lowered to 60-75. To minimize the effects of noise, Sensitivity can be reduced so that only more prominent objects will be detected and trigger events.
Display Bounding Boxes	If checked, the video on the Web UI will display a bounding box around a valid object. **NOTE:** Bounding boxes will not overlay on video streams. They are displayed in the camera web UI only.
Trigger Video Analytic Event	If enabled, Video Analytic Events will be treated as motion data. If Block Standard Motion Detection Data is enabled, the client (VMS) will only receive the Analytic events as motion detection events.



Line Crossing Settings Object Type Person Vehicle All Objects Crossing Detection A —> B A <— B A <—> B	1. Left click and drag a line on the live video. 2. Select a desired Object Type* to trigger events. The options are Person, Vehicle and All Objects. 3. Select a desired crossing direction to trigger events. The options are A —> B, A <— B, A <—> B. 4. Click Apply. * Optional Advanced License Required

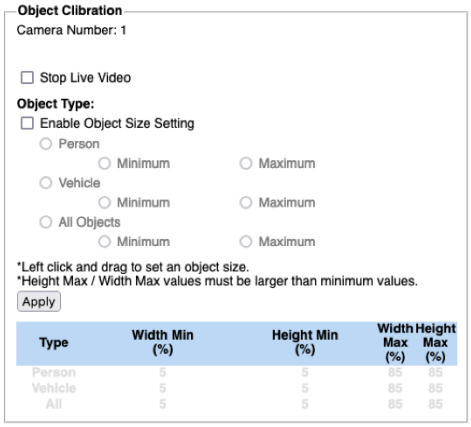
	Loitering Settings Minimum Loitering Time (Sec)	1. Left click and drag to draw a virtual area. 2. Right click and drag to erase a virtual area. 3. Specify the amount of time an object must be in the area to trigger the event. Click Apply.
	Camera Tamper Settings Triggered by Light Changes	If enabled, lights turning on/off will be treated as a tamper event.
	Sensitivity	Sets the sensitivity to detect the tamper event due to the sudden changes in the image.
	Intrusion Detection Settings Object Type: Person Vehicle All Objects	1. Left click and drag to draw a virtual area. 2. Right click and drag to erase a virtual area. 3. Select a desired Object Type* to trigger events. The options are Person, Vehicle and All Objects. 4. Click Apply. * Optional Advanced License Required
	Person/Vehicle Counting Settings Object Type: Person Vehicle All Objects Event Count: A —> B B —> A Trigger event if count is greater than: A —> B B —> A Reset Event Count Every Day Every Week Every Month	1. Left click and drag to draw a virtual area. 2. Right click and drag to erase a virtual area. 3. Select the Object Type* that will trigger the analytic. 4. Select an object crossing direction count to trigger events. An event will be created when the counts for A —> B or A <— B reach a count greater than the number entered in the field. 5. Choose whether or not to Reset Event Count. When checked, the Event Count will be reset at the selected interval. 6. Click Apply * Optional Advanced License Required



Object Left/Removed Settings
Enable Object Left
Enable Object Removed

1. Left click and drag to draw a virtual area.
2. Right click and drag to erase a virtual area.
3. Select Enable Object Left or/and Enable Object Removed.
4. Click Apply

Object Calibration



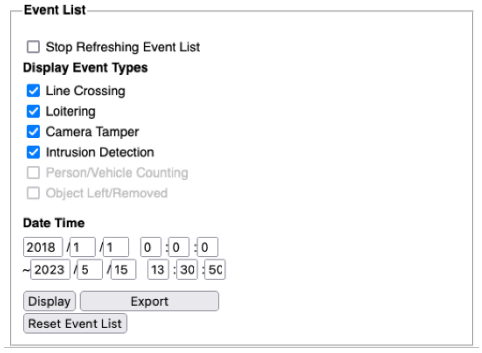
Stop Live Video
Object Type
Enable Object Size Setting
- Person
- Vehicle
- All Objects

Click Stop Live Video to perform object calibration.
Enable Object Size Setting to start object calibration.

1. Select Minimum to specify the minimum object size of the target.
2. Left click and drag to set the object size.
3. Select Maximum to specify the maximum object size of the target.
4. Left click and drag to set the object size.
5. Click Apply

NOTE: It is recommended to set minimum object size to half the width and height of the average object and maximum object size to ~130% the width and height of the average object.

Event List



Event List
Stop Refreshing Event List
Display Event Types
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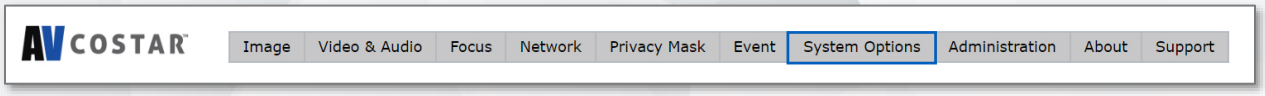
3. Click the Display button.

Click Reset Event List button to reset the current event list.

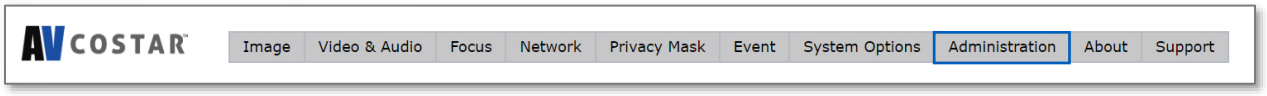
* Optional Advanced License Required

System Options

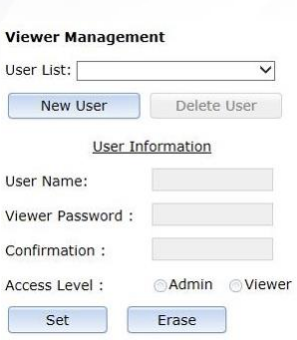


Menu	Feature	Description
	Firmware Upgrade	Clicks **Browse** to choose the firmware upgrade file, and then clicks **Upgrade**.
	Download Log	Records all the status information of the camera in list format. Downloads the log file to the computer as a text file. *Note: The log file is protected by a password. Please contact with Arecont Vision technical support team.*
	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**	**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
	Access Control	Passwords can be up to 16 letters, digits and symbols, excluding following symbols for passwords without encoding # % & ' " < > / [ ] { } _ ( ) = . + ,
	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. 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.

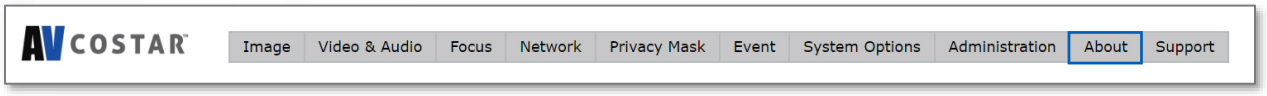
Viewer Password: Specifies the password for the viewer.

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

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

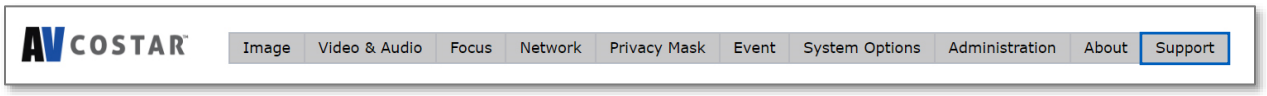
Set/ Erase: Save or removes the password.

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
Support • 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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