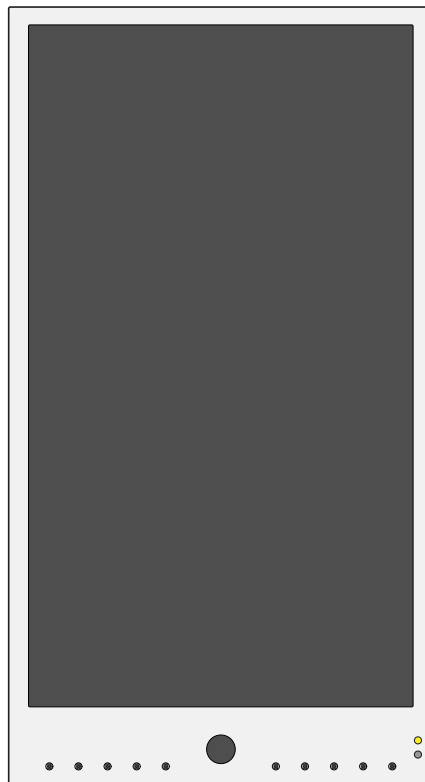


clintonelectronics

CE-M21PE User Manual

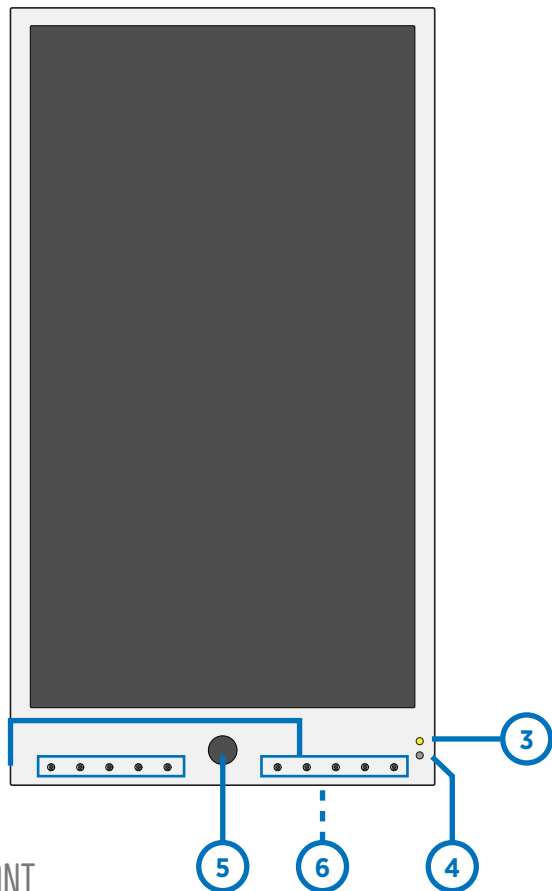
For PVMs with CE-PVM2MPF camera



Based on camera firmware version: 90100.1.0280.100

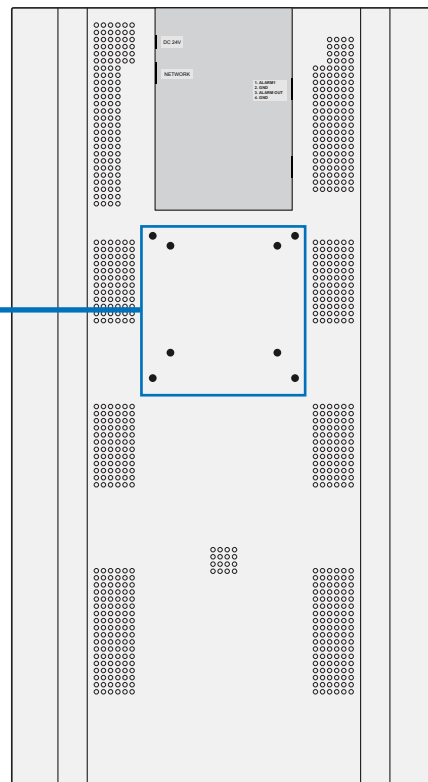
Clinton reserves the right, without notification, to make changes in product design & specification.

Hardware Overview: CE-M21PE



FRONT

1. LCD Screen
2. RGB LEDs
3. LED
4. IR Remote Control Sensor
5. Camera
6. Micro SD Card Access Cover

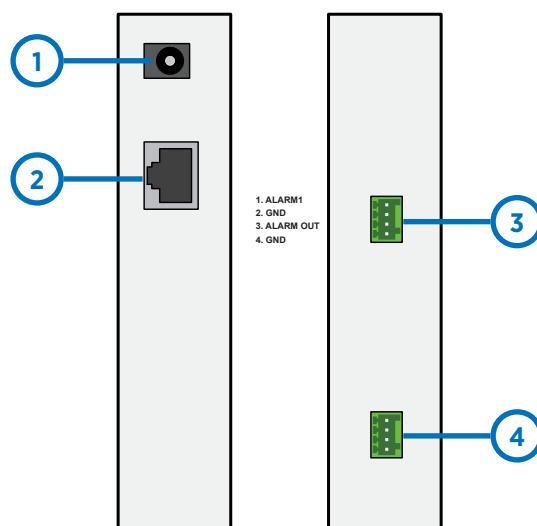


BACK

1. VESA Mounting Holes
2. Recessed Connections (secured behind cover plate)
*see below for connection details

Connections (behind cover plate)

1. DC24V Power Input
2. Network Port
3. Alarm I/O: Connect to Alarm contact (+/-) from external device to trigger messages and/or LEDs. Alarm Output is triggered from camera motion detection.
4. Firmware Update Connection, no user function.



Hardware Overview: Remote Control

Remote Controls

SOURCE: No function

POWER: Turns LCD Screen ON/OFF (does not turn off camera)

SWAP: No function

PIP: No function

MUTE: Turns Audio ON/OFF

MENU: Push once to display OSD Menu

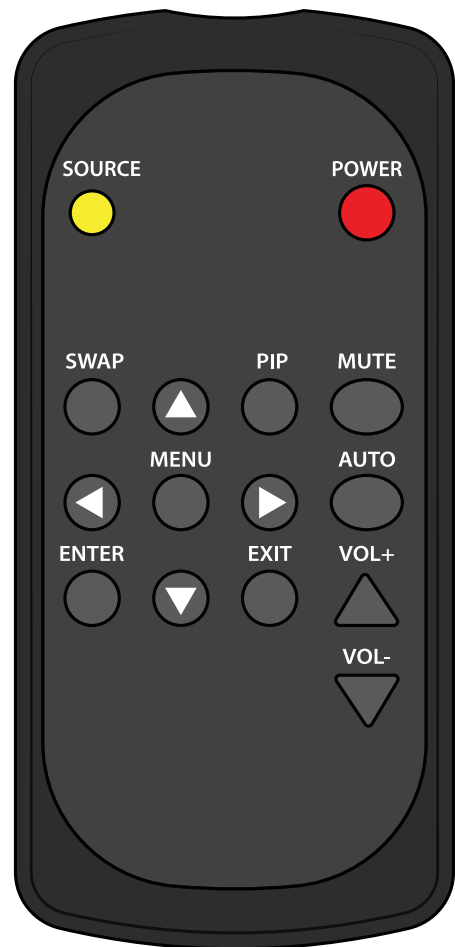
SELECTION ARROWS: Navigate through OSD menu

AUTO: No function

ENTER: Select a highlighted menu item to open submenu

EXIT: When in a selection, press to exit out from that menu item

VOL+ / VOL - : Increase/Decrease audio chime



Basic Setup Guide

⚠ 24VDC POWER SUPPLY REQUIRED, SOLD SEPARATELY ⚠

1 Remove Cover Plate and Install PVM:

Remove the cover plate on the back-side of the PVM and set aside. Install the PVM to desired VESA mounting bracket following instructions supplied with the mounting bracket. **Mounting Bracket Not Included, Sold Separately.*

2 Connect DC24V Power:

Connect DC24V power to PVM (using the supplied pigtail adapter cable). It is recommended that the power supply not be plugged into the main power source during this step **Power Supply Not Included, Sold Separately.*

3 Connect Network Cable:

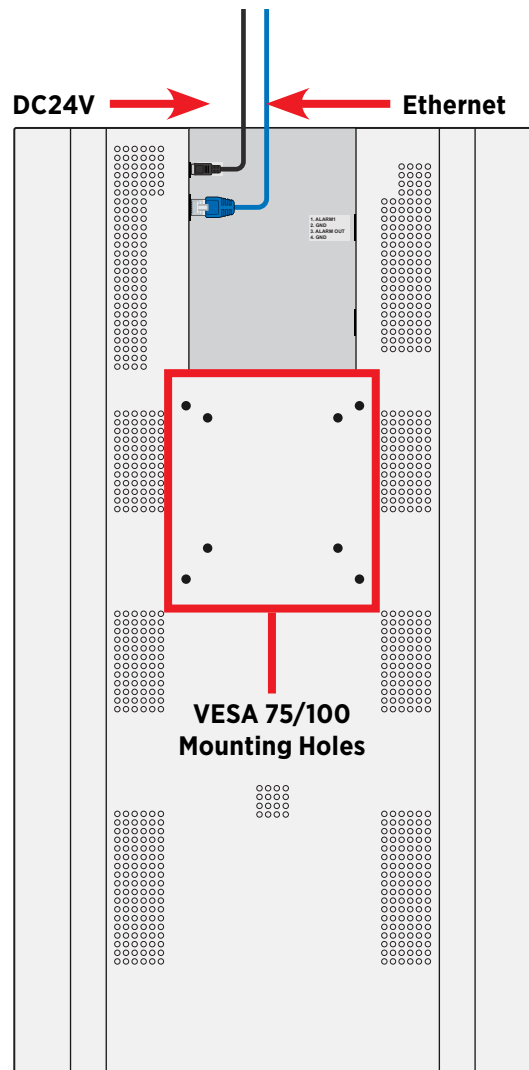
Connect an ethernet cable to the network port on the PVM. To view the IP camera on the network follow the setup instructions found later in this manual. **This device does not support WiFi.*

4 Turn Power ON:

After making the power and network connections, plug the power supply into a wall outlet. Connecting the DC24V pigtail into the PVM while plugged into the main power source can cause sparking.

5 Camera Boot-Up:

Colored bars will display on the screen while the IP camera is booting up. These bars will be on the screen for approximately 30-40 seconds. The live camera image will display on the screen after the camera has successfully booted up.



- **This is not a PoE device!** Power for this device must come from 24 Volt DC power source.
- This device does not support WiFi. Network connection must be made via Cat5e/Cat6 network cable.
- Face Detection boxes are OFF by default. This is a camera-level setting that must be enabled after logging into the camera.

PVM Features

This model PVM can be configured to display different messages over the camera image and/or have different LED options based on event triggers such as Motion Detection or an Alarm Input. **See pages 7-9 for setup.**

Camera Mode:

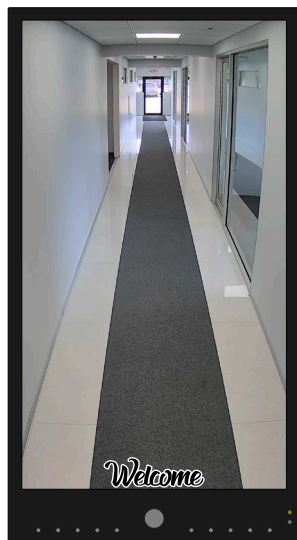
This is the normal view mode when there are no active motion or alarm triggers. If desired, enter the submenu to select a message overlay and/or LED options.

Motion Trigger:

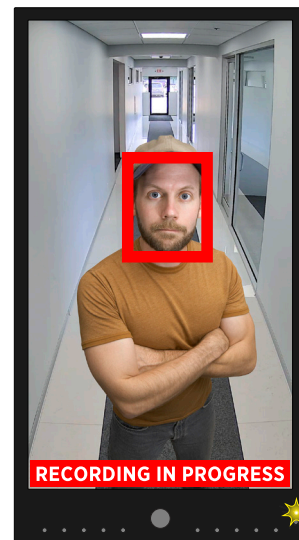
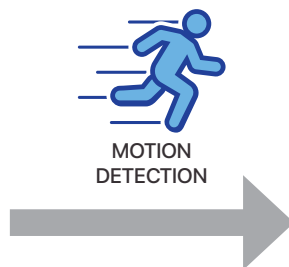
When triggered by motion detection from the camera, the PVM can be setup to display a message on the screen and/or have flashing LEDs. Once the Motion Detection has ended, the PVM will return to the normal Camera Mode.

Alarm Trigger:

When triggered by an alarm from an external source, such as an EAS pedestal, the PVM can be setup to display a message on the screen and/or have flashing LEDs. Once the Alarm Trigger has ended, the PVM will return to the normal Camera Mode.

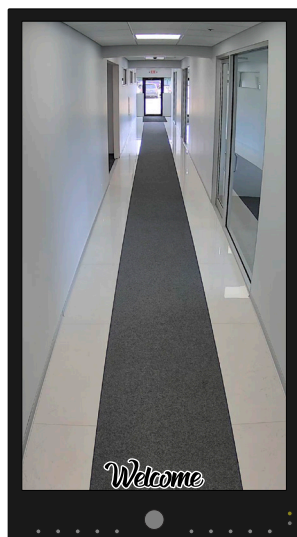


Camera Mode

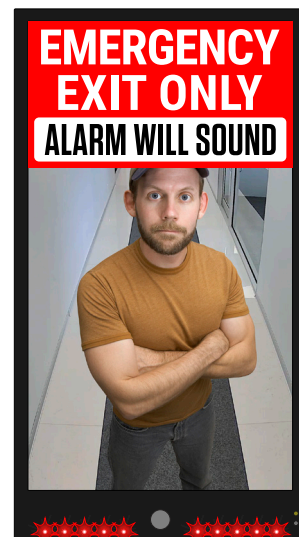


Motion Trigger*

**shown with Face Detection box.
See page 23 for setup information.*



Camera Mode

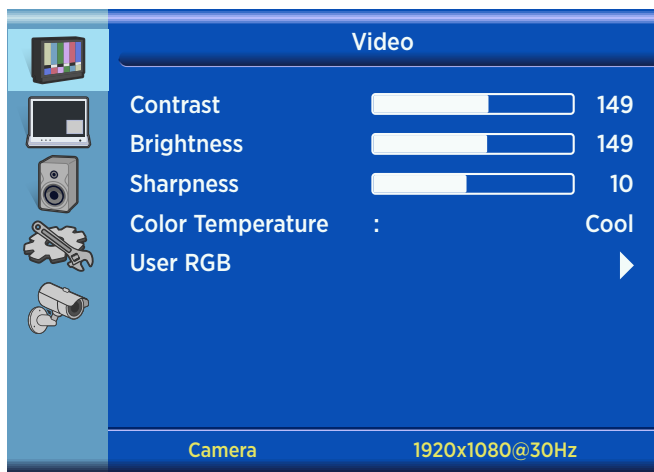


Alarm Trigger

OSD / On Screen Display

Clinton PVMs come preset with settings that are optimized for most applications. Adjust the picture as needed.

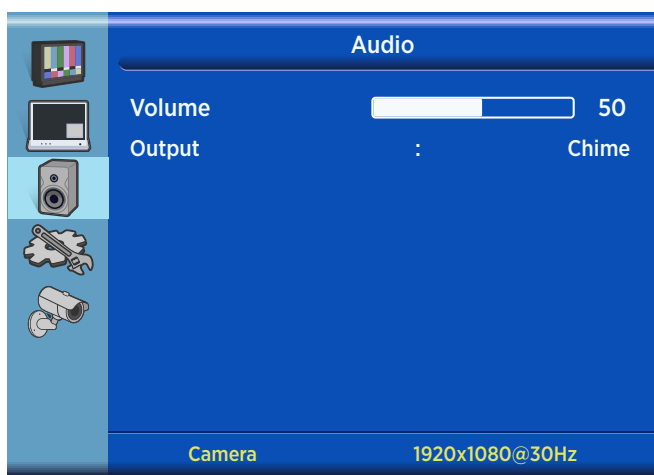
To access the OSD Menu, press the **MENU** button on the remote or using the controls on the backside of the PVM.



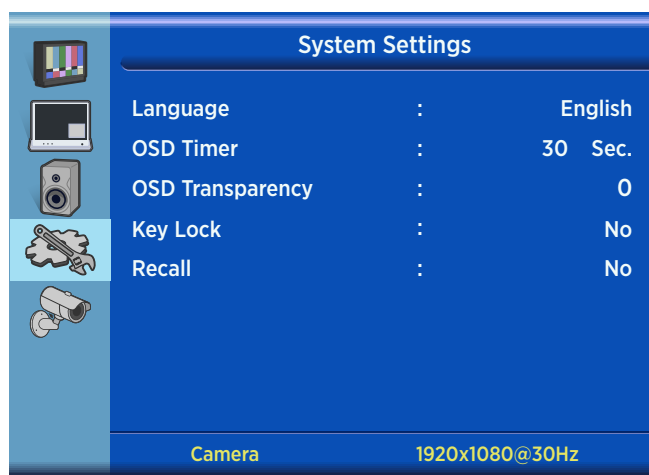
VIDEO



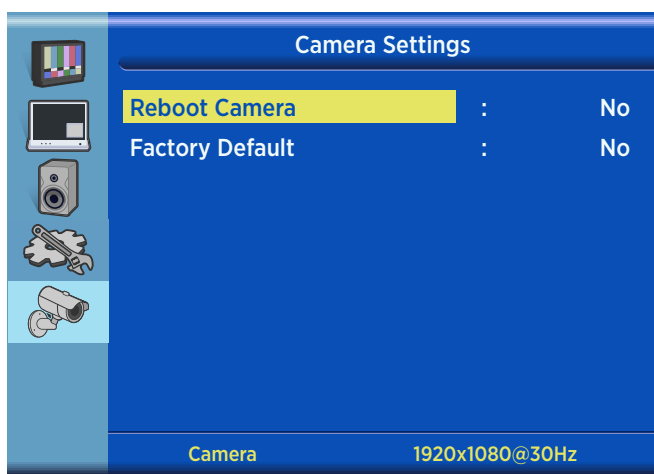
DISPLAY



AUDIO



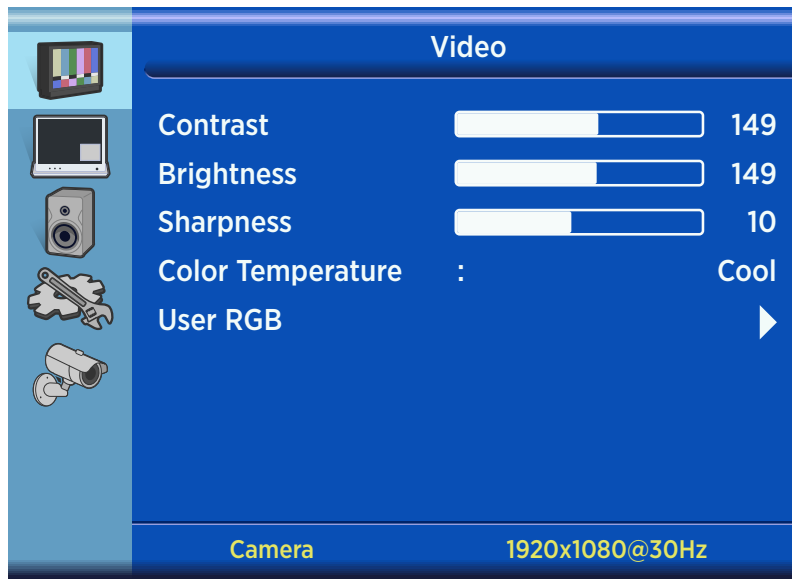
SYSTEM SETTINGS



CAMERA SETTINGS

- The OSD Menu will automatically timeout/disappear after 30 seconds of no activity. (time can be adjusted)

VIDEO



Contrast:

Adjust to set the white level so that the images are at their brightest without losing definition in the white portions of the image. Setting the too high will result in an over-saturated image.

Brightness:

Adjust to set the black level so that the images are at their brightest while the black portions are still black. Do not adjust too high where the black portions of the image become gray or the image will have a “washed out” appearance.

Sharpness:

Adjust lower if the image appears too grainy or pixelated. Increase if the image appears too soft.

Color Temp:

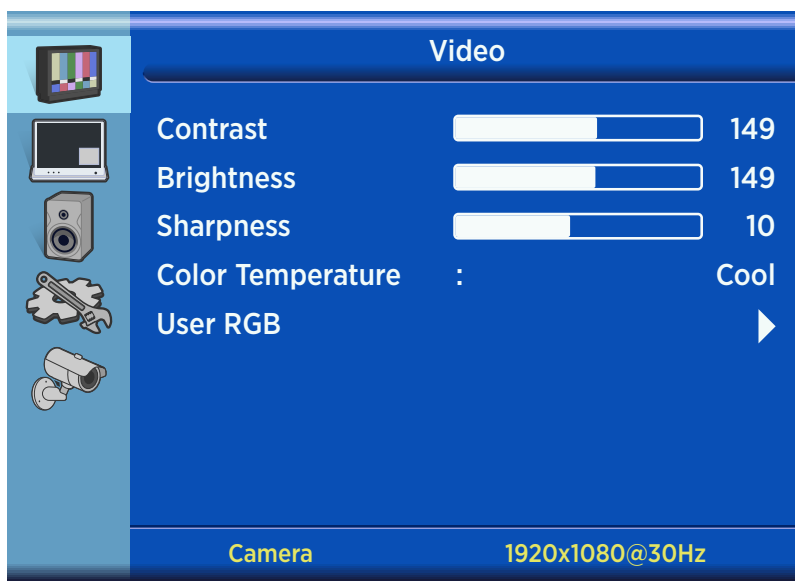
Adjust to achieve a realistic image of the items within the viewing area.

User RGB:

To adjust the RGB color values, the Color Temp mode must be set to USER. Adjust each value as needed.

- **These settings do not adjust the network image.** It's recommended to verify that the network image from the IP camera looks correct before adjusting these monitor settings. The camera's image settings can be adjusted after logging into the camera with a web browser.

DISPLAY



Aspect Ratio:

Select the display aspect ratio (Full Screen, Cinema Scope, 4:3, Pillar Box Expand, 1:1). Select Full Screen to correctly display the camera image without stretching or distortion.

Camera Mode: **see submenu section on next page*

This is the normal view mode when there are no active motion or alarm triggers. If desired, enter the submenu to select a message overlay and/or LED options.

Motion Trigger: **see submenu section on next page*

When triggered by motion detection from the camera, the PVM can be setup to display a message on the screen and/or have flashing LEDs. Enter the submenu to select a message overlay and/or LED options. Camera motion detection settings are only adjustable through the camera's web interface.

Alarm Trigger: **see submenu section on next page*

When triggered by an alarm from an external source, the PVM can be setup to display a message on the screen and/or have flashing LEDs. Enter the submenu to select a message overlay and/or LED options.

Motion Dwell Time:

Set to adjust how long the Motion Trigger content will be active after motion is detected.

Example: If set to 3 Seconds - the Motion Trigger content will remain active for 3 seconds after a period of not motion detection.

Alarm Dwell Time:

Set to adjust how long the Alarm Trigger content will be active after an alarm input.

Example: If set to 3 Seconds - the Alarm Trigger content will remain active for 3 seconds after the alarm input is canceled.

• **Motion Detection will not work if certain settings on the IP camera are disabled.**

The required settings are: (the camera is defaulted with settings enabled)

Camera / Motion Sensor (ON) / Area 1 Enabled

Event / Motion Event / Alarm Out Enabled

Event / Action / Operation: Alarm Out, Schedule: Always, Duration: 5 Sec or Transparent

DISPLAY / Camera Mode, Motion Trigger & Alarm Trigger Setup

The Display options for Camera Mode, Motion Trigger, and Alarm Trigger each have settings for banner messages and LED options that can be individually configured.



Message Type:

Select either a Large or Small Banner, see next page for banner sizes/examples.

Message:

Select the desired banner based on the size selected. For no banner message, leave set to OFF.

Location:

Set the position of the banner when shown on the screen, either at the bottom or the top.

Message Flash:

Turning Flash "ON" enables the banner message to flash on and off.

RGB LEDs:

Adjust the color of the RGB LEDs; Red / Green / Yellow / Blue / Magenta / Cyan / White / Color cycle / Off. Selecting Color cycle will cycle through all of the colors sequentially.

LED:

Set to ON to enable the single Yellow LED light.

LED Open Time: (controls both single LED and RGB LEDs simultaneously)

Adjust how long the LEDs are ON when flashing. If set to OFF the LEDs will not illuminate.

LED Close Time: (controls both single LED and RGB LEDs simultaneously)

Adjust how long the LEDs are OFF when flashing. Set the LED Close Time to OFF for the RGB LEDs to remain constantly illuminated, with no flashing.

- **Banner Messages do not effect the network image.** The banners are overlayed on the live image of the PVM. They are not embedded onto the output from the camera itself— and therefore will not be recorded.
- **Motion Trigger Message Update:** If you change the Motion banner message while motion is being detected, the new banner may update with a short delay. When the current motion event is over, the updated message should appear on subsequent motion detection. If it does not appear after a few seconds, try power cycling the PVM (turning it off and on).

DISPLAY / Banner Previews

Shown are some of the available banner options. Some options are available in multiple languages. Images noted with an * (asterisk) have a transparent background.

Large Banners:

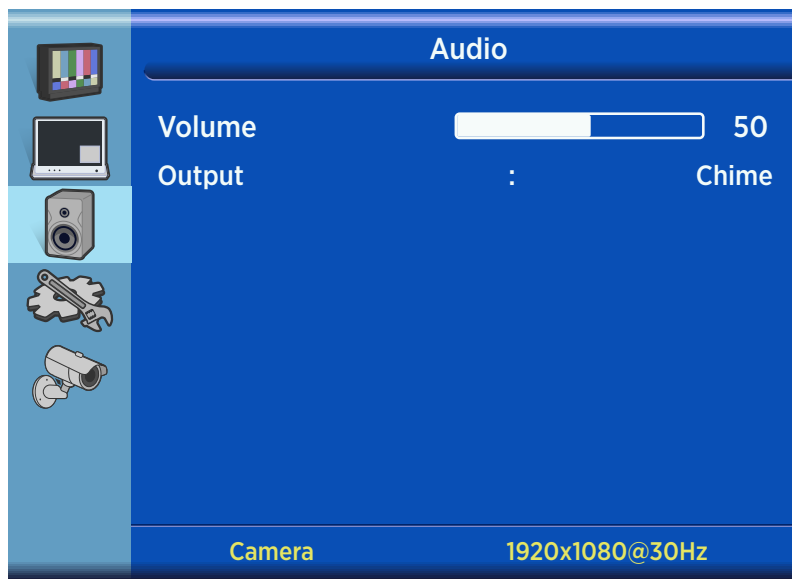


Small Banners:



**Banner options and availability subject to change without notice

AUDIO



Volume:

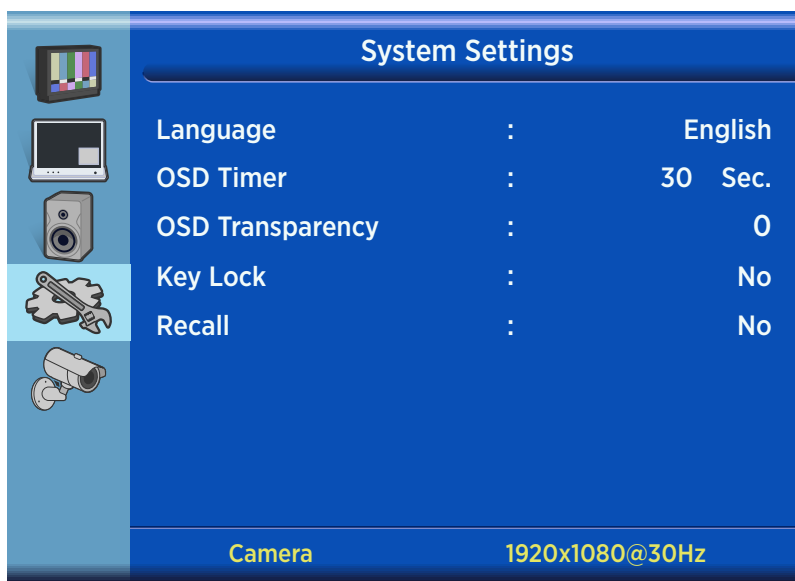
Raise or Lower the volume for the SD Card content or Chime*. Alternatively, you can use the volume buttons on the remote control to set volume level.

Output:

Choose the audio output from the PVM. This option will vary by model.

- **Chime***: Only audible “ding-dong” chime is played when motion is detected.

SYSTEM SETTINGS



Language:

Display the OSD menu in English or Spanish. Note: Changing the Language does not change the flashing on-screen message. This must be changed in the Message Control > Message setting.

OSD Timer:

Set the time in seconds before the OSD menu timeouts/disappears.

OSD Transparency:

Set the transparency level of the OSD menu.

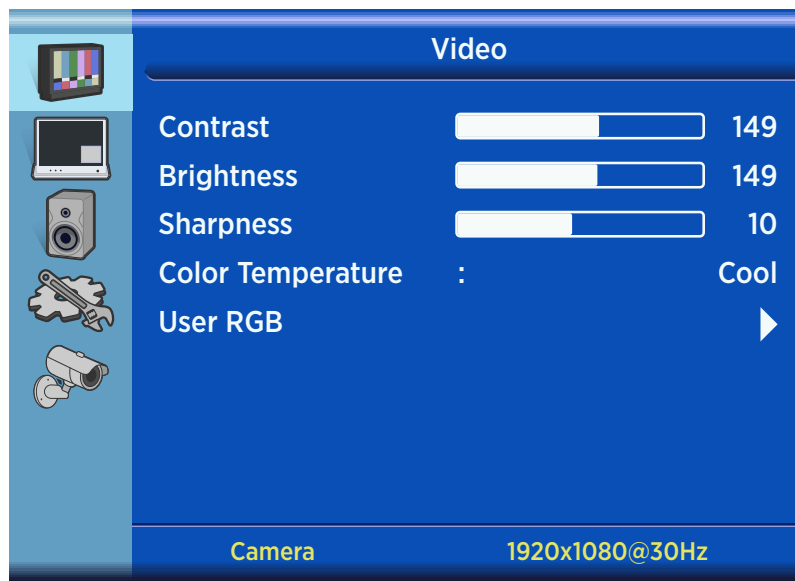
Key Lock:

Turning this ON will lock the OSD Menu buttons located on the back of the PVM, the remote control will still function. The remote control is required to disable Key Lock. This only applies to models with externally accessible OSD Menu buttons.

Recall:

Resets PVM settings to defaults (does not affect any camera settings).

CAMERA SETTINGS



Reboot Camera:

To reboot the camera, select Reboot and press the ENTER button on the remote. The reboot takes about 1 minute to complete.

Factory Default:

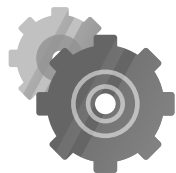
To reset all of the settings on the camera to the defaults, select Factory Default and press the ENTER button on the remote. After pressing ENTER the camera will perform the Factory Default process (it could take up to 15 seconds before Factory Default begins). During this time the camera will display the colored bars on the screen of the PVM, perform a reboot and will be inaccessible for about 1 minute.

The camera's IP Address should remain unchanged, unless the DHCP server re-assigned a new address. After the camera reboots, the password will need to be reconfigured, as well as any additional camera settings.

IP CAMERA / Discovery

1 Install iDevice Manager

To quickly discover Clinton IP cameras on the network, use the iDevice Manger application. This is a free application and can be found on the PVM's product page at www.clintonelectronics.com, via the Downloads tab.



iDevice
Manager

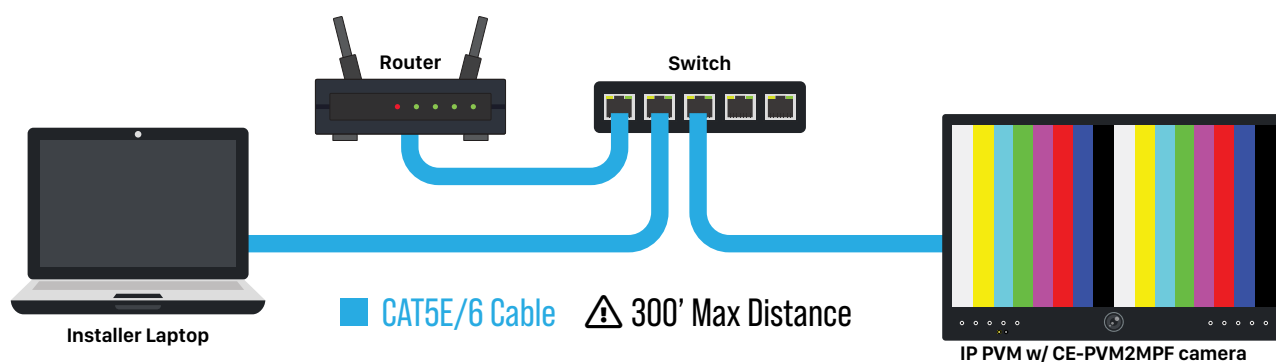
After downloading, follow the setup wizard to complete the installation.

If prompted by Windows Firewall during the installation or first time launching the application, select the desired network communication options. These settings can be re-configured via: *Control Panel > Update and Security > Windows Security > Firewall & Network Protection > Allow an app through firewall.*

Depending on your computers network settings, the network profile may need to be set to Private in order to discover devices on the network. If you are unsure, it's recommended to check with your IT/Network admin before adjusting settings on your computer.

2 Connect Laptop to Network with PVM

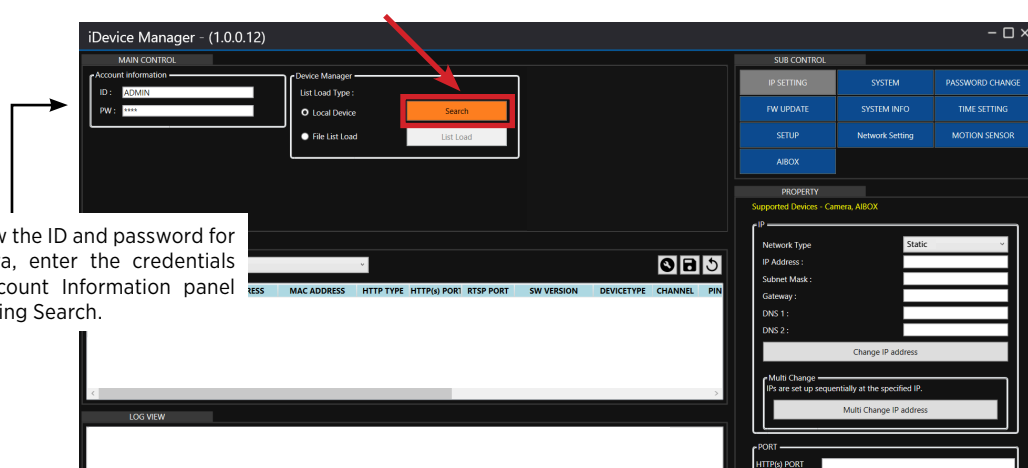
Using ethernet cable, connect Windows PC to PVM via DHCP enabled Server/Router.



NOTE: If the network does not support DHCP, the camera's default IP address is: **192.168.1.90**

3 Launch iDevice Manager

If no cameras are shown in the Device List, click the **Search** button to scan for available Clinton IP cameras and devices on the local network.



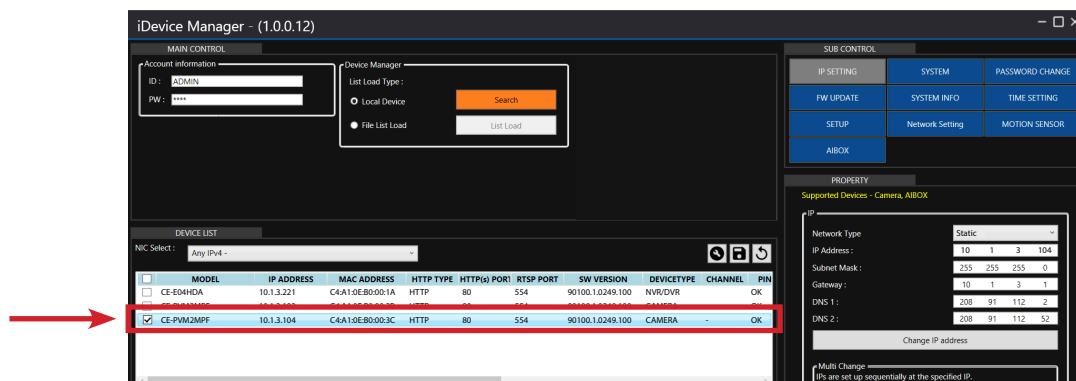
If you know the ID and password for the camera, enter the credentials in the Account Information panel before hitting Search.

IP CAMERA / Discovery

4 Find desired Clinton IP Camera

Click on the desired device to view and/or configure in the Device List. If multiple Clinton IP devices are on the network, it may be useful to use the MAC address to help identify the desired device.

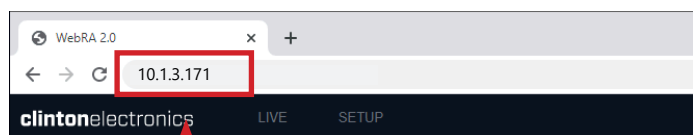
For Clinton PVMs you should look for model: **CE-PVM2MPF**.



NOTE: Only the model number of the camera is shown, not the actual model number of the PVM itself.

5 Create Password

Type the IP Address of the camera into your desired web browser. On the initial connection to the camera you will be prompted to create a new password for the ADMIN user. After the password has been set, the page will reload. To log in to the camera's web page, enter default User ID of ADMIN and the newly created password.



IP Address of Camera

New Password Required!

To help keep your information safe, your new password must contain:

- At least 8~16 characters
- At least 1 uppercase and lowercase letter
- At least 1 number
- At least 1 special character: ~!@#\$%^&*()_+=[]{}?/

Additionally, your password should not include:

- Your user ID

Enter New Password

NEW PASSWORD

Confirm New Password

PASSWORD CHECK

NOTE: If the ADMIN password is lost, the camera will need to be reset to the factory settings.

IP CAMERA / Discovery

6 Set IP Address Info: (requires set password on camera)

If desired, change the IP address of the camera by editing the info in the IP Setting Property panel. It's recommended to change the Network Type from DHCP to Static after the desired IP address has been set. Click the '**Change IP Address**' button after making adjustments to save IP address settings.

Enter the new ADMIN password in the Account Information panel, then hit **Search**.

The screenshot shows the iDevice Manager (1.0.0.12) interface. The 'MAIN CONTROL' panel on the left includes 'Account Information' with fields for ID (ADMIN) and PW (***), and a 'Device Manager' section with 'List Load Type' (Local Device, File List Load) and a 'Search' button. The 'SUB CONTROL' panel on the right has tabs for IP SETTING, SYSTEM, and PASSWORD CHANGE. The 'IP SETTING' tab is active, showing a 'PROPERTY' section for 'Supported Devices - Camera, AIBOX'. The 'Network Type' is set to 'Static'. The 'IP Address' field is highlighted with a red box and a red arrow pointing to it. Below the IP Address field is a 'Change IP address' button. The 'Multi Change' section is also visible, with a 'Multi Change IP address' button. The 'PORT' section shows 'HTTP PORT' set to 80.

NIC Select:	Any IPv4									
<input type="checkbox"/>	MODEL	IP ADDRESS	MAC ADDRESS	HTTP TYPE	HTTP(s) PORT	RTSP PORT	SW VERSION	DEVICETYPE	CHANNEL	PIN
<input type="checkbox"/>	CE-EMHDA	10.1.3.221	C6A10E80D001A	HTTP	80	554	90100.1.0249.100	NVR/DVR	-	OK
<input type="checkbox"/>	CE-PVM2MPF	10.1.3.103	C6A10E80D002B	HTTP	80	554	90100.1.0249.100	CAMERA	-	OK
<input checked="" type="checkbox"/>	CE-PVM2MPF	10.1.3.104	C6A10E80D003C	HTTP	80	554	90100.1.0249.100	CAMERA	-	OK

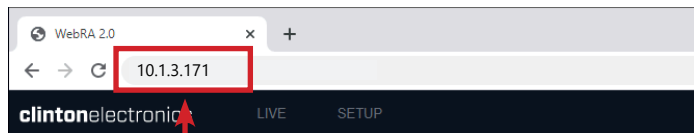
TIP: Bulk IP Address Assignment

To assign IP addresses to multiple devices simultaneously, click the check box on the desired cameras, then enter the IP Address information in the property panel. Next click the 'Multi Change IP address' button to assign the new IP addresses to the selected cameras.

IP CAMERA / Login

1 Log in to camera

Type the IP Address of the camera into your desired web browser. Enter the default User ID of ADMIN and the newly created password, then click **Login** to access the camera's web page.



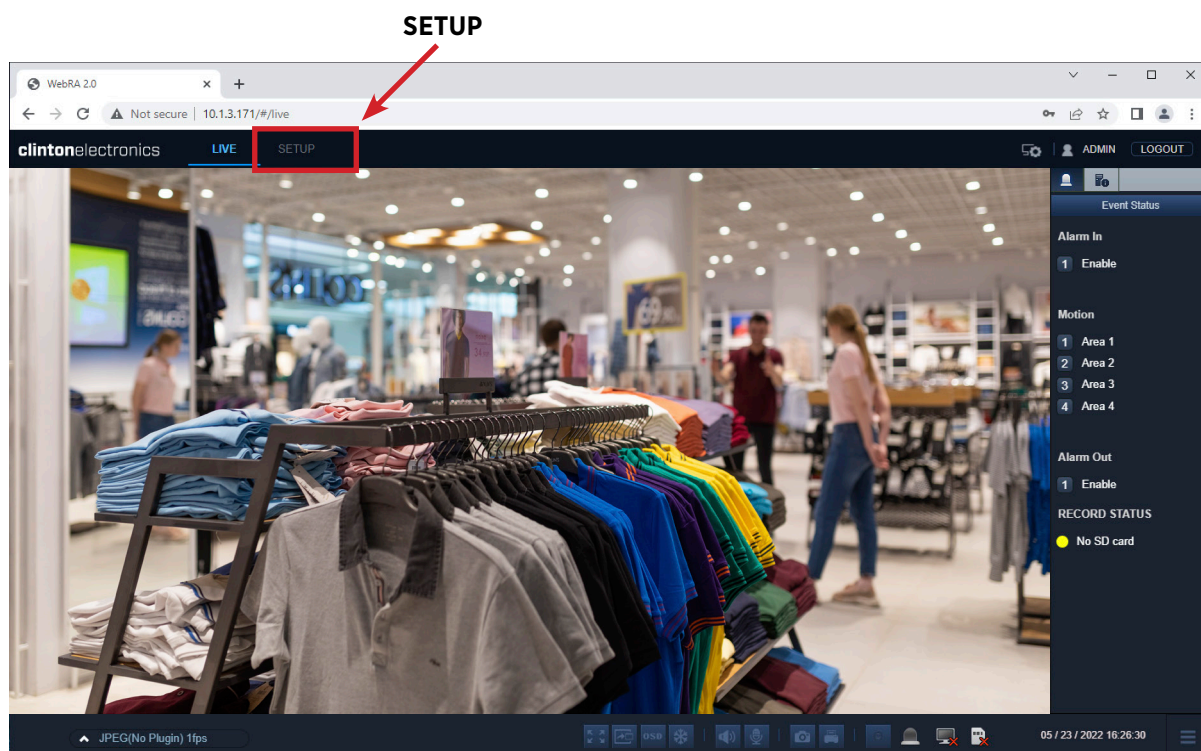
IP Address of Camera

NOTE: You may need to add the web port after the IP Address of the camera if the page will not load or if the web port has been changed.

2 WebRA Live View

After successful log in to the camera, the live view will be shown. Note that most browsers only support video previews of MJPG at 1 fps— and do not support live streaming of full resolution and frame rate.

Click the '**SETUP**' tab at the top of the page to make adjustments to the camera.



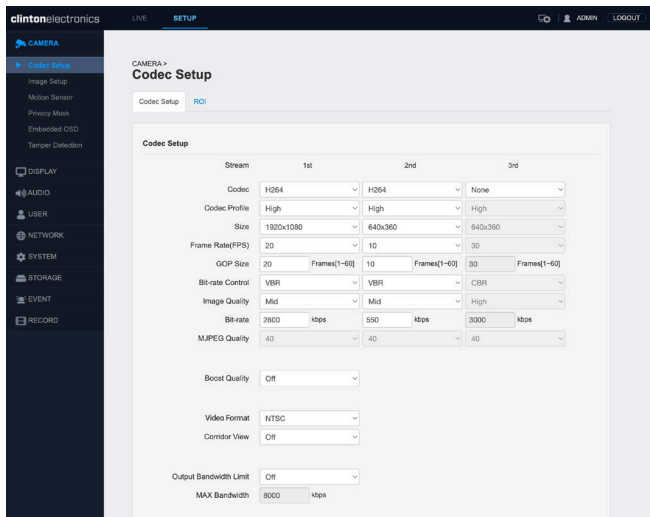
ⓘ ATTENTION:

Most browsers will only preview the camera image as a low resolution, low frame rate MJPG. This does not indicate the actual image quality of the camera stream(s).

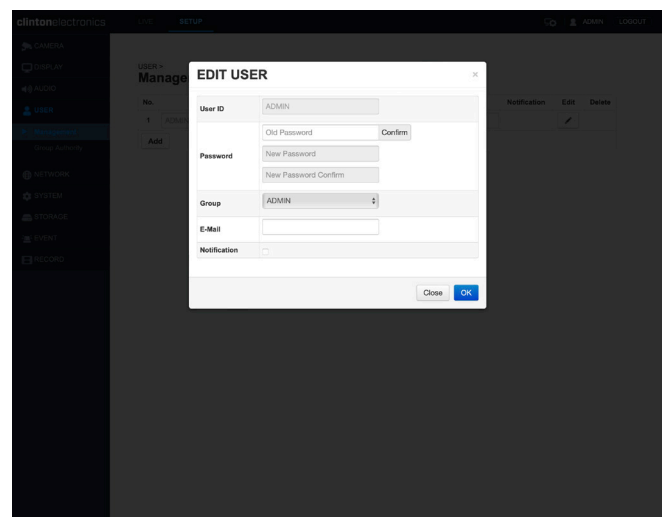
- **Microsoft Edge — Internet Explorer Mode:** To view full video resolution and frame rate on Edge, open the Settings menu (three dots in the upper-right corner), then select Reload in Internet Explorer Mode.
- Some of the controls below the Live image have no function when using Chrome, Edge, Firefox, or Safari.

IP CAMERA / Adjusting Basic Camera Settings

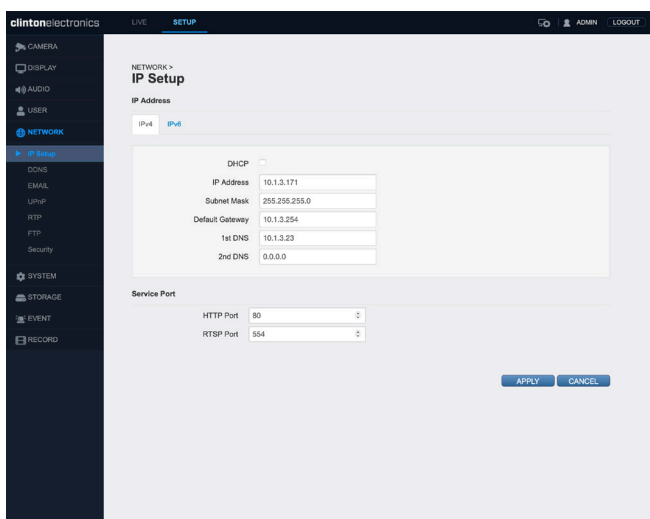
Before completing the installation it's recommended to check and adjust basic camera settings such as: Codec, Date/ Time, Admin password, and confirm the IP Address settings.



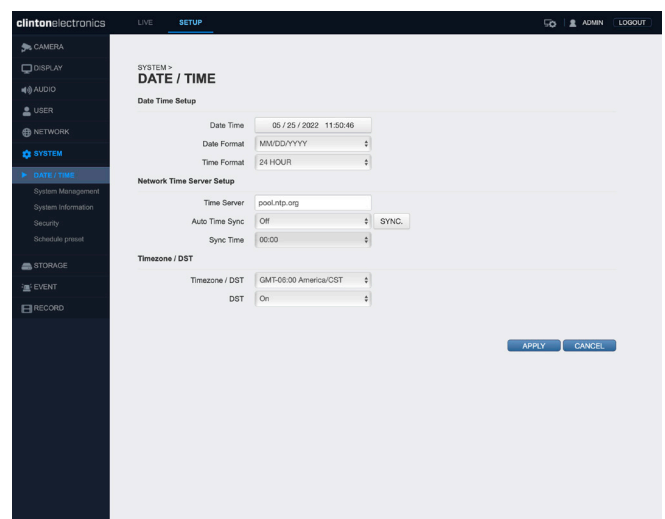
CAMERA / Codec



USER / Management



NETWORK / IP Setup



SYSTEM / Date & Time

ⓘ RTSP Stream Info:

To view the camera's live RTSP stream use the camera's IP Address, RTSP port number, then live and main. After connecting you will be prompted to enter the User ID and Password for the camera.

Example: **rtsp://192.168.10.25:554/live/main** *554 is the default RTSP port number

For the 2nd, 3rd and Supplementary (4th) RTSP streams, replace main with second, third, or fourth.

Example: **rtsp://192.168.10.25:554/live/second**

To view the RTSP stream and login with credentials (without second login prompt):

Example: **rtsp://ADMIN:password@192.168.10.25:554/live/main**

IP CAMERA / Codec Settings

The screenshot shows the 'clintonelectronics' web interface for 'CAMERA > Codec Setup'. The left sidebar lists various settings: CAMERA (selected), Image Setup, Motion Sensor, Privacy Mask, Embedded OSD, Tamper Detection, DISPLAY, AUDIO, USER, NETWORK, SYSTEM, STORAGE, EVENT, and RECORD. The main content area is titled 'CAMERA > Codec Setup' and has tabs for 'Codec Setup' and 'ROI'. The 'Codec Setup' tab is active, showing a table with three columns for Stream 1st, 2nd, and 3rd. Each column contains settings for Codec, Codec Profile, Size, Frame Rate(FPS), GOP Size, Bit-rate Control, Image Quality, Bit-rate, MJPEG Quality, Boost Quality, Video Format, Corridor View, Output Bandwidth Limit, and MAX Bandwidth.

Stream	1st	2nd	3rd
Codec	H264	H264	None
Codec Profile	High	High	High
Size	1920x1080	640x360	640x360
Frame Rate(FPS)	20	10	30
GOP Size	20 Frames[1~60]	10 Frames[1~60]	30 Frames[1~60]
Bit-rate Control	VBR	VBR	CBR
Image Quality	Mid	Mid	High
Bit-rate	2800 kbps	550 kbps	3000 kbps
MJPEG Quality	40	40	40
Boost Quality	Off		
Video Format	NTSC		
Corridor View	Off		
Output Bandwidth Limit	Off		
MAX Bandwidth	8000 kbps		

Adjust the camera codec settings as needed to meet the requirements of the install network.

Click the **APPLY** button at the bottom of the page to save codec changes.

Codec:

- **H264** : Video compression standard to transmit high quality video stream efficiently. H.264 is available in various networks and systems and allows the bit-rate to be controlled according to adjusted bandwidth usage.
- **H265** : Provides substantially improved video quality at the same bit-rate of H.264. Check to ensure the connected NVR or VMS Server supports H.265 video.
- **MJPEG** : Motion JPEG uses a considerable amount of bandwidth, but provides excellent quality for each image.

Size : Adjust the output resolution of the camera as needed.

Frame Rate (FPS) : Set the frame rate for the video from 1-30 fps. If recording the video at a lower frame rate, consider lowering the frame rate from the camera to save network bandwidth.

GOP Size (Group of Pictures) : The GOP setting is automatically adjusted for best results based on the FPS setting and should only be adjusted if necessary (adjusting from the automatic setting can have a negative effect with decoding hardware/software). Lowering the GOP value may improve video quality but consumes more bandwidth. Conversely, increasing the GOP value consumes less bandwidth, which may degrade video quality.

Bit-rate Control : You can select CBR, VBR, or VBR+.

- **CBR** (Constant Bit Rate) : Used for encoding H.264/H265 video into a fixed Bit Rate.
- **VBR** (Variable Bit Rate) : Encoding bit rate will be varied from video to video. Normally, when the video is more dynamic, the Bit Rate will also go up.

IP CAMERA / Codec Settings

- **VBR+** : Has a higher compression rate than VBR. The effectiveness will be maximized if the video is less dynamic. Depending on the decoding software or hardware used, the VBR+ video stream data may not display correctly. If necessary, consult with the decoding software or hardware manufacturer.

Image Quality : With VBR or VBR+ set, you can reduce bandwidth further by lowering the image quality.

Bit-rate : Adjust the average size of the encoding video. Enter a value within a range of 512 Kbps ~ 15,000 Kbps.

Boost Quality : When a Motion Detection event is triggered, the camera's FPS/Bit-rate/GOP value is changed into the specified Boost FPS/Bit-rate/GOP value.

- **Boost FPS** : Sets the frame rate when motion is detected.
- **Boost Bit-rate** : Sets the bit rate when motion is detected.
- **Boost GOP Size** : Set the GOP Size when motion is detected.

Video Format : Select either NTSC or PAL video format.

Output Bandwidth Limit : You can select whether to limit bandwidth or not.

- **MAX Bandwidth** : Specifies the peak bandwidth. Enter your desired value if selecting <ON> for Bandwidth Limit. Enter a value within a range of 1,000 kbps-30,000 kbps.

Supplementary : Used to set up the Frame Per Second reception rate differently for the 1st/2nd video streaming.

- **Use** : Sets whether to use Supplementary.
- **Original stream** : Sets the default video stream.
- **FPS** : You can set the frame rate of the camera image.

Use the charts below as a reference for bit rate values with some common resolutions and frame rates. These are recommended starting bit rate values and should be adjusted accordingly to meet the requirements of the install network.

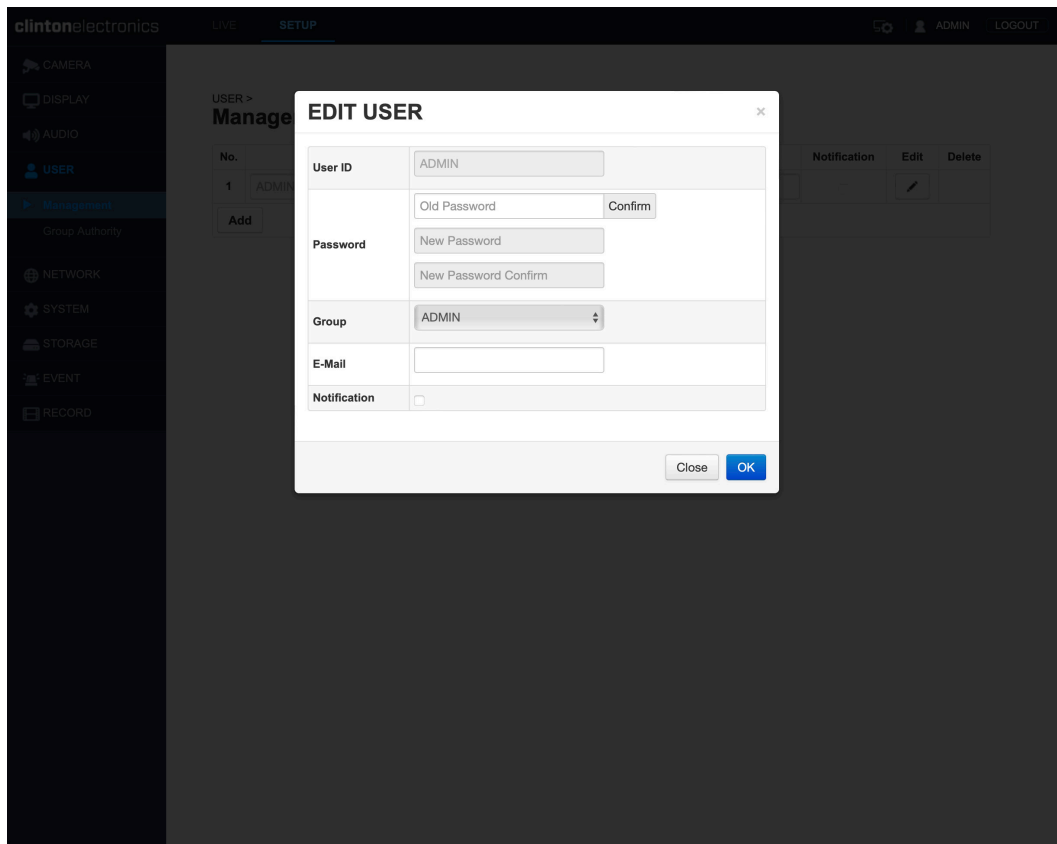
H.264 Bit-rate Guide (Kbps)						
Resolution	30 fps	25 fps	20 fps	15 fps	10 fps	5 fps
1920 x 1080 (2MP)	4096	3500	2800	2048	1536	768
1280 x 720 (720p)	2048	1792	1536	1024	768	384
704 x 480 (D1)	1024	896	640	512	384	192

H.265 Bit-rate Guide (Kbps)						
Resolution	30 fps	25 fps	20 fps	15 fps	10 fps	5 fps
1920 x 1080 (2MP)	2048	1792	1536	1024	768	384
1280 x 720 (720p)	1024	896	768	512	384	192
704 x 480 (D1)	512	448	384	256	192	96

① NOTE:

- **Codec Settings do not effect the main image of the PVM.** These settings only effect the network stream(s).
- **If selecting H.265:** Ensure the connected equipment supports the H.265 codec.

IP CAMERA / Set Admin Password



Follow the steps detailed below to edit the ADMIN password, or to create new user accounts.

To access the User Management page, click the User icon in the top right corner or click User, then select Management.

1 Click the Edit (Pencil) icon

2 Enter the old password

Click **Confirm**.

3 Enter new password

The new password must be a minimum of 8 characters in length, but no longer than 16 characters.

4 Confirm new password

Re-enter the new password.

5 Click OK to save the new password

You will automatically be logged out after saving the new password, log back in with new password.

If the ADMIN password is lost, the camera will require a Factory Default. Refer to the Factory Default procedure detailed in the PVM Basic Setup Guide. Factory Default will erase the password set during initial setup.

IP CAMERA / Verify IP Address Info

The screenshot shows the 'clintonelectronics' web interface for IP Setup. The top navigation bar includes 'LIVE' and 'SETUP' tabs, with 'ADMIN' and 'LOGOUT' links on the right. A left sidebar lists various settings: CAMERA, DISPLAY, AUDIO, USER, NETWORK (selected), IP Setup (selected), DDNS, EMAIL, UPnP, RTP, FTP, Security, SYSTEM, STORAGE, EVENT, and RECORD. The main content area is titled 'NETWORK > IP Setup'. It features a tabbed interface for 'IPv4' and 'IPv6'. The 'IPv4' tab is active, showing a 'DHCP' checkbox (unchecked) and several input fields: 'IP Address' (10.1.3.171), 'Subnet Mask' (255.255.255.0), 'Default Gateway' (10.1.3.254), '1st DNS' (10.1.3.23), and '2nd DNS' (0.0.0.0). Below these is a 'Service Port' section with 'HTTP Port' (80) and 'RTSP Port' (554). At the bottom right, there are 'APPLY' and 'CANCEL' buttons.

Verify that the IP Address of the camera is correct or assign a new IP Address to the camera.

Click the **APPLY** button at the bottom of the page to save IP Setup changes. Once clicked you will be disconnected from the camera. To log in to the camera again, enter the newly assigned IP Address.

By default, the camera uses DHCP to get an IP Address and other network information from the connected DHCP server/router. To prevent the camera from potentially getting a new IP Address it is recommended to disable DHCP once the IP Address is set/confirmed to be correct.

If you are unsure about assigning an IP address to the camera, it's best to check with the network administrator to avoid potential IP address conflicts.

To access the web viewer when HTTPS is enabled:

In the web browser enter: `https://[ip.address]:[HTTPs port]`, example: `https://192.168.109.115:8443`

IP CAMERA / Set Time & Date

The screenshot shows the 'clintonelectronics' web interface. The top navigation bar includes 'LIVE' and 'SETUP' tabs, with 'SETUP' being the active tab. On the right of the top bar are icons for a camera, a user profile labeled 'ADMIN', and a 'LOGOUT' button. A left sidebar contains a menu with categories: CAMERA, DISPLAY, AUDIO, USER, NETWORK, and SYSTEM. The 'SYSTEM' category is expanded, showing sub-items: DATE / TIME (highlighted), System Management, System Information, Security, and Schedule preset. Below these are STORAGE, EVENT, and RECORD sections. The main content area is titled 'SYSTEM > DATE / TIME'. It contains three sections: 'Date Time Setup' with fields for 'Date Time' (05 / 25 / 2022 11:50:46), 'Date Format' (MM/DD/YYYY), and 'Time Format' (24 HOUR); 'Network Time Server Setup' with fields for 'Time Server' (pool.ntp.org), 'Auto Time Sync' (Off), and 'Sync Time' (00:00), plus a 'SYNC.' button; and 'Timezone / DST' with fields for 'Timezone / DST' (GMT-06:00 America/CST) and 'DST' (On). At the bottom right of the main area are 'APPLY' and 'CANCEL' buttons.

It's recommended to check and/or configure the Date & Time for the camera, especially if this information will be embedded onto the network stream, used for recording, or if time-based schedules will be used for event notifications.

The default **Time Server** is [pool.ntp.org], but this can be edited to a different network time server address, example: 192.168.109.5 where 5 is the NTP server.

To automatically have the camera sync it's time to the Time Server, set **Auto Time Sync** to **ON**, then set a desired Sync Time.

Set the **Timezone** and **DST** (Daylight Saving Time) options for the camera.

Click the **APPLY** button at the bottom of the page to save DATE/TIME changes.

IP CAMERA / Optional & Advanced Settings

The screenshot shows the 'CAMERA > Embedded OSD' settings page. The left sidebar has a menu with 'CAMERA' selected. The main area is titled 'CAMERA > Embedded OSD'. Under 'Camera Information', there are three dropdown menus: 'Resolution' (OFF), 'Date / Time' (OFF), and 'DEVICE NAME' (OFF). A yellow note box says 'Note - Go to System Administration to set the device name.' Below this is the 'AI Face Detection' section with three dropdown menus: 'Display Bounding Box' (ON), 'Bounding Box Width' (5), and 'Bounding Box Color' (RED). At the bottom right are 'APPLY' and 'CANCEL' buttons.

CAMERA / Embedded OSD
AI Face Detection Box

The screenshot shows the 'SYSTEM > System Management' settings page. The left sidebar has a menu with 'SYSTEM' selected. The main area is titled 'SYSTEM > System Management'. Under 'System Management', there are several buttons: 'FW Upgrade' (Upgrade), 'Factory Default' (Load), 'System Data' (Save, Load), 'System Reboot' (Reboot), and 'Event Log' (Save). Below these are input fields for 'System ID' (SYSTEM ID), 'Device Name' (CAMERA), and 'Expired Term Of Password' (Not Used). At the bottom right are 'APPLY' and 'CANCEL' buttons.

SYSTEM / System Management
Firmware Update, Factory Default, System Data

The screenshot shows the 'STORAGE > SD Card' settings page. The left sidebar has a menu with 'STORAGE' selected. The main area is titled 'STORAGE > SD Card'. Under 'SD Card', there is a 'DISK WRITE MODE' dropdown set to 'ONCE'. Below this is a table with columns: Name, Type, Format, Total Size, Used, Available, Status, and Settings. The table has one row for 'SD Card' with status 'Unmounted' and a 'Configure' button. Below the table is the 'CONFIGURATION' section with input fields for 'Storage Name' (SD Card), 'Storage Type' (SD Card), 'Storage Status' (Unmounted), and 'SD Card Format' (FORMAT). There is also a 'Check Disk' button. At the bottom right are 'APPLY' and 'CANCEL' buttons.

STORAGE / SD Card

The screenshot shows the 'RECORD > RECORD SETUP' settings page. The left sidebar has a menu with 'RECORD' selected. The main area is titled 'RECORD > RECORD SETUP'. Under 'RECORDING MODE', there are three radio buttons: 'CONTINUOUS', 'EVENT' (selected), and 'DISABLE'. A yellow note box says 'NOTE - You must use a 16GB or higher SD card to use recording storage. Older SD cards may not work.' Below this is the 'STORAGE Options' section with a 'RECORDING STORAGE' dropdown set to 'SD Card'. Under 'CONTINUOUS RECORDING Options', there is a 'VIDEO STREAM' dropdown set to '2ND STREAM'. Under 'EVENT RECORDING Options', there is a 'VIDEO STREAM' dropdown set to '2ND STREAM'. Below this is the 'Recording schedule' section with a yellow note box saying 'Note - Go to Schedule Preset to create a new preset.' and three radio buttons: 'always', 'weekday' (selected), and 'weekend'. At the bottom are input fields for 'PRE RECORDING TIME' (5 SEC) and 'POST RECORDING TIME' (30 SEC). At the bottom right are 'APPLY' and 'CANCEL' buttons.

RECORD / Record Setup

IP CAMERA / Face Detection Box

⚠ ATTENTION:

- **AI Face Detector by default is set to OFF.** Check with supervisor before enabling this feature. The following steps are optional and should be skipped if this feature is not to be used.

The screenshot shows the 'clintonelectronics' web interface. The top navigation bar includes 'LIVE' and 'SETUP' tabs, with 'SETUP' selected. The left sidebar lists various settings categories: CAMERA, DISPLAY, AUDIO, USER, NETWORK, SYSTEM, STORAGE, EVENT, and RECORD. The 'CAMERA' section is expanded, showing 'Embedded OSD' as the selected option. The main content area is titled 'CAMERA > Embedded OSD' and contains 'Camera Information' fields: Resolution (OFF), Date / Time (OFF), and DEVICE NAME (OFF). A note below these fields states: 'Note - Go to System Administration to set the device name.' Below the note, the 'AI Face Detection' section is highlighted with a red box. It contains three fields: 'Display Bounding Box' (OFF), 'Bounding Box Width' (7), and 'Bounding Box Color' (RED). At the bottom right of the main content area are 'APPLY' and 'CANCEL' buttons.

The camera can be configured to overlay a colored frame around faces, giving the impression of advanced AI monitoring.

Follow the steps below to enable this feature:

- 1 Select **Display Bounding Box**, and change from OFF to **ON**.

- 2 When prompted, click **OK** to acknowledge that the colored box will be embedded onto the network video stream.

The dialog box is titled 'Attention' and has a close button (X) in the top right corner. The main text reads: 'Embedded OSD options such as Camera Information or AI Detection colored overlays are embedded onto the video stream. These will display on recorded footage.' At the bottom right, there are two buttons: 'Close' and 'OK'. The 'OK' button is highlighted with a red box.

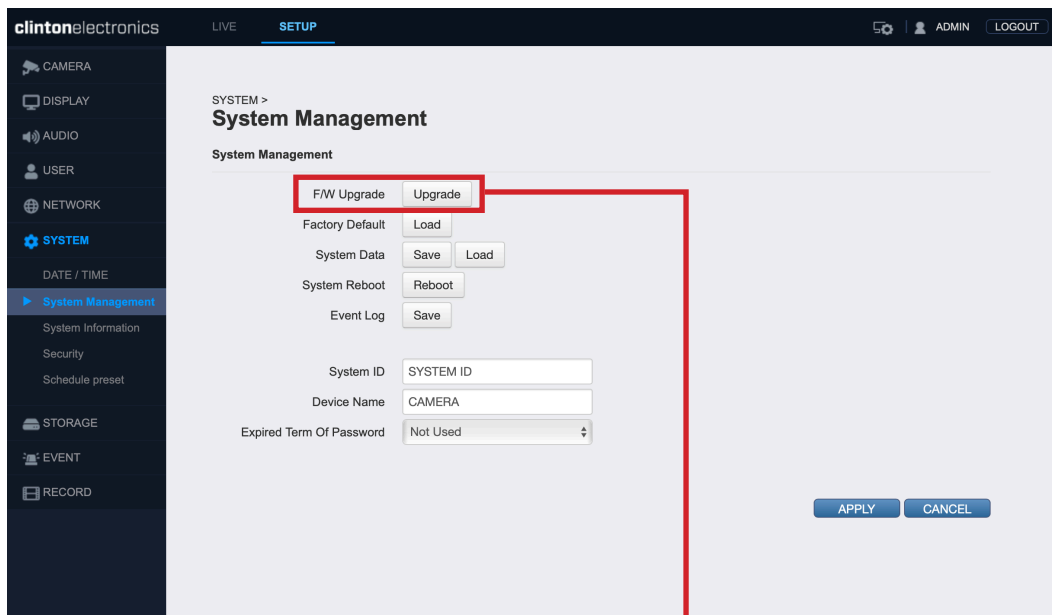
- 3 Adjust the Box Width and Color. For a thicker Box Width increase the number.

- 4 Click **APPLY** to save changes. Once saved, the colored Face Detection boxes will display on the video.

ⓘ ATTENTION:

- **The colored detection boxes will be embedded into the video stream.** Do not enable this feature if you do not want the colored boxes to be saved on recorded video.

IP CAMERA / System Management

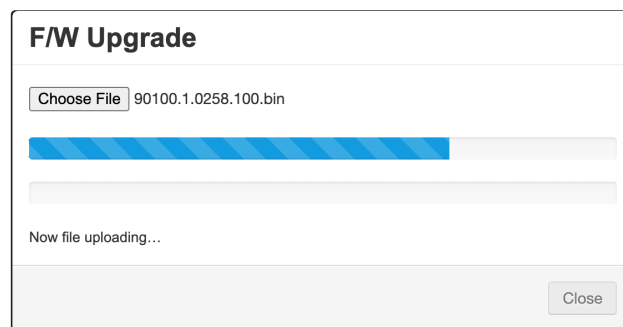
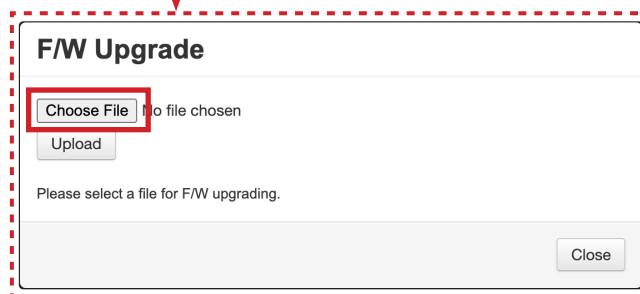


Firmware Upgrade:

To update the camera's firmware, click the **Upgrade** button, then click the **Choose File** button. Select the location on your computer where the firmware file is saved. Click **Upload** to begin the firmware update.

For the most up-to-date firmware, visit www.clintonelectronics.com/downloads

The firmware update could take up to 5-10 minutes to complete. During the firmware update do not adjust additional camera settings. Once the firmware update is complete the camera will reboot.



Factory Default:

Click the **Load** button to restore the camera's default settings. This will reset or erase all of the settings on the camera, with the exception being network settings (the camera's IP Address should remain unchanged, unless the DHCP server re-assigned a new address)

During the Factory Default process the camera will be inaccessible for about 1 minute and perform a reboot.

System Data:

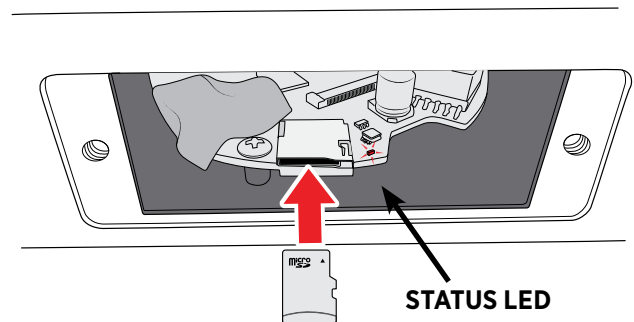
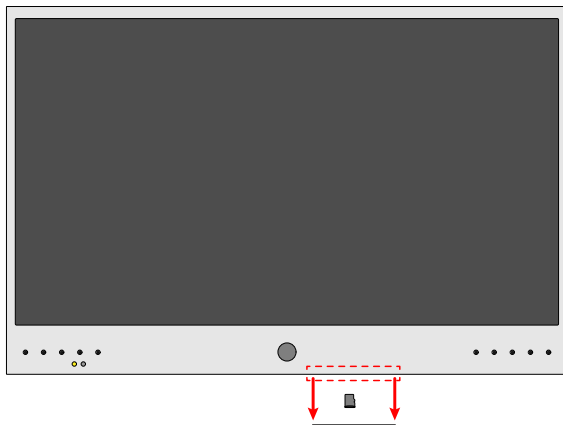
The camera's settings can be saved as a "config" file that can be used to quickly setup additional cameras. Click **Save** to save the camera's settings to your computer. Click **Load** to copy the saved settings from the connected computer to the camera.

IP CAMERA / SD Card Edge Recording

Follow the steps below to save recorded video locally to on the camera using a microSD card (not included).

- 1 Remove the microSD card cover plate to gain access to the card slot. The location of the cover plate varies by model, but is either located on the bottom or side of the PVM.

Insert a micro SD card as shown. Inserting the card “upside-down” can cause damage to the microSD card and slot. A red LED indicator will illuminate when the microSD is correctly inserted.

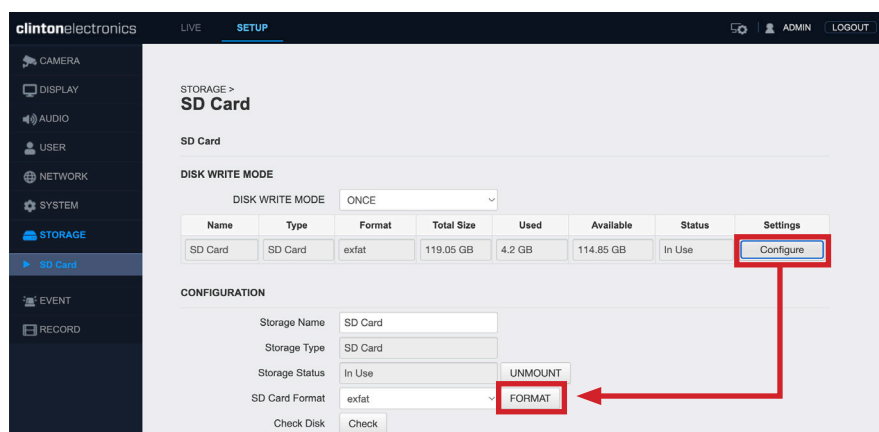


NOTE:

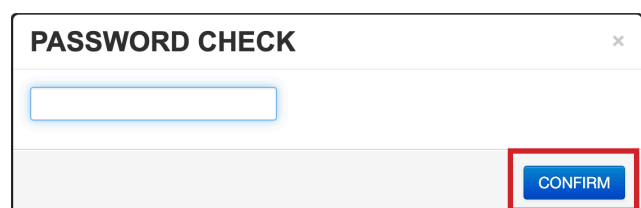
- **The camera does not automatically record when a microSD card is inserted.** Further configuration is required. Continue following the setup procedure.
- Minimum card size is 16GB. For best results, use a Class 10 32GB or larger card designed for 24/7 operation.

- 2 Navigate to : **STORAGE > SD Card**. If the microSD card is inserted correctly, the ‘Status’ column should display as In Use. If it shows as Unmounted, check that the microSD card is correctly inserted.

For best recording results it’s recommended to format the card while inserted into the camera. To format: Click the **Configure** button. Then click **FORMAT**.



- 3 When prompted, after clicking **FORMAT**, enter the ADMIN password. Click **CONFIRM**. This will erase all data previously saved on the microSD card.



IP CAMERA / SD Card Edge Recording

- 4 For Motion Recording, navigate to **EVENT > Motion Event**. (skip ahead to the next step if Continuous recording will be used)

Click the Recording **checkbox** to enable recording when Motion is detected.

Click the **APPLY** button at the bottom of the page to save Motion Event changes.

The screenshot shows the 'Motion Event' configuration page. A notification banner at the top states: 'Notification - Actions and notifications require detailed settings on each setting page to work.' Below this is a table with columns: ID, Event Parameter, Action, and Notification. The table has one row with ID '1'. The 'Event Parameter' is 'Ignoring Interval' with a value of 'OFF'. The 'Action' column has three sub-columns: 'Alarm Out' (checked), 'Send Image' (unchecked), and 'Recording' (checked, highlighted with a red box). The 'Notification' column has an 'E-Mail' checkbox which is unchecked.

ID	Event Parameter	Action			Notification
		Alarm Out	Send Image	Recording	E-Mail
1	Ignoring Interval: OFF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- 5 Next, go to **RECORD > RECORD SETUP**.

Set the Recording Mode to **EVENT** for only recording when motion is detected. Selecting Continuous will record non-stop, even if motion is not detected.

Select which stream to use for recording, either the 1ST or 2ND STREAM, (configurable via CAMERA / Codec Setup). Then select what the recording Schedule should be: Always, Weekday, or Weekend.

Click the **APPLY** button at the bottom of the page to save Recording Setup changes.

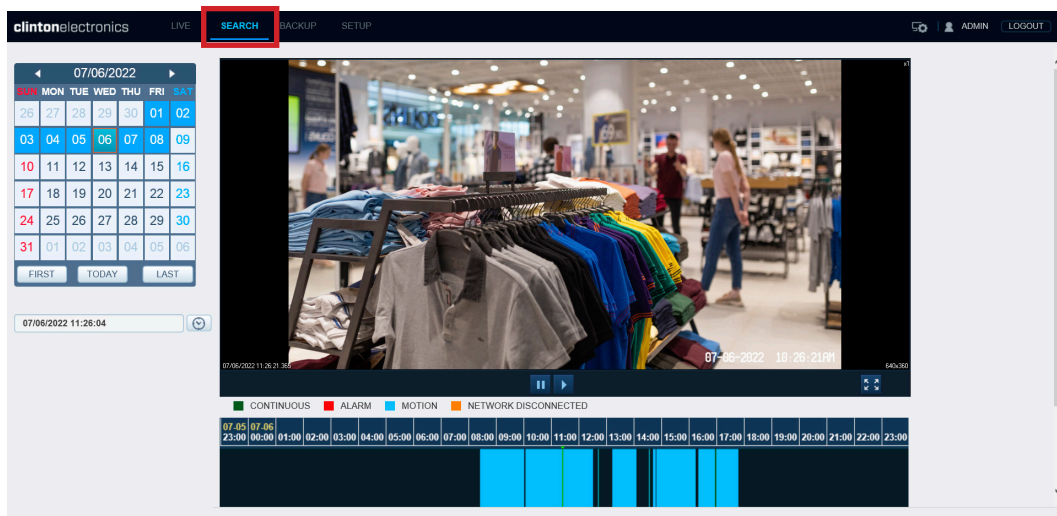
The screenshot shows the 'RECORD SETUP' page. Under 'RECORDING MODE', the 'EVENT' radio button is selected and highlighted with a red box. A red arrow points from this box to the 'EVENT RECORDING Options' section. This section is enclosed in a red dashed box and contains a 'VIDEO STREAM' dropdown set to '2ND STREAM' and a 'Recording schedule' section with radio buttons for 'always', 'weekday' (selected), and 'weekend'. A yellow note above the schedule says: 'Note - Go to Schedule Preset to create a new preset.' Below the schedule section is the 'RECORDING TIME' section with 'PRE RECORDING TIME' set to '5 SEC' and 'POST RECORDING TIME' set to '30 SEC'. 'APPLY' and 'CANCEL' buttons are at the bottom right.

It's recommended that the Date & Time information of the camera be verified and/or configured if recording video to the SD Card. The saved files will use the date & time information for file naming.

IP CAMERA / Search & Backup Files through browser

Follow the steps below to search recorded video and/or backup video from the microSD card .

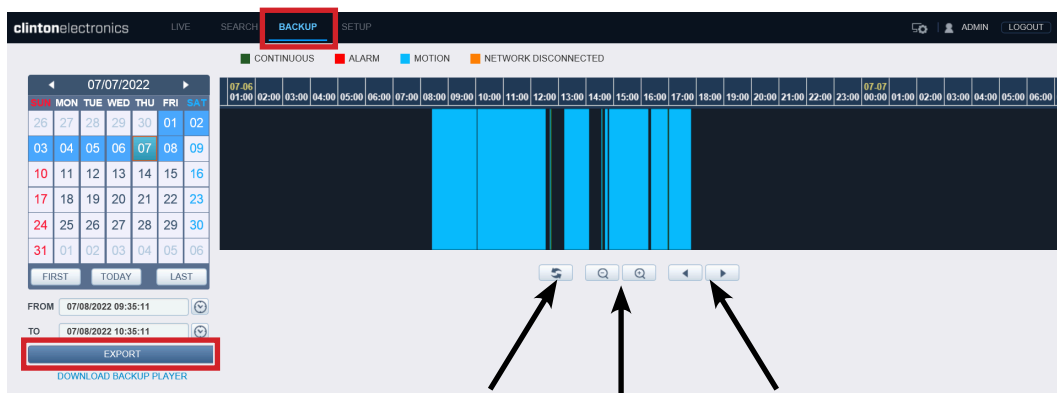
- 1 Launch Microsoft Edge, and connect to the camera using Internet Explorer Mode. To view using IE Mode, open the Settings menu (three dots in the upper-right corner), then select Reload in Internet Explorer Mode.
- 2 Click on the **SEARCH** tab. Then, select a day on the calendar, and click on the timeline in the area you wish to view. Click the Play icon to begin playback.



- 3 To create a backup file of video from the microSD card, click the **BACKUP** tab. Next select the desired day from the calendar to load the video. Then click and drag to select the desired backup time.

Click the **EXPORT** button to open the Backup window. Edit the date and time if needed, then click the **Start** button.

**Backup files will be saved to: Windows (C:) / Save Video*



Refresh
Timeline

Zoom
Out/In

Move Timeline
Left/Right

- **Search and Backup functionality is only available using Internet Explorer Mode on Edge.** These tab options are not viewable on other browsers such as Google Chrome, Safari or Firefox.
- To view backup files, download the Backup Player from: www.clintonelectronics.com/support

IP CAMERA / Viewing Backup Files

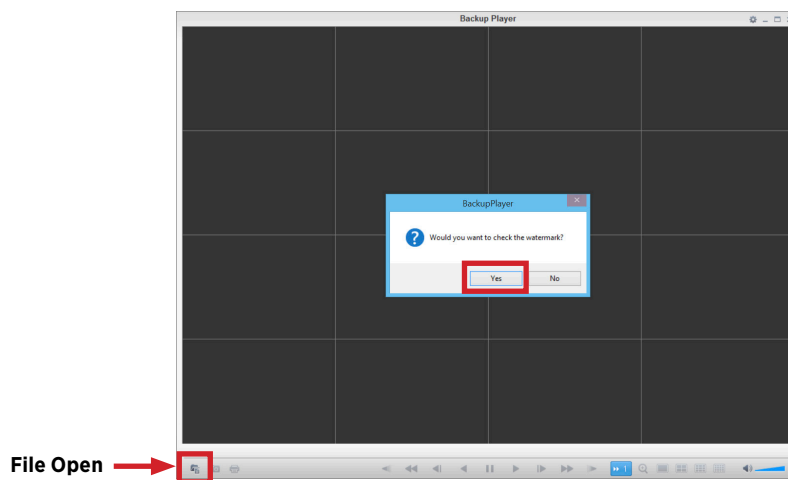
To view video backups from web interface 'BACKUP':

- 1 Download and install Backup Player from www.clintonelectronics.com/support (Windows only).

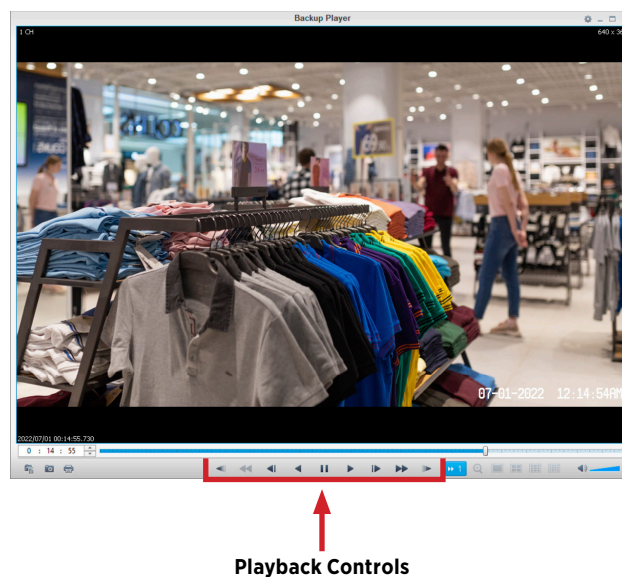


- 2 Launch Backup Player, then click on the **File Open** icon in the lower-left corner of the window, or drag-and-drop the backup file onto the black viewer area. (Saved video backups can be found here: Windows (C:) / Save Video)

Click **Yes** when asked to check for the watermark to verify that the video has not been edited.



- 3 After checking the watermark, the video will load and begin playing. Click Pause to drag the timeline playhead to the desired time.



- **Viewing files directly from microSD card requires VLC Media Player.** If you do not have VLC Media Player, it can be downloaded for free from: <https://www.videolan.org/vlc/> Each file on the microSD card will be 5 seconds long, because of this it is recommended to perform Playback and Backup of video through the web interface.

clintonelectronics

CE-M21PE

User Manual

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