Portal User Guide

![CHECKVIDEO]

System Overview

CheckVideo is a cloud-based video management system (VMS) that combines smart on-premise devices with hosted software to provide benefits that have traditionally required servers and complex software integration. With a web and mobile-first approach, CheckVideo eliminates the need for software installation, downloads and management, allowing video cameras to be viewed by any authorized user, simply by logging into the CheckVideo portal via any web browser or CheckVideo App. It scales from a couple of cameras at one location to thousands of cameras across hundreds of locations seamlessly and includes Homeland Security grade video analytics technology, an industry-first video search engine to speed up investigations, health monitoring and cloud backup.
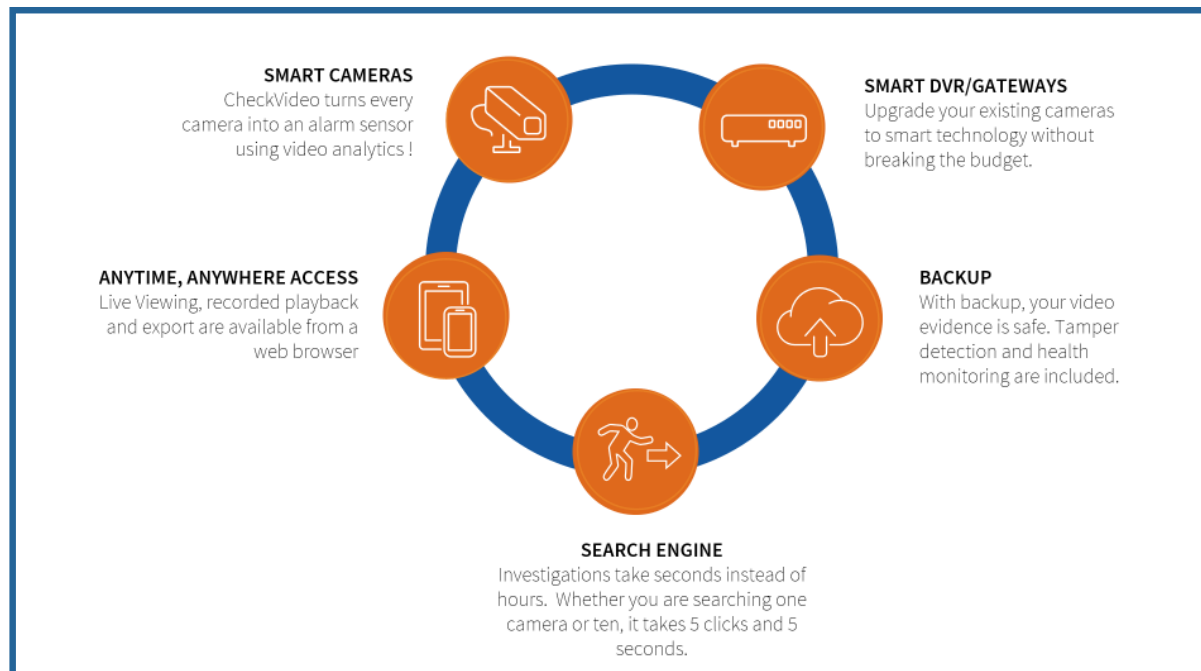

All functions are accessed using the CheckVideo portal. All that is required is an email address and password. Multi-factor authentication and single sign on are also available as configuration options. The CheckVideo portal is designed using a "functional interface" philosophy using modern design and user experience (UX) paradigms. This means that instead of deep menus and a proliferation of buttons, the interface only displays controls and options that are relevant for the task at hand. Similarly, the CheckVideo interface embraces filtering and search over clicking and scrolling.   The interface is designed to work equally well for the novice or occasional user as well as a power user who may spend most working hours on video monitoring and surveillance.

The CheckVideo user portal includes both end-user functionality such as video viewing, recorded video playback, video search, export and share.   It also includes advanced functionality for multi-camera viewing, smart monitoring and auto-tours. As a cloud-based system, configuration and management functions are also provided through the web portal, but are only available to users with a role that allows them to add/remove cameras, program cameras for video analytics and detection, create monitoring schedules and configure notifications to email, SMS or mobile. Additionally, health monitoring and reporting is available through CheckVideo Command, an Enterprise focused, web-based interface for administration of very large distributed installations.

Key Components

The CheckVideo portal is available by navigating to portal.checkvideo.net using a web browser. Chrome is the recommended browser for the best user experience. Once logged in, a user starts on the main page, which includes multiple functional components. This section provides a high-level description of major components of the CheckVideo portal. Key components are shown below and provide commonly used functions.
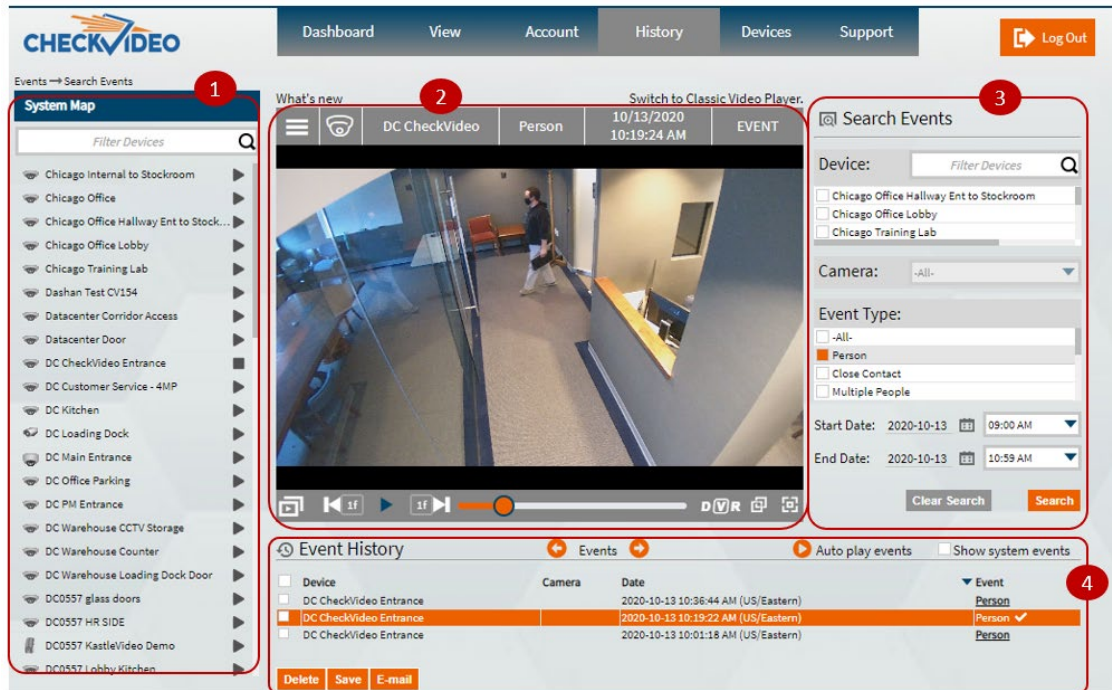
1. **System Map:** The System Map includes a list of all cameras accessible to a user.   A camera can be selected for playback by clicking the Play icon in the System Map. It also includes filtering options to quickly find relevant cameras.
2. **Video Player:**   The Video Player is the main component used to view and control video playback. It integrates multiple modes of playback and offers a functional interface with controls customized to the task.
3. **Search Bar:** CheckVideo includes a unique search engine instead of a traditional timeline. The search bar is used for investigations to quickly narrow down events of interest across multiple cameras.
4. **Event History:** The results of search are displayed in the Event History. From here, they can be played back or shared and saved.

Additional functions are available through the top-level menu bar. These include video export, multi-camera View functionality and Device configuration.   Some of these may be restricted based on the role assigned to a user account.

System Map

The System Map lists all cameras associated to the user's login. This list of available cameras is configured by an administrator, so only assigned cameras are available. The list may include all cameras across sites or limited to cameras at a given site. It is also possible to grant access to specific cameras across sites, providing a great amount of flexibility. For instance a regional director may have access to all cameras across sites in a region while a facility manager may only have access to cameras in a single facility.

An icon to the left of each row indicates whether the device is a standalone cloud camera or a Gateway that has multiple cameras connected to it. A Gateway is used with third-party analog or IP cameras, serving as a DVR/NVR in addition to providing cloud management, backup and video analytics functionality. CheckVideo cameras include on-board recording and analytics, and do not require a Gateway. Click the Gateway icon to expand and show the list of cameras.

While a scroll bar is available to scroll through the list of cameras and recorders, a faster and more contemporary approach is to use the filter box at the top of the System Map. Within the filter box, enter a keyword to filter the list to a smaller subset of devices. For instance, to filter all cameras at the Houston office, type 3 or more letters from the word "Houston".   The list is narrowed down as you type to only display devices that match the filter term.

Multi-channel devices, such as the CheckVideo IP Gateway appear by device name. To view the Gateway's cameras, click the device name and the cameras will appear.
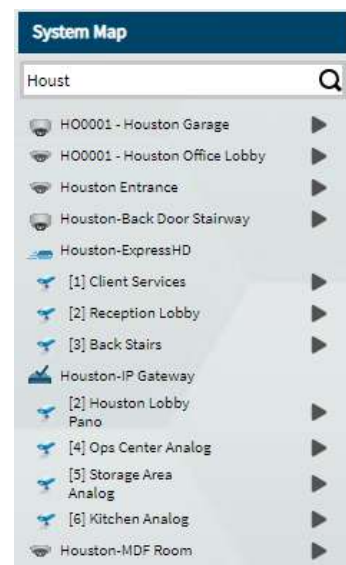
Clicking the Play button to the right of each camera will play live video from that camera in the Video Player.
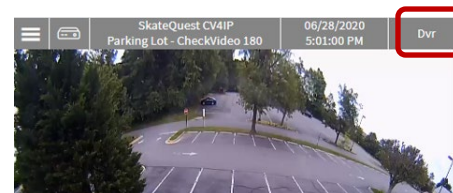
Video Player

The Video Player combines multiple video display and playback functions into a common interface. Specifically, it combines Live Video Viewing, Recorded Video Playback and Video Event Playback. The player includes controls, menus and shortcuts for common video tasks.

Player Modes

The Video Player supports three modes of operation in a single interface.   The current mode is indicated in the Video Player at the top right.

1. Live Mode.   This indicates that the camera is playing a live video stream in the player. No date or time stamp will be displayed for Live playback.

2. DVR Mode.   This indicates that the camera is playing pre-recorded video. Video is recorded on-site 24x7 in addition to cloud backup of video events. DVR Mode is used to playback this continually recorded video. The date and time are updated as video plays.

3. Event Mode.   This mode indicates that cloud video is being played back, typically from results that were returned by the search engine. Event clips are typically 10 seconds long to capture the most relevant activity.   This mode is used to quickly navigate through a visual summary of events, to narrow down the time frame for deeper investigation and export.

Player Controls

The Video Player has a distinctive look. It supports automatic resizing to fit available space while maintaining the original aspect ratio of the video stream. The Video Player includes several common button and controls. Additional controls are displayed based on the specific mode of function as appropriate. Key controls are shown below.
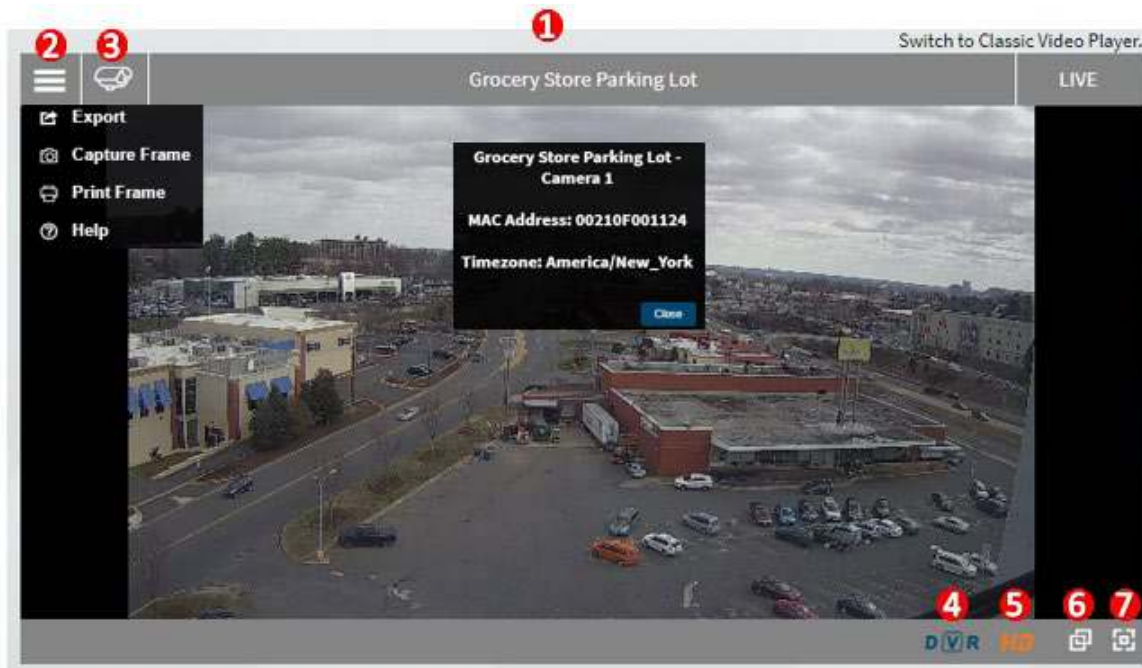
1. **Title Bar:** Indicates name of the camera. If the camera is connected to a Gateway, the name of the Gateway is also displayed here.
2. **Menu:** For navigation to Extended Export, snapshot or to print a single video frame.
3. **Camera:** Includes camera specific information such as MAC ID and time zone. The time zone is set by the administrator. A user may have access to cameras across multiple time zones.
4. **DVR button:** This is used to switch to DVR playback mode by selecting a date and time to start playback.
5. **HD Video:** CheckVideo cameras and Gateways include dual streaming capability with a standard resolution and high definition stream. The high definition stream typically is the best resolution available from the camera. The player uses the standard resolution stream by default, and automatically switches to the HD stream when zooming in. Clicking the HD icon will manually switch to the highest definition video available from that camera. Click it again to change to standard resolution.
6. **Pop-Up Display:** Clicking this button will cause a pop-up window to open with video from the camera currently playing in the Video Player. This window can then be resized and positioned anywhere on screen. This is generally used to keep an eye on one or more cameras while working with a different camera in the player.
7. **Full Screen Mode:** This expands the player to display video full screen. Player controls are still available. Press the ESC key to exit Full Screen Mode.

DVR Playback

All CheckVideo IP cameras include on board storage for 24x7 recording. Similarly, Gateways connect to non-cloud IP cameras and provide 24x7 video recording. This Digital Video Recording (DVR) can be replayed by clicking the DVR icon in the Video Player. Note that a camera must be playing in the Player before you can see and click the DVR icon. This can be done by clicking the Play button next to a camera name in the System Map.

Clicking the DVR icon brings up a date and time selector. Once a date and time have been selected, video will

begin playing from that date and time. Contols specific to DVR playback will also be displayed in the control bar at the bottom of the Video Player.

Important Note: In some cases, the DVR icon is not selectable or no dates are selectable in the date/time picker. This is because there is no available network route or path from your browser to the camera. This could happen if the cameras are on a corporate network behind a firewall. In this case, first connect to the corporate network using VPN, then login to the portal or contact your network administrator.

DVR controls include the following options:

1. **DVR:** Shows DVR mode and the date/time of the video are displayed on the title bar.
2. **Live Mode:** Returns you back to a live view from that camera. To return to DVR, click the DVR icon and select a date and time.
3. **Step Back/Forward:** This pair of buttons on either side of the play/pause button are used to step back or forward. It defaults to stepping one frame at a time. This skip duration can be adjusted by clicking on the box showing [1f] next to the Step Back button, and a step size from 2 seconds to 30 seconds can be selected. Step forward and back can have different step sizes, e.g. step back can be 2 seconds, but step forward can be 1f for one frame at a time.
4. **Play and Pause:** Click to play. When playing this changes to a Pause button. Click to pause.
5. **Fast Forward:** This plays back video at faster than normal speed.   Clicking this button changes to 2x speed. Clicking again increases speed to 4x, then 8x and 16x.
6. **Normal Playback:** Clicking this button restores playback to 1x, or normal rate.
7. **Skip to Event:** This is a pair of buttons that are extremely useful to quickly jump ahead to the next activity detected by that camera. For instance, if a break in occurred between 10pm and 6am, rather that starting at 10pm and fast forwarding, clicking the Next Event button automatically jumps ahead to the next activity, saving a lot of effort and time that would otherwise be spent in watching video with no activity.

Digital Zoom
Within the Video Player, you can digitally zoom in on a person of interest or an object. To do so, hold the left mouse

button down and, drag to create a box around the object in the scene. When you release the mouse button, the image will digitally zoom in. While zoomed in, you can also move around the scene by holding down the mouse button and dragging left/right/up/down. To zoom out, just press and release the mouse button.

If your mouse has a scroll wheel it can also be used to zoom in. Position the mouse on top of the object you would like to use as the center point and scroll the wheel down toward you to zoom in.

Video Search

CheckVideo includes a powerful search engine that finds video of relevant activity. It provides a faster way to find video compared to a traditional timeline view. The Search Bar is available on the right side of the portal screen.

The Search Bar includes a list of cameras similar to the System Map. It is used to select cameras that must be searched for video events. A video event is any activity that is deemed to be relevant for that camera. Activities are detected by the camera based on analytics settings and schedules configured by an administrator.

A Filter Box is also included to narrow down the list of cameras to search. This can be done by typing part of the camera name in the Filter Box.

Cameras to be searched are then selected, and indicated by the filled in box. Next, the type of event must be specified. For instance, if you are looking for people in an area, just select "Person" as the event type. The accuracy of search results will be higher, the more specific the search criteria.

Finally, specify the start date and time, and end date and time during which the search should be performed.

In this example, the search is specified for two cameras, to find one or more Persons between 6 am and 9:59 am (up to 10 am).

Once the search button is clicked, events with video corresponding to a Person in these camera views is fetched and available for viewing.
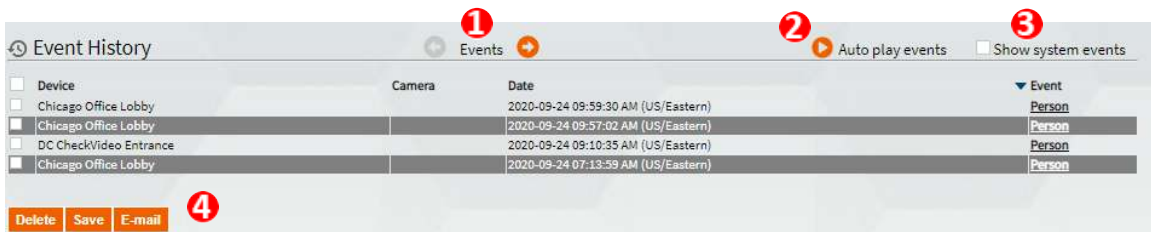
In this example, the search returns three events across both cameras. These video events are bookmarks that allow rapid investigation. Click on the "Person" link to play that event video. This automatically puts the Video Player in Event mode. It is also possible to sort the event list by time, by clicking on the Date header in the Event History table.

There are several controls available within the Event History:

1. **Events:** Allows you to quickly skip forward or backward to the next Event clip in your results list. This feature does not require you to watch the entire 10 second video clip before moving to the next. Once viewed, a visual indicator will appear next to the Event Type within the table.
2. **Auto-play Events:** Will play each event in succession, beginning the next event once the last event clip has completed playback. Once viewed, a visual indicator will appear next to the Event Type within the table.
3. **Show System Events:** If you wish to include health messages for your devices, check the Show System Events checkbox. They will appear in chronological order with your behavior events.
4. **Delete Save Email:** You can choose to delete, save or email event clips. Within the Event History table, click the checkbox to the left of one or more events and select the appropriate button at the bottom of the table.

Note that the event plays the best ten seconds of video that best represents the activity that triggered the event. When you find the event of interest and would like to play beyond the ten seconds, it can be done be done easily. Click the "Step Forward" icon . The Player will switch to DVR mode. Click the Play icon to continue watching video.
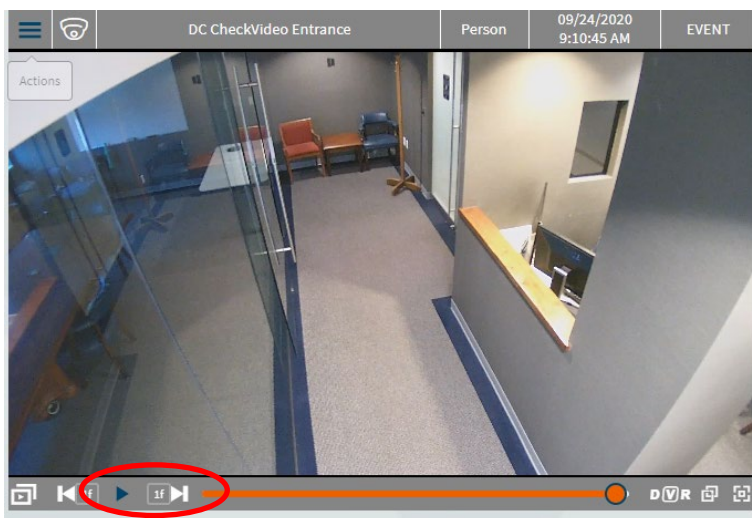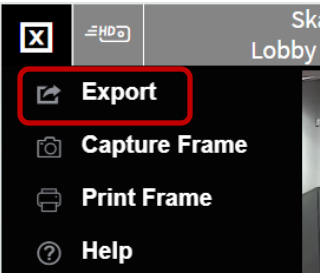

At any time during event playback, you can switch to DVR or Live by clicking its icon in the Video Player.

Export Video

Once the right date and time have been identified through Video Search, you may export a longer video segment. CheckVideo devices record 24x7 on-site which is available for export as needed. The Export page is available through the Player menu, by selecting the Export option or under the History menu option.

It is recommended that you start with a camera playing in either DVR or Event mode before you launch the Export page. This will display video recording history for that camera with export parameters pre-filled at the time last played.

To select a different camera, click on the desired camera in the System Map, and wait for its recording history to be loaded (this may take a few seconds). Once camera history has been loaded, you can go through the following steps to export video.

1. **Calendar:** Use the Calendar to select a date for export. Dates with video available, are shown in black, dates that are in a different month or when video is not available are gray.
2. **Rec. Time Ranges:** Once a date is selected, the list of times during which video recording is available will be loaded. Select the desired time range.
3. **Export Start Time:** Pick the Hour and Minute corresponding to the beginning of exported video.
4. **Clip Duration (mins):** Choose a Clip duration for the export and press the Submit Job button.

Since video download over the web can take between a few seconds and several minutes, you are not required to wait for the download to complete. You can check the Exported Videos section at the bottom of the page. When the export is ready for download, a link will be created. Click the Download link to download the clip. Note that exported clips are retained in the cloud for up to 6 months, so you can always come back to it. You can also choose to share the exported clip by emailing a link to it.

The exported clip is in mp4 format and is playable in standard video players on PCs and mobile devices.

Multi-View and Active Monitoring

The CheckVideo portal also allows multiple cameras to be viewed simultaneously. It includes the ability to save and restore named View configations, to auto-tour through live video across cameras as well as "Smart Matrix" functions for actively monitoring tens or hundreds of cameras, even across locations.

These functions are availabe under the View menu option.   The matrix starts with a blank view and a 2x2 matrix layout. Click on a camera in the System Map to play it in the next available window. Key components are listed below.
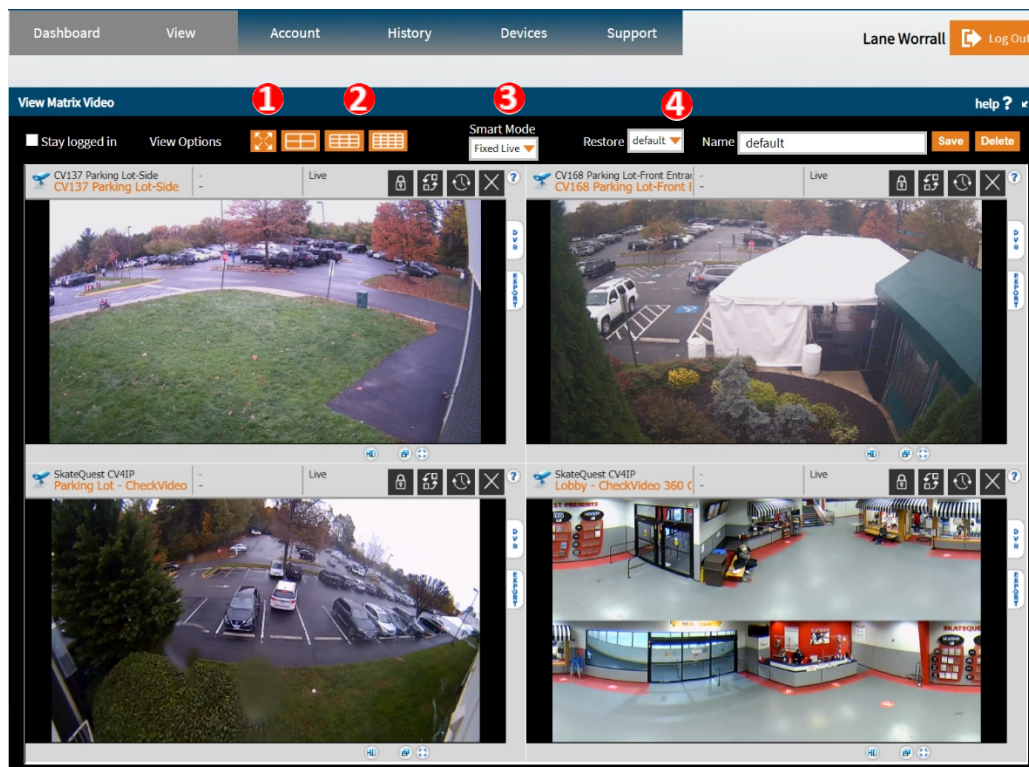
1. **Full Screen:** Click this to display the current matrix layout full screen. Click it again to restore the System Map.

2. **Layout:** Choose from a 2x2, 3x3 or 4x4 matrix layout. Note that this will start with a blank matrix.

3. **Matrix Mode:** There are 4 modes for this matrix: a) Fixed Live (default), b) Auto Live - automatically pushes live video from cameras that have activity, c) Auto Clip - displays a short clip from active cameras, and is useful in bandwidth constrained environments and d) Live Tour - cycles through all cameras in the user's scope, loading a new camera every two seconds.

   These modes enable powerful live video monitoring capability. With Auto Live and Auto Clip, a single operator can be informed about activities from hundreds of cameras without having them up live all the time.

4. **Save and Restore Views:** Once you have a layout with cameras that you like, enter a name for it and click "Save". You can create multiple Favorite Views in this manner. They can be restored by selecting the view from the drop down. Examples might include specific facilities or groupings of cameras at a specific facility, such as rear parking lot or main warehouse.

Additional online help is available by clicking the "help?" button at the top right of this page.

If you plan on leaving video playing actively in the matrix for several hours, make sure to check the "Stay Logged In" button. As a security measure, CheckVideo will time out a user session after an hour of inactivity. Clicking the "Stay Logged In" button leaves the user session active.

For really long viewing times over weeks or months, with up to 36 cameras per monitor, we recommend the CheckVideo Viewing Matrix appliance that is purpose built for live viewing and display wall functions and is not subject to browser timeouts or Windows restarts.

Cloud VMS

CheckVideo's revolutionary managed service enables centralized configuration, viewing and monitoring of video feeds across tens or hundreds of locations while reducing infrastructure costs. Every video camera enrolled into the service benefits from remote live, playback and export without the need to add servers or install software. Combining the best of on-premise recording and off-site backup, your video evidence is safe.

An industry-first search engine saves hours of time on investigations, and built-in video analytics notify you about activities of interest as they occur, not after the fact. As a managed system, updates are included and automatically applied, and the health of the system is monitored to ensure that your property stays secure.

Benefits

Automated Software Updates

Pushes software updates over the network ensuring you always have the latest features.

Built-in Health Monitoring

Our devices monitor their own health and alert within minutes if any component, has an issue.

Unified Interface

Provides single-point view across sites, with automatic time synchronization across customer locations.

Web Based Integration

Delivers point-and-click setup via a web browser.

IP Security

Aggregates, authenticates and encrypts data from video cameras, keeping hackers out. It also firewalls existing 3rd party cameras to keep them off the corporate network.

Software as a Service

Hosted software for system configuration and management that easily scales with business growth, eliminating the need for capital investment in local servers.

Video Dashboard

Enables viewing of video alarm, streaming live and recorded video from all cameras.

Configuration Backup

Stores configuration settings on the CheckVideo appliance and the CheckVideo servers.