MAKE THE
WORLD SEE

Milestone Systems

XProtect® Smart Client 2022 R1

User manual (simplified)

milestone

Contents

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Supported VMS products and versions

This manual describes features supported by the following XProtect VMS products:

- XProtect Corporate

- XProtect Expert

- XProtect Professional+

- XProtect Express+

- XProtect Essential+

Milestone tests the features described in this manual with the above-mentioned XProtect VMS products in the current release version and the two previous release versions.

If new features are only supported by the current release version and not any previous release versions, you can find information about this in the feature descriptions.

You can find the documentation for XProtect clients and add-ons supported by the retired XProtect VMS products mentioned below on the Milestone download page (https://www.milestonesys.com/downloads/).

- XProtect Enterprise

- XProtect Professional

- XProtect Express

- XProtect Essential

Surveillance system differences
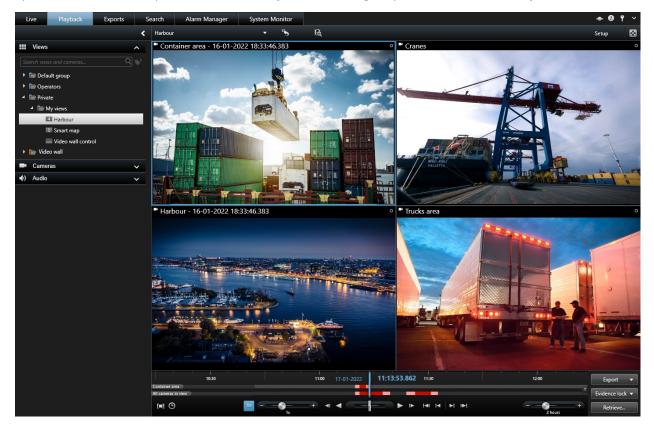
Most of the features are available in all versions of the XProtect VMS products, but there are exceptions depending on what product you are using. For more information, see:

- Key feature overview: https://www.milestonesys.com/solutions/platform/product-index/

- Detailed product comparison chart: https://content.milestonesys.com/media

XProtect Smart Client (explained)

XProtect Smart Client is a desktop application designed to help you manage and view video from the cameras that are connected to your XProtect VMS system. It gives you access to live and recorded video, instant control of cameras and connected security devices, and allows you to perform advanced searches to find video data and metadata - if any - that is stored on the server.

Available in multiple local languages, XProtect Smart Client has an adaptable user interface that can be optimized for individual operators' tasks and adjusted according to specific skills and authority levels.

Additional functionality

Depending on the XProtect add-ons installed on your XProtect VMS system, you can:

- combine video with integrated access control systems, including restricting or allowing access to buildings

- read license plate information from vehicles and view the live or recorded video that shows the vehicles

- view and investigate transactional data from PoS systems in combination with video from cameras that monitor the PoS systems

By using the MIP SDK, users can integrate various types of security and business systems, and video analytics applications, which you manage through XProtect Smart Client.

Workspaces in XProtect Smart Client

XProtect Smart Client comes with a set of dedicated tabs allowing you to perform your daily surveillance tasks. Some of these tabs are standard and others require XProtect add-ons.

Finally, some tabs may be custom-made through the MIP SDK and specific to your XProtect VMS system. Functionality that depends on MIP SDK is not documented in the current manual.

Standard tabs (overview)

- The **Live** tab for viewing live video. See also Live tab (explained) on page 11

- The **Playback** tab for viewing recorded video. See also Playback tab (explained) on page 11

- The **Search** tab for making advanced searches for video and metadata. See also Search tab (explained) on page 11

- The **Exports** tab for exporting video data. See also Exports tab (explained) on page 12

- The **Alarm Manager** tab for investigating and managing alarms. See also (see Alarm Manager tab (explained) on page 12

- The **System Monitor** tab for viewing system information. See also (see System Monitor tab (explained) on page 12

> 🖉 If some of the tabs are unavailable, it is because you do not have the rights required to access all these tabs.

Add-on tabs (overview)

- The **Access control** tab for controlling your access control system and associated cameras. See also Access control tab (explained) on page 13

- The **LPR** tab for identifying vehicles by their license plates, and investigating LPR related events. See also LPR tab (explained) on page 13

- The **Transact** tab for monitoring and investigating transactional data in combination with the associated video streams. See also Transact tab (explained) on page 13

These tabs are visible only if you have acquired base licenses for:

- XProtect Transact

- XProtect LPR

- XProtect Access

All tabs (in detail)

Live tab (explained)

On the **Live** tab, you can view live video feeds, and work with audio, carousels, hotspots, Matrix, smart map, pan-tilt-zoom (PTZ) control, digital zoom, independent playback, and more.

Here, you can also enter setup mode, where you can set up views for your cameras and other types of content.

Playback tab (explained)

On the **Playback** tab, you can investigate recorded video by playing it back, start search from any camera or view, and then document what you find by exporting evidence. To protect the evidence from being deleted from the database, you can also add evidence locks to recorded video.

The timeline gives you advanced features for browsing recorded video and jumping to a specific date and time.

You can also:

- Listen to audio when connected to selected Milestone surveillance systems

- If your XProtect VMS supports smart map, you can get access to the cameras in your system in a geographical interface, which is easy to navigate

- Use hotspots, digital zoom, or carousels, navigate fisheye lens images, print images, and more

Search tab (explained)

On the **Search** tab, you can search across the different types of data available in your VMS system. This includes:

- Video recordings in general

- Recordings with motion

- Recordings with motion in selected areas

- Bookmarks

- People

- Vehicles

- Video recordings with alarms

- Video recordings with events

For each search category, you can apply filters to refine your search.

From the search results, multiple actions are available. For more information, see .

Exports tab (explained)

On the **Exports** tab, you can export video data.

First, you add the sequences that you want to export to the **Export list**. Next, for each item on the **Export list**, you can change the time span by clicking the **Start time** and the **End time**. See also Export video, audio, and still images on page 83.

You can choose which formats to use for the export, and for each format, you can change the **Export settings**.

After you click the **Export** button, you specify an **Export name** and an **Export destination**. Then, you can create the export.

The exports that you create are stored in the folder that you specified in the **Create export** window > **Export destination** field. See also View exported video on page 88.

Alarm Manager tab (explained)

On the **Alarm Manager** tab, you can view and respond to incidents or technical problems that have triggered an alarm. The tab displays an alarm list, an alarm preview, and a smart map or map if one is available.

System Monitor tab (explained)
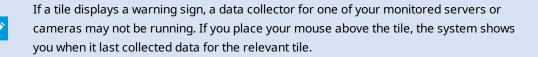
On the **System Monitor** tab, you can get a visual overview of the current state of your system servers, cameras, other devices, and the computer running XProtect Smart Client.

By default, the tiles represent **Recording servers**, **All servers**, **Failover servers**, and **All cameras**. Your system administrator specifies the tiles and the threshold value for each state.

Here is a description of the colors used:

- Green: **Normal** state. Everything is running normally

- Yellow: **Warning** state. At least one monitoring parameter is above the defined value for the **Normal** state

- Red: **Critical** state. At least one monitoring parameter is above the defined value for the **Normal** and **Warning** state

If a tile changes color and you want to identify the server or parameter that caused the change, click the tile. This opens an overview in the bottom of the screen. Click the **Details** button for information about why the state changed.

> If a tile displays a warning sign, a data collector for one of your monitored servers or cameras may not be running. If you place your mouse above the tile, the system shows you when it last collected data for the relevant tile.

Access control tab (explained)

On the **Access control** tab, you can investigate access control events with search and filtering, and view the associated video recordings and access control data. You can also monitor door states, investigate cardholders, and create reports.

You can drag the **Access control** tab to its own separate floating window, while you keep the main window in the background to watch multiple views simultaneously. You can also sort columns and drag the columns to different positions.

You can search for, filter, sort, and review data related to:

- **Events**: Logs the events with a time stamp, event type, the associated door or access control unit, and cardholder name if available. If your XProtect VMS system integrates with multiple access control systems, the list displays from which access control system the event was triggered

- **Doors**: Lists the doors, access points and other access control units in each access control system, and their current state

- **Cardholders**: Lists the cardholders in each access control system and their details

> Depending on your access control system, you may be able to connect to the access control system applications via the **Access control Administration** button in the top right corner to, for example, specify access rights or manage cardholders.

LPR tab (explained)

On the **LPR** tab, you can investigate LPR events from all your LPR cameras, and view the associated video recordings and license plate recognition data. Keep match lists updated and create reports.

The tab includes an LPR event list, and an LPR camera preview for previewing video associated with individual LPR events. Below the preview, information about the license plate appears together with details from the license plate match list it is associated with.

You can filter the event list according to the period, country module, LPR camera, or license plate match list. Use the **Search** field to search for a particular license plate number. By default, this list shows LPR events from the last hour.

You can specify and export a report of relevant events as PDF.

You can make updates to the existing match lists by using the **License Plate Match List** function.

Transact tab (explained)

On the **Transact** tab, you can investigate transactions through search and filtering, and view receipts and video recordings in a combined view.

There is a search field and two filters:
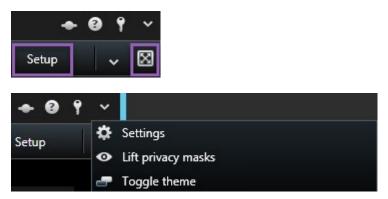
- Search field: enter your search words here to perform a free text search. The search returns transaction lines that contain your search words and does not distinguish between upper and lower case letters. In the receipt, the transaction lines matching the search are highlighted

- Time interval: use this filter to specify the time interval, for example **Last 7 days**. You can also set a custom interval by your own choice. By default, the filter is set to **Today**

- Source: use this filter to select the transaction sources you want to view transactions for. By default, the filter is set to **All**

Buttons in XProtect Smart Client (overview)

XProtect Smart Client has multiple buttons that allow you to perform different actions. The buttons are located in the following places:

- In the upper-right corner

- In the lower-right corner

The buttons available vary depending on the tab you are standing on. For example, **Setup** is not available on all tabs.

Button	Description
Setup	Enter setup mode.
Export	Export video evidence. See also Export video, audio, and still images on page 83.
Evidence lock	Create an evidence lock to prevent evidence from being deleted.
Retrieve	Retrieve recordings from interconnected hardware devices or cameras that support edge storage.
Toggle full screen mode ⊠	Toggle between full screen and a smaller window that you can adjust to the size you want.
Status	Access the **Status** window.
Help	Access the help system, play online video tutorials, or view version number and plug-

Button	Description
	in information.
Log out	Log out of XProtect Smart Client.
Settings	Configure XProtect Smart Client settings and behavior, joysticks, keyboard shortcuts, language, and more.
Lift privacy masks	Users with sufficient rights can temporarily lift privacy masks.
Toggle theme	Switch the XProtect Smart Client theme to dark or light.

Views (configuration)

In setup mode, you can create views and specify which cameras or other types of content should be included in each view. To organize your views, you must create at least one view group. This is often done by your system administrator.

> ✏️ Your ability to edit views and groups depends on your user rights. If you can create the view or group, you can also edit it.

Views and view groups (explained)

The way video is displayed in XProtect Smart Client is called a view. XProtect Smart Client can handle an unrestricted number of views, allowing you to switch between video from various groups of cameras. Views can hold between one and hundred cameras, but can also contain other types of content, for example images and text.

Views must be contained inside view groups that help you organize your views.

Views are available on the **Live** and **Playback** tabs. Views can be private or shared:

- Private views can only be accessed by the user who created them. To make the view private, create it inside the **Private** folder

- Shared views allow multiple operators to share the same views. Depending on your XProtect VMS system:

  - There may be a default folder for shared views named **Shared** or **Default group**

  - Shared views can be shared by all operators, or access to selected shared views can be given to certain operators. Typically, only a few people in an organization can create and edit shared views, for example the system administrators

> ✏️ Not all users may have access to all cameras on the XProtect VMS system. Some of the features you include in your shared view may not be supported in earlier versions of XProtect Smart Client. Always make sure that the users you want to share with have the necessary rights and are running the same XProtect Smart Client version as yourself.

Your user settings, including information about your views, are stored centrally on the XProtect VMS server, so you can use your views on any computer that has XProtect Smart Client installed.

Example of a 2x2 view

What can views contain?

In setup mode in the **System overview** pane, you can see the elements that you can add to your views:

Item	Description
Alarms	Allows you to show a list of alarms or an alarm preview. Both elements are also available on the **Alarm Manager** tab.
Access Monitor	Access monitor - with XProtect® Access installed, you can show access monitors in your views, for example for a specific door.

Item	Description
Cameras	Allows you to show video feed from a live camera or play back video. The cameras appear under the site name, which is defined by your system administrator.
Carousels	Allows you to shift between cameras at a pace that you define.
Hotspots	Allows you to show whatever camera is in focus in a high resolution or frame rate.
HTML pages	Allows you to show a webpage, for example an online news channel.
Images	Allows you to show an image, for example if you want to distribute a picture of a suspect.
LPR	With XProtect® LPR installed, you can add LPR cameras to views.
Maps	Allows you to show a floor plan or a geographical area.
Matrix	Allows you to show a Matrix position.
Smart maps	Allows you to navigate your cameras on a geographical map of the world based on one of these online map services: • Bing Maps • Google Maps • Milestone Map Service • OpenStreetMap
Smart Wall controls	If XProtect Smart Wall has been configured by your system administrator, Smart Wall controls allow you to push cameras and other types of content to your video walls.
Text	Allows you to show text, for example if you want to provide instructions for other operators.
Transact	If XProtect Transact has been installed in your system, you can add point-of-sales systems together with cameras.

Create view groups

Your XProtect Smart Client may be preconfigured to display view groups that you can add your views to. However, you can create your own view groups to help you organize your views.

Example

Imagine that you have cameras installed on ten different levels in a multi-story building. You decide to create a view group for each level and name them accordingly: **Ground floor**, **First floor**, **Second floor**, and so on.

Steps:

1. In setup mode, in the **Views** pane, select the **Private** or **Shared** top-level folder you want to add a group to.

2. Click **Create new group**:

   A new group is created named **New group**.

3. Select and click the **New group** to overwrite the name.

4. You can now create views within this group.

Create views

To view or play back video in XProtect Smart Client, first you must create a view, where you add the cameras you need.

Requirements

Before creating the view, you need a group that you can add the view to. See also .

Steps:

1. In the right corner, click **Setup** to enter setup mode.

2. In the **Views** pane, select the group you want to add the view to.

3. Click to create a new view.

4. Select a layout. The layouts are grouped according to their aspect ratio, and according to whether they are optimized for regular content or content in portrait mode (where the height is greater than the width).

5. Enter a name for the view by overwriting the default **New View** name.

6. Click **Setup** again to exit setup mode. Your changes are saved.

Add cameras and other items to views

You can add different types of elements to your views, for example cameras.

Steps:

1. Open the view that you want to modify.

2. Click **Setup** to enter setup mode.

3. In the **System overview** pane, drag the required element into a view item.

4. Fill out any additional information about the element.

5. Click **Setup** again to exit setup mode. Your changes are saved.

Managing views

Views are located on the **Live** and **Playback** tabs and can contain cameras and other types of content. If views have been assigned shortcut numbers, you can select a view by using keyboard shortcuts. See also Keyboard shortcuts (overview) on page 35.
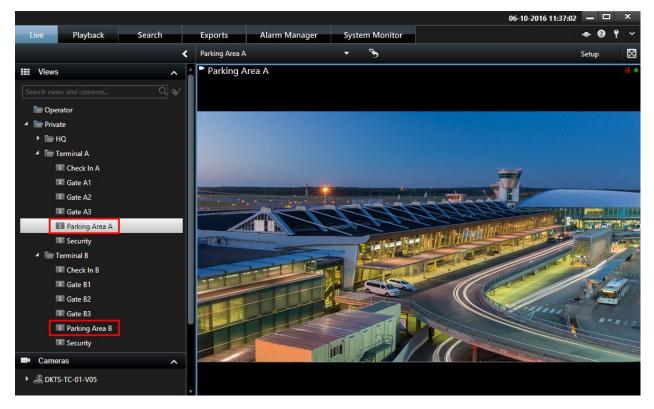
Searching for views and cameras (explained)
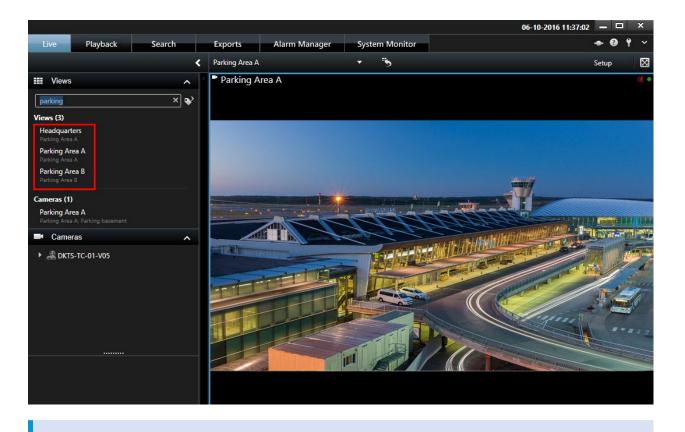
If you have a large or complex hierarchy of view groups, the search function makes navigation easier and allows you to search for views, cameras - including camera characteristics (see also Camera characteristics on page 25) - and keywords across the hierarchy. You can find an overview of common keywords if you click [icon] next to the search field.

Example

The following two images show a hierarchy of views and what it looks like when you search for **parking**:

> If a top-level folder has a red background [icon], it is protected. You can still access any views under the protected top-level folder, but you cannot create new views or edit existing views under it.

As you enter the search words, matching results for views and cameras are displayed. When you select one or more of the matching cameras, the cameras appear in a temporary view that is optimized for the number of cameras you select.

To view a single camera in a 1:1 view, click the search result in the **Cameras** section.

To view the first 25 cameras in a view, click the search result in the **Views** section. You can also select cameras manually if you press either **Ctrl** or **Shift** while clicking the cameras. Press **Enter** to view the cameras.

Camera characteristics

- Name

- Description

- Capability:

    - PTZ

    - Audio

    - Input

    - Output

- Views containing a specific camera

- Recording server name or address (shows connected cameras)

> ✅ Your system administrator can add free text tags in the camera description field on the XProtect VMS server to make it possible to group cameras and search for these tags. An example could be that all outdoor cameras use the tag "Outdoor" in the description field. In that case, you can find all cameras of this type.

Change individual cameras temporarily

You can temporarily change the cameras in a view. However, it does not permanently change the view. If you want to permanently change the content of a view, you must be in setup mode.

Requirements

You can only change the camera if the view item contains a camera.

Steps:

1. Select the relevant item in the view.

2. Do one of the following:

    - In the **Cameras** pane, drag the relevant camera into the position in the view.

    - On the camera toolbar, click **More** > **Send to window** > **Main window**, and then select a position in the view.

3. To restore your original view, click 📷 on the workspace toolbar.

> ✏️ In the **Cameras** pane, the list of cameras is grouped by server. If a server is listed with a red icon, it is unavailable, in which case you will not be able to select cameras from that server.

Swap cameras

You can temporarily swap two cameras in a view. The camera in that position then exchanges places with the one you swap it with. You can only swap cameras with other cameras. This can be useful, for example, if you want to keep all your most important cameras in a certain position in your view.

Steps:

1. Click the relevant camera title bar and drag it to a new position.

2. To restore the original view, click on the workspace toolbar.

> If you want to make permanent changes to your view, you must first be in setup mode.

Send video between open views

You can send video from a selected camera position to a single-camera position in another open view, including any views you may have in floating windows or on secondary displays.

> This feature is not available for hotspots, carousels, or Matrix positions.

Steps:

1. On the camera toolbar, click **More** > **Send to window**.

2. Select the destination view, and then select the position in the view where you want the video for that camera to display. If some of the camera positions are not selectable, they might be unavailable or used for hotspots, carousels, or Matrix content.

Send views between displays

You can send a view to a specific display or a floating window. This is useful, for example, if you have several monitors. Afterwards, you can synchronize the time of the destination display with the time used in the main window.

1. In the **Views** pane, right-click the relevant view.

2. Click **Send view to** and then specify how you want your view to display.

If more secondary displays are available, they will be numbered.

3. To synchronize the time between the two displays, click **Link window** in the upper-right corner. The timeline is hidden in the destination window, but is still visible in the main window.
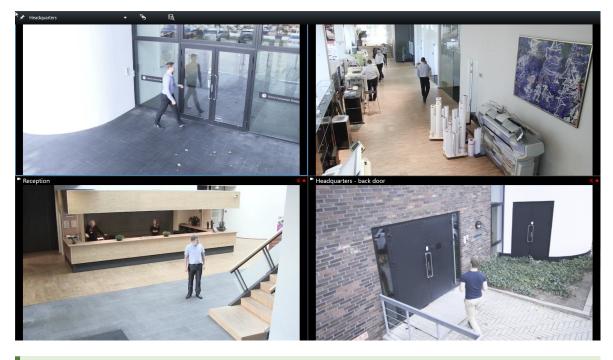
> ✎ Any hotspots, carousels, Matrix positions, still images, or HTML pages included in the view will work as usual in a floating window.

Multiple windows or displays (explained)

You can send individual views to separate windows or displays, while keeping the main window of the XProtect Smart Client in the background, so you can watch several views simultaneously. The selected camera or item is always displayed with a blue border.

You can send any view to:

- A primary display that shows the view in a separate full-screen window on the main display of your computer with the main window hiding behind it
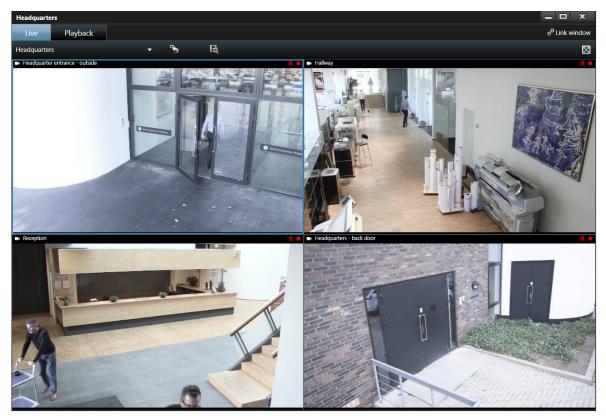
> ✅ By default, the tabs and controls are hidden. Press **Esc** to make the tabs and certain controls reappear.

- A secondary display that shows the view in a full-screen window on another monitor (if available). The main window stays visible on the primary monitor

> ✅ By default, the tabs and controls are hidden. Press **Esc** to make the tabs and certain controls reappear.

- A floating window that shows the view in a separate window. You can open any number of floating windows and drag them to any monitor that is connected to your computer.

> ✅ Click **Link window** to synchronize the time in the floating window with the time of the main window.

> ✏️ Your multiple window setup is stored in XProtect Smart Client, so next time you log in, you can reuse it. However, the setup applies only to the computer that you are currently using. To use multiple windows on more than one computer, you must configure your multiple window setup on each computer.

Navigating your cameras and views

Learn about some of the ways of navigating within or between the cameras in XProtect Smart Client.

Hotspots (explained)

A hotspot lets you view magnified and higher quality video from a selected camera in a dedicated position in a view. Hotspots are useful because you can use a low image quality or frame rate for cameras in the regular positions of the view and a high image quality or frame rate for the hotspot. This saves bandwidth on your remote connections.

There are two types of hotspots:

- Global hotspots, which display the selected camera regardless of whether the camera is in the main window or in a secondary display

- Local hotspots, which only display the selected camera of the local display

It is a good idea to have a hotspot in one of the larger positions of the view, for example, the large position in a **1+7** view: .

Use hotspots

- When you click a camera in a view, the hotspot position updates with video feed of that camera

- The title bar displays the hotspot icon:

When you view live or recorded video, you can double-click a hotspot (or any other camera position in a view) to maximize it. When you do this, the video in the hotspot is displayed in full quality, regardless of your image quality selection. If you want to make sure that the selected image quality also applies when maximized, in **Setup** mode, in the **Properties** pane, select **Keep when maximized**.

Carousels (explained)

A carousel is used for displaying video from several cameras, one after the other, in a single position in a view. You can specify which cameras to include in the carousel as well as the interval between camera changes. Carousels are displayed with the carousel icon on the toolbar: .

> Fisheye lens cameras cannot be included in a carousel.

You can maximize a carousel by double-clicking the carousel position. When you do this, video from cameras included in the carousel is by default displayed in full quality, regardless of your image quality selection. This default cannot be overridden for carousels.

You can use digital zoom and PTZ controls from a carousel if the camera supports this. When you use the PTZ or digital zoom controls that appear, the carousel pauses automatically.

Use carousels

If any of your views contain carousels, this icon will appear in the title bar next to the camera name: .

Requirements

- Carousels must be configured before you can use them.

- In the **Settings** window, **Default for camera title bar** must be set to **Show**.

Steps:

1. On the **Live** tab, open a view that contains a carousel. When you hover over the view item, this toolbar appears: .

2. The carousel starts automatically. To pause it, click the **Pause** button.

3. To shift to the next or previous camera in the carousel, click the **Previous camera** or **Next camera** button.

4. Additional actions available in the toolbar:

    - Jump to the place on the smart map, where the camera is located

    - Start search from the camera currently in focus, in a new window

    - Create snapshot

    - Copy to clipboard

> ✅ You can maximize a carousel by double-clicking the carousel position. Video from cameras included in the carousel is by default displayed in full quality, regardless of your image quality selection.

Digital zoom (explained)

Digital zoom lets you magnify a portion of a given image so you are able to have a closer look at it. It works both in live and playback mode.

Digital zoom is a useful feature for cameras that do not have their own optical zoom capabilities. Using digital zoom will not affect any recording of the video. Recording will still take place in the regular format of the camera.

For non-PTZ cameras, digital zoom is enabled by default. If you enable or disable digital zoom on one camera, all cameras in your view are affected. For PTZ cameras, this setting only applies to one camera at a time.

When you export video data, you can choose to export the regular images or the digitally zoomed images in the AVI or in the JPEG formats. When you export in the XProtect format, this is unavailable because the recipient can use digital zoom on the exported recordings. If you print an image on which you have used digital zoom, the digitally zoomed area of the image will be printed.

Use digital zoom

Requirements

To enable digital zoom, on the camera toolbar, click **More** and select **Digital zoom**.

Steps:

1. Click and drag inside the image to zoom. The area you select is highlighted by a dotted line. When you release the mouse button, the zoom will take effect.

2. To move to other areas of the image while maintaining your zoom level, in the overview frame, drag the highlighted area to the required position.

3. To adjust the zoom level, click inside the image and use the scroll wheel on your mouse.

4. Click the **Home** icon inside the virtual joystick to return to the normal zoom level.

Virtual joystick and PTZ overlay buttons (explained)

If your views include fisheye cameras or lenses, or PTZ devices, you can navigate the images by using the virtual joystick or the PTZ navigation buttons that may appear inside the image.

The virtual joystick:

> ✅ If you do not want the camera toolbar to pop up when you hover over the view item, press and hold the **CTRL** key while moving the mouse.

Views and shortcuts (explained)

You can use keyboard shortcuts to select views if the views have been assigned numbers. You assign numbers to the views in setup mode on the **Live** and **Playback** tabs.

> ⚠ Using keyboard shortcuts to select a view only works if you are using a numeric keypad.

Example

If you have assigned the number **1** to a particular view, you select the view by pressing ***** + **1** + **Enter**.

Keyboard shortcuts (overview)

When you work on the **Live** and **Playback** tabs, a number of keyboard shortcuts allow you to navigate within and between views.

> ✏ These shortcuts cannot be used for positions in views containing Matrix content or static images.

Press these keys	To do this
Enter	Toggle maximized and regular display of the selected item in the view.
Alt	Select a specific view item within a view. First, press **Alt**. A number is displayed for each open window. If, for example, you want to select a view item in the second window, press **2**. Multiple numbers now appear, one for each view item that is visible in the second window. Press the number of the view item that you want to select, for example **4**. When a view item is in focus, it is marked with a blue frame. If you are using a PTZ camera or a hotspot, this allows you to control cameras with a joystick or to send the view item directly to the hotspot without using the mouse.

Press these keys	To do this
/ + **<camera shortcut number>** +**Enter**	Change the camera in the selected view item to the camera with the matching shortcut number. Example: if the required camera has the shortcut number **6**, press **/+ 6**+**Enter**. Camera shortcut numbers may not necessarily be in use on your XProtect VMS system. They are defined on the server.
/+**Enter**	Change the camera in the selected view item to the default camera.
/ +**/**+**Enter**	Change the cameras in all view items to the default cameras.
*+<view shortcut number> +**Enter**	Change the selected view to the view with the matching shortcut number. Example: if the required view has the shortcut number **8**, press ***+ 8**+**Enter**. If view shortcut numbers are used, you can see them on the **Live** and **Playback** tabs in the **Views** pane, where they appear in parentheses before the names of the views.
6 (numeric keypad only)	Move the view position selection one step to the right.
4 (numeric keypad only)	Move the view position selection one step to the left.
8 (numeric keypad only)	Move the view position selection one step up.
2 (numeric keypad only)	Move the view position selection one step down.

Viewing live video

You view live video mainly on the **Live** tab. To view live video, you must find a view that shows video from the cameras that you are interested in. The views are available in the **Views** pane. For each camera that appears in a view, different actions are available, for example taking snapshots or starting manual recording. See also Camera toolbar (overview) on page 39. If something catches your attention, you can zoom in to take a closer look using the virtual joystick.

Live video (explained)
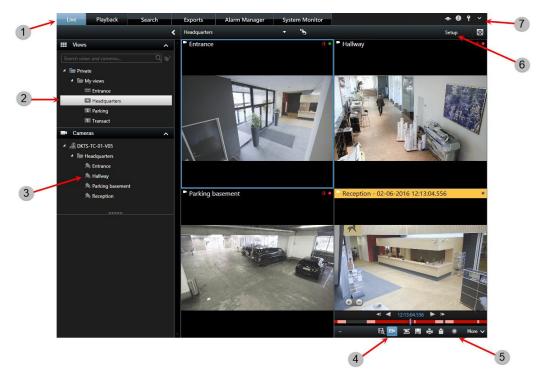
The video stream from the camera is not necessarily being recorded. Typically, recording takes place according to a schedule, for example, every morning from 10.00 to 11.30. Or whenever the XProtect VMS system detects special events, for example, motion generated by a person entering a room, a door is opened, or similar.

> ✅ If multiple streams have been set up on the server, you can temporarily view a different stream by selecting this from the camera toolbar. On the camera toolbar, click **More** and then select a stream from the available list.

To investigate an incident that was recorded, go to the **Playback** tab. To perform advanced searches, go to the **Search** tab.
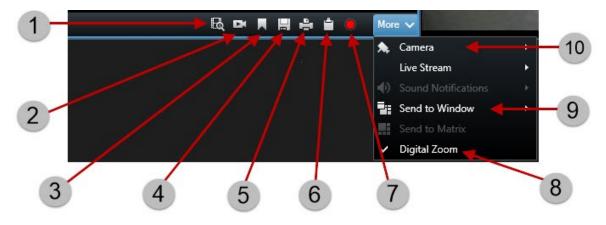
Live tab (overview)

Number	Description
1	The different workspaces. See also Workspaces in XProtect Smart Client on page 10.
2	Select a view.
3	Change cameras in views temporarily. See also Change individual cameras temporarily on page 26.
4	View recorded video for individual cameras. See also View recorded video independently of timeline on page 49.
5	The camera toolbar. See also Camera toolbar (overview) on page 39.
6	Enter or exit setup mode to add cameras and other types of content to your views.
7	Buttons. See also Buttons in XProtect Smart Client (overview) on page 14.

Camera toolbar (overview)

The camera toolbar appears whenever the cursor hovers over a camera inside a view. The camera toolbar is available both on the **Live** and on the **Playback** tab.

Number	Description
1	Open a new search window where the camera is preselected. See also Start search from cameras or views on page 65.
2	View recorded video independently of the timeline. See also View recorded video independently of timeline on page 49.
3	Bookmark the video.
4	Take simple snapshots of what you are viewing. See also Take single snapshots on page 41.
5	Print a surveillance report from a single camera. See also Print report from single cameras on page 89.
6	Copy single images to the clipboard. See also Copy images to clipboard on page 91.
7	Record video manually from a single camera. See also Record video manually on page 41.
8	Enable digital zoom. See also Use digital zoom on page 33.
9	Change the camera in the view item temporarily. See also Change individual cameras temporarily on page 26.

Hide camera toolbar

When you minimize the camera toolbar in a view item, the toolbar remains minimized only to you in the current session. However, you can hide it permanently for a particular view item, for all users with access to the view item.

Steps:

1. On the **Live** or **Playback** tab, click **Setup** to enter setup mode.

2. Find the view item where you want to hide the toolbar.

3. Click ⌄ to hide the toolbar.

4. Click **Setup** again to exit setup mode. Your changes are saved.

> ✏ The setting you make in setup mode is stored on the server, so that the change impacts other XProtect Smart Client operators.

Camera indicators (explained)

The camera indicators show you the status of the video that is displayed in the camera view items. The camera indicators are visible only if the camera title bar is enabled in the **Settings** window on the **Application** tab.

> ✓ You can turn the camera title bar on and off on individual view items. On the **Live** or **Playback** tab, click **Setup** and select the **Show title bar** check box in the **Properties** pane.

The list describes the different camera indicators that appear when:

- 🏃 motion is detected. Click inside the image to reset the motion indicator

- ◥ the server connection to the camera is lost

- ● video from the camera is being recorded

- ⏩ a connection to the camera is established. This icon is only relevant for live video

- ▶ playing back recorded video

- ⬤ no new images have been received from the server for more than two seconds

> ✏️ In the camera properties, you can add sound to notify you when there is motion.

Record video manually

Recording while watching live video is useful if you see something of interest.

Steps:

On the camera toolbar for the view item that you want to record, select one of the following options:

- 🔴 Start recording for # Minutes

  Once started, recording will continue for the number of minutes determined by your system administrator. You cannot change this, and you cannot stop recording before the specified number of minutes has passed.

- ⚪ Start manual recording

  Once started, recording will continue for the number of minutes determined by your system administrator, or you can click the icon again 🔴 to stop manual recording.

  > ✅ You can start recording the video stream from more than one camera simultaneously, but you must select them one by one.

Take single snapshots

As you are viewing live or recorded video, or searching for video, you can take an instant snapshot that you can share. The path to the folder, where the still image is saved, is specified in the **Settings** window under **Application settings**.

Requirements

In the **Settings** window under **Application**, **Snapshot** must be set to **Available**.

Steps:

1. If you are on the **Live** or **Playback** tab:

    1. Hover over a view item that contains a camera, a hotspot, or a carousel.

    2. In the toolbar, click ![save icon]. The icon momentarily turns green.

2. If you are on the **Search** tab, double-click a search result and click ![save icon] in the camera toolbar. The icon momentarily turns green.

3. To access the snapshots, go to the file location where the snapshots are saved.

> ✎ If the image contains a privacy mask, this privacy mask is also applied to the snapshot image.

Investigating incidents

You investigate incidents mainly on the **Playback** tab by using the timeline to browse recorded video. To view recorded video, you must find a view that shows video from the cameras that you are interested in. The views are available in the **Views** pane. For each camera that appears in a view, different actions are available, for example taking snapshots or launching search. See also Camera toolbar (overview) on page 39. If something catches your attention, you can zoom in to take a closer look using the virtual joystick.
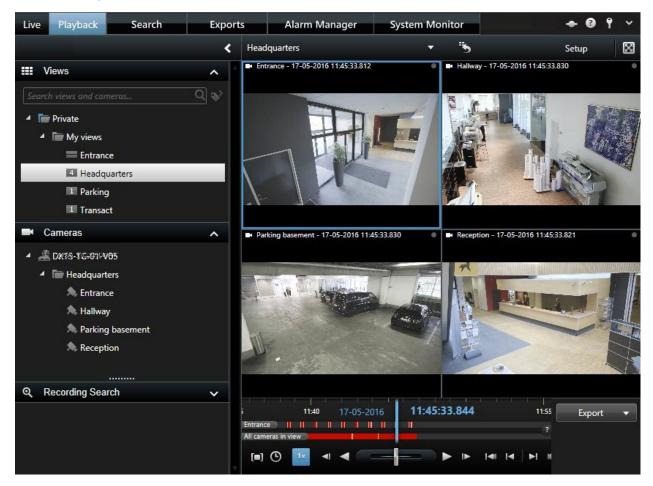
You can perform advanced searches on the **Search** tab and use the search results as a starting point for further investigation or actions, for example exporting and bookmarking.

If the incident is associated with an alarm, go to the **Alarm Manager** tab, or select a view where the **Alarm List** has been added.

Viewing recorded video (explained)

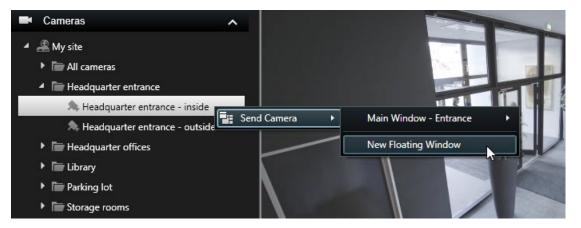There are different ways of viewing recorded video:

On the Playback tab

On the **Playback** tab, all cameras in a view display recordings from the same point in time, the master time. You can play back or browse recordings by using the timeline. See also .

However, you can also view and navigate recordings from individual cameras independently of the master time. **Independent playback** must be enabled in the **Functions** settings.

If you are accessing your cameras through the tree structure in the **Cameras** pane, you can open individual cameras in a new window from the **Playback** tab.
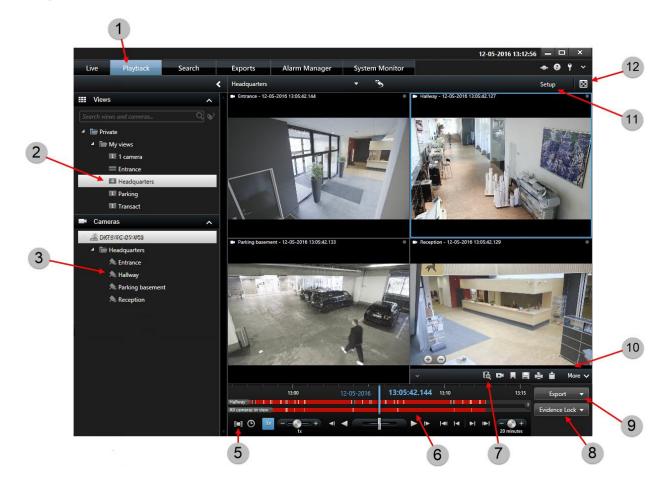

On the Live tab

Though the **Live** tab normally shows live video, you can watch recorded video for individual cameras by clicking the ▶️ button in the camera toolbar. This will open a new window where you can play back or browse the recordings. **Camera playback** must be enabled.

On the Search tab

The search results are basically video sequences that you can play back:

- Preview the search results. See also

- Play back the search results in full screen mode or in a separate window. See also

Playback tab (overview)

Number	Description
1	View recorded video on the **Playback** tab.
2	Select a view in the tree structure or use keyboard shortcuts. See also Keyboard shortcuts (overview) on page 35.
3	Change individual cameras temporarily. See also Change individual cameras temporarily on page 26.
5	Select a time span for exporting video. See also Time navigation controls (overview) on page 47.

Number	Description
6	Browse using the timeline. See also Timeline (explained) on page 46.
7	Open a new search window with the camera preselected. See also Start search from cameras or views on page 65.
8	Create an evidence lock.
9	Export video data. See also Export video, audio, and still images on page 83.
10	Perform various actions on the camera toolbar. See also Camera toolbar (overview) on page 39.
11	Enter or exit setup mode to add cameras and other types of content to your views.
12	Switch to full screen mode.

Timeline (explained)

The timeline displays an overview of periods with recordings from all cameras displayed in your current view. Two timelines are displayed in the timeline area:

- The upper timeline shows the recording periods of the selected camera

- The lower timeline is for all the cameras in the view, including the selected camera. If you have linked floating windows, these will also be included on the lower timeline
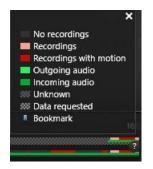
> ✅ Drag the timeline to the right or left to move in time, or use the scroll wheel of your mouse.
>
> To adjust the range of the timeline, press **CTRL** and use the scroll wheel at the same time.

You will see these colors in the timeline:

- Light-red indicates recordings

- Red indicates motion

- Light green indicates outgoing audio

- Green indicates incoming audio

For a legend of the color codes, to the far right, click the small question mark.

Additional markers and colors

If there are additional sources of data available in your XProtect VMS system, incidents from these sources are shown as markers in other colors. The incidents can appear as pop-ups in the timeline.

> ⚠️ To view markers and colors from additional sources, **Additional data** and **Additional markers** must either be enabled in the timeline settings or server-side by your system administrator.

Bookmarks in the timeline (explained)

Bookmarks in the timeline are indicated with a blue bookmark icon: . To view the bookmarked video, place your mouse over the icon.

Time navigation controls (overview)

Number	Description
1 and 3	The playback date and time is the time to which all the cameras are tied. When you play back recordings, all cameras in the view will show video from the same time. Some cameras, however, may only record if motion is detected. Also, there may be no recorded video from one or more cameras in the view matching the specified point in time. Then, the last image in the database prior to the specified point in time will be dimmed.
2	The time of the timeline is indicated by a blue vertical line.
4	▣ Select a period of time by dragging the start and end time indicators on the timeline - typically when you are exporting video. Click again to see the timeline with no time selected.
5	⏰ Jump to a specific point in time by specifying the date and time.
6	The playback speed slider lets you change the current playback speed. Move the slider to the left for slow motion, and to the right for fast motion. Click **1x** for normal speed.
7	◀∣ Move to the image just before the one currently viewed.
8	◀ Play backward in time. ❚❚ When you click either **Play backward** or **Play forward**, the button turns into a pause button.
9	▭ Adjust the speed. Drag it to the right to increase forward play speed. Drag to the left to increase backward play speed.
10	▶ Play forward in time.
11	∣▶ Move to the image just after the one currently viewed.
12	⏮ Move to the first image in the database for the selected camera.
13	◀∣ Move to the first image in the previous sequence.

Number	Description
14	Move to the first image in the following sequence.
15	Move to the last image in the database for the selected camera.
16	Specify the time span of playback in the timeline.

View recorded video independently of timeline

When you play back video on the **Playback** tab, all recordings in the view are synchronized with the timeline. For individual cameras, you can play back video independently of the timeline.

> You can only use this feature for ordinary single-camera positions, not for hotspots, carousels, or Matrix positions.

Requirements

In the **Settings** window > **Functions** tab, the **Independent playback** option must be set to **Available**.

Steps:

1. Move your cursor to the bottom of the camera that you want to view recorded video from. On the toolbar that appears, click the **Independent playback** button.

   The independent playback timeline appears:

2. Drag the timeline to set the start time.

3. To view recorded video for the selected time on all the cameras in your view at once, on the toolbar, click the **Use the selected time on the playback timeline** button: . This displays the **Playback** tab with all cameras synchronized to the time you have selected.

Investigate your search results

There are different ways of investigating incidents that you have found on the **Search** tab:

- Open the search result in a separate window where the **Playback** tab is preselected. See also Open search results in separate windows on page 66

- Open the search result in a detailed view. Do one of the following:

  - In the list of search results, double-click the search result to view it in full screen mode. Double-click again to return to the list of search results

  - If you are previewing your search result in the preview area, double-click inside the video image. The search result opens in full screen mode. Double-click again to return to the preview area

Searching for video data

The search features are available mainly on the **Search** tab, but they are integrated with the **Live** and **Playback** tabs.

Search for video

The **Search** tab lets you search for video recordings, and - based on the search results - lets you take action, for example by exporting.

What can you search for?

- Video sequences

- Video sequences with motion

- Bookmarked video

- Video sequences with alarms

- Video sequences with events

- Video sequences with people

- Video sequences with vehicles

- Video recorded at a certain location

Requirements

- Searching for people, vehicles, and location is only available if these search categories were enabled by your system administrator

- Searching for vehicles is also available if you have XProtect® LPR installed in your system. For more information, ask your system administrator
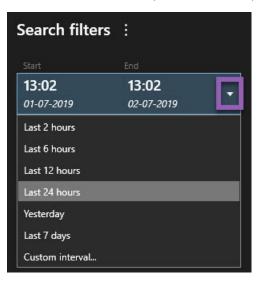
> The search categories **Alarms**, **Events**, **People**, **Vehicles**, and **Location** are only available if you are using one of these products:
>
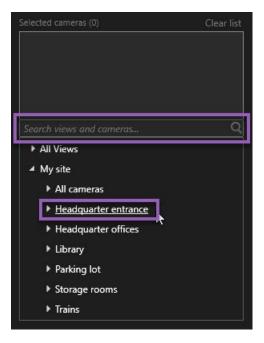> - XProtect Corporate
>
> - XProtect Expert
>
> You can only combine search categories if you are using one of the products mentioned above. For information about the features available in your XProtect VMS, see Surveillance system differences on page 8.

Steps:

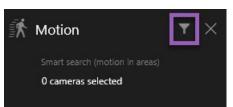1. Click the arrow to select a predefined time span, or define your own **Custom interval**.

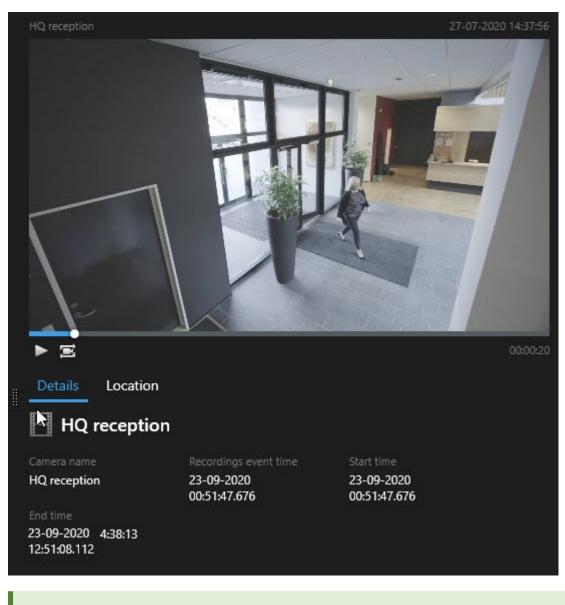2. In the **Selected cameras** list, do one of the following to add cameras to your search:

- Use the search function to find cameras or views

- Manually select the cameras in the tree structure. To add all cameras within a view, select the name of the view

As you add cameras, the search is run immediately.

3. Click **Search for** to select the search categories. You can use search categories alone or combined.

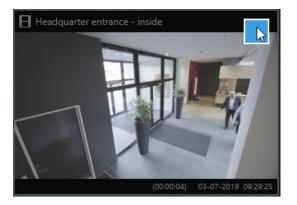4. For each search category that you add, you can refine the search by adding search filters.

5. To preview the video of a search result, select the search result and, in the preview pane, click ▶.

> ✅ To play back the video sequence in full-screen mode, double-click the search result.

6. To make the action bar appear, hover over the search results, one by one, and select the blue check box that appears.

The blue action bar appears:

Search for motion (smart search)

When you search for video recordings with motion, you can apply smart search filters to show only search results with motion in areas that you define.

Example

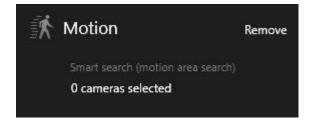Use smart search to find video footage of a person entering through a doorway that is monitored by multiple cameras.

Requirements

To use smart search filters, smart search must be enabled on your user profile by your system administrator.
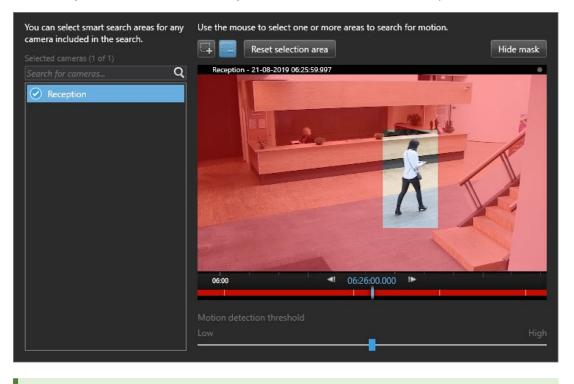
Steps:

1. On the **Search** tab, select a time span.

2. Select the cameras that you want to include in your search.

3. Click **Search for** > **Motion** > **New search**. If the database has any recordings with motion within the selected time span and cameras, the recordings appear as thumbnail images in the search results pane.

4. To find motion in selected areas only:

   1. Below **Motion**, click **0 cameras selected**.

   A dialog box appears with a list of the cameras that you selected.

   2. Select one camera at a time and, in the red preview area, click and drag to unmask at least one area. The system will look for motion only in that area. You can unmask multiple areas.

> ✅ The sensitivity of the motion detection is defined by your system administrator in Management Client on individual cameras. However, you can use the slider to adjust the sensitivity. For more information, see Motion search threshold (explained) on page 57.

   3. Automatically, the search is run. Click outside the dialog to return to the search results.

4. To perform actions, for example bookmarking search results, hover over the search results and select the check box ☑ . The action bar appears.

Motion search threshold (explained)

When you search for motion in selected areas of a camera, you can adjust the motion threshold. The motion threshold determines how sensitive the motion search mechanism is:

- The higher the threshold, the more motion is required to activate motion detection. Likely, this will produce fewer search results

- The lower the threshold, the less motion is required to activate motion detection. Likely, this will produce more search results
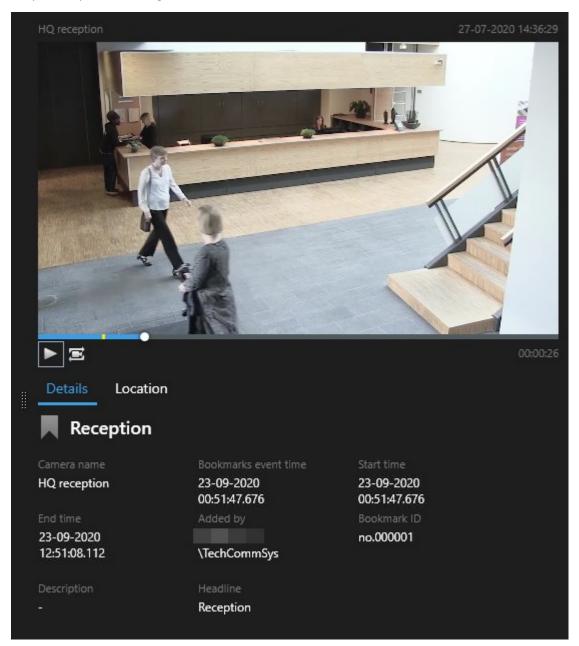
Search for bookmarks

You can find incidents that are bookmarked by you or others for any number of cameras.

Steps:

1. Select the cameras that you want to include in your search.

2. Click **Search for** > **Bookmark** > **New search**. If the database has any bookmarked recordings, they appear as thumbnail images in the search results pane.

3. To preview the video sequence and bookmark details, select a search result and play back the video in the preview pane on the right-hand side.

4. To view the recording in full-screen mode, double-click the search result.

5. To perform other actions, for example editing the bookmark, hover over the search result and select the check box ☑. The action bar is displayed.

Search for alarms

When you search for video recordings associated with alarms, you can apply search filters to show only search results with certain alarms, for example alarms in a certain state that are assigned to a specific operator.

Steps:

1. Select the cameras that you want to include in your search.

2. Click **Search for** > **Alarms** > **New search**.

3. Apply search filters to narrow down search results. You can filter for:

   - **Priority**

   - **State**

   - **ID** - Type the full ID to filter for it

   - **Owner**

   - **Server** - available only if you are using Milestone Federated Architecture™

   > If you are using Milestone Federated Architecture™, the **Priority** and **State** filters are applied across all connected sites.

Search for events

When you search for video recordings associated with events, you can apply search filters to show only search results with certain events, for example events that come from a specific source or server.

Steps:

1. Select the cameras that you want to include in your search.

2. Click **Search for** > **Events** > **New search**.

3. Apply search filters to narrow down search results. You can filter for:

   - **Source**

   - **ID** - Type the full ID to filter for it

   - **Server** - available only if you are using Milestone Federated Architecture™

Search for people

> 🖉 This search category and its search filters are only available if they were enabled by your system administrator.

When you search for video recordings that include people, you can apply search filters to show only search results with people that have certain characteristics, for example people of a certain age or height.

1. Select the cameras that you want to include in your search.

2. Click **Search for** > **People** > **New search**.

3. Apply search filters to narrow down search results. You can filter for:

   - **Age** - Filter for people in a certain age range

   - **Gender** - Filter for males or females

   - **Height** - Filter for people in a certain height range

   - **Face** - Select the check box to limit search results to people whose face is visible

Search for vehicles

> 🖉 This search category and its search filters are only available if they were enabled by your system administrator.
>
> Searching for vehicles is also available if you have XProtect® LPR installed in your system.
>
> For more information, ask your system administrator

When you search for video recordings that include vehicles, you can apply search filters to show only search results with certain vehicles, for example a vehicle with a certain license plate that was issued by a certain country.

1. Select the cameras that you want to include in your search.

2. Click **Search for** > **Vehicles** > **New search**.

3. Apply search filters to narrow down search results. You can filter for:

- **Color** - Filter for vehicles of certain colors

- **License plate** - Type a part of a license plate number or the full license plate number to filter for it

- **Country** - Filter for license plates that were issued by certain countries

> ✏️ This search filter is only available if you have XProtect® LPR installed in
> your system.

- **Vehicle type** - Filter for types of vehicles, for example trucks

- **Vehicle speed** - Filter for vehicles moving at a certain speed

- **License plate match list** - Filter for license plates that are part of certain license plate match lists

> ✏️ This search filter is only available if you have XProtect® LPR installed in
> your system.

Search for video at location

> ✏️ This search category and its search filters are only available if they were enabled by your
> system administrator.

When you search for video recordings recorded at a certain location, you can apply search filters to show only search results in a specific location.

1. Select the cameras that you want to include in your search.

2. Click **Search for** > **Location** > **New search**.

3. Apply search filters to narrow down search results. You can filter for geographic coordinates by specifying the latitude and longitude coordinates and the radius of the search area.

Search results, settings, and actions

This section describes the search timeline and the different settings and things you can do while searching.

For information about saving and managing searches, see Managing your searches on page 78.

Timeline on Search tab (explained)

The timeline gives you an overview of how the search results are distributed. The timeline also allows you to navigate the search results.
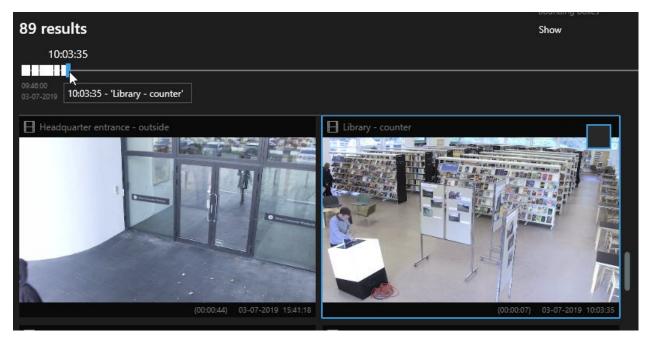
The scope of the timeline changes according to the selected time span, for example **Last 6 hours**.

The white markers indicate where the search results are.

Individual markers may indicate that there are multiple search results. By hovering over the markers, information is displayed about the time and the cameras that recorded the events or incidents.

To navigate the search results, click a marker. The marker turns blue, and the associated search result is marked with a blue border.

If the marker that you select shows more than one search result, the first search result is marked.

> If a marker indicates more than 10 search results, a message will inform you about the number of search results and the number of associated cameras.

Actions available from search results (overview)

Based on your search results, there are multiple actions available. Some actions are available in the blue action bar, others in the preview area.

> The actions available may differ depending on your user rights.

Action	Description
	Add the selected sequences to the **Exports** tab > **Export list**. All the sequences that you add to the **Export list** are ready for export on the **Exports** tab. See also Export video, audio, and still images on page 83.
	Create PDF reports with information about the search results, for example still images from the video sequences.
	Bookmark multiple search results at the same time.
	Edit multiple bookmarks at the same time.
	Add evidence locks to protect the video sequences and data from related devices, for example audio, from being deleted.
	Open multiple search results in a separate window, where you can view the video in live or playback mode, export, create evidence locks, and retrieve recordings from devices and cameras belonging to interconnected VMS systems.
	Take multiple snapshots of your search results at the same time.
	When you are previewing video, you can transfer the current time to the playback timeline. This is useful, for example, if you want to look at related cameras on the **Playback** tab at the time that an incident took place.

MIP-related actions

There may be additional actions available, related to third-party software. The MIP SDK is used to add these additional actions.

Merged search results (explained)

If you are using multiple search categories, and the search results overlap in time, they are merged into one. In some situations into multiple search results. This happens when different search criteria match video from the same camera within the same time span. Instead of returning different search results that show basically the same video sequences, XProtect Smart Client simply gives you one search result that contains all details, for example the camera name, indications of event time, and search categories.

Examples:

Find vehicle on Memory Lane 15

Suppose you want to find a vehicle of the type truck on Memory Lane 15 within the last two hours. To configure your search:

1. Select 10 cameras placed in the right area.

2. Set **Duration** to **Last 2 hours**.

3. Add the search category **Vehicles** and filter on **Truck**.

4. Add the search category **Location** and filter on the geo coordinates of the address and a search radius.

5. Select the **Match all criteria** check box.

> For more information, see Search for vehicles on page 60 or Search for video at location on page 61.

Find bookmarked alarm

Two days ago an alarm went off in your XProtect VMS system. To make it easy to find the alarm again, you bookmarked it. Now you want to find the bookmark again to make an export. To configure your search:
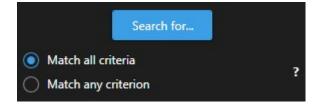
1. If you remember which camera recorded the incident, select the camera. Otherwise, select a range of possible cameras.

2. Set **Duration** to **Last 24 hours**, or specify a **Custom interval**.

3. Add the search categories **Bookmarks** and **Alarms**.

4. Select the **Match all criteria** check box.

> 🖊 For more information, see Search for bookmarks on page 57 or Search for alarms on page 59.

Match any or all search criteria (explained)

If you are using XProtect Corporate or XProtect Expert, you can use multiple search categories in the same search. While configuring your search, specify whether your search must match any or all the search categories.

Matching all criteria gives you fewer but more accurate search results. In addition, if the search results overlap, they are combined into fewer results. See also Merged search results (explained) on page 64.

Matching any criterion gives you more but less accurate search results.

> 🖊 Actions that are normally available in the action bar may not be available for merged search results. This happens if the action that you are trying to perform cannot be used with one of the search categories.

Start search from cameras or views

If you are looking for something specific in one or more video streams, you can start search from a single camera, or from an entire view. The search workspace opens in a new floating window.

Steps:

1. Go to the **Live** or **Playback** tab.

2. To search a single camera:

   1. Hover over the view item. The camera toolbar appears.

   2. Click ⬚. A new **Search** window opens, and a search for recorded video starts immediately based on the camera in the view item.

3. To search all cameras in a view:

   1. Make sure the correct view is open.

   2. At the top of the view, click . A new **Search** window opens, and a search for recorded video starts immediately based on the cameras in the view.

4. Depending on your goal, change the time span, search categories and filters, or similar. For more information, see .

Open search results in separate windows

You can open a search result in a new window. The window opens on the **Playback** tab allowing you to investigate the incident using the full timeline and perform other actions, for example exporting video.

1. Hover over the search result and select the blue check box that appears.
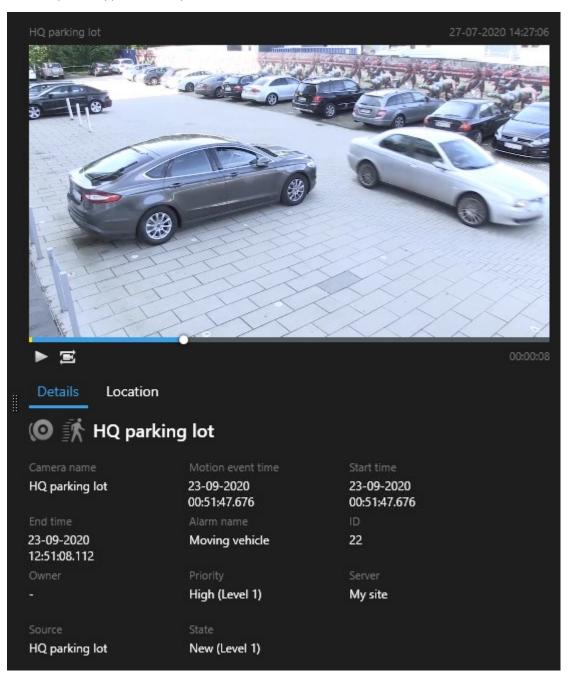

   The blue action bar appears:

2. Click to open the search result in a new floating window on the **Playback** tab.

3. To move the window to a different monitor, click and drag the window and release when appropriate.

Preview video from search results

To determine whether you have found the video sequence you were looking for, you can do a quick preview.

Steps:

1. When you have run a search on the **Search** tab, select a search result. A still image from the associated video sequence appears in the preview area.
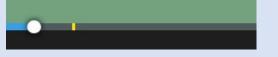

2. Click ▶ to play back the video.

3. To preview the video in full-screen mode, double-click the individual search results. Double-click again to return to the search results.

4. Scroll with your mouse wheel to zoom in or out. You can even click and drag to zoom in on a specific area.

> The yellow marker in the timeline indicates the event time. Hover over the marker to view the event time.
>
>
>
> Multiple markers appear in the same timeline when search results are combined.
>
>
>
> This happens, for example, if you have searched for **Motion** and **Vehicles**, and the search result match both criteria. In this example, one marker would indicate when the motion started. The other marker would indicate when the vehicle was identified as a vehicle.

Show or hide bounding boxes during search

During search, bounding boxes help you identify objects, for example based on motion detection. You can turn the bounding boxes on or off.

> The bounding boxes mostly appear in the thumbnail images of your search results. However, if your VMS system is configured to search for metadata, bounding boxes may also appear when you preview video from the search results.

Steps:

1. Go to the **Search** tab and run a search.

2. In the upper-right corner below **Bounding boxes**, do one of the following:

- Select **Show** to make the bounding boxes appear

- Select **Hide** to hide the bounding boxes

Sorting options

You can sort your search results by:

Name	Description
Relevance	This sorting option is only available if you are using one of these products: • XProtect Corporate • XProtect Expert **Relevance** means different things depending on how your search is configured: • None or one search category selected - the search result with the newest event time is displayed first • Multiple search categories selected/**Match any criterion** - the search result with most matching search categories is displayed first. If two search results have the same number of matching search categories, the search result with the newest event time is displayed first • Multiple search categories selected/**Match all criteria** - the search result with most event times is displayed first. If two search results have the same number of event times, the search result with the newest event time appears first
Newest event time	Search results with the most recent event time appear first.
Oldest event time	Search results with the oldest event time appear first.
Newest start time	Search results with the most recent start time appear first.
Oldest start time	Search results with the oldest start time appear first.

Locate cameras while searching

If your VMS system is configured to use smart map , you can view the geographical location of the cameras in a smart map preview while searching for video and related data.
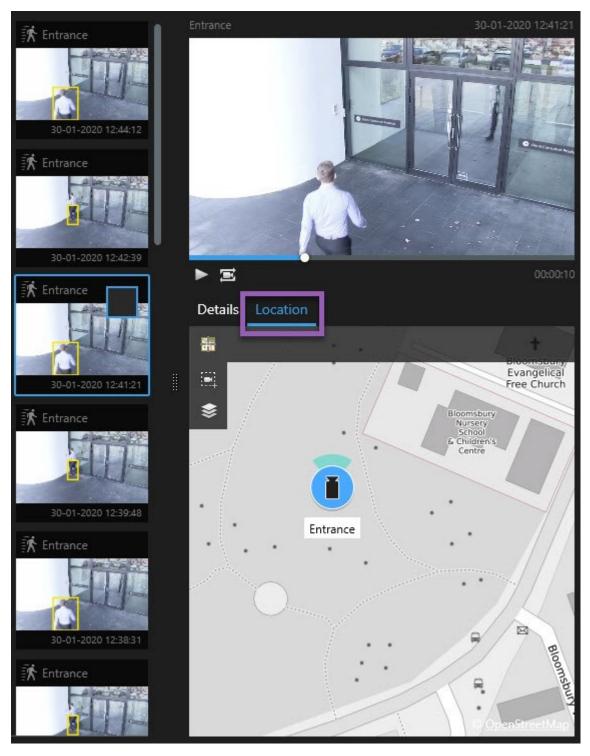
Requirements

- You are using one of these XProtect products:

    - XProtect Corporate

    - XProtect Expert

    > ✏️ For information about the features available in your XProtect VMS, see
    > Surveillance system differences on page 8.

- Cameras must be geographically positioned. If in doubt, ask your system administrator

Steps:

1. Select the search result that you are interested in.

2. In the preview area, click **Location**. The camera is displayed in its geographic context.

3. To get an overview of the surroundings, use the scroll wheel on your mouse to zoom out, or pan away from the camera position.

4. To return to the camera, click **Re-center**.

Camera icons (explained)

Some of the icons described in this topic appear only in the **Location** area on the **Search** tab, whereas icons with red are associated with alarms and also appear in views that contain the smart map. The icons differ depending on the situation.

In the table below:

- Gray background indicates that you have *not* selected the camera

- Blue background indicates that you have selected the camera

Icon	Tabs	Description
	Search	The camera is not associated with any of the search results.
	Search	You have selected the search result that the camera is associated with.
	Live, **Playback**, and **Search**	This is a source camera: a camera that triggered an alarm.
	Live, **Playback**, and **Search**	This is a related camera: a camera associated with the selected source camera, which triggered the alarm. This icon only appears after you select a source camera.
	Live, **Playback**, and **Search**	This is both a source camera and a related camera. This camera: • Triggered an alarm, and

Icon	Tabs	Description
		• Is associated with the selected source camera, which triggered the alarm This icon only appears after you select a source camera.

> ✏️ Source cameras and related cameras are defined in XProtect Management Client as part of the alarm definition.
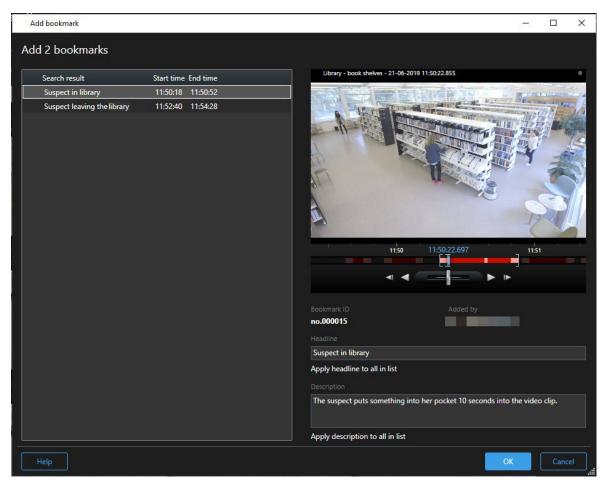
Bookmark search results

To document or share incidents that you have found by searching, you can bookmark multiple search results at the same time. Bookmarking incidents allows you or other operators to find the incidents later.

Steps:

1. For each search result that you want to bookmark, hover over it and select the blue check box checkbox .

2. In the blue action bar, click bookmark . A window appears. The picture reflects the situation where you have selected two search results.

3. Select the search results one by one to add details to the bookmarks and follow these steps:

    1. To change the default time span, drag the handles in the timeline to a new position.

    2. Enter a headline and possibly also a description of the incident.

    3. If you want the same headline or description to apply to all the bookmarks, click:

        - **Apply headline to all in list**

        - **Apply description to all in list**

4. Click **OK** to save the bookmarks. A progress bar informs you when the bookmarks are created.

> ✏️ If XProtect Smart Wall is set up in your system, click **Display on Smart Wall** to send a bookmark to a monitor in a Smart Wall.

Edit bookmarks from search results

You can edit the details of bookmarks in your system, for example the time span, headline, and description. You can also edit multiple bookmarks at the same time.

Requirements

You must have the user rights to edit bookmarks. This is done by your system administrator in Management Client under **Roles** > **Overall Security**.

Steps:

1. On the **Search** tab, find the bookmarks that you want to edit. When you perform the search, make sure that you have selected **Search for** > **Bookmarks**.

2. For each bookmark that you want to edit, hover over it and select the blue check box ✅ .

3. In the blue action bar, click [icon] . A window appears.

4. Select the search results one by one to edit the details, for example time span, headline, and description.

5. Click **OK** to save your changes. A progress bar informs you when the changes are saved.

> [pencil icon] If XProtect Smart Wall is set up in your system, click **Display on Smart Wall** to send the bookmarks a video wall.

Take snapshots from search results

To save and share still images from your search results, you can take multiple snapshots at the same time.

Steps:

1. When you have performed your search, hover over the search results, one by one, and select the check box ☑ .

2. In the blue action bar, click ⬚⬚⬚ and select **Create snapshot**. A progress bar informs you when the snapshots are created.

3. To locate the snapshots on your computer, go to the location that is specified in the **Settings** dialog > **Application** > **Path to snapshots**.

Transfer the search time to the playback timeline

When you are previewing a search result on the **Search** tab, you can synchronize the time on the **Playback** tab with the time in the preview timeline. This is useful if, for example, you have found an incident, and you want to investigate what happened at that time on other cameras.

1. On the **Search** tab, select a search result.

2. In the preview area, click ⬚ to transfer the current time to the playback timeline on the **Playback** tab. You will stay on the **Search** tab.

3. To check other related cameras, click the **Playback** tab and select a view that contains the cameras that you are interested in. The timeline is now in sync with the search result.

Managing your searches

📝 This feature is only available in certain XProtect VMS systems. For information about the features in your system, see Surveillance system differences on page 8.

You can save your searches to reuse them and share them with other operators. Depending on your user rights, you can also access and use the searches made by others, unless they are private. When a search has been saved, you can:

- Change the name and description, and make the search private or public.

- Modify how the search is configured, for example by adding or removing cameras or by adjusting the search categories.

- Delete the searches as they become obsolete.
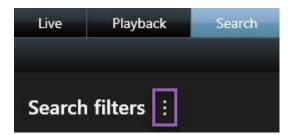
Save searches

You can save your searches, so you can reuse them later or share them with other operators.

Requirements

To save new searches that will be available to other users of your VMS system, the **Create public searches** user right must be enabled on your role in XProtect Management Client.

Steps:

1. On the **Search** tab, configure your search. See Searching for video data on page 51.

2. Click ⋮ to the right of **Search filters**.

3. In the list that appears, click **Save as**. A window appears.

4. Select a name that will make it easy for you to find the search, and possibly also a description. Later, when you use keywords to find the search, the search includes both the **Name** and the **Description** fields.

5. To make the search visible only to you, select the **Private search** check box.

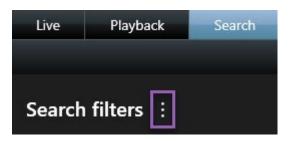6. Click **Save**. A progress bar informs you when the search is saved.

> ✅ To get an overview of saved searches, click [⋮] and then **Open and manage searches**.

Find and open saved searches

Requirements

To find and open public searches, the **Read public searches** user right must be enabled on your role in XProtect Management Client.
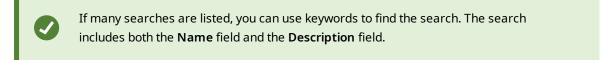
Steps:

1. On the **Search** tab, click [⋮] to the right of **Search filters**.

2. In the list that appears, click **Open and manage searches**. A window appears.

3. Find and double-click the search that you want to open, or click **Open**. Immediately, the search is run.

> ✓ If many searches are listed, you can use keywords to find the search. The search includes both the **Name** field and the **Description** field.

4. You can modify the search, for example by adding cameras. Click [⋮] > **Save** to save the changes.

Edit or delete saved searches

> ✏️ This feature is only available in certain XProtect VMS systems. For information about the features in your system, see Surveillance system differences on page 8.

You can change the details of a saved search, or you can change how the search is configured, for example the search categories.

If the searches become obsolete, you can delete them.

Requirements

The following user rights are enabled on your role in XProtect Management Client:

- To find and open public searches, the **Read public searches** user right must be enabled

- To edit a public search, the **Edit public searches** right must be enabled

- To delete a public search, the **Delete public searches** right must be enabled
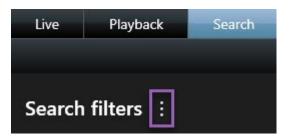
Learn how to:

Edit the details of a saved search

1. On the **Search** tab, click ⋮ to the right of **Search filters**.

2. In the list that appears, click **Open and manage searches**. A window appears.

3. Find and select the search that you want to change.

4. Make your changes, for example by entering a name for the search, and click **Save**.

Change how a search is configured

1. On the **Search** tab, click to the right of **Search filters**.

2. In the list that appears, click **Open and manage searches**. A window appears.

3. Find and double-click the search that you want to open, or click **Open**. Immediately, the search is run.

> ✅ If many searches are listed, use the search function to find the search.

4. Modify the search, for example by adding cameras, and click > **Save**.

Delete a saved search

1. Open the **Open and manage searches** window as described above.

2. Find and select the search that you want to delete.

3. Click **Delete search**.

Creating video evidence

There are several ways of documenting incidents and events in XProtect Smart Client, for example by exporting recordings and creating single still images from the video stream.

Export video, audio, and still images

To share video evidence, you can export video and associated audio in different formats. You can also export still images and other types of data that—depending on your XProtect VMS system—may be available.

On the **Exports** tab, you can export video evidence in three steps:

1. Add the video sequences that you want to export to the **Exports** tab > **Export list**. See also Add video sequences to the Export list on page 83.

2. Select at least one export format and adjust the export settings. See also Adjust export settings on page 84.

3. Create the export. See also Create the export on page 85.

Add video sequences to the Export list

You can add video sequences to the **Export list** on the:

Exports tab

In the **Export list**, select **Add item** to add the video sequences that you want to export.

Playback tab

1. In the timeline, select the ▣ button to select the start and end time (see) of the sequence that you want to export.

2. For each item that you want to include in the export, select the associated check box ✅.

3. Select **Export** > **Export** to add the selected video sequences to the **Export list** and to move to the **Exports** tab.

   OR:

   Select **Export** > **Add to export list** to add the selected video sequences to the **Export list** and to stay on the **Playback** tab.

Playback tab > Evidence lock > View > Evidence lock list

1. In the **Evidence lock list**, select an existing evidence lock.

2. Select **Add to export list** to add the selected evidence lock to the **Export list** and to stay on the **Playback** tab.

Search tab

1. For each search result that you want to export, hover over it and select the blue check box ☑ .

2. In the blue action bar, select **Add to export list** 📤.

Adjust export settings

After you added at least one sequence to the **Exports** tab > **Export list**, you must select at least one export format. Optionally, you can adjust export settings.

Steps:

1. Under the **Export list**, select at least one export format.

   - **Export as XProtect format** - use the XProtect format if you want to include the XProtect Smart
     Client – Player along with the export. Other media players will not work. If you want the recipient to
     be able to verify that the exported evidence has not been tampered with, select **Export settings** >
     XProtect format > **Include digital signature**. This will enable the **Verify signatures** button in the
     XProtect Smart Client – Player

   - **Export as media player format** - use a format that most media players can play. This requires
     that a media player is installed on the computer where the export is to be viewed

   - **Export as still images** - export a still image file for each frame for the selected period

2. Optionally, for each video sequence on the **Export list**, you can change the **Start time** and the **End time**.

3. Optionally, you can add privacy masks to video sequences to cover different video areas. See also Mask
   areas in recordings during export on page 86.

4. Optionally, for each format, you can change the **Export settings**.

Create the export

After you added at least one sequence to the **Exports** tab > **Export list** and selected at least one export format,
you can create the export.

Steps:

1. Select the **Export** button. The **Create export** window opens.

2. In the **Export name** field, an export name is automatically created for you. You can change the name.

3. In the **Export destination** field, specify a path for the export. The export that you create will be stored in the folder that you specify here.

4. Select **Create export** to export the evidence.

5. The export is created and stored in the folder that you specified as the **Export destination**. See also .

Mask areas in recordings during export

When you export video, you can add privacy masks to cover selected areas. When someone watches the exported video, the areas with privacy masks appear as solid blocks.

> The privacy masks that you add here only apply to the current export and for the video sequence that you selected in the **Export list**. The export may already include privacy masks that have been defined by your system administrator for certain cameras.

Steps:

1. On the **Exports** tab > **Export list**, select the video sequence that you want to add a privacy mask to.

2. Above the preview pane, click the **Privacy mask** button. The **Add privacy mask** window opens.

3. For each area that you want to mask, click the ⊞ button, and then drag the pointer over the area that you want to mask.

4. To unmask a part of a privacy mask, click the ⊟ button, and then drag the pointer over the area that you want to unmask. Repeat this step for each part to unmask.

> ✅ To temporarily hide masks, click and hold the **Hide mask** button.

5. Click **OK** to return to the **Exports** tab.

> ✎ The preview image contains an invisible grid with cells. If the area you select includes any portion of a cell, the system masks the entire cell. The result can be that the system masks slightly more of the image than you intended.

Storyboards (explained)

The storyboard function helps you paste together video sequences from one camera or from multiple cameras into one cohesive flow. You can use the sequence of events, the storyboard, as proof of evidence in internal investigations or the court of law.

You can skip all sequences that are not relevant and avoid wasting time looking through long sequences of video that you do not need. Also, you avoid wasting storage space on stored sequences that do not contain relevant video.

Export storyboards

You can create a storyboard by pasting together video sequences into one cohesive flow and then export it.

Steps:

1. On the **Playback** tab, start by opening a view that contains items that you want to add to your storyboard.

2. In the timeline, click ▣.

3. Select the start time and the end time for the storyboard. See .

4. For each item in the view that you want to add, select the corresponding check box ☑ and click **Export** > **Add to export list**.

   Repeat steps 1-4 until you have added all items that you need for your storyboard.

5. Continue with the export process. See and .

Export locked video evidence

When you export evidence locks, also the data from devices related to the cameras is included in the export.

Steps:

1. Click the **Playback** tab.

2. To the right of the timeline, click **Evidence lock** and select **View**.

3. If you want to stay on the **Live** tab instead of the **Playback** tab, click the **Status** button on the application toolbar and select **Evidence lock list**.

4. Select an evidence lock and click **Add to export list**.

5. Continue with the export process. See and .

View exported video

The exports that you create are stored in the folder that you specified in the **Create export** window > **Export destination** field.

Steps:

1. To view the exported video immediately after creating it:

   1. In the upper-right corner of XProtect Smart Client, select **Export details**.

      In the **Export details** window > **Export location** field, a link shows the location of the output folder.

   2. Click the link to open the output folder and to access the exported files.

2. If you exported video at a previous point in time:

   1. Go to the folder where you store exports. The default location is
      C:\Users\<username>\Documents\Milestone\Video Export. You can check the folder location in the
      Create export window > **Export destination** field. This works only if you always use the same
      export destination.

   2. Depending on the output format, open the relevant folder and double-click the video file or still
      image. If the format is **XProtect format**, double-click the Smart Client – Player file with the .exe
      extension.

Printing or creating surveillance reports

Depending on your needs, you can either print surveillance reports on the fly based on still images from
surveillance cameras, or you can create surveillance reports that you save to your computer.

Print report from single cameras

You can print single still images and related information from live cameras or from recorded video. Notes that
you add are also printed.

Steps:

1. To print a recorded still image, go to the **Playback** tab.

2. To print a live still image, go to the **Live** tab.

3. Open the view that contains the camera you are interested in.

4. Hover over the view item. The camera toolbar appears.

5. Click the icon. A window appears.

6. Add notes if required.

7. Click **Print**. The Windows **Print** dialog appears.

8. If necessary, change the print settings and print. Otherwise, just click **Print**.

> ✅ You can also print information about alarms if your organization uses the alarm handling features.

Create reports from search results

Based on search results, you can create a surveillance report that contains information about the events or incidents, for example still images, event time, information about the cameras, and notes. The report is saved as a PDF file.

Steps:

1. Go to the **Search** tab and run a search.

2. For each search result that you want to include in the report, hover over it and select the blue check box ☑.

3. In the blue action bar, click ▤ PDF . A window appears.

4. Change the default report name into something meaningful. In the report, the name is displayed as the page header.

5. To change the folder that the report is saved to, in the **Report destination** section, click ▦ and select a different folder.

6. To add a note, enter text in the **Note** field.

7. Click **Create**. A progress bar informs you when the report is generated.

8. To open the report, click **Details**, and then click **Open**. To open the destination folder, click the link.

> ✔️ To change the layout of the report, open the **Settings** dialog, click **Advanced**, and then select a different value in the **PDF report format** list.

Copy images to clipboard

You can copy single still images from selected cameras. Copied images can then be pasted (as bitmap images) into other applications, such as word processors, e-mail clients, etc. You can only copy a single image from one camera at a time.

- On the camera toolbar, click the **Copy to clipboard** icon to copy an image

Glossary

A

access control
A security system that controls the entering of persons, vehicles, or others into a building or area.

adaptive streaming
A feature that improves the video decoding capability and thereby the general performance of the computer running XProtect Smart Client or another video viewing client.

alarm
Incident defined on surveillance system to trigger an alarm in XProtect Smart Client. If your organization uses the feature, triggered alarms are displayed in views that contain alarm lists or maps.

archiving
The automatic transfer of recordings from a camera's default database to another location. This way, the amount of recordings you are able to store will not be limited by the size of the camera's default database. Archiving also makes it possible to back up your recordings on backup media of your choice.

aspect ratio
Height/width relationship of an image.

AVI
A popular file format for video. Files in this format carry the .avi file extension.

B

bookmark
An important point in a video recording, marked and optionally annotated so that you and your colleagues will easily be able to find it later.

C

cardholder
A person that possesses a card that is recognizable to an access control system and gives access to one or more areas, buildings or similar. See also access control.

carousel
A particular position for viewing video from several cameras, one after the other, in a view in XProtect Smart Client.

cluster
a grouping of devices or plug-in elements – or a combination - on the smart map displayed visually as a circular icon with a number. Clusters appear on certain zoom levels indicating the number of devices or plug-in elements within a particular geographical area.

codec
A technology for compressing and decompressing audio and video data, for example in an exported AVI file.

CPU
Short for "central processing unit", the component in a computer that runs the operating system and applications.

custom overlay
A user-defined, graphic element that users can add to a smart map, for example to illustrate a floor plan in a building, or to mark borders between regions. A custom overlay can be an image, a CAD drawing, or a shapefile.

D

deadzone
A deadzone determines how much a joystick handle should be allowed to move before information is sent to the system. Ideally, a joystick handle should be completely vertical when not used, but many joystick handles lean at a slight angle. When

joysticks are used for controlling PTZ cameras, even a slightly slanting joystick handle could cause PTZ cameras to move when it is not required. Being able to configure deadzones is therefore often desirable.

DirectX
A Windows extension providing advanced multimedia capabilities.

E

event
A predefined incident occurring on the surveillance system; used by the surveillance system for triggering actions. Depending on surveillance system configuration, events may be caused by input from external sensors, by detected motion, by data received from other applications, or manually through user input. The occurrence of an event could, for example, be used for making a camera record with a particular frame rate, for activating outputs, for sending e-mails, or for a combination thereof.

evidence lock
A video sequence that is protected, so it cannot be deleted.

F

FIPS
Short for "Federal Information Processing Standards".

FIPS 140-2
A U.S. government standard that defines the critical security parameters that vendors must use for encryption before selling the software or hardware to U.S. government agencies.

fisheye lens
A lens that allows the creation and viewing of 360° panoramic images.

FPS
Frames Per Second, a measure indicating the amount of information contained in video. Each frame represents a still image, but when frames are displayed in succession the illusion of motion is created. The higher the FPS, the smoother the motion will appear. Note, however, that a high FPS may also lead to a large file size when video is saved.

frame rate
A measure indicating the amount of information contained in motion video. Typically measured in FPS (Frames Per second).

G

GOP
Group Of Pictures; individual frames grouped together, forming a video motion sequence.

GPU
Short for "graphics processing unit", which is a processor designed to handle graphics operations.

H

H.264/H.265
A compression standard for digital video. Like MPEG, the standard uses lossy compression.

hotspot
A particular position for viewing magnified and/or high quality camera images in XProtect Smart Client views.

I

i-frame
Short name for intraframe. Used in the MPEG standard for digital video compression, an I-frame is a single frame stored at specified intervals. The I-frame records the entire view of the camera, whereas the following frames (P-frames) record only the pixels that change. This helps greatly

reduce the size of MPEG files. An I-frame is similar to a keyframe.

J

JPEG
An image compression method, also known as JPG or Joint Photographic Experts Group. The method is a so-called lossy compression, meaning that some image detail will be lost during compression. Images compressed this way have become generically known as JPGs or JPEGs.

K

keyframe
Used in the standard for digital video compression, such as MPEG, a keyframe is a single frame stored at specified intervals. The keyframe records the entire view of the camera, whereas the following frames record only the pixels that change. This helps greatly reduce the size of MPEG files. A keyframe is similar to an i-frame.

L

layer
The geographic background on a smart map, a custom overlay, or a system element, for example a camera. Layers are all the graphic elements that exist on the smart map.

LPR
Short for "license plate recognition".

M

MAC address
Media Access Control address, a 12-character hexadecimal number uniquely identifying each device on a network.

map
1) XProtect Smart Client feature for using maps, floor plans, photos, etc. for navigation and status

visualization. 2) The actual map, floor plan, photo, etc. used in a view.

Matrix
A product integrated into some surveillance systems, which enables the control of live camera views on remote computers for distributed viewing. Computers on which you can view Matrix-triggered video are known as Matrix-recipients.

Matrix-recipient
Computer on which you can view Matrix-triggered video.

MIP
Short for "Milestone Integration Platform".

MIP element
A plug-in element added through the MIP SDK.

MIP SDK
Short for "Milestone Integration Platform software development kit".

MKV
Short for "Matroska Video". An MKV file is a video file saved in the Matroska multimedia container format. It supports several types of audio and video codecs.

MPEG
A group of compression standards and file formats for digital video, developed by the Moving Pictures Experts Group (MPEG). MPEG standards use so-called lossy compression as they store only the changes between keyframes, removing often considerable amounts of redundant information: Keyframes stored at specified intervals record the entire view of the camera, whereas the following frames record only pixels that change. This helps greatly reduce the size of MPEG files.

O

operator

A professional user of an XProtect client application.

output

Data going out of a computer. On IP surveillance systems, output is frequently used for activating devices such as gates, sirens, strobe lights, and more.

overlay button

A button appearing as a layer on top of the video when you move your mouse cursor over individual camera positions in views on the Live tab. Use overlay buttons to activate speakers, events, output, move PTZ cameras, start recording, clear signals from cameras.

P

P-frame

Short name for predictive frame. The MPEG standard for digital video compression uses P-frames together with I-frames. An I-frame, also known as a keyframe, is a single frame stored at specified intervals. The I-frame records the entire view of the camera, whereas the following frames (the P-frames) record only the pixels that change. This helps greatly reduce the size of MPEG files.

pane

Small groups of buttons, fields and more located in the left side of the XProtect Smart Client window. Panes give you access to the majority of the XProtect Smart Client features. Exactly which panes you see depends on your configuration and on your task, for example on whether you are viewing live video on the Live tab or recorded video on the Playback tab.

patrolling profile

The exact definition of how patrolling with a PTZ camera is carried out, including the sequence for moving between preset positions, timing settings, etc. Also known as a "patrol scheme".

port

A logical endpoint for data traffic. Networks use different ports for different types of data traffic. Therefore, it is sometimes, but not always, necessary to specify which port to use for particular data communication. Most ports are used automatically based on the types of data included in the communication. On TCP/IP networks, port numbers range from 0 to 65536, but only ports 0 to 1024 are reserved for particular purposes. For example, port 80 is used for HTTP traffic which is used when viewing web pages.

PoS

Short for "Point of Sale" and typically refers to a cash register or cashier counter in a retail shop or store.

privacy mask

A blurred or solid color that covers an area of the video in the camera view. The defined areas are blurred or covered in live, playback, hotspot, carousel, smart map, smart search, and export modes in the clients.

PTZ

Pan-tilt-zoom; a highly movable and flexible type of camera.

PTZ patrolling

The automatic turning of a PTZ camera between a number of preset positions.

PTZ preset

Can be used for making the PTZ camera automatically go to particular preset positions when particular events occur, and for specifying PTZ patrolling profiles.

Q

QVGA

A video resolution of 320×240 pixels. QVGA stands for "Quarter Video Graphics Array" and is named as such because the resolution 320×240 pixels is a quarter of the size of the standard VGA resolution which is 640×480 pixels.

R

recording

In IP video surveillance systems, the term recording means saving video and, if applicable, audio from a camera in a database on the surveillance system. In many IP surveillance systems, all of the video/audio received from cameras is not necessarily saved. Saving of video and audio in is in many cases started only when there is a reason to do so, for example when motion is detected, when a particular event occurs, or when a specific period of time begins. Recording is then stopped after a specified amount of time, when motion is no longer detected, when another event occurs or similar. The term recording originates from the analog world, where video/audio was not taped until the record button was pressed.

S

SCS

File extension (.scs) for a script type targeted at controlling XProtect Smart Client.

Sequence Explorer

The Sequence Explorer lists thumbnail images representing recorded sequences from an individual camera or all cameras in a view. The fact that you can compare the thumbnail images side-by-side, while navigating in time simply by dragging the thumbnail view, enables you to very quickly assess large numbers of sequences and identify the most relevant sequence, which you can then immediately play back.

smart map

A map functionality that uses a geographic information system to visualize devices (for example, cameras and microphones), structures, and topographical elements of a surveillance system in geographically accurate, real-world imagery. Maps that use elements of this functionality are called smart maps.

smart search

A search feature that lets you find video with motion in one or more selected areas of recordings from one or more cameras.

Smart Wall control

A graphical representation of a video wall that allows you to control what is displayed on the different monitors.

Smart Wall preset

A predefined layout for one or more Smart Wall monitors in XProtect Smart Client. Presets determine which cameras are displayed, and how content is structured on each monitor on the video wall.

snapshot

An instant capture of a frame of video at a given time.

still image

A single static image.

T

TCP

Transmission Control Protocol; a protocol (i.e. standard) used for sending data packets across networks. TCP is often combined with another protocol, IP (Internet Protocol). The combination, known as TCP/IP, allows data packets to be sent back and forth between two points on a network for longer periods of time, and is used when connecting computers and other devices on the Internet.

TCP/IP

Transmission Control Protocol/Internet Protocol; a combination of protocols (i.e. standards) used when connecting computers and other devices on networks, including the Internet.

V

view

A collection of video from one or more cameras, presented together in XProtect Smart Client. A view may include other content than video from cameras, such as HTML pages and static images. A view can be private (only visible by the user who created it) or shared with other users.

VMD

Video Motion Detection. In IP video surveillance systems, recording of video is often started by detected motion. This can be a great way of avoiding unnecessary recordings. Recording of video can of course also be started by other events, and/or by time schedules.

VMS

Short for "Video Management Software".

X

XProtect Transact

Product available as an add-on to surveillance systems. With XProtect Transact, you can combine video with time-linked Point of Sale (PoS) or ATM transaction data.

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About Milestone

Milestone Systems is a leading provider of open platform video management software; technology that helps the world see how to ensure safety, protect assets and increase business efficiency. Milestone Systems enables an open platform community that drives collaboration and innovation in the development and use of network video technology, with reliable and scalable solutions that are proven in more than 150,000 sites worldwide. Founded in 1998, Milestone Systems is a stand-alone company in the Canon Group. For more information, visit https://www.milestonesys.com/.