Contera IP® Fisheye

Installation Manual

12MP

AV12CFE-250

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. Notwithstanding the preceding provisions, AV COSTAR shall have no obligation or responsibility with respect to any Product that (i) has been modified or altered without AV COSTAR’s written authorization; (ii) has not been used in accordance with applicable documentation; (iii) has been subjected to unusual stress, neglect, misuse, abuse, improper storage, testing or connection; or unauthorized repair; or (iv) is no longer covered under the Warranty Period. AV COSTAR make no warranties or conditions, express, implied, statutory or otherwise, other than the express limited warranties made by AV COSTAR above, and AV COSTAR hereby specifically disclaims all other express, statutory and implied warranties and conditions, including the implied warranties of merchantability, fitness for a particular purpose, non-infringement and the implied condition of satisfactory quality. All licensed programs are licensed on an “as is” basis without warranty. AV COSTAR does not warrant that (i) the operation of the products or parts will be uninterrupted or error free; (ii) the products or parts and documentation will meet the end users’ requirements; (iii) the products or parts will operate in combinations and configurations selected by the end user; other than combinations and configurations with parts or other products authorized by AV COSTAR or (iv) that all licensed program errors will be corrected.

For RMA and Advance Replacement information visit http://www.avcostar.com

ConteraIP Fisheye Megapixel Cameras

Camera Overview

The ConteraIP® Fisheye megapixel camera features 12-megapixel (MP) resolution with an integrated ultra-wide-angle lens for excellent, optimal image quality and optimum performance. The ConteraIP Fisheye camera can replace multiple fixed or PTZ cameras by recording an entire 360º panoramic field of view, without blind spots, and the ability to zoom into multiple regions of interest for a return on investment that's easily measured.

Regardless of time-of-day, this camera is ideal for applications with challenging lighting conditions. The series combines a day/night mechanical IR cut filter for the highest image quality at any time of day. For applications with poor lighting conditions, WDR™ (wide dynamic range) at 100dB 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, which is further enhanced by integrated LED illumination.

AV Costar™ was the first to bring H.264 to the mainstream market. Today we are proud to offer our next generation H.265 capable of delivering high quality video while saving over 50% of the data rate to reduce or prevent strain on the network.

ConteraIP Fisheye is designed for demanding environments. Certified to rigorous dust and water tests, the camera carries an IP67 rating. The rugged dome housing is IK-10 rated for vandal-prone applications.

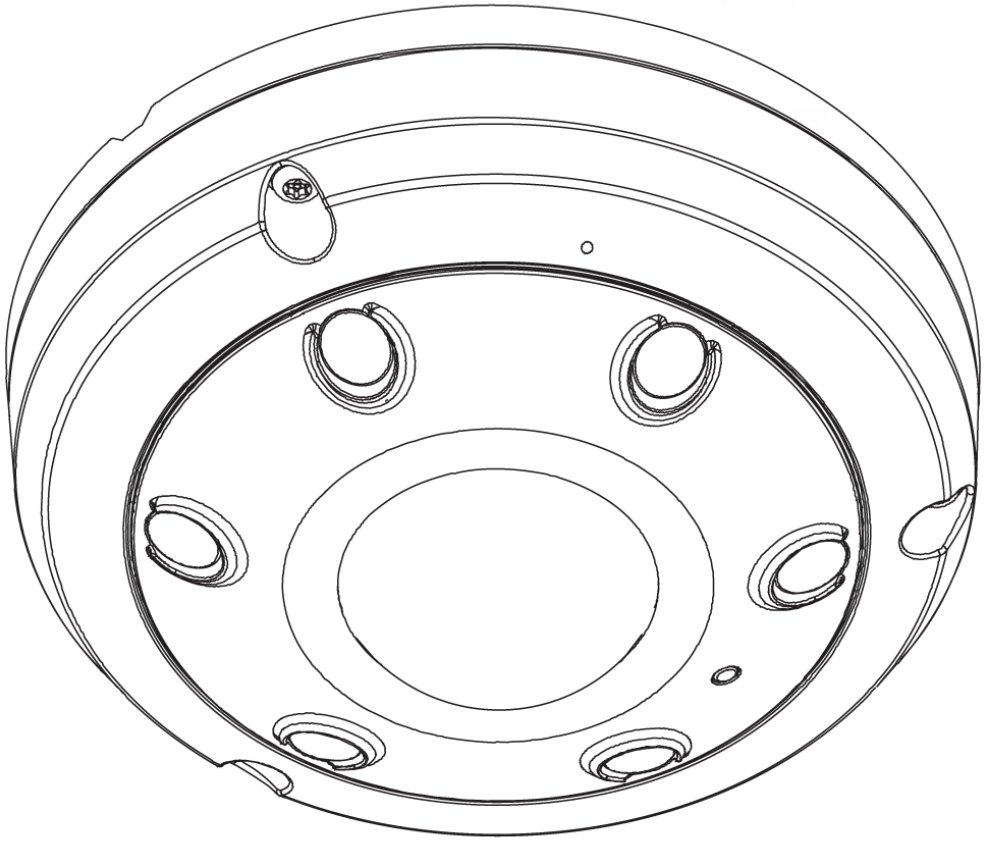
The microSDXC card slot supports up to 1TB of storage capacity for convenient onboard storage. The camera's power can be supplied via a Power-over-Ethernet (PoE - IEEE 802.3at) compliant network cable connection or a 12V DC power supply.

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

Package Contents

- AV12CFE-250

Description	QTY
AV12CFE-250 IP camera	1
Mounting Template	1
Quick Installation Guide	1
Mounting Hardware	1
Desiccant Packet	1



Installation

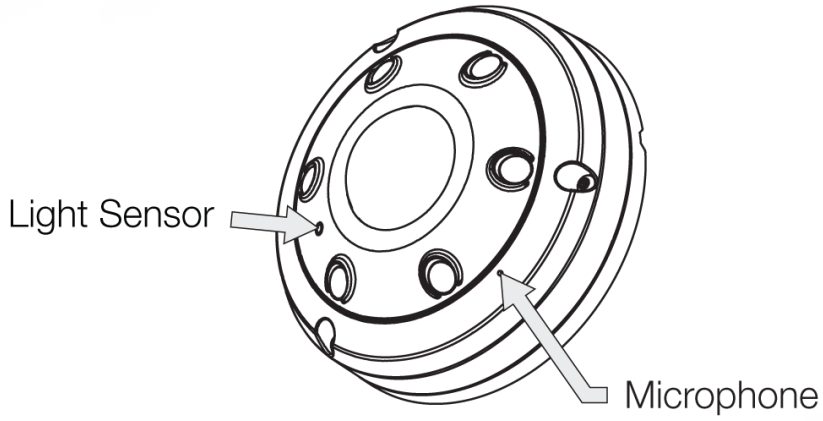
Accessories

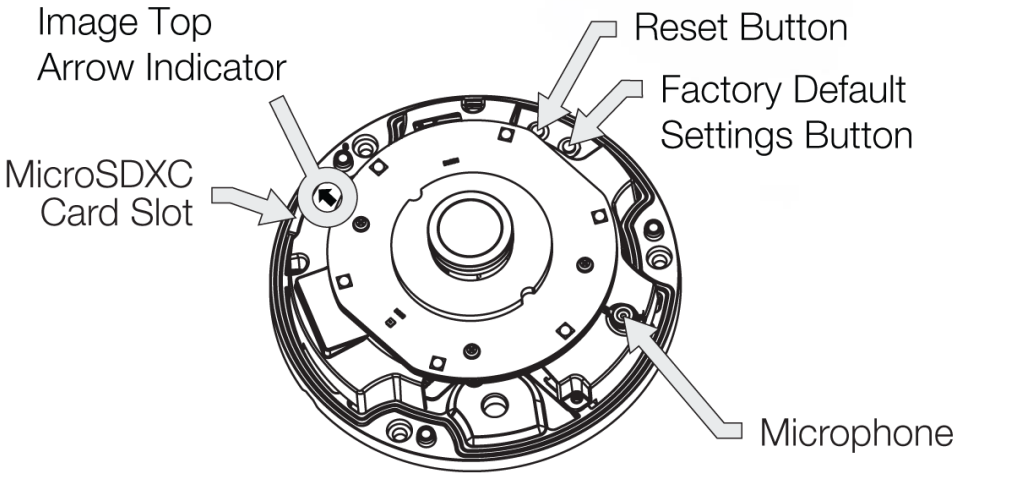
AV Costar offers various mounting solutions for ConteraIP Fisheye cameras that provide wall, pendant, and corner mounting options. Please visit the camera models' webpage on www.avcostar.com or contact your local sales representative for information on all accessories.

Model Number	Description
AV12CFE-ADPT	ConteraIP 2nd Gen Fisheye Mount Adapter (AV Costar White)
AV-CRMA-W	Corner Mount Adapter (AV Costar White)
AV-EBAPR	Electrical Box Adapter Plate (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-JBA-W*	ConteraIP Outdoor Dome Round Junction Box (AV Costar White)

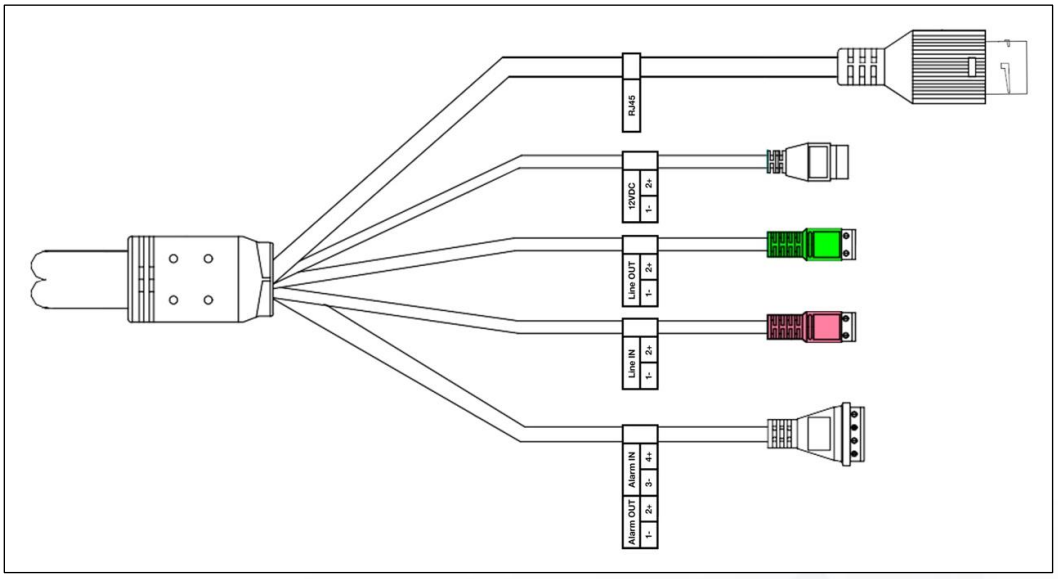
* Requires AV12CFE-ADPT

Camera Features





(Enabled in future firmware release)



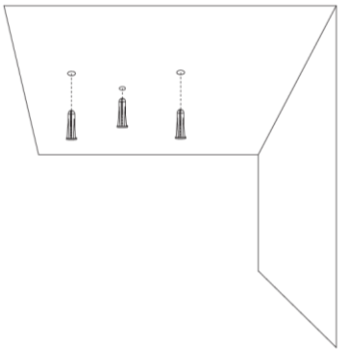
Surface (Ceiling and Wall) Mount

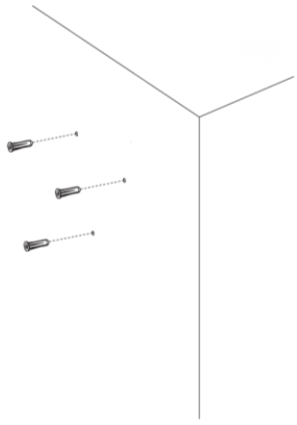
We recommend placing the ConteraIP Fisheye camera directly on a hard ceiling or wall.

Template, anchors, and screws are provided for mounting the camera.

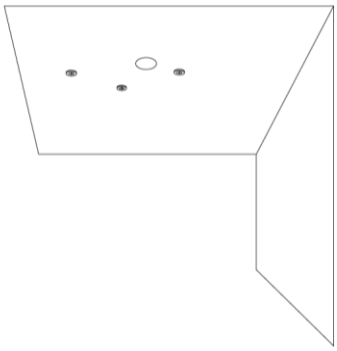
1. Position the mounting template at the desired installation location. The top of the template is the top of the video image.

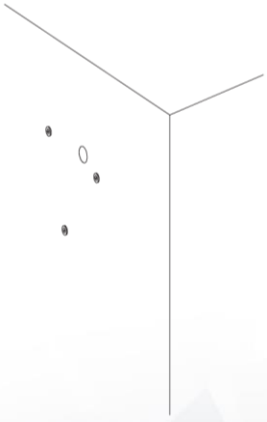
2. Drill three mounting holes and insert the included screw anchors.



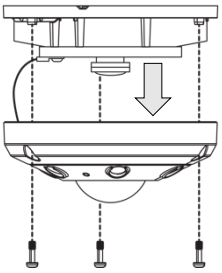


3. Drill a hole for the interface cable.



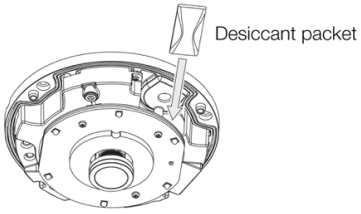


4. Remove the dome cover.

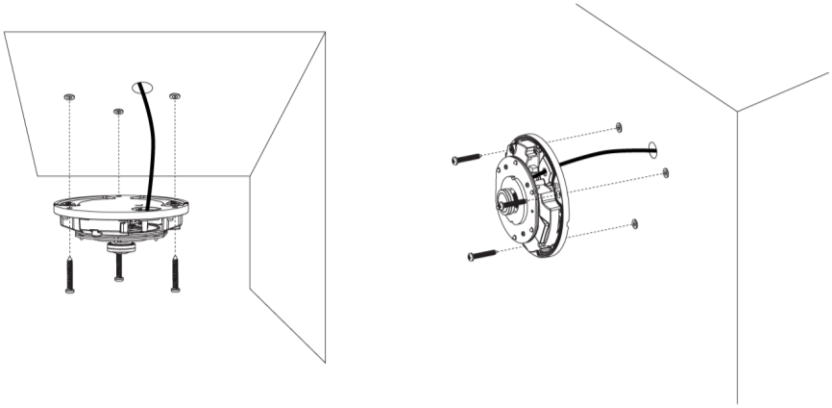


NOTE: Do not remove tether. Camera damage may occur.

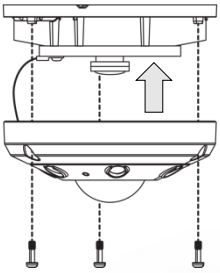
5. Put the desiccant packet in the suggested position.



6. Make alarm/audio/network/power connections to interface cable.
7. Install the camera feeding the interface cable through its hole. The arrow on the camera points in the direction of the top of the video image.



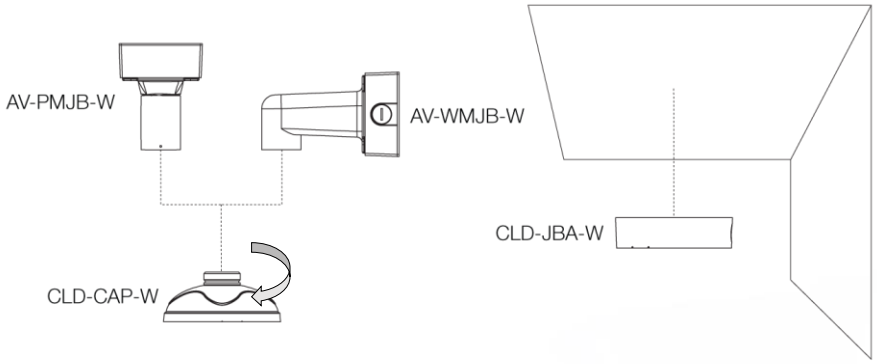
8. Replace the top cover and secure it tightly using the supplied tool.



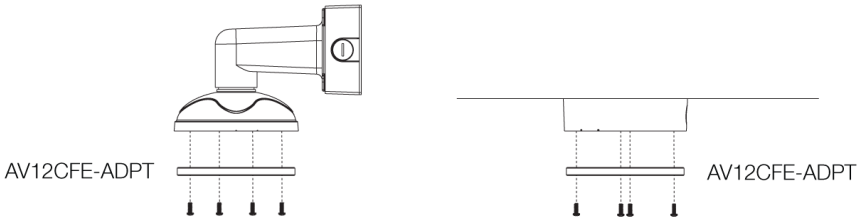
Cap and Junction Box Hardware Installation

Template, anchors, and screws are provided for mounting the camera.

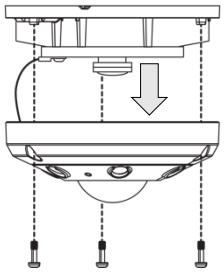
1. Screw the CLD-CAP-W cap to the desired 1.5" NPT mount (such as the AV-PMJB-W or AV-WMJB-W) or install the CLD-JBA-W junction box.



2. Feed cables through the mount and cap assembly.
3. Screw the adapter (AV12CFE-ADPT) to the cap.

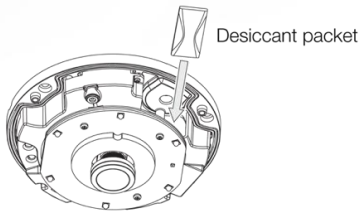


4. Remove the dome cover.

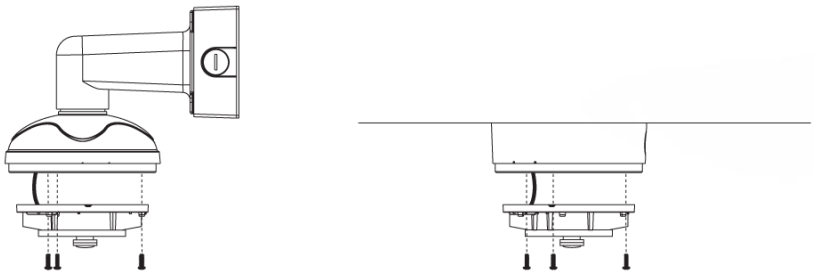


NOTE: Do not remove tether. Camera damage may occur.

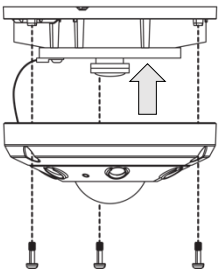
5. Put the desiccant packet in the suggested position.



6. Connect cables from the unit to the cables from the cap/mount assembly.
7. Screw the camera to the adapter/cap/mount assembly. The arrow on the camera points in the direction of the top of the video image.



8. Replace the top cover and secure it tightly using the supplied tool.

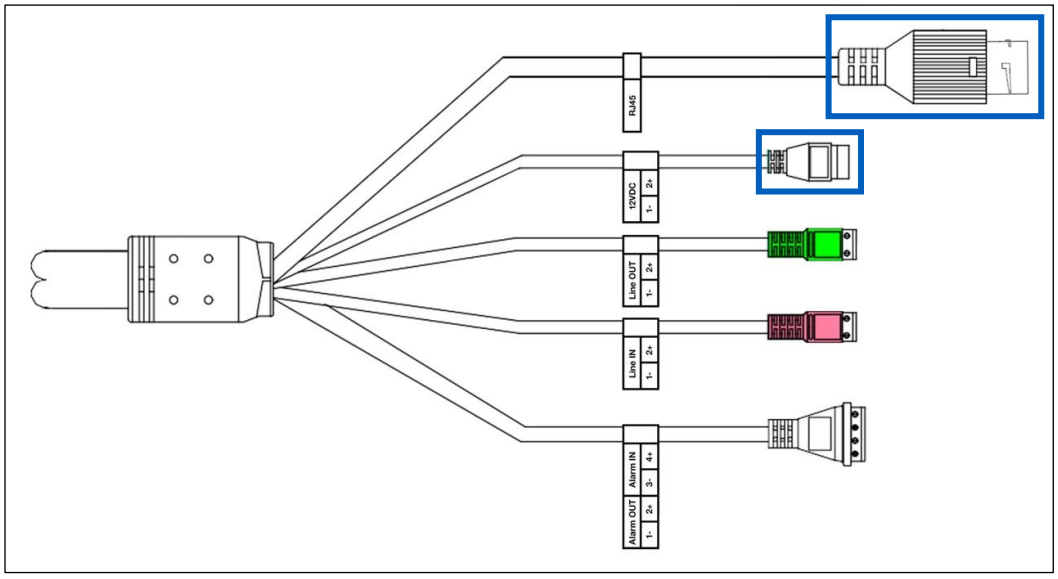


Camera Power Up

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

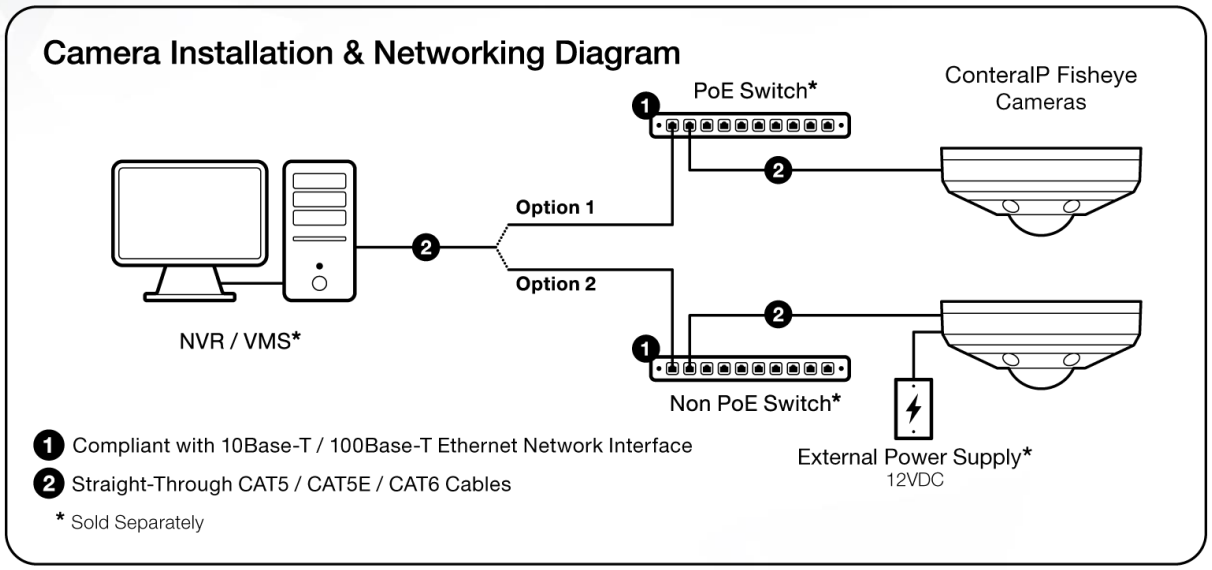
CAUTION! Make the connections inside a watertight compartment. Isolate unused power wires individually. After connections are made, ensure that the watertight compartment is tightly closed, and cables and conduits are properly sealed to prevent ingress of water.

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 (12VDC) to the power connector.



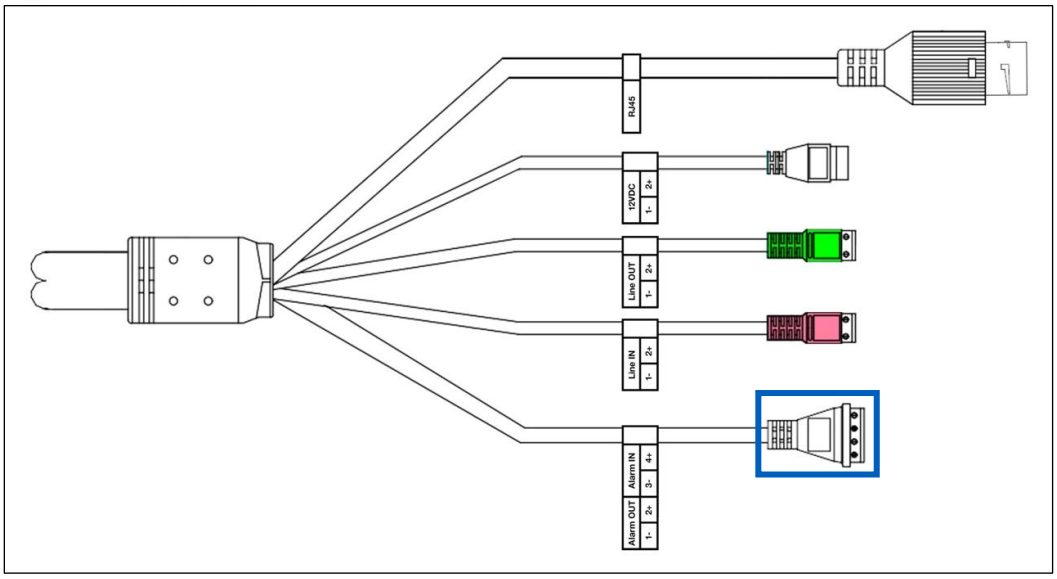
NOTE: This product is intended to be supplied by a Listed Power Adapter or DC power source, rated (1) 12VDC, 50/60Hz (Max. 15W); (2) 42.5-57VDC (Max. 15W) for PoE+ IEEE 802.3at, Class 4, Tma = 50°C, and the altitude of operation = 2000m. For assistance with purchasing the power source, please contact AV Costar for further information. Ensure the power cord connection of the power adapter at the socket-outlet provides an earthing connection.

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



LED	Status	Description
Green	Constant illumination	Normal operation
None	None	No connection

Alarm I/O Functions

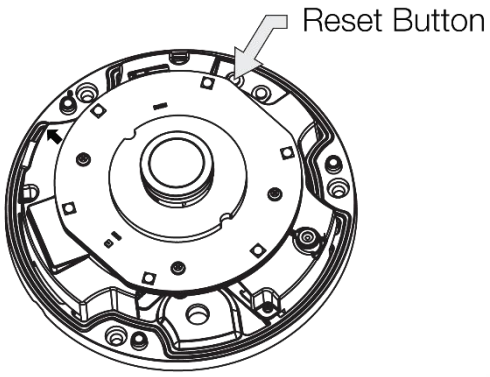


Connect the Alarm In (DI) connector to the alarm input sensor, and then connect the Alarm Out (DO) connector to the alarm output signal.
To avoid any damage, please follow the specification of the part as below:

Alarm In (Dry Contact)	**Alarm Out (Dry Contact)**	
V sense	V sense	I sense
3.5~6.3VDC	0~30VDC	50mA (max)

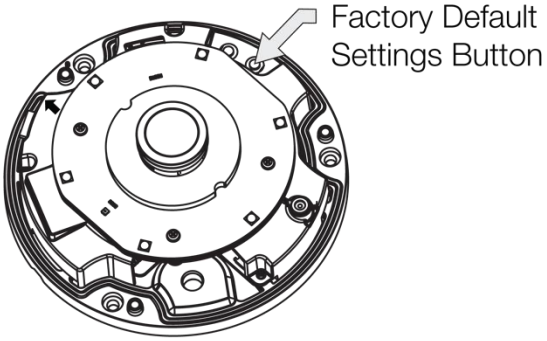
Restart the Camera

Press the Reset Button to restart the camera. Settings will not be changed.



Reset to Factory Default Settings

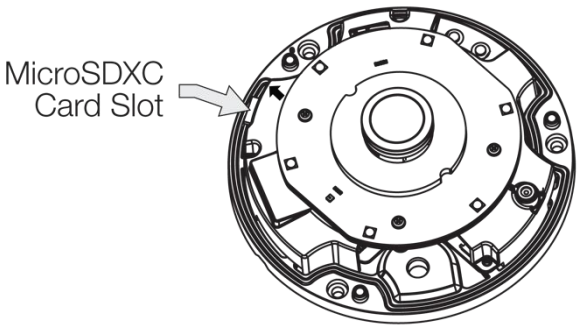
1. Press and hold the Factory Default Settings Button for 2 to 5 seconds, then release the button. This completely resets the camera to the factory default settings.



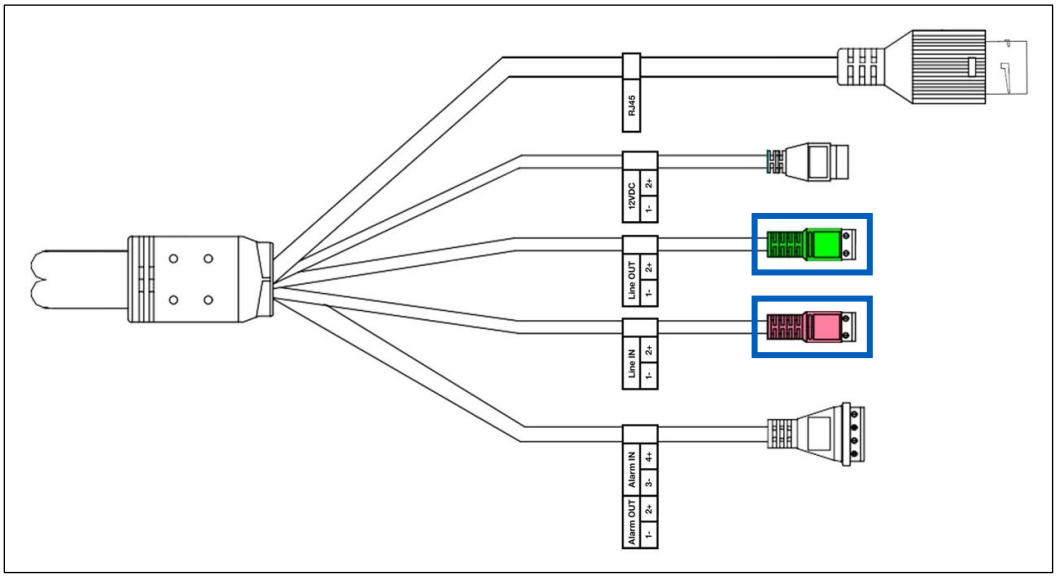
2. Also, the user can reset the camera to factory default or factory default except network settings via the camera web interface or the Costar Utility.

Audio/SD Card Info

- MicroSDXC Card Slot (Up to 1TB card capacity)



- Audio Connectors



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

Camera Discovery, Setup, and Configuration

AV Costar Utility is recommended for camera discovery and setup. Software can be found on the website of AV Costar http://www.arecontvision.com/softwares.php.

The AV Costar Utility can provide multiple discovery options including broadcast and multicast, check the status of a camera, change the camera settings, import and export camera settings via a .csv file, and update firmware and/or hardware from virtually anywhere with a network connection.

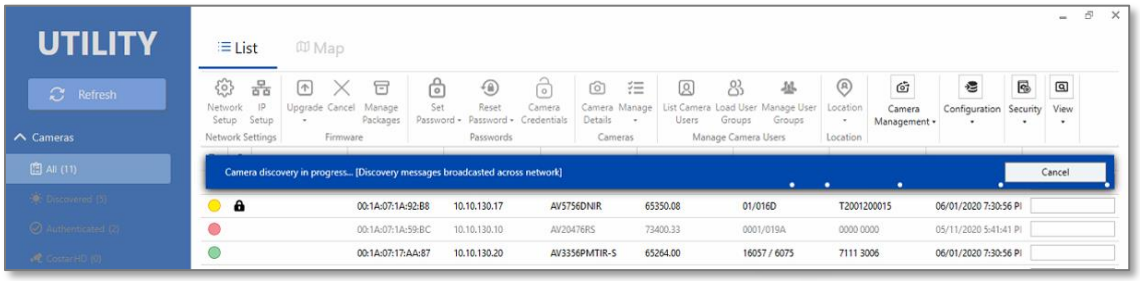
The AV Costar Utility tool is efficient and convenient for mass or single camera uploads whether used for large installations that require an update to multiple settings, or smaller installations where only one camera needs to be changed.

The AV Costar Utility version v3.1.2x+ tool is compatible with all AV Costar ConteraIP 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.

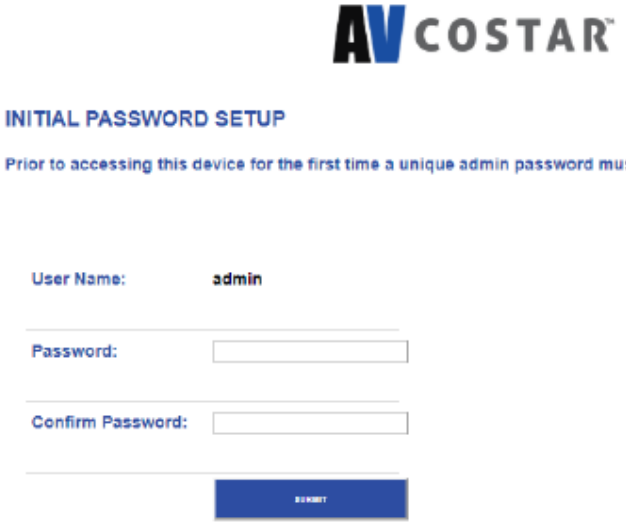
2. When the Costar Camera Utility is launched, it will automatically search the network for AV Costar and CostarHD cameras on the network and over a time interval. You can also manually search cameras by clicking the “Refresh” button.



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

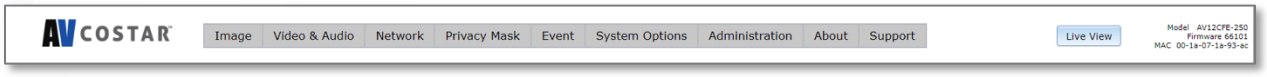
4. If there is no DHCP server present in the network, the camera will default to the following IP Address “192.168.1.168”.

NOTE: A password must be entered before the camera can be used. To choose a password, visit the camera’s webpage or use the configuration utility.



Prior to accessing this device for the first time a unique admin password must be created

Web Interface Navigation



The menu categories are located on the top of the web interface, and clicking on one of the buttons will show the settings for that category in the left column of the page. To the right of the configuration menu categories are the Live View camera display button and important camera information.

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

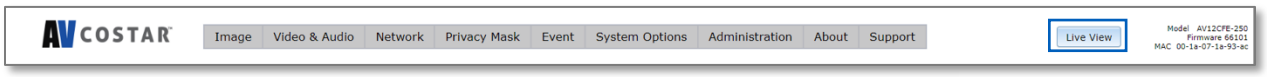
The following are the camera settings available on the top of the web interface:

- **Image**
  - Basic Image Settings
    - Mirror Image
    - WDR (Wide Dynamic Range) Mode
    - Lighting Compensation Frequency
    - Day/Night Mode
    - IR Control
  - OSD (On-Screen Display)
  - ROI (Regions of Interest)
- **Video & Audio**
  - Video
    - Main Stream Configuration
    - Sub Stream Configuration
    - Third Stream Configuration
  - Audio
- **Network**
  - Basic Network Settings
    - 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

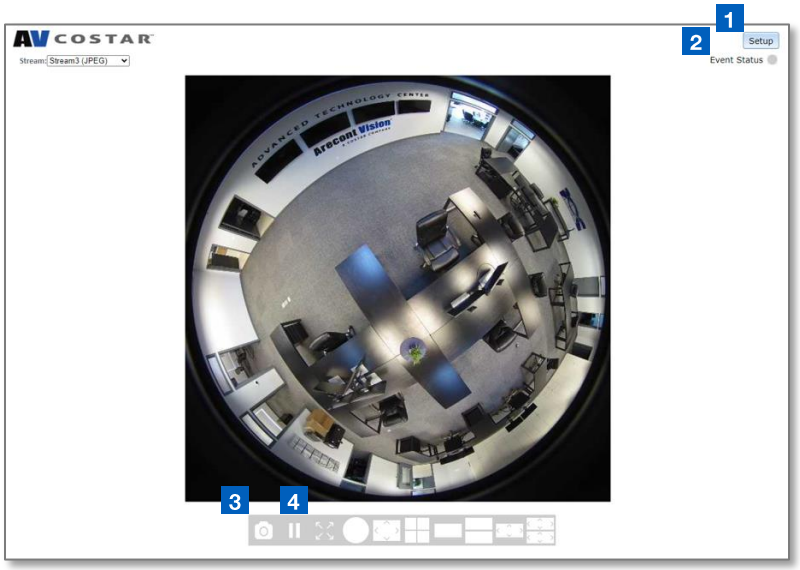
- Tamper Detection
- FTP Upload Handler
- SMTP (Simple Mail Transfer Protocol) Notification
- Network Storage
- SD Card

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

Live View

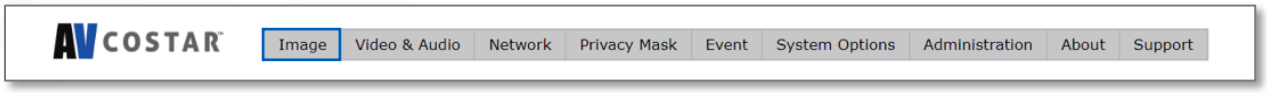


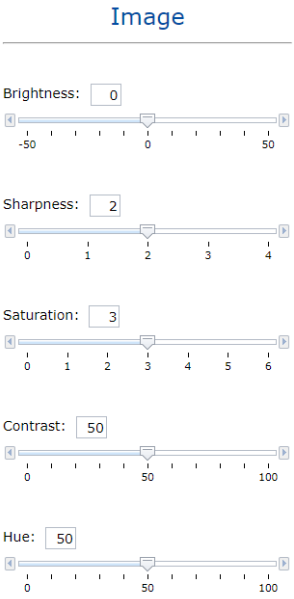
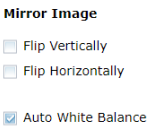
Live View allows a user to view the current camera image, shows event status, and allows for a SnapShot to be taken. Live View shows the camera's third stream.

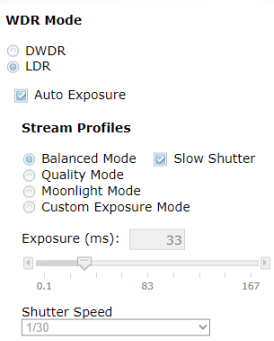


1. Setup button: Returns to the main camera interface.
2. Event Status: Flashes blue when an event is triggered.
3. SnapShot: Takes a still frame image of the camera stream and displays it in a pop-up window.
4. Additional Camera Controls: Coming in a future firmware update.

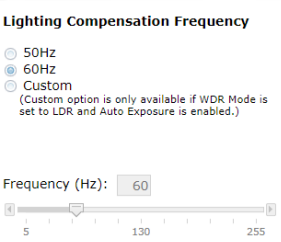
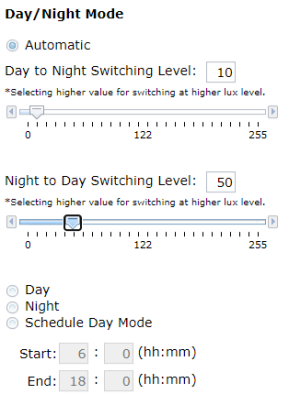
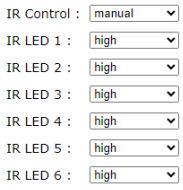
Image

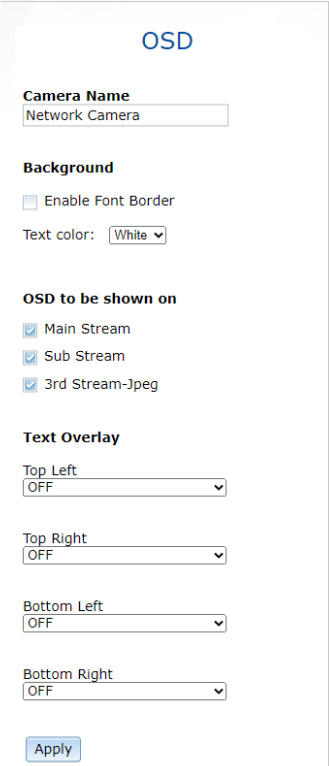


Menu	Feature	Description
	Brightness	Controls the overall brightness of the camera image and works in conjunction with the exposure controls to maintain the image brightness.
	Sharpness	Controls sharpness and edge definition of the image. Setting this to lower levels may make overall image appear a bit 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.
	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 is rendered a neutral white in the image.

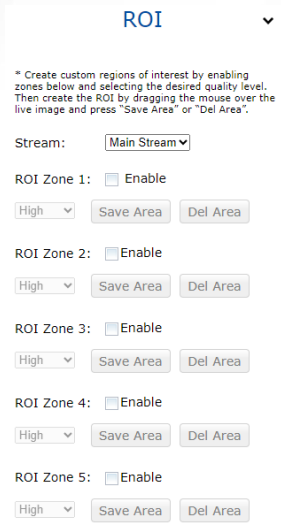


DWDR	Digital WDR (DWDR) enhances dark areas by adjusting the gamma value.
LDR	Will not combine long and short exposures into one frame, resulting in better low light performance.
Auto Exposure	Automatically adjusts illumination and exposure values.
Stream Profiles: Balance Mode -Slow Shutter, Quality Mode, Moonlight Mode, Custom Exposure 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: 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 Mode: Enables manual setting of exposure time between 0.1 and 167ms. 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.

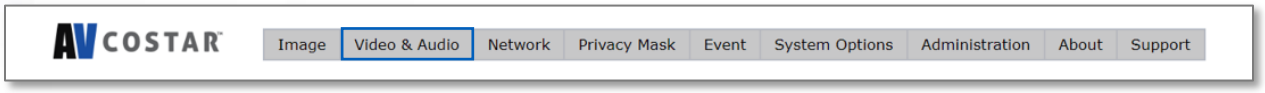
	Lighting Compensation Frequency: 50hz, 60hz, Custom	Prevents flicker caused by the power line frequency of lighting. Choose 50Hz for Europe and China and 60Hz for US and Japan. This parameter will have no effect when the dominate light is sunlight. A user can select Custom and manually set a frequency between 5Hz and 255Hz.
	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 and 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: Off, Auto, Manual	Off: Disables IR. Auto: Triggers all IR LEDs at high intensity when the camera switches to night mode. Manual: Manually adjusts the IR intensity or turns off each LED individually. The options are high, mid, low, or off. IR LEDs are triggered when the camera switches to night mode.



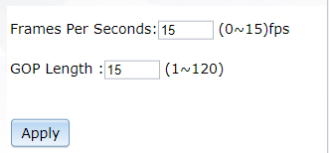
Camera Name	Specifies a name for the camera. The maximum length is 32 characters.
Background Enable Font Border	Enables a border for the text overlay.
Text Color	Options are Black, White, Green, or Yellow.
OSD to be shown on Main Stream, Sub Stream, 3rd Stream-Jpeg	Allows the On Screen Display to be enabled/disabled on a stream-by-stream basis.
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. Off: Displays no 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 (Region of Interest)	ROI (Region 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.

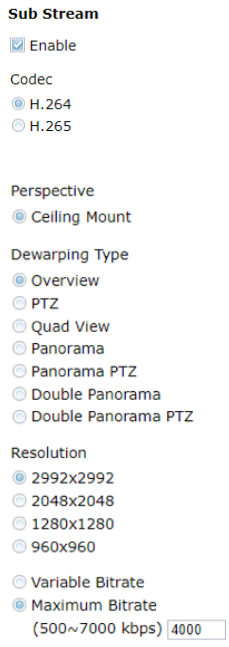
Video & Audio



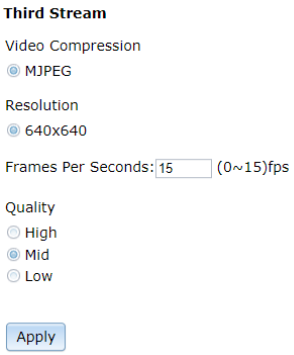
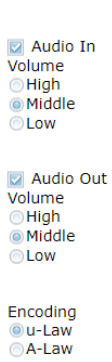
Menu	Feature	Description
	Codec H.265, H.264	Use the radio buttons to select the desired compression codec.
	Perspective Ceiling Mount, Wall Mount	Use the radio buttons to select the mounting location. Dewarping Types available will change based on the selection. Dewarped video will be different for each Perspective even with the same type selected.
	Dewarping Type	Use the radio buttons to select the dewarping type for the stream. Options vary based on the Perspective chosen. Ceiling Mount Options: Overview, PTZ, Quad View, Panorama, Panorama PTZ, Double Panorama, Double Panorama PTZ Wall Mount Options: Overview, PTZ, Panorama, Double Panorama
	Resolution	Use the radio buttons to select the desired resolution. Options vary based on the Perspective and Dewarping Type chosen.
	Variable Bitrate	Maintains the Quality setting configured. There may be variation in the bitrate 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 500 to 11,000 kbps.



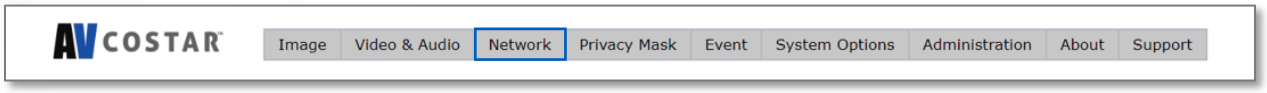
H.264 Quality	H.264 image quality setting for variable bit rate control. Setting a lower value result in higher image quality, higher value results in lower image quality.
Frames Per Seconds	Frame rate adjustment for the camera video stream.
GOP Length	Specifies how many frames between two consecutive I-Frames.

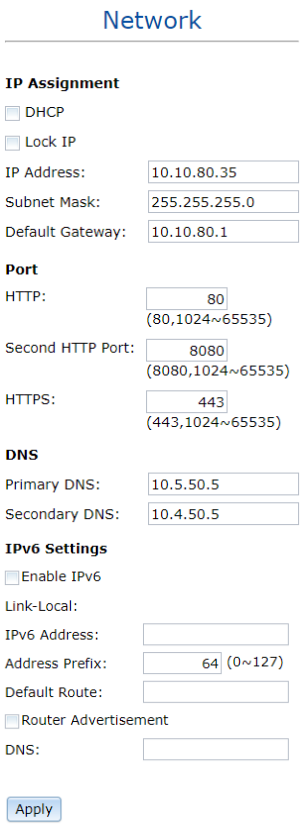


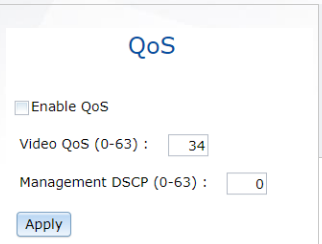
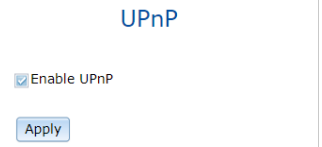
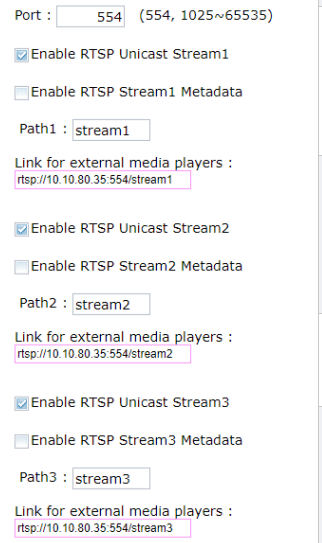
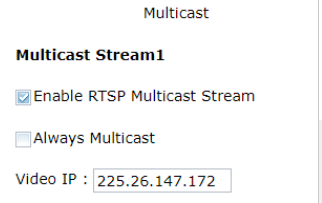
Enable	Enables or disables the sub stream.
Codec H.265, H.264	Use the radio buttons to select the desired compression codec.
Perspective Ceiling Mount, Wall Mount	The Perspective setting for the sub stream is automatically set to match the main stream.
Dewarping Type	Use the radio buttons to select the dewarping type for the stream. Options vary based on the Perspective chosen. Ceiling Mount Options: Overview, PTZ, Quad View, Panorama, Panorama PTZ, Double Panorama, Double Panorama PTZ Wall Mount Options: Overview, PTZ, Panorama, Double Panorama
Resolution	Use the radio buttons to select the desired resolution. Options vary based on the Perspective and Dewarping Type chosen.
Variable Bitrate	Maintains the Quality setting configured. There may be variation in the bitrate output from the camera using this mode.

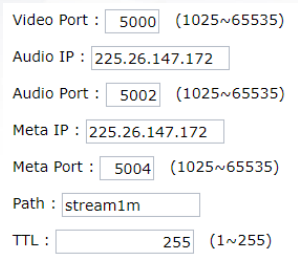
	Maximum Bitrate	Maintains variable bit rate control and maintains the bitrate under the rate limit you set to. It can be set from 500 to 11,000 kbps.
	H.264 Quality	H.264 image quality setting for variable bit rate control. Setting a lower value result in higher image quality, higher value results in lower image quality.
	Frames Per Seconds	Frame rate adjustment for the camera video stream.
	GOP Length	Specifies how many frames between two consecutive I-Frames.
	Video Compression: MPJEG	The third stream is designed for the live view in the 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 640 x 640.
	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 Audio Out: Volume Encoding	Audio In/Audio Out: Enables the Audio In/ Audio Out features on the camera. Volume: Specifies the volume level of Audio In/Audio Out: High, Middle, or Low. Encoding: Specifies the encoding algorithm: u-Law or A-Law.

Network



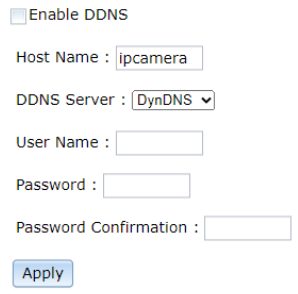
Menu	Feature	Description
	IP Assignment: DHCP, Lock IP, IP Address, Subnet Mask, Default Gateway	DHCP: If checked, the camera will attempt to obtain its IP address from the DHCP server available on the network. Lock IP: Prevents the changing of the IP address when set manually. IP Address: Sets the current 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	Configures the multicast address and the port number to stream video.



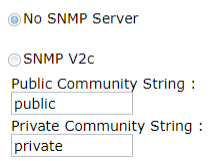
Video Port	
Audio IP Audio Port	Configures the multicast address and the port number to stream audio. *This function is supported depends on models.
Meta IP Meta Port	Configures the multicast address and the port number to the HTML meta.
Path	Configures the URL address of the video stream.
TTL	Configures the time-to-live threshold of the multicast datagram before it is discarded by the router.

DDNS

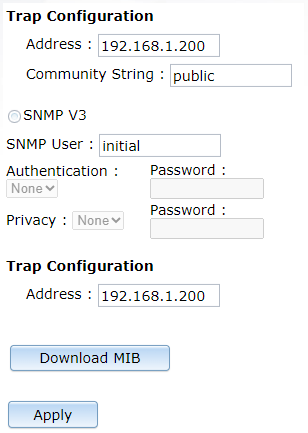


Enable DDNS	Enables DDNS service
Host Name	Specifies the Host name registered with the DDNS server
DDNS Sever	Selects one of the pubic DDNS severs from the dropdown menu. Options are DynDNS, NO-IP, and Twi-DNS.
User Name	Specifies the user name of the DDNS account.
Password	Specifies the password of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

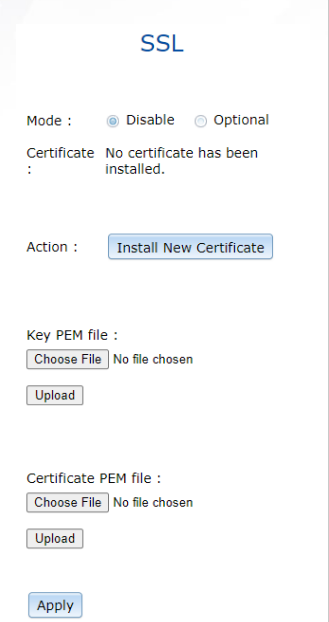
SNMP



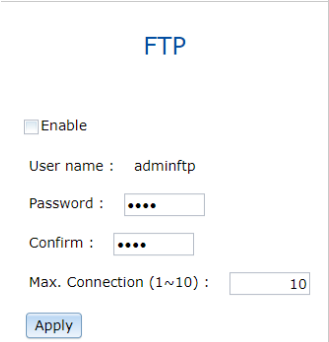
No SNMP Sever	Disables SNMP function
SNMP v2c	Enables SNMP version 2 support
Public Community String Private Community String	Specifies the public and private names of the community to access to SNMP information.



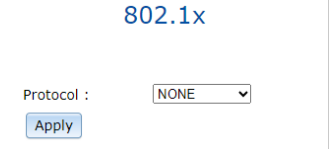
Trap Configuration: Address, Community String	Specifies the destination IP address to send SNMP trap messages.
SNMP v3	Enables SNMP version 3 support.
SNMP User	Specifies the user name of the SNMP v3.
Authentication Password	Authentication: Selects one of the Authentication modes from the dropdown menu. Options are None, MD5, and SHA. Password: Specifies the Password for the Authentication.
Privacy Password	Privacy: Selects one of the encryption methods for SNMP v3 from the dropdown menu. Options are DES and AES. Password: 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.



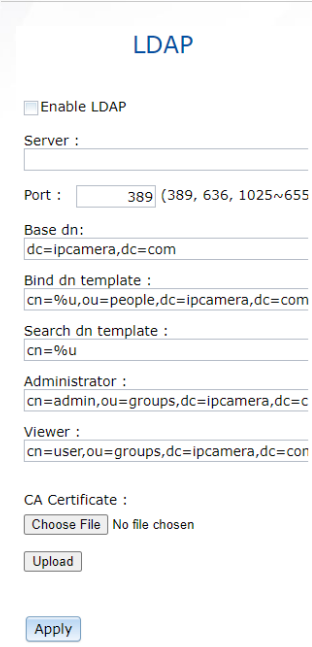
Mode: Disable, Optional	Disable: Support for HTTP only. Optional: Support for HTTP and HTTPs both.
Certificate	Shows the current status of the Certificate
Install New Certificate Key PEM file, Certificate PEM file	1. Locate Key PEM file and Certificate PEM file using the Choose File button and click the Upload button. 2. Click the Install New Certificate button to install the Certificate files.



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.

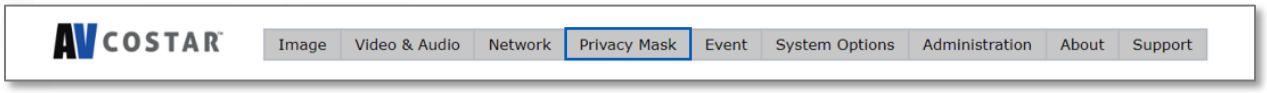


Protocol	The default is None to disable 802.1 x functions. You can select one of the protocol options from the dropdown menu. The supported protocols are EAP-MD5, EAP-TLS, EAP-TTLS or EAP-PEAP. After the protocol has been selected, manually configures the username, password and other required information.



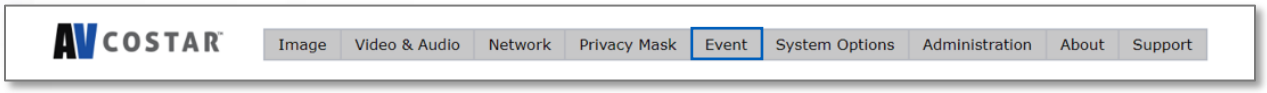
Enable LDAP	Enables LDAP service.
Server	Specifies the IP address of the LDAP server.
Port	Specifies the port address of the LDAP server. The default LDAP port is 389. For LDAPS set the port to 636 (default for LDAPS). A custom port from 1025 to 65535 can also be set.
Base dn	Specifies the starting point 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.
CA Certificate Choose File, Upload	For LDAPS, use the Choose File button to select a CA Certificate file and the Upload button to upload it to the camera.

Privacy Mask

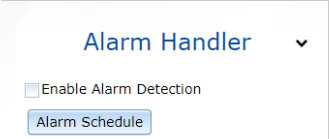
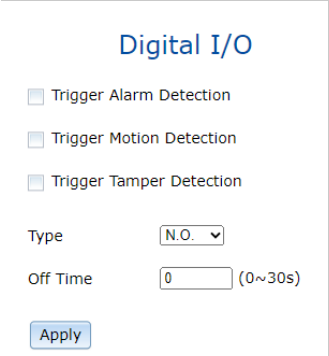


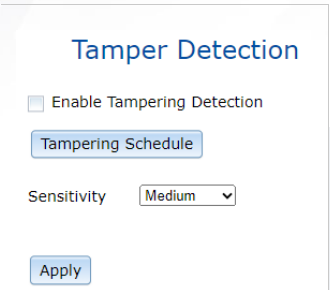
Menu	Feature	Description
	Enable Privacy Mask	Enable up to 5 privacy mask areas by clicking the check boxes. Create a privacy mask by clicking the Set Area button then click and drag on the camera image to select the mask area shown by a yellow rectangle. The mask can be repositioned by clicking and dragging inside the mask area. When the desired mask is in place, click the Set Area button to finalize the mask. The mask will then turn black and obscure the area. To delete a mask, click the Del Area button or click the checkbox for the mask to be deleted.

Event

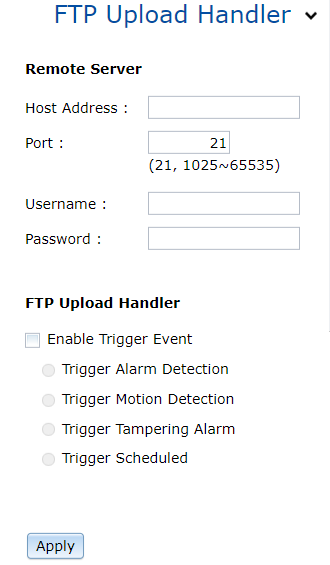


Menu	Feature	Description
	Enable	Turns on and off on-camera motion detection
	Sensitivity	Sets the Sensitivity of the motion detection
	Zone [1-5] Set Area, Del Area	Enables and sets the area of motion detection zones. Click the Set Area button for the zone to be configured. Click and drag on the live camera view to select the area. A yellow rectangle will show the area selected. Click Set Area again to enable selected zone. The area will change in color to red. To remove a zone, click the Del Area button for the zone to be removed. This cannot be undone.
	Motion Schedule	Configure the motion 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 motion schedule is enabled, while a light grey color indicates that the motion 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 enable the entire day. D: Click “D” to clear the entire day.

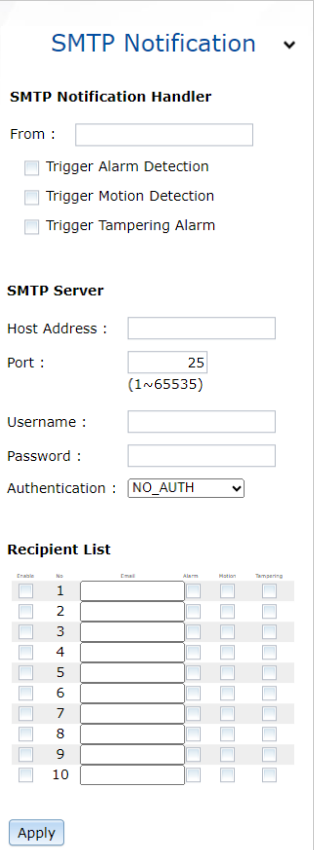
	Enable Alarm Detection	Enables Alarm Detection (Alarm In) function.
	Alarm Schedule	Configures the alarm schedule by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is 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 enable the entire day. D: Click “D” to clear the entire day.
	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



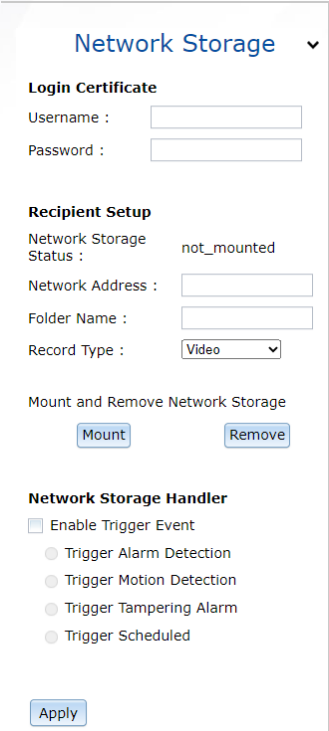
Enable Tampering Detection	Enables Tampering Detection function.
Tampering Schedule	Configures the alarm schedule by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is 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 enable the entire day. D: Click "D" to clear the entire day.
Sensitivity	Configures the sensitivity level of Tampering Detection: High, Medium, and Low.



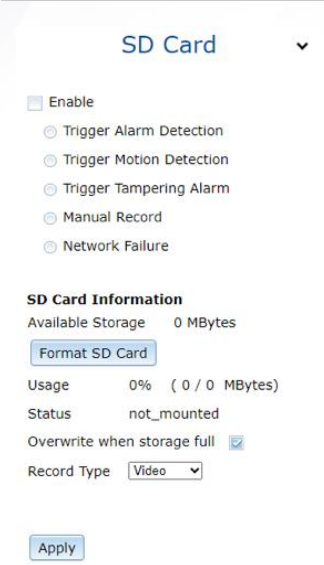
Remote Server Host Address, Port, Username, Password	Host Address: Specifies the host name or IP address of the FTP server. Port: Specifies the port number of the FTP server. Username: Specifies the login username of the FTP server. Password: Specifies the login password of the FTP server.
FTP Upload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



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.

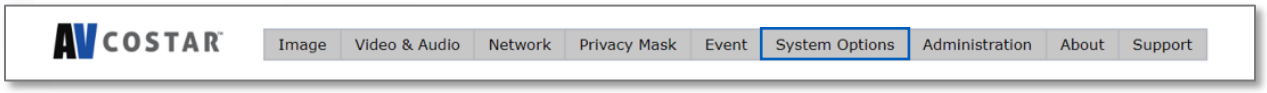


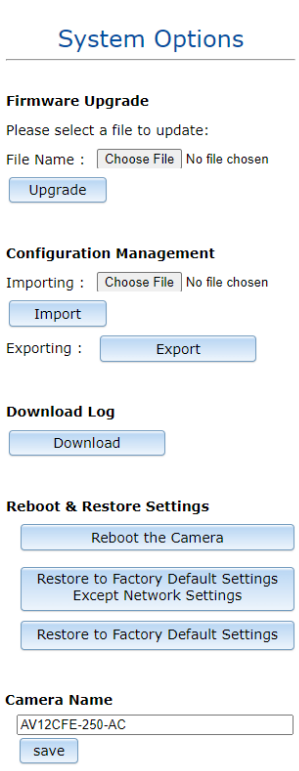
Login Certificate	Specifies the login Username and Password for the network storage server.
Recipient Setup Network Storage Status, Network Address, Folder Name, Record Type, Mount and Remove Network Storage	Network Storage Status: Displays the current status of the connection with the network storage 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.

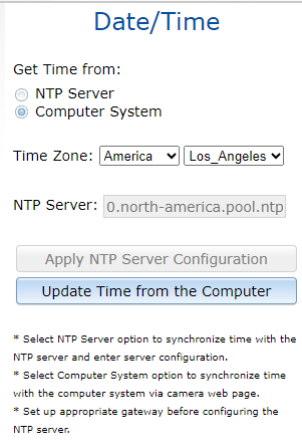


Enable	Enables and selects a desired trigger source. The options are Trigger Alarm Detection*, Trigger Motion Detection, Trigger Tampering Alarm, and Manual Record.
SD Card Information Available Storage, Format SD Card, Usage, Status, Overwrite when storage full, Record Type	Available Storage: Displays the available storage of the SD card if it is installed. Format SD Card: Erases all the data stored on the SD 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: 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

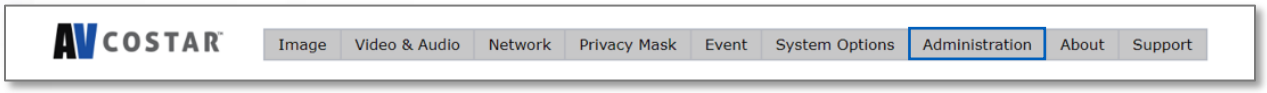


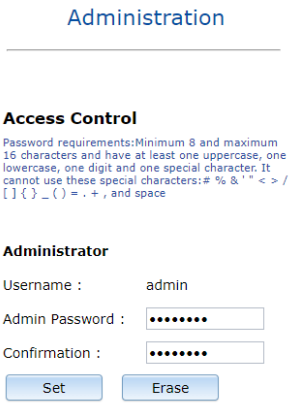
Menu	Feature	Description
	Firmware Upgrade	Clicks **Browse** to choose the firmware upgrade file, and then clicks **Upgrade**.
	Configuration Management Importing, Exporting	Records all the configuration information of the camera except network settings. **Import:** Imports a Configuration file from other cameras. **Export:** Exports a Configuration file from this camera.
	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 the AV Costar 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.
	Camera Name	Specifies a name for the camera. The maximum length is 32 characters.

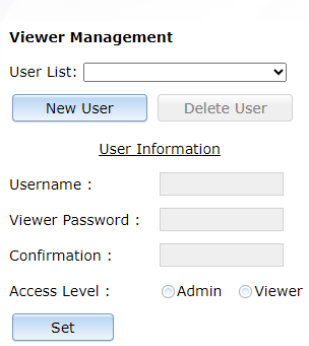


Get Time from NTP Server, Computer System	NTP Server: Synchronizes the date/time information with defined NTP server. After setting up the desired Time zone and NTP Server, clicks Apply NTP Server Configuration. **NOTE:** Please make sure set up appropriate gateway before configuring the NTP server. 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 # % & ' " < > / [ ] { } _ ( ) = . + , and space character.
	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 Costar Camera Utility using the key file. Please contact AV Costar technical support to obtain the key file required to perform this function. The camera can also be reset to Factory Default 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.

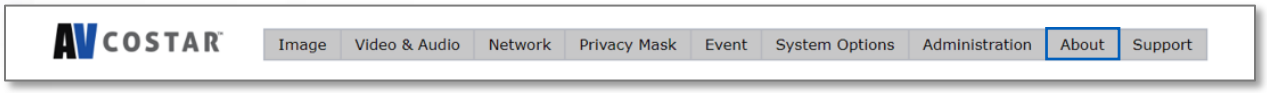
Viewer Password: Specifies the password for the viewer.

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

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

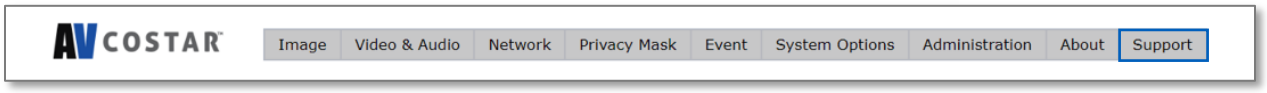
Set/ Erase: Save or removes the password.

About



Menu	Feature	Description
About Model Name : AV12CFE-250 Firmware : 66101 Serial Number : TSCD11004414 MAC Address : 00-1a-07-1a-93-ac	About	Displays camera information: 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 about the camera.

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