

MxManagementCenter

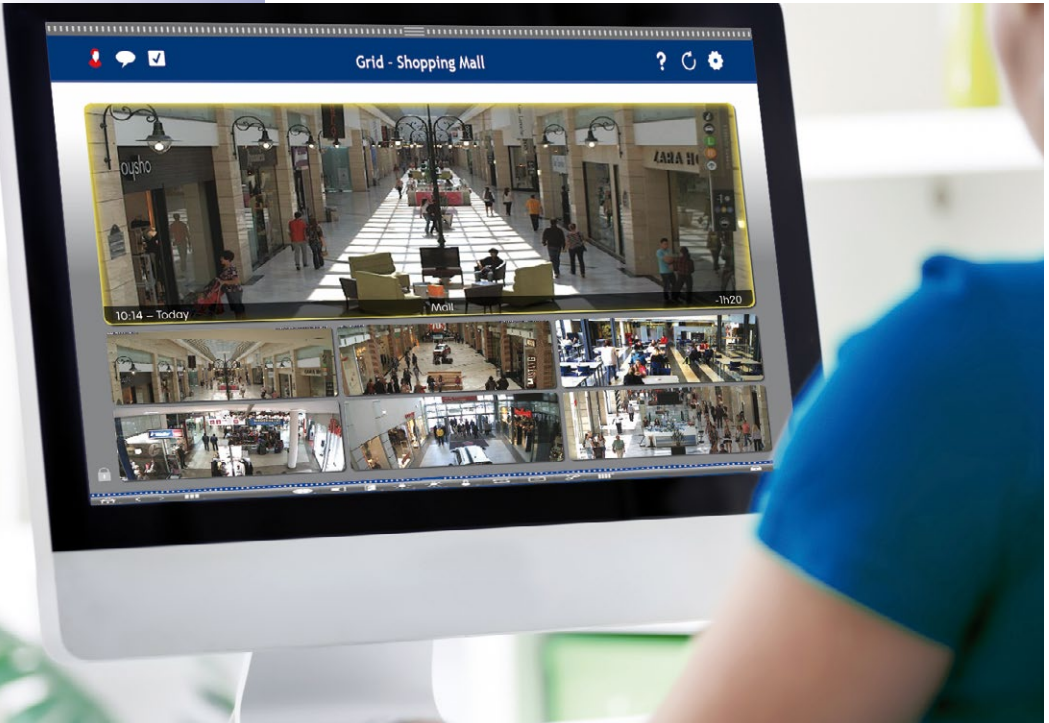


A New Milestone of Video Management

Innovations – Made in Germany

The German company MOBOTIX AG is known as the leading pioneer in network camera technology and its decentralized concept has made high-resolution video systems cost-efficient.

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1 Basics

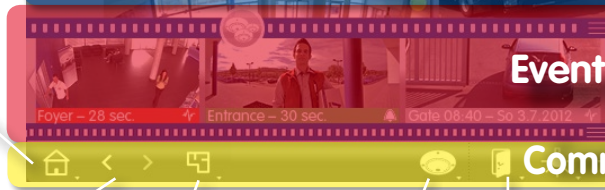
1.1 General Structure of the Views

Camera bar/Camera group bar

Selection of all cameras or camera groups with sorting functions, switching between cameras and groups



Home View



View History
Forward/backward

Context-sensitive selection of views

Function and control buttons

Camera and camera group management



Camera display area

Single, groups as grid or graphic view

Event Bar

Chronological list of all event recordings

Hyperlink function

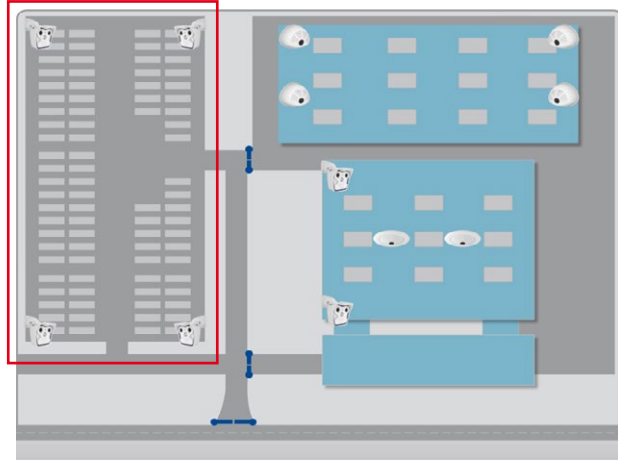
Execution of pre-defined functions, such as home automation control via HTTP requests or display of weather station website

Edit Mode

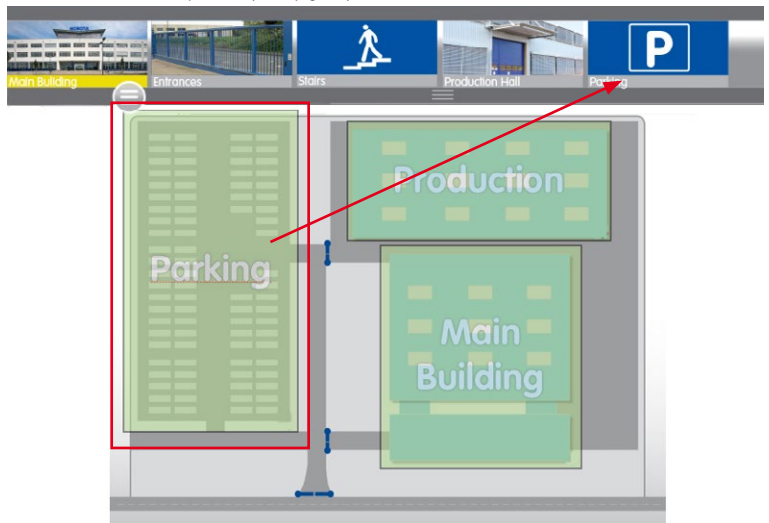
For Grid, Graphic and Info views

1.2 Camera Groups

A surveillance area is divided into different areas, which contain the cameras.

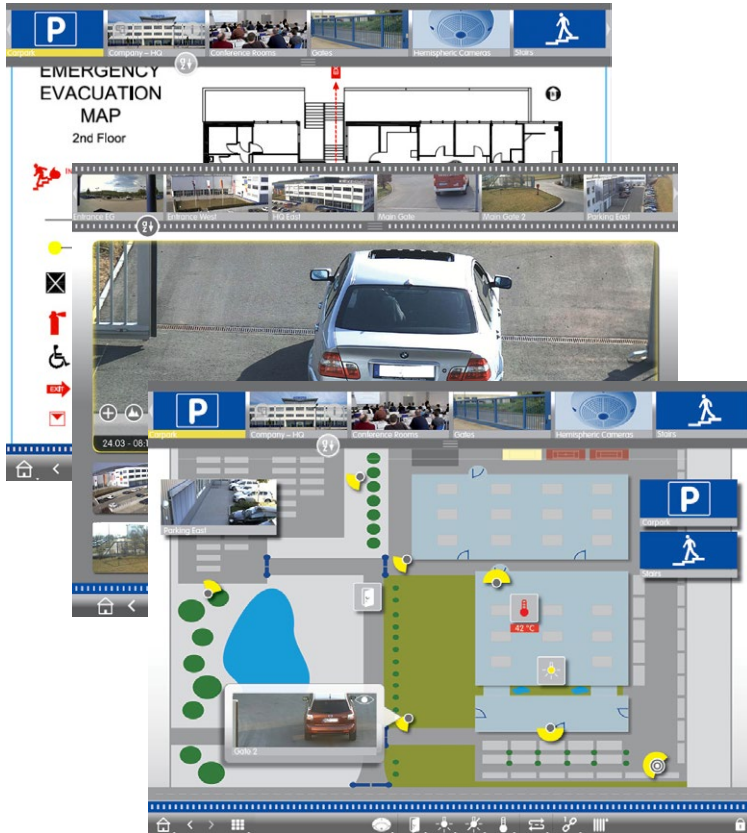


The cameras of these areas are combined into group views. They always provide an overview that allows you to quickly grasp the current situation.



This simplifies navigation and – in case of an alarm, you are quicker to access the relevant cameras.

The easily customized Graphic, Grid and Info views are available for displaying the camera groups:



Info view

Grid view

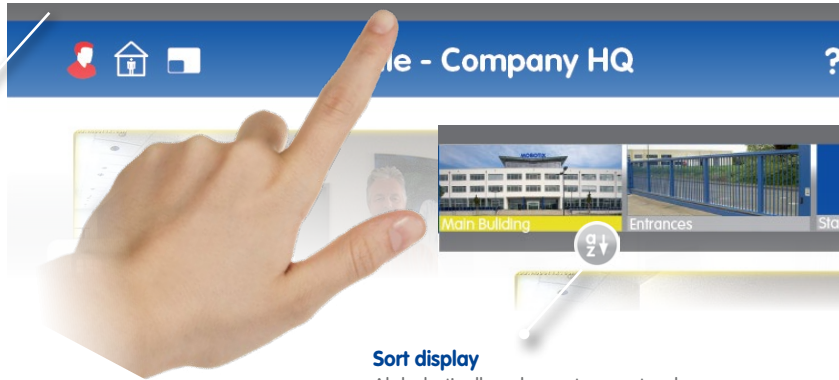
Graphic view

1.3 Camera Group Bar and Camera Bar

Direct selection of camera groups or individual cameras and fast switching of views.

Show bars

Click/tap on the frame to open the group bar or the camera bar



Sort display

Alphabetically or by custom sort order

Switch from group bar to camera bar

Click/tap on the upper part of the frame



Sort display

Alphabetically, by IP address or custom sort order

Camera images

Camera images are reference images, which are created when adding the cameras. This allows identifying the cameras independent of the current illumination of the area.

Camera Group Bar and Camera Bar

Switch view

Mouse-over shows these icons:



Select group

Single click or drag&drop into display area

Show on 2nd monitor

Double-click



Adjust bar size

Drag the lower part of the frame

Select camera

Single click or drag&drop into display area

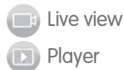
Show on 2nd monitor

Double click



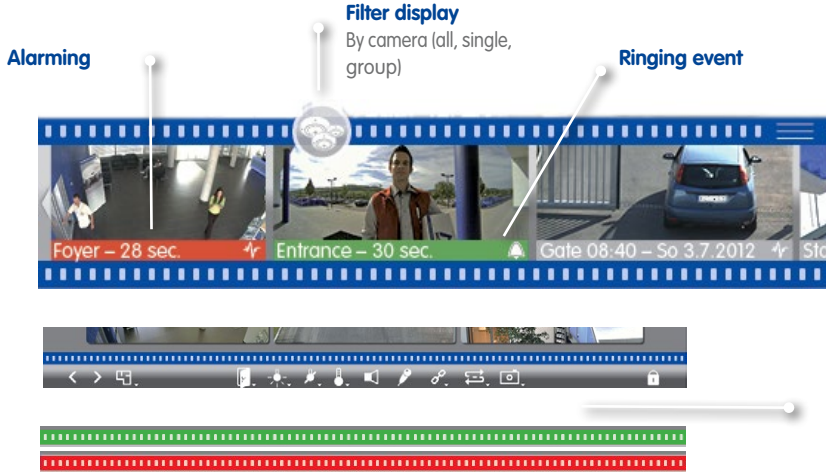
Switch view

Mouse-over shows these icons:






1.4 Event Bar

Shows events that led to alarms or if visitors rang the doorbell – regardless of whether or not the bar is hidden at the moment.



Switch view

Mouse-over shows these icons:

-  Grid view
-  Player
-  Instant Player

Instant Player



Event Bar

Filter display

By event type

Show maximized within window

Single click

Show live image on 2nd monitor

Double-click

**Detect events**

New events are displayed even if the bar is hidden: Bar turns red (alarm) or green (ringing events)

Hide event bar

Pull down the upper frame border

Show on 2nd monitor

Double-click opens Instant Player on 2nd monitor



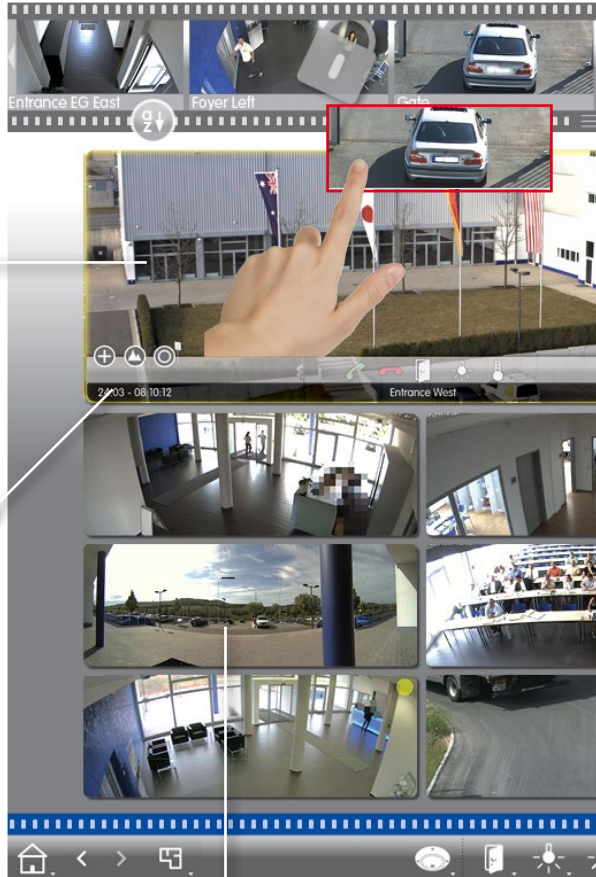
1.5 Grid view

Focus Window

Drag&drop cameras from the grid or the camera bar into the focus window.

Switching and control functions

For camera in focus window

**Show maximized within window**

Single click on a camera image

Show on 2nd monitor

Double-click

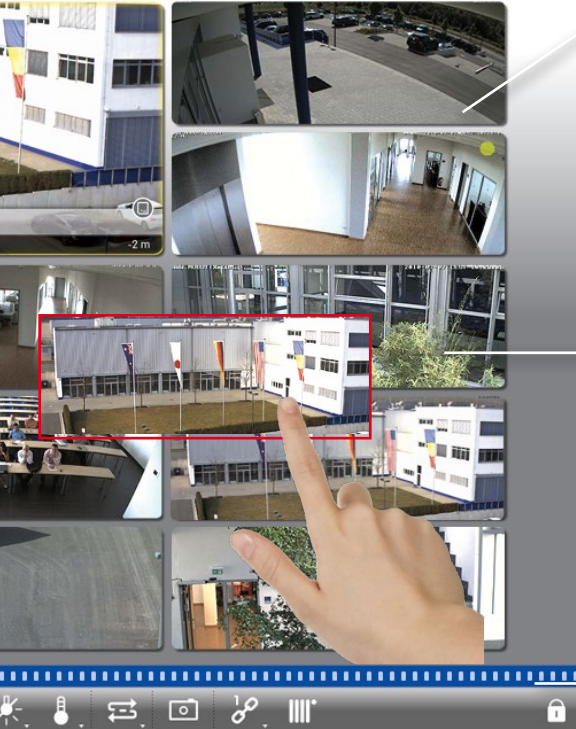
Grid view

Camera/Group bar



Event Info Bar

Mouse-over displays bar, shows the last 25 event images (when moving the mouse pointer over the bar)



Live Images

of the cameras in this group

Event bar (hidden)



1.6 Graphic view

Bandwidth

Temporary adjustment of the displayed image size/quality

Header

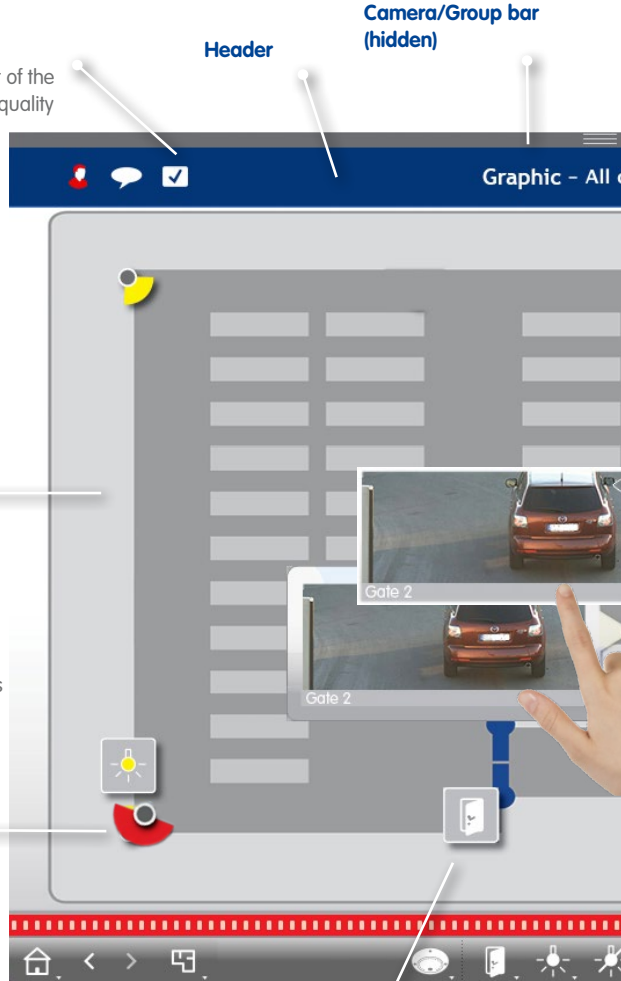
Camera/Group bar (hidden)

Ground/Floor plan

Cameras can be positioned on ground/floor plans as in reality.

Camera icons

With adjustable angles of view, change color to red or green upon events.



Switching functions

Use icons to switch functions, such as opening a door. Also shows the status: Door is still open.

Graphic view

Several cameras

Represents several cameras on one spot, e.g., on a pole.

Environments/Projects

Set up several environments for accessing the cameras from separate locations with different bandwidths and allows saving/loading projects.

Camera groups

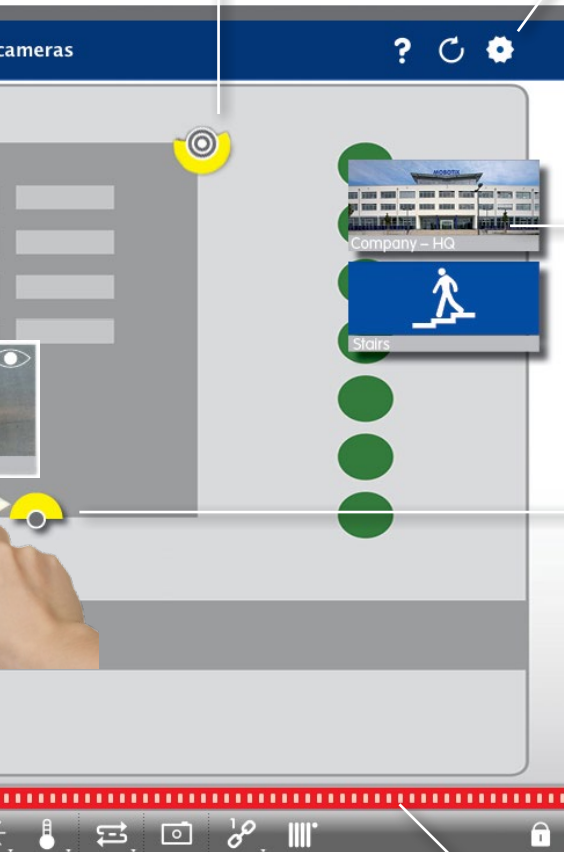
Click/tap on icon to open the corresponding Graphic view.

Temporarily show live image

By mouse-over, drag&drop onto plan to make image stick temporarily.

Event bar (hidden)

Red indicates: A camera has detected an event.



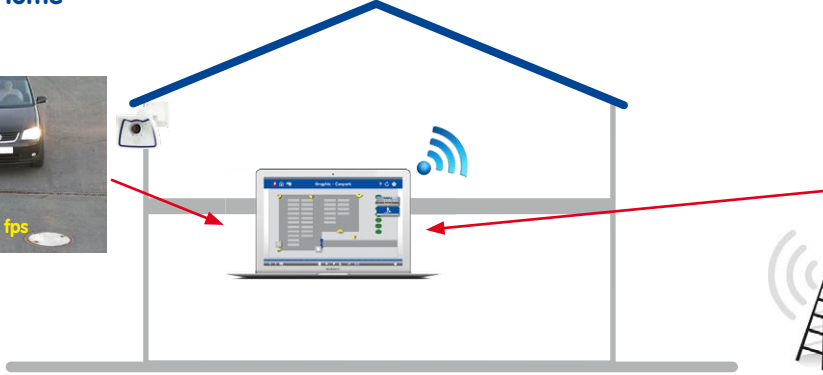
1.7 Working With Different Network Environments

Automatic adjustment of image size, image quality and frame rate depending on selected environment. This is done by the camera, independent of the Live view. The same applies to stored images, which have been reduced in size by the camera before transmission.

Home



Good quality
House camera

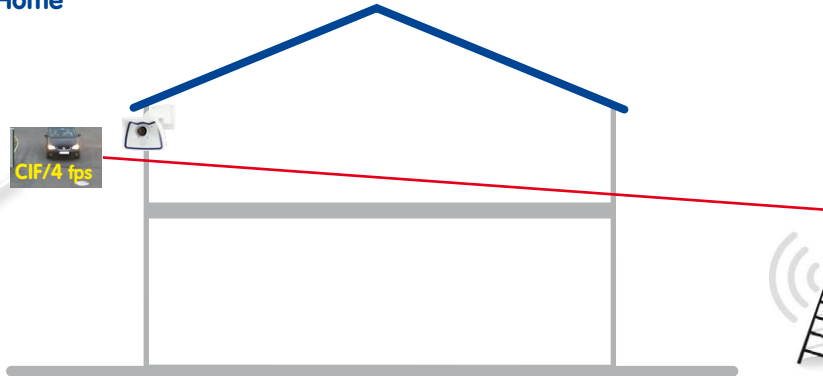


Access to gas station cameras from home using DynDNS access via Internet (low bandwidth)
Direct access to home cameras (high bandwidth).

Home

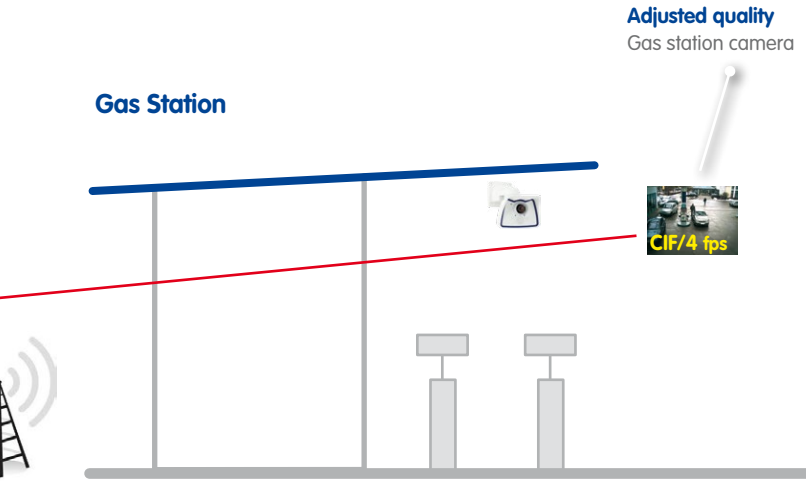


Adjusted quality
Home camera

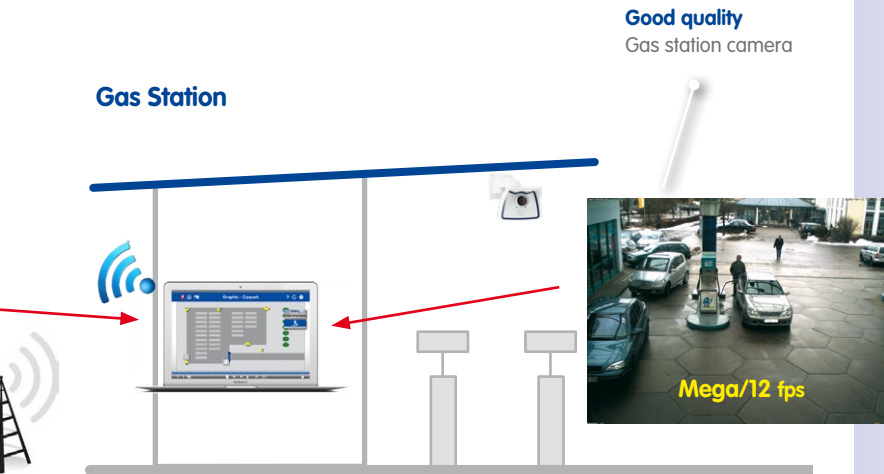


Access to home cameras from gas station using DynDNS access via Internet (low bandwidth)
Direct access to gas station cameras (high bandwidth).

Gas Station



Gas Station



2 Highlights

2.1 Unique Usability Concept

Instant selection

Drag&drop from camera bar.



Show maximized within window
Single click



Show fullscreen

Double-click

If additional monitor is attached:

Show on 2nd monitor

Double-click

Switch view

View selection using mouse-over icons in the camera bar.



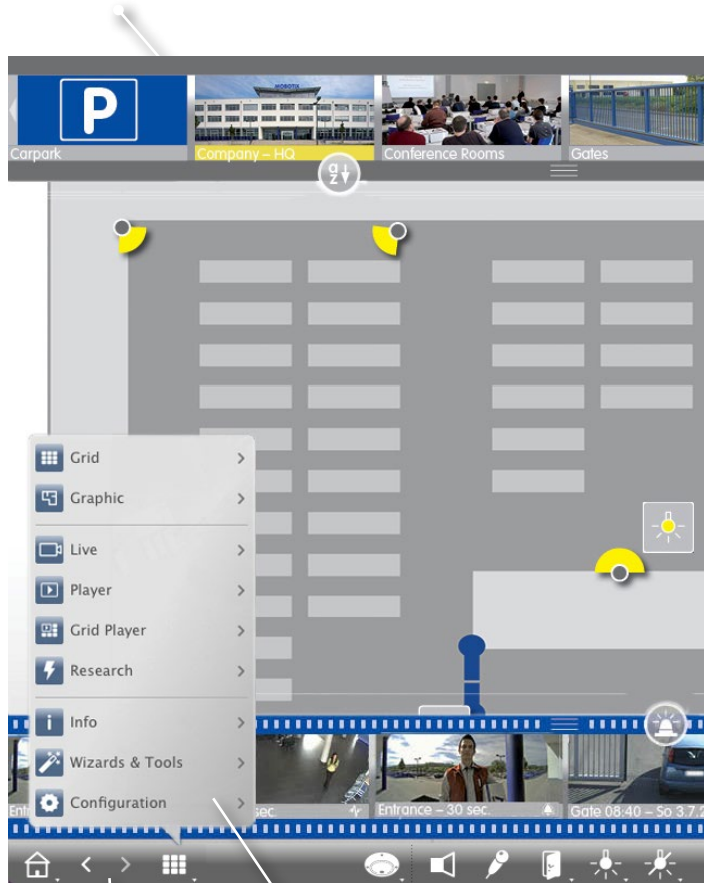
Instant selection

Drag&drop from files into focus window.



Instant selection

Drag&drop from group bar.



Home View

Browse

Through the view history.

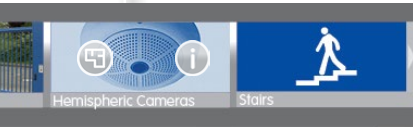
Navigate

Select view or camera using navigation button.

Unique Usability Concept

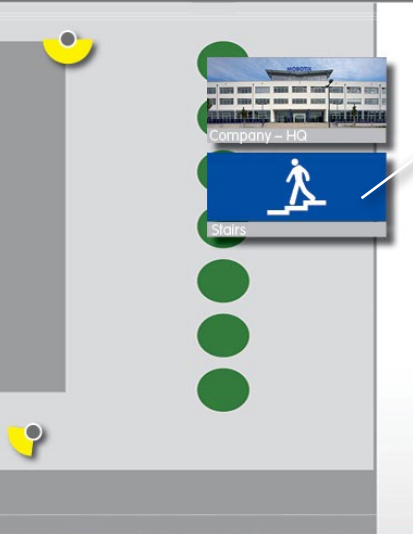
Switch view

Select view using mouse-over icons in group bar.



Open other group

By clicking in Grid view.



Switching functions

Use switch icons to control functions.

Switch view

Select view or camera using mouse-over icons in event bar.



Icons in all views for adjusting and selecting

Settings:



Zooming, sorting and filtering:



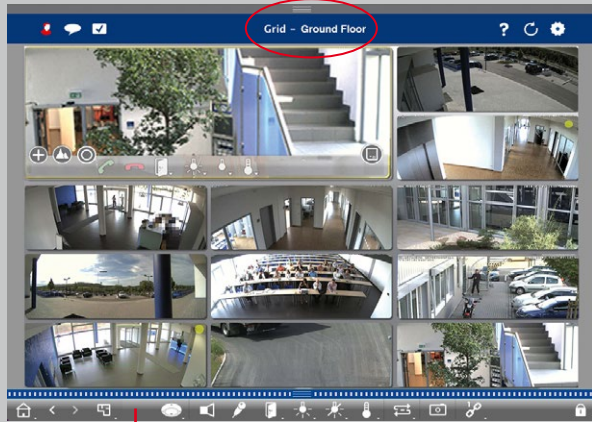
Image settings and volume:



2.2 Camera groups

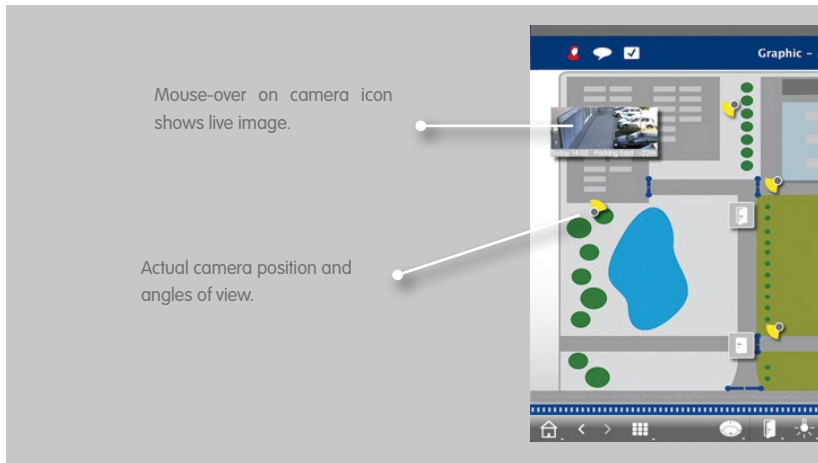
Grid View For Grouping According to Several Criteria: By location, by function, ...

"Ground Floor" camera group

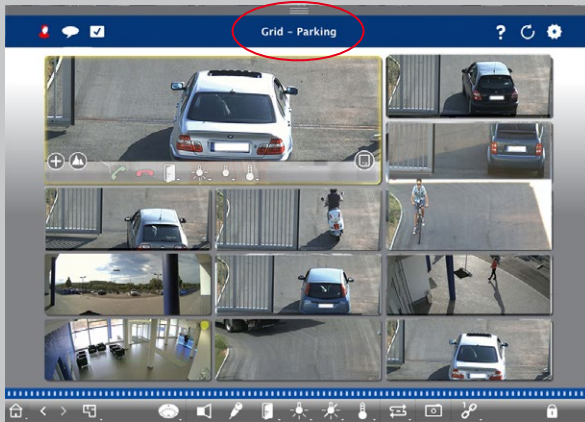


Group functions
Announcements using sev

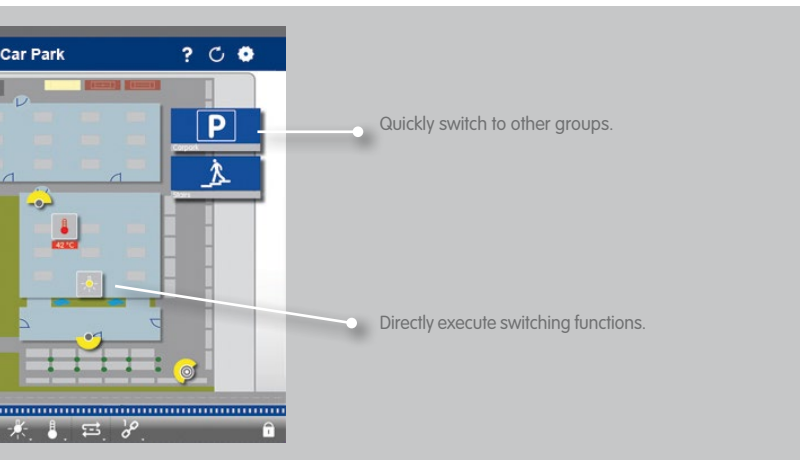
Graphic view for positioning as in reality: perfect overview



"Parking Lot" camera group

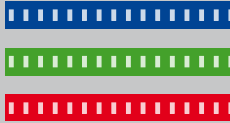


veral cameras or opening of the default doors.



2.3 Staying Informed Everywhere and in All Views

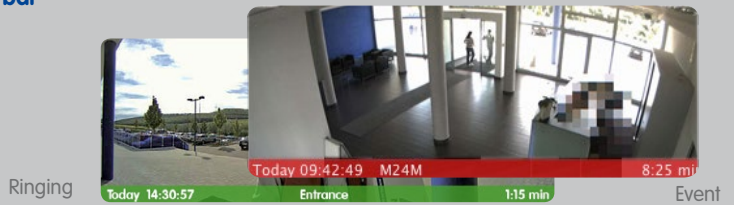
Event Bar



Show new events

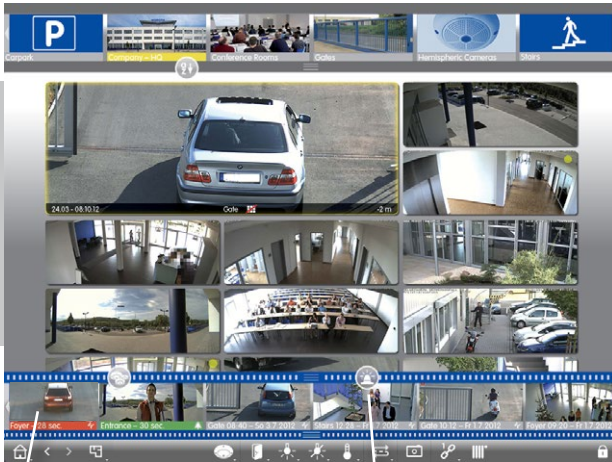
Red upon event trigger, green upon ringing event.

Event Info bar






Show new events

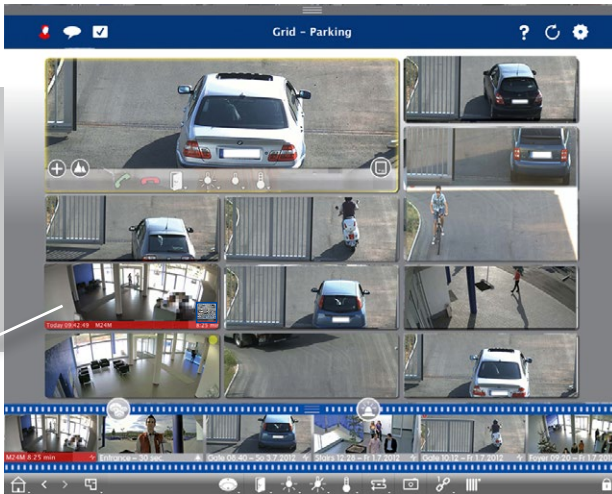
Bar beneath live image turns red or green if the camera detects an event. Move the storage card slider to the left to see the last event image.



Chronological ordering of event images

Filter display

-  By camera
-  By group
-  By event type



2.4 Convenient Search and Analysis in Player Means Fast Results

Fast and Simple Operation



Camera selection
By drag&drop

Select playback mode

Search for time/date

Quick positioning on desired date/time

Playback



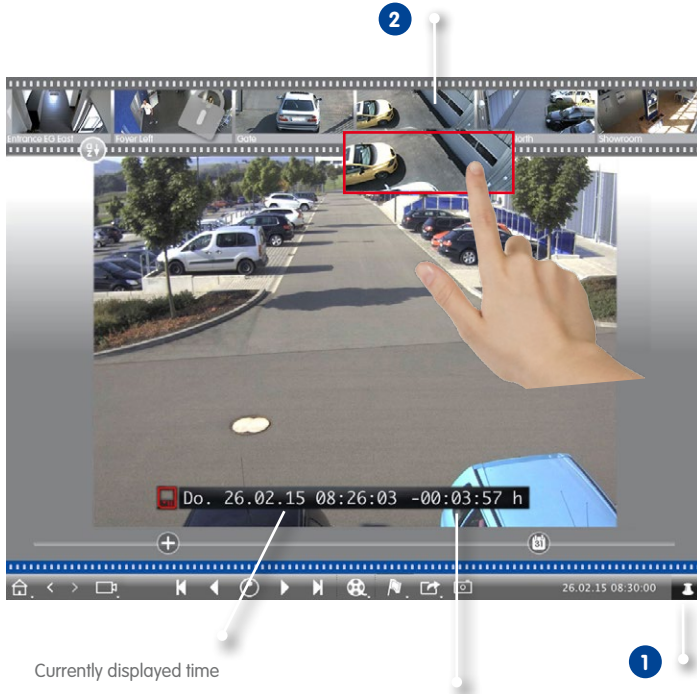
Play back

One image forward/
backward

Up to 16 times
Playback speed

Investigate Multiple Cameras for a Specific Point in Time

One of the parking lot cameras has detected an event at 8.30 pm. What did the other cameras record at that time?

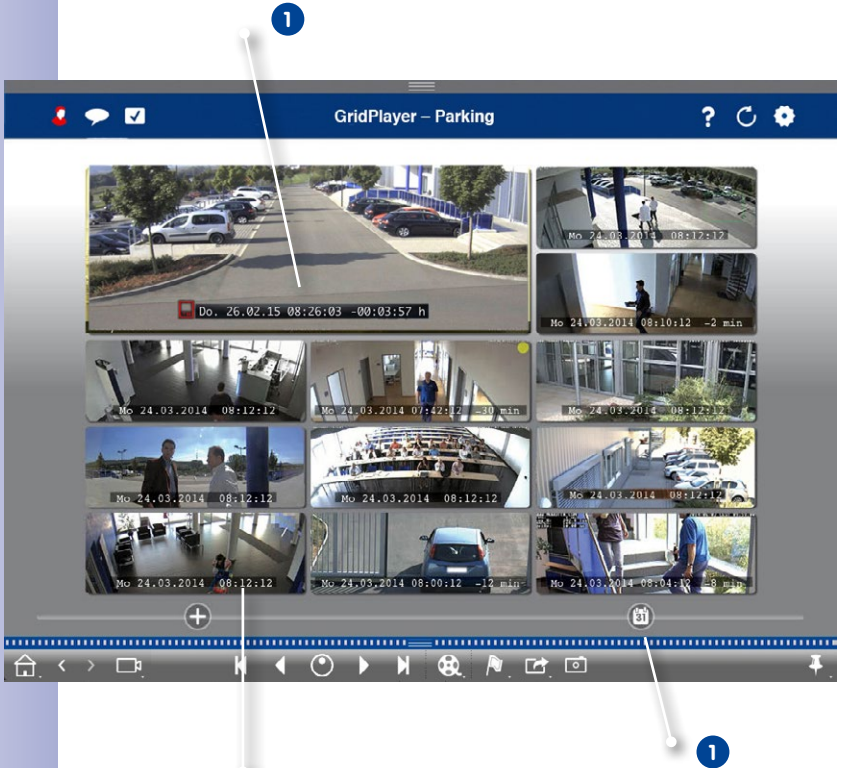


- 1 Click on pin button to set the reference time.
- 2 Drag&drop cameras from camera bar one by one to synchronize them according to the reference time.

2.5 Grid Player – Investigating Entire Camera Groups

Browse the Recordings of Entire Camera Groups Synchronized By Time

- 1 Use the timestamp in the focus window or the calendar slider to set the time.



All cameras jump to the event image that is closest to the specified point in time. The timestamp beneath each camera image shows the time and date of the image. The difference to the reference time is shown at the right.

Event Protocol – Getting a Quick Overview of All Events

2.6 Event Protocol – Getting a Quick Overview of All Events

Coming soon

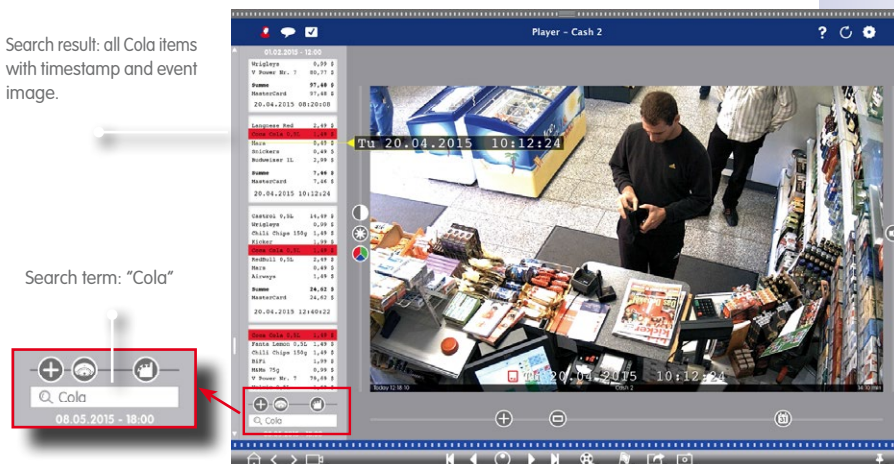
Event database in the camera, no additional PC; overview with timestamp of all events.



2.7 MxPOS – Integration of Point of Sale Systems

Coming soon

Searching and sorting functions created by POS systems. Checkout transactions can be analyzed by items, price or staff member, for example.



2.8 Access to Stored Images – Easily Customized

Depending on the requirements, you can access the recordings via the camera or directly on the file server.

1 Access via camera

In local network or remotely

Advantage: Camera can adjust the image size, frame rate and image quality of the video stream to the available bandwidth.



2 Direct access on stored images

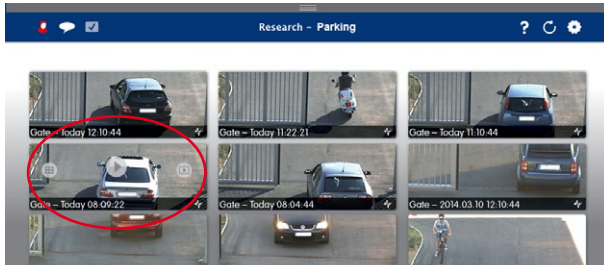
Advantage: Faster, since it does not put any load on the camera (coming soon).

2.9 Instant-Player – Research from Everywhere

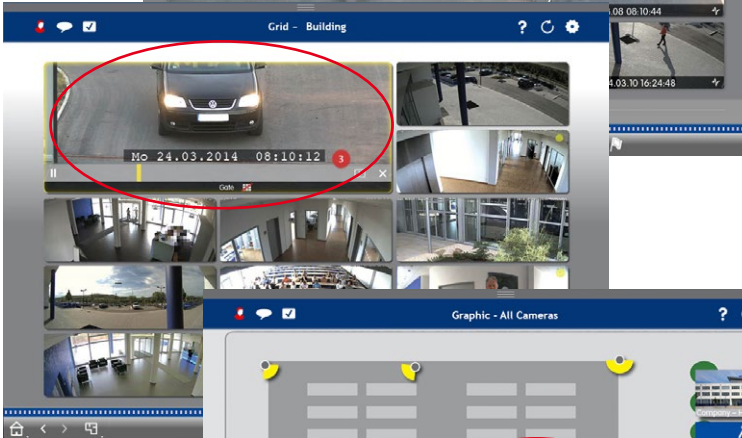
Instant playback of event recordings for fast results – in the Event Bar or the Research, Grid or Graphic views.



Event Bar



Research view



Grid view



Graphic view

2.10 Image Adjustment

Hemispheric cameras generate 360° images. In order to get naturally-looking images, MxMC can correct these images. This applies to both live images and recorded images.



Full Image



Normal

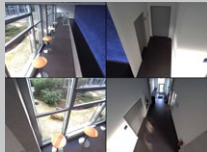


Panorama

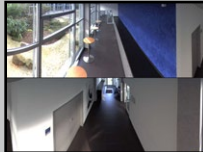




Surround



Double Panorama



Panorama/Focus



2.11 Panorama Correction and Auto Flip

Panorama Correction

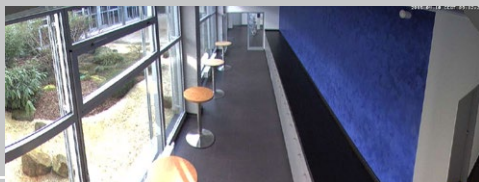


Not corrected

Auto Flip: Automatic Monitoring Aid for Dome Cameras

Always shows correct images even if persons or objects move directly under the camera.





Corrected

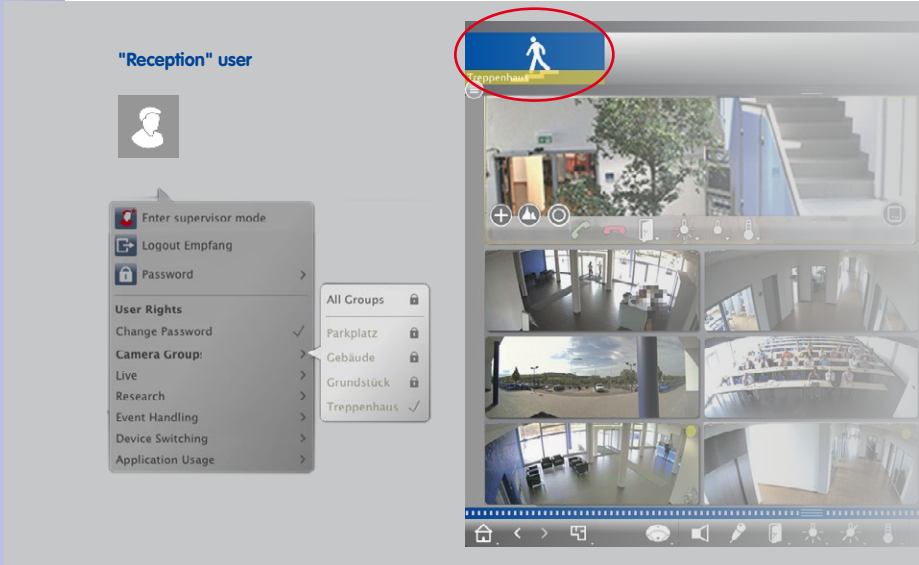
Move Panorama slider to Correction position and use the mouse wheel to create the most naturally-looking image.



Automatic flipping of the camera image

2.12 User Management

Individual Rights Management



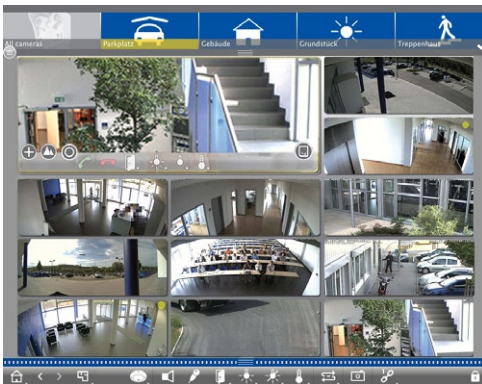
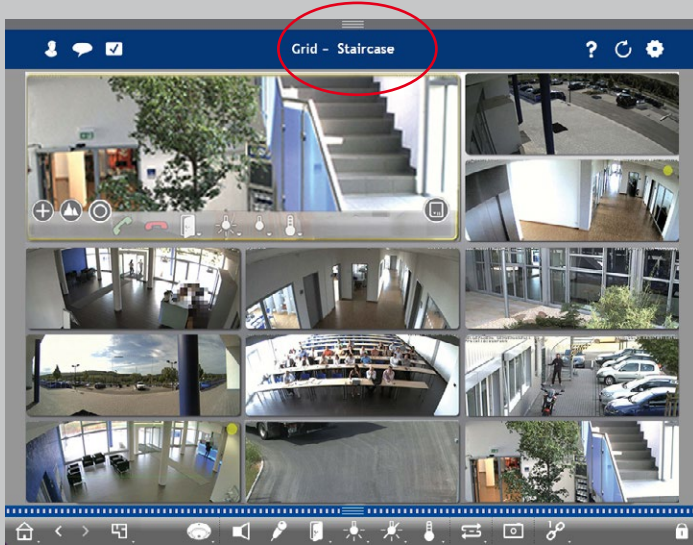
Only the "Staircase" camera group has been unlocked for the "Reception" user.

Temporarily Unlock Functions

"Reception" user

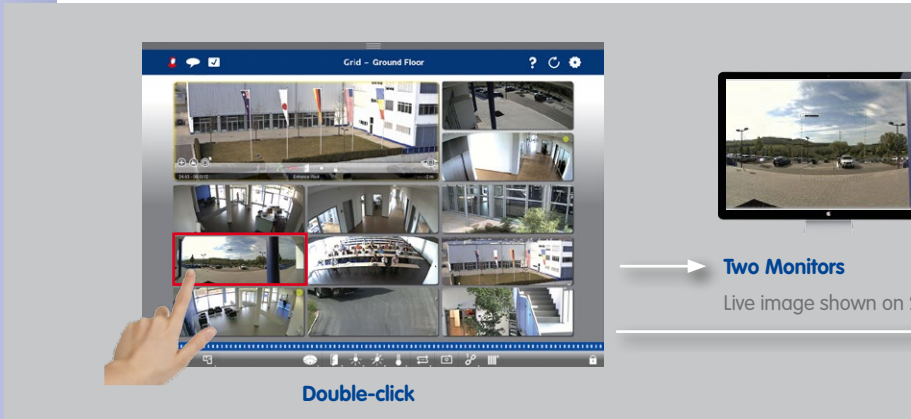


Use Supervisor PIN to unlock other camera groups.



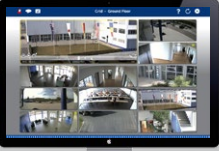
User can temporarily access all camera groups.

2.13 Multi-Monitor Capability

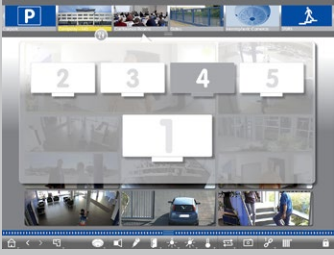


Multi-Monitor System Without Any Costs for Additional Software





2nd monitor. →



Several Monitors/Monitor Wall
Monitors are recognized automatically and can be selected and arranged as needed.

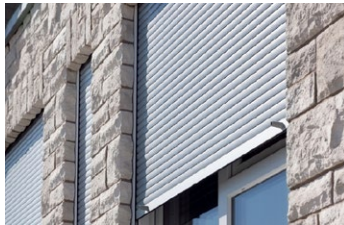


2.14 Hyperlink Support

Execution of pre-defined functions, such as display of weather station website or home automation control using HTTP requests.



Show weather station website



Open/close shutters.

Coming soon

2.15 ONVIF Support

Since December 2014, MOBOTIX is ONVIF member. MxManagementCenter allows integrating and using ONVIF-compatible video sources.

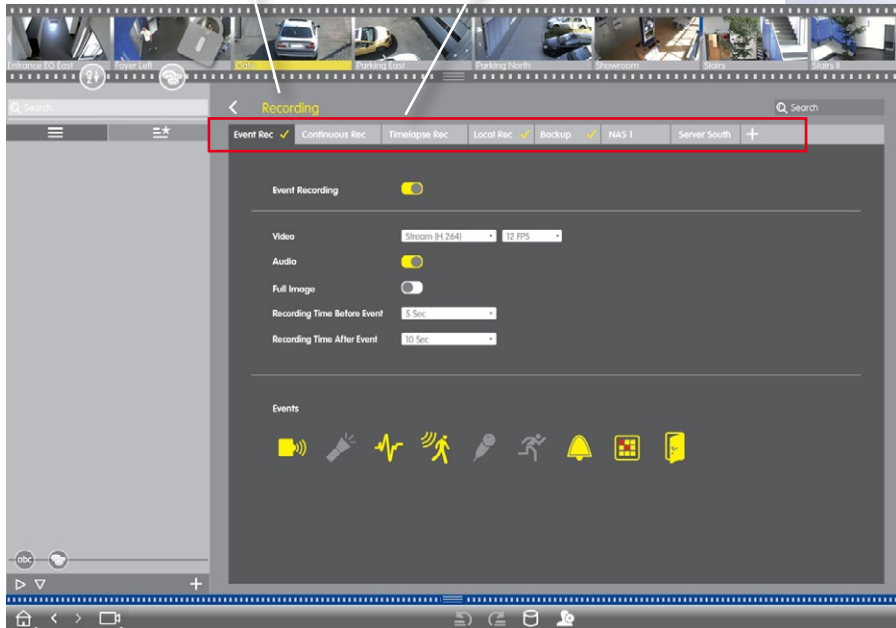


2.16 Intelligent Configuration Management

All Relevant Settings for the Selected Function Are Available on One Spot

Configuration: Recordings

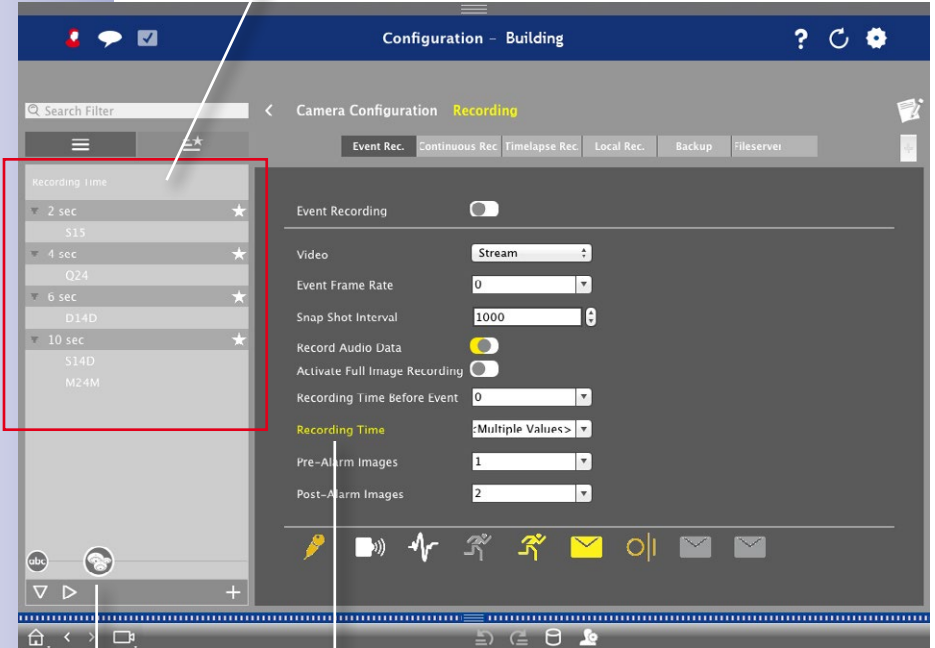
All settings for configuring recordings




All Settings of the System/the Group at One Glance

Coming soon

Display of all settings of one or more cameras for the selected function and intelligent sorting by parameters.



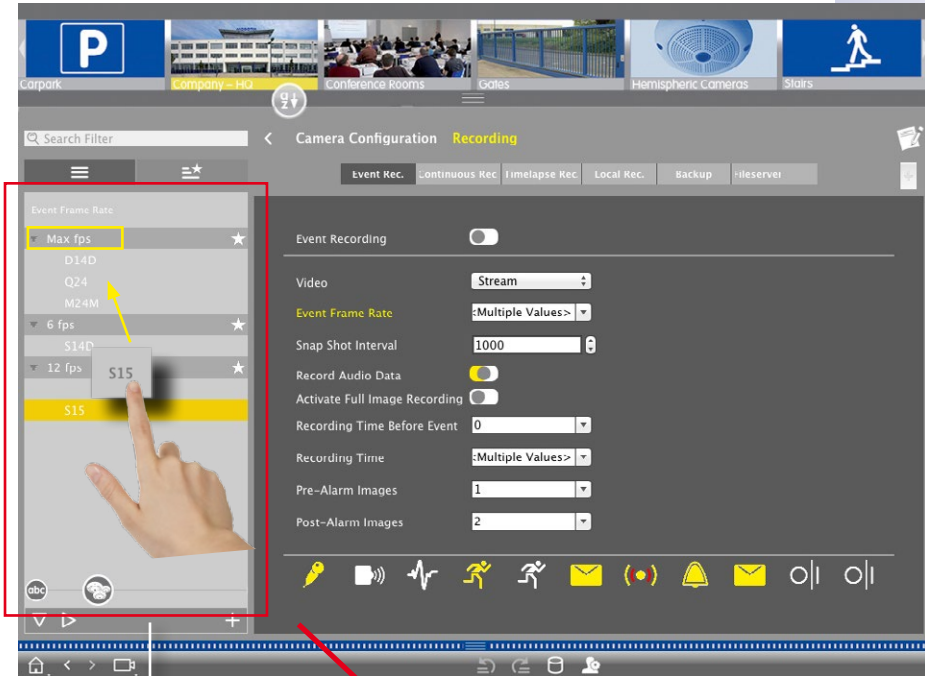
Select function

 Show all cameras

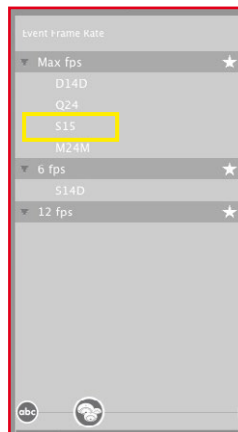
 Show cameras of group

Simple Configuration Changes of One or More Cameras Using Drag&Drop

Coming soon



Adjust recording frame rate of S15 by moving the camera to a different setting.



3 Details

3.1 System Requirements

Mac OS X:

Mac OS X 10.7 or higher, processor with min. 2 GHz, min. 2 GB RAM, graphic adapter with OpenGL V2.1 support.

Windows:

Windows Vista or higher, processor with min. 2 GHz, min. 2 GB RAM, graphic adapter with OpenGL V2.1 support.

Integrated MOBOTIX Video sources:

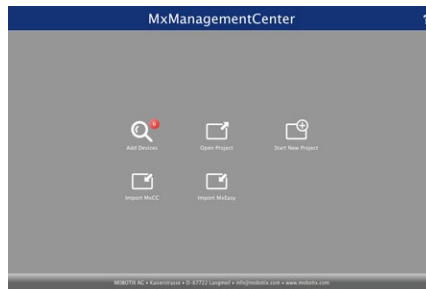
Camera software 4.3.2.72 or higher.


For more information on the system requirements and available releases of MxMC, please read the release notes on the MOBOTIX website under www.mobotix.com > **Support** > **Software Downloads**.

3.2 Initial Operation of MxManagementCenter

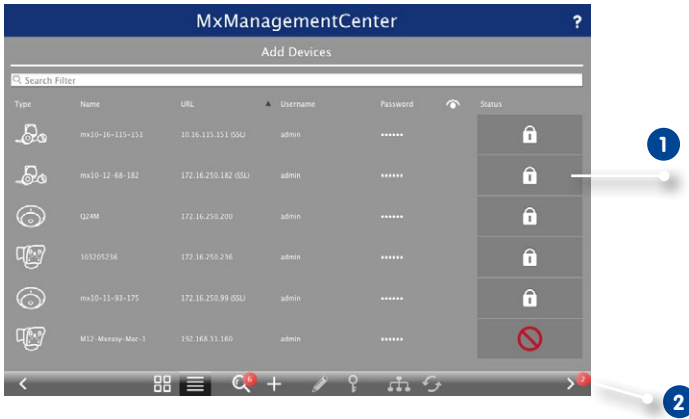
3.2.1 Adding Cameras

Adding Cameras When Starting MxMC for the First Time



When starting MxMC for the first time, the configuration wizard opens and automatically starts searching for MOBOTIX cameras. The number of found cameras is shown next to the **Add** button . This number is updated automatically if the number of MOBOTIX cameras on the network has changed (i.e., by connecting new/disconnecting existing cameras).

1. Click on **Add Devices**. The cameras are displayed either in a list or as tiles. Use the **List** and **Tile** buttons to change the display mode.



Possible camera statuses: **1**

- : Camera cannot be reached
- : Camera not in the same network as the computer
- : Camera software is not up-to-date
- : Camera is password-protected

2. Select camera (use **Cmd-click** to select several cameras)

- : If the camera is password-protected, click on **Edit User and Password** and enter the user name and password.
- : If the camera is in an invalid network, click on **Edit Network Settings** and select automatic IP address assignment or enter a fixed IP address.

3. The number of selected cameras is shown near the **Next** button **2**. Move to the next page and click on **Finish**.

Hint:

You can also open the configuration wizard from the menu later on.



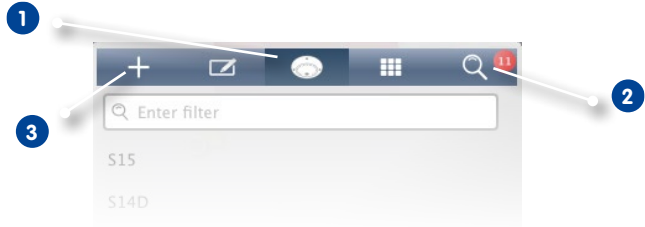


Adding Cameras to a Running System

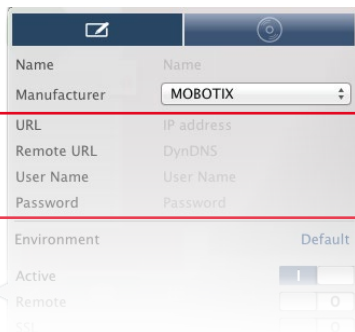
Open the **Camera management**. To do so, right-click on **Camera** in the command bar in the Graphic, Grid, Live and Info views.



a) Camera search:



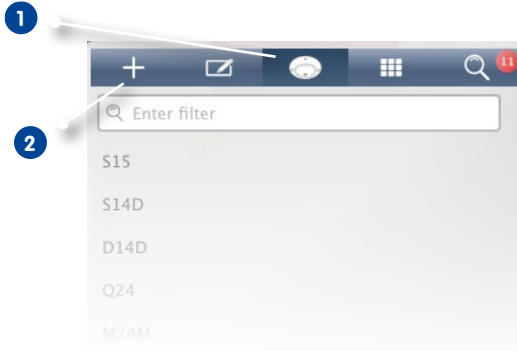
1. Click on **Camera** **1** and then on **Search** **2**. The list shows all cameras that were found in the local network.
2. Select the camera you want to add (use **Cmd-click** to select several cameras).
3. Click on **Add** **3**. Enter a camera description, such as "Parking lot". If several cameras are added, they will be numbered "Parking Lot_001", "Parking Lot_002", etc.
4. Enter the user name and password.
5. Click anywhere outside of the context menu and click on "Yes" to close the prompt. The list now shows all cameras that have been added. Click on one of the recently added cameras to edit the camera data.
6. Camera access data:



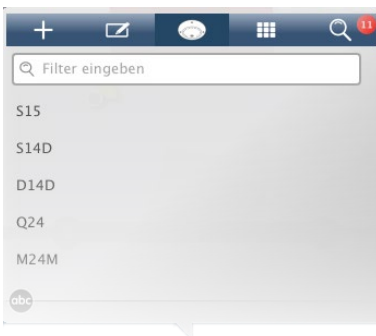
- *Name*: The camera name is displayed automatically. If you had added several cameras, you can now enter individual names for each camera.
- *URL*: The IP address is displayed automatically.
- *User name, password*: Shows the access data that had been entered when adding the camera. You can change the data here, if required.

b) Add cameras manually:

Cameras that are not part of the local network cannot be found automatically. You can add these camera manually.



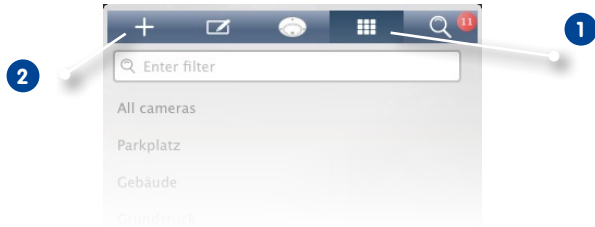
1. Click on **Camera** **1** and then on **Add** **2**.
2. Camera access data:
 - *Name*: Enter a descriptive name.
 - *URL*: IP address of the camera.
 - *Remote URL*: In order to access the camera from outside of the local network, you need to enter the DynDNS name. Make sure that you also activate the **Remote** option.
 - *User name, password*: Enter the user name and password of the camera.



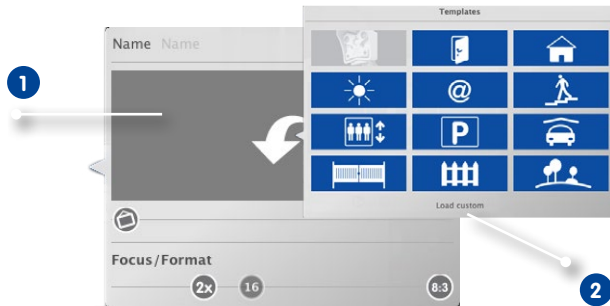


3.2.2 Creating Camera Groups

1. Open the **Camera management**. To do so, right-click on **Camera** in the command bar in the Graphic, Grid, Live and Info views.
2. Click on **Group** **1** and then on **Add** **2**.



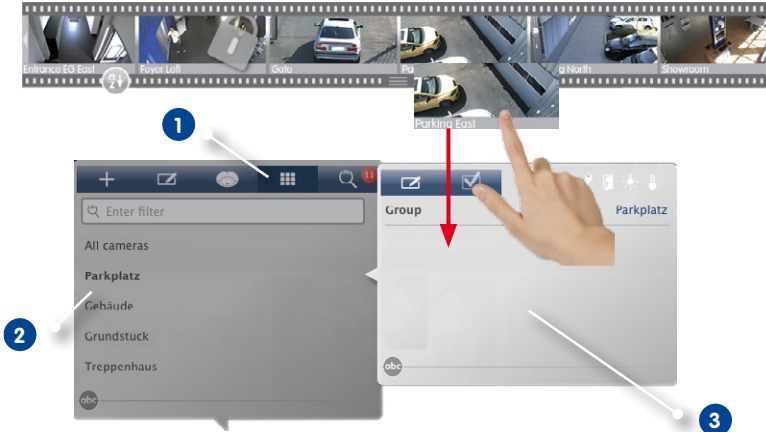
3. Enter a group name and – if desired – add an image or an icon for the group that will be used to represent the group in the group bar later on. To do so, click on the gray field **1** and select one of the pre-defined icons. If you want to use one of your own images, click on **Custom** **2**.



4. *Focus/Format*: This controls the layout that is used to show the cameras in Grid view: Format (aspect ratio) of the camera images (4:3, 16:9, 8:3) and size of the focus window (0x (no focus window), 1x, 2x, 3x, 4x, 5x, 6x, 7x or 8x the size of the camera images). Set the maximum number of cameras that will be shown in the Grid view.
5. Move the three sliders to the desired settings.


Adding Cameras to a Camera Group

1. Open the **Camera management**. To do so, right-click on **Camera** in the command bar in the Graphic, Grid, Live and Info views.
2. Click on **Group** **1** and then on the desired camera group **2**.
3. Pull down the camera bar from the upper frame border.



4. Drag&drop the desired cameras from the camera bar into the window for editing the groups **3**.

Hint:

Note that you can also drag groups into the new group. This will insert all cameras of the group into the new camera group. To add all cameras of the same type, click on  and drag one camera into the group.

3.2.3 Setting Up Group Views



Using a Ground/Floor Plan for the Graphic View

You can position the cameras of a group on a ground or floor plan when using the Graphic view.




1. Open the **Camera management**. To do so, right-click on **Camera** in the command bar in the Graphic, Grid, Live and Info views





2. Click on **Group** **1** and then on **Edit** **2**. Select the camera group for which you want to set a ground or floor plan. Another window opens.
3. Move the slider  to the right until you reach the  position.
4. Click on the arrow and select the file with the ground or floor plan.

Adding Information for a Camera Group

You can add an information page to a camera group in order to show special instructions for this camera group, for example.

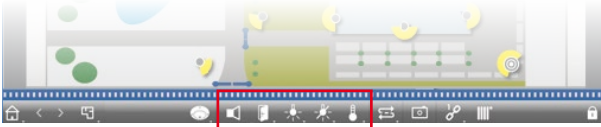
1. Open the **Camera management** (in the Graphic, Grid, Live and Info views) by right-clicking on  in the command bar.



2. Click on **Group** ① and then on **Edit** ②. Select the camera group for which you want to add information. Another window opens.
3. Move the slider  to the right until you reach the  position.
4. Click on the arrow and select the file you want to use.

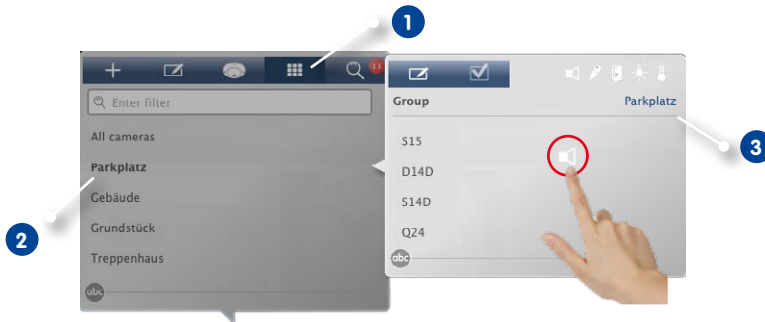
Setting and Deleting Group Functions

You can use group functions in the Graphic, Grid, Live and Info views.



For example, you can switch the lights of several cameras at once, make an announcement via several speakers or open a door without having to select a specific camera.

1. Open the **Camera management**. To do so, right-click on **Camera** in the command bar in the Graphic, Grid, Live and Info views.



2. Click on **Group** ① and then on the camera group ②, for which you want to assign group functions.
3. Assign the desired functions to the cameras by moving the corresponding buttons (Listen, Talk, Door, Light, Temperature) ③ onto the cameras.

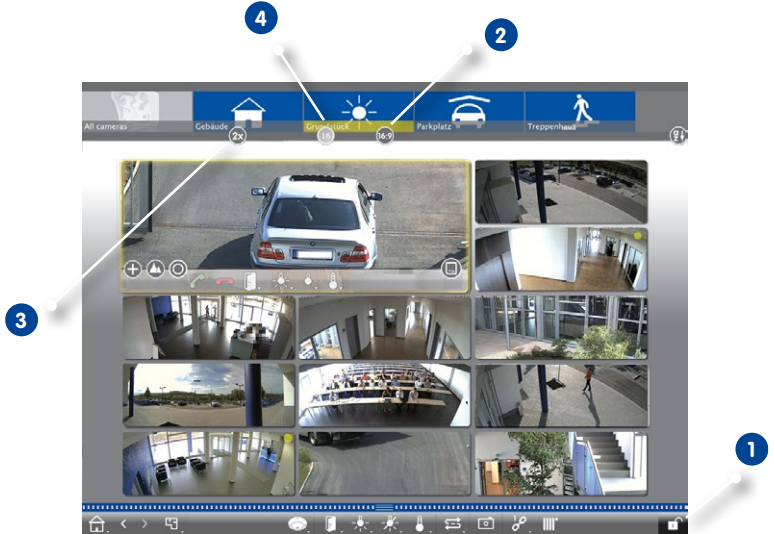
Deleting Group Functions

To delete a function, drag the icon away from the camera line.



Setting Additional Options for the Grid View

You can also adjust the layout you defined when creating the camera groups directly in the Grid view later on.



16:9

2x

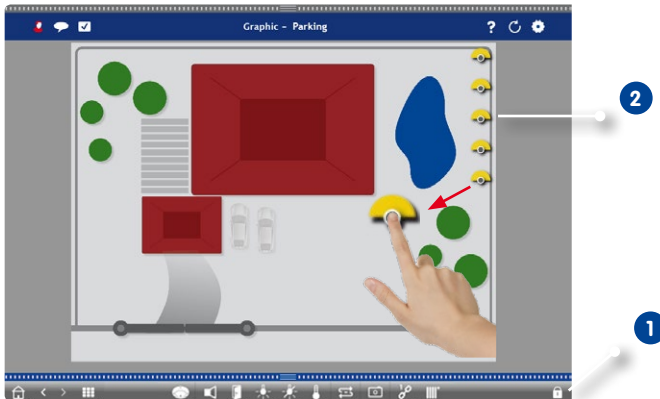
16

1. Activate the **Edit mode** 1.
2. Open the group bar. There are several sliders at the bottom of the bar.
3. Move the slider to the desired 2 position to set the format (aspect ratio) of the camera images (4:3, 16:9, 8:3) of the camera images. Move the slider to the desired position 3 to set the size of the focus window (0x, 1x, 2x, 3x, 4x, 5x, 6x, 7x or 8x the size of the camera images). You can use the slider 4 to limit the number of cameras to show. This can be used, e.g., if you want to see an overview with many cameras in the Graphic view and show only the most important ones in Grid view.
4. Deactivate the **Edit mode** to save the settings.

Setting Additional Options for the Graphic View

Positioning Cameras on the Plan

When opening the Graphic view of a camera group for the first time, all cameras of the group are shown as icons at the right-hand border. You should move the cameras to the same position on the ground or floor plan as in reality.

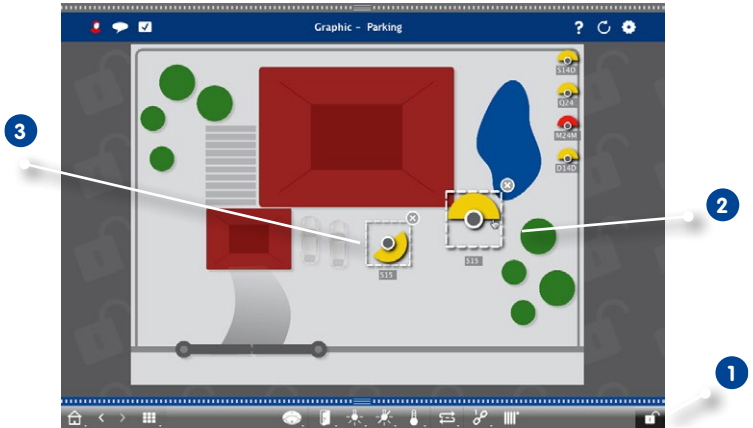


1. Activate the **Edit mode** **1**. Click on the gray circle at the center of the icon and drag the icon to the actual position of the camera.
2. Deactivate the **Edit mode** to save the settings.



Editing Camera Icons

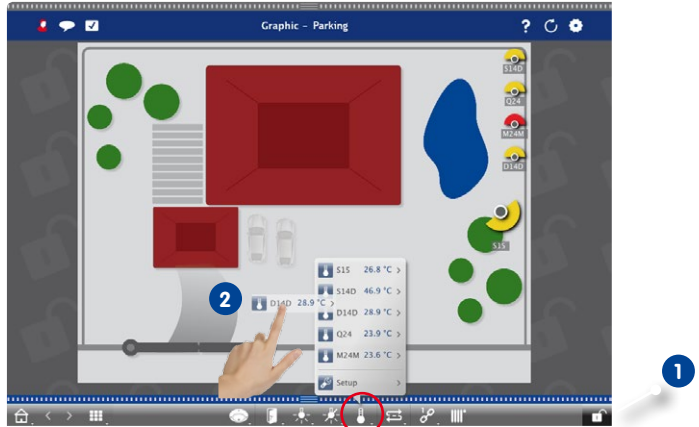
You can change the icon size and rotate the icons to reflect the viewing direction and the angle of view of the cameras.



1. Activate the **Edit mode** **1** and click on a camera icon. Use the yellow area of the icon and rotate it as desired **2**.
2. To change the icon size, drag the corners of the bounding box as desired **3**.
3. To change the angle of view, click in the camera icon and turn the mouse wheel until the desired angle has been reached.
4. Deactivate the **Edit mode** to save the settings.

Positioning Controls on the Plan

If a camera is connected to a door, for example, and has been set up properly, simply drag the corresponding control icon onto the ground or floor plan and click on the icon to control the feature. This makes sense if you want to control e.g., the door features of a camera close to its position on the plan.



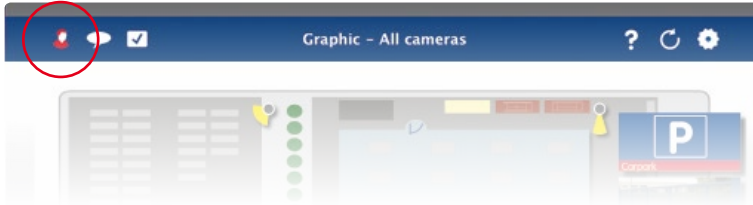
1. Activate the **Edit mode** 1.
2. Right-click on the desired control function and drag the icon onto the ground/floor plan 2.
3. Deactivate the **Edit mode** to save the settings.

3.2.4 Adding Users

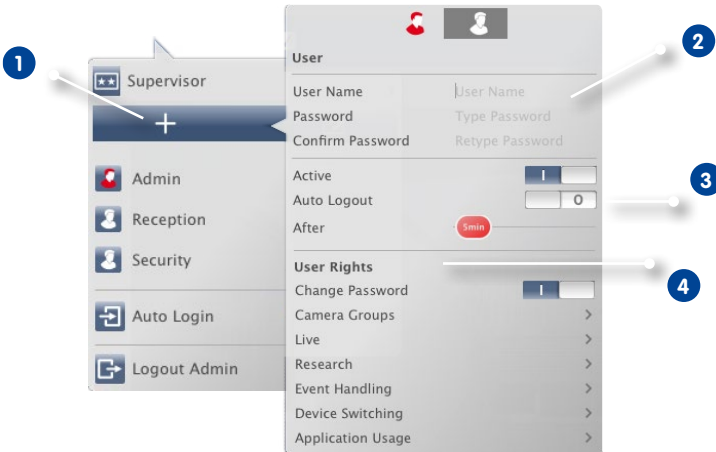
If you want to set up users with different rights for MxManagementCenter, you need to add these users first. For this purpose, the application differentiates between the "administrator" and "user" roles. While the administrator has all rights, you can assign the rights for users depending on the functions they need.

In order to add a user, you need administrator rights.

1. Click on the **User management** icon in the header.



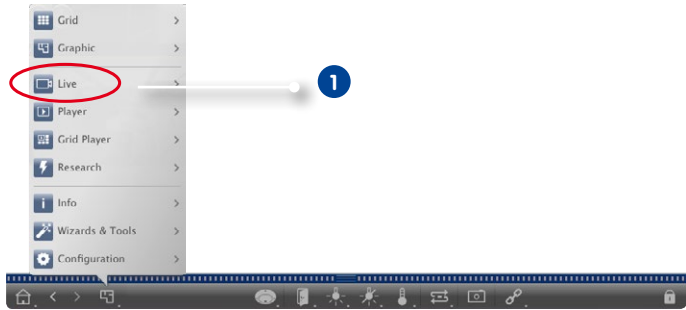
2. Click on **Add** 1.
3. Enter the user name and a password 2.



4. Use the **Active** option to enable the new user immediately or later on. If required, use the **Auto Logout** settings to automatically log out the user after the specified period of time 3.
5. By default, a new user has the rights to execute all functions. Deactivate the rights that are not available to this user in the **User Rights** section 4.

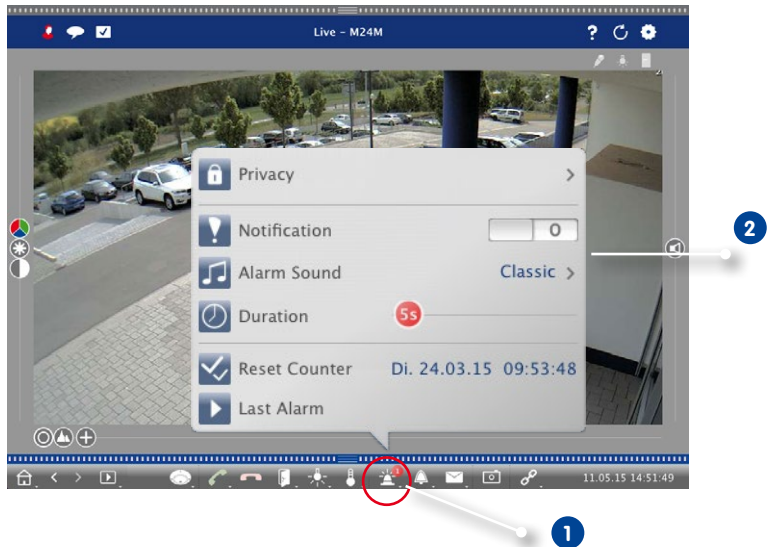
3.2.5 Setting Up Alarm Messaging (Live View)

In addition to the event notifications in the event bar or the event info bar, you can set up an alarm notification or alarm sound that signals new alarms. You can do this in the Live view by right-clicking on the Navigation icon and selecting **Live view** **1**.



Alarm Messaging




To activate/deactivate alarm messaging, right-click on the **Alarm** **1** icon in the Live view. Then activate the **Notification** switch **2**.



Active Alarm Message

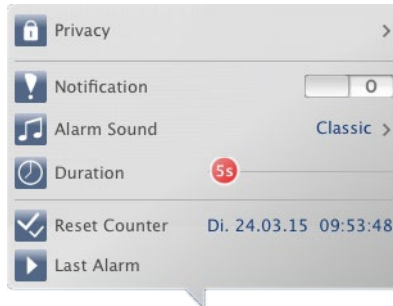
If a camera detects an event that leads to an alarm, an alarm message pops up if **Notification** has been enabled.



- Click on  to see the live images of the camera (e.g., if the alarm popped up a couple of seconds ago).
- To open the Player and to see the recording, click on .
- To close the message, click on .

Alarm Sound

1. Click on **Alarm Sound** to set the melody and the volume.
2. Select a melody from the list and move the **Volume** slider at the bottom to set the volume.



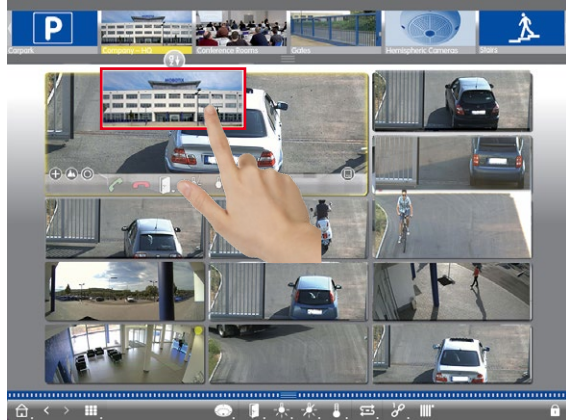
Alarm Duration

Use the **Duration** slider to set the period of time for showing the message.

3.3 MxManagementCenter in Day-to-Day Use

3.3.1 Working With the Grid View

Selecting a Group



1. Pull down the group bar.
2. Drag&drop a group onto the Grid view. Alternative: Click on the Group icon.

Showing a Different Camera in the Focus Window



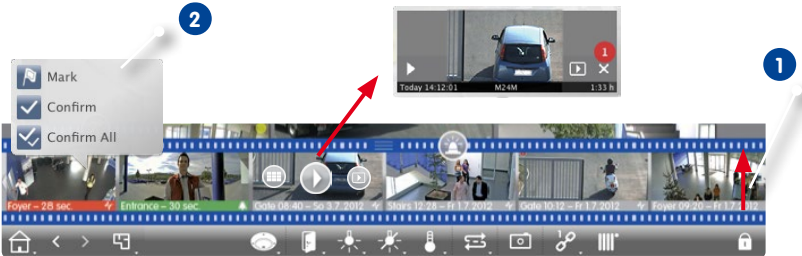
1. Drag&drop a camera from the camera bar or drag the live image into the focus window.




Detecting and Editing Events

If a camera triggers an alarm, the Grid view shows this using several methods.

Event Bar

The **Event bar** contains events that lead to an alarm (red) or if visitors rang the doorbell (green) – regardless of whether or not the bar is hidden at the moment.



1. Pull up the lower frame border to show the Event bar **1**.
2. To acknowledge a new event, click on the event image. To acknowledge all events at once, right-click the event image and select **Confirm All** **2**. You can also mark events that are important to you, so you can play back only the important events later on.
3. Features of the Event bar:
 - View the event recording directly in the Event bar using the **Instant Player**. To do so, move the mouse pointer over the event image. Three icons appear. Click on  to start the playback.
 - Jump to the player. Click on .
 - Open the Grid view assigned to this camera. Click on .

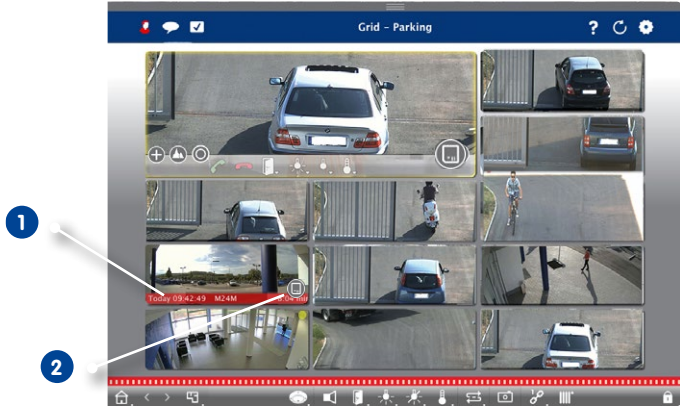
Hint:

Click into the live image or the recording to show this camera maximized within the window.



Event Info Bar

New events are also displayed in the Event Info bar. The bar beneath the corresponding live image turns red or green if the camera detects an event **1**.



Move the SD card slider to the left **2**. This opens the **Instant Player** with the last event image. Drag the red counter **3** along the bar to show the preceding images; the number in the counter increases. Click on **Playback** **4** to see the recording for the corresponding event image.

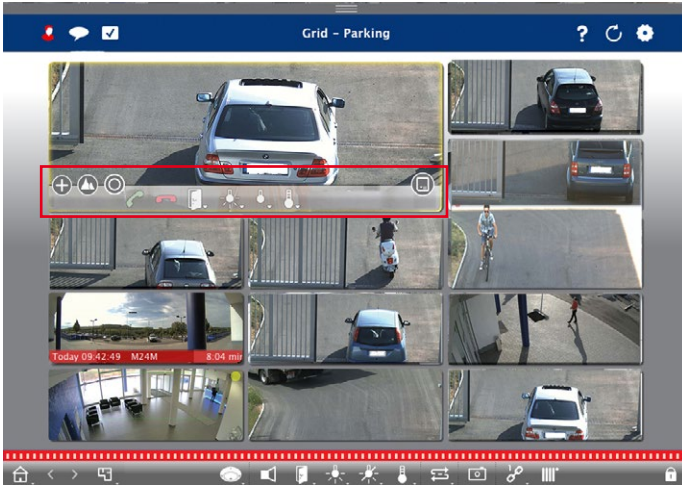


Hint:

Click into the live image or the recording to show this camera maximized within the window.

Controlling the Camera in the Focus Window

Use the controls at the bottom of the window to control the camera that is currently showing in the focus window.



- : Zooming and Moving Image Sections
- : Select pre-defined image sections.
- : Correct image distortion
- : Accept and end calls.
- : Open door and switch lights.
- : Show temperature.
- : Show event images.

Switching Group Functions

You can use the group buttons of the command bar to control the functions of a camera group. A group function allows to switch the lights, to open one or more doors or to make an announcement over several speakers for one or more cameras of the group (regardless of the camera in the focus window). In addition, you can right-click on the group buttons to open the context menu in order to control cameras that are not part of the current group. Before you can do this, the cameras have to be set up accordingly, i.e., the cameras need to be connected to door openers/light switches and have to be configured properly.



- Make an announcement.
- Open door, switch light.
- Show temperature.

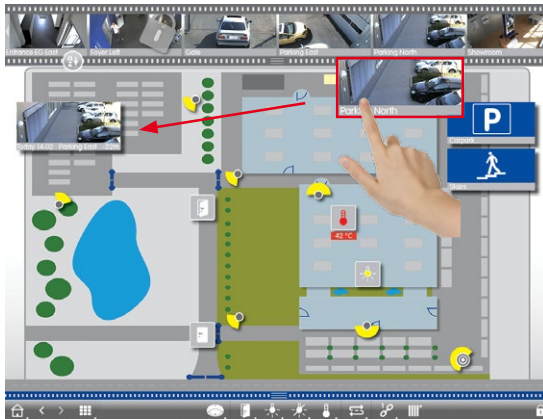
3.3.2 Working With the Graphic View

Temporarily Showing the Live Image of a Camera on a Ground/Floor Plan



To quickly check the situation, you can show a live image by moving the mouse pointer over the camera icon **1**. You can also temporarily drag the live image from the camera bar onto the Graphic view.

Temporarily Showing the Live Image of a Camera of a Different Group



Drag&drop the desired camera from the camera bar onto the ground/floor plan. When changing the view, the live image disappears.

Hint:

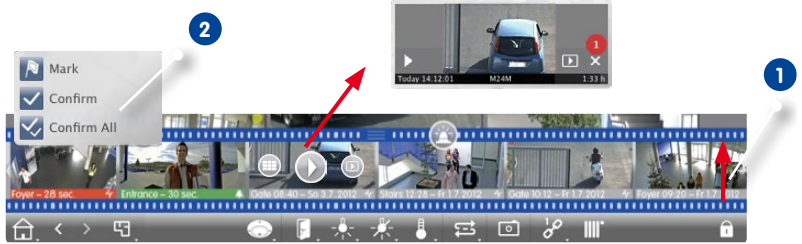
You can also show the live image permanently. Simply activate the **Edit mode**, pull the live image onto the ground/floor plan and deactivate the edit mode.




Detecting and Editing Events

If a camera triggers an alarm, the Graphic view shows this using several methods.

Event Bar

The **Event bar** contains events that lead to an alarm (red) or if visitors rang the doorbell (green) – regardless of whether or not the bar is hidden at the moment.

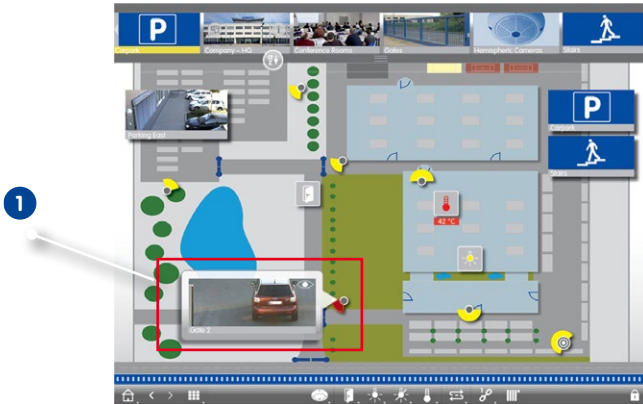


1. Pull up the lower frame border to show the Event bar **1**.
2. To acknowledge a new event, click on the event image. To acknowledge all events at once, right-click the event image and select **Confirm All** **2**. You can also mark events that are important to you, so you can play back only the important events later on.
3. Features of the Event bar:
 - View the event recording directly in the Event bar using the **Instant Player**. To do so, move the mouse pointer over the event image. Three icons appear. Click on  to start the playback.
 - Jump to the player. Click on .
 - Open the Grid view assigned to this camera. Click on .



Camera Icons

If a camera detects an event, the camera icon turns red or green (ringing event). You can



get a quick glance at the situation observed by the camera by showing a small live image (move mouse pointer over icon) **1** or by showing a large live image (click on camera icon). If a second monitor is available, double-clicking on the icon will show the live image on that monitor. From the live image, you can switch directly to the Player to check the event details.

You can also see the event recording in the **Instant Player**. To do so, show the live image



and click on the bottom (date and time). The Instant Player opens **2**. Click on **▶** to start the playback or move the mouse pointer over the image.

Camera Group Icon

If you have positioned additional camera groups on the ground/floor plan, the name bar of the group icon turns red or green, if a camera of that group detects an event **1**.

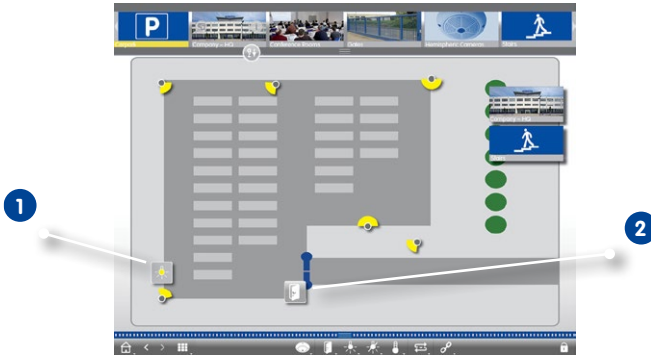


1. Move the mouse over the group icon in order to show the live image **2** from the camera that triggered the event.
2. Click on the bottom of the live image (date and time) to open the Instant Player. Click on **▶** to start the playback.

Switching Functions

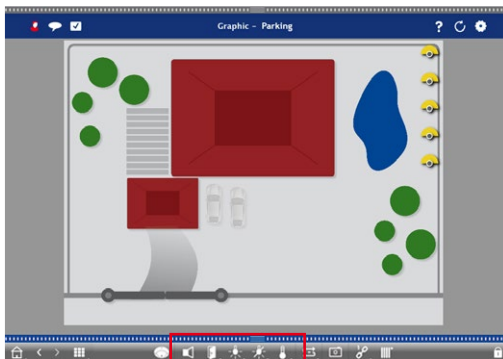
Switching Functions for One Camera

For controls that you pulled onto the ground/floor plan, a simple click will execute the function **1**. At the same time, the icon shows the status of the function. If the door is not closed, for example, the icon shows an open door icon **2**.



Switching Functions for a Group

Use the group buttons of the command bar to switch the lights of several cameras at once, to open several doors or to make an announcement over several speakers for one or more cameras of the group regardless of the focus window contents. In addition, you can right-click on the group buttons to open the context menu in order to control cameras that are not part of the current group.



- Make an announcement.
- Open door, switch light.
- Show temperature.

3.4 Searching in MxManagementCenter

3.4.1 Searching and Playing Back in the Player

To show the Player, right-click on the Navigation button and select **Player**.



General Player Controls

To search and play back recordings, you can activate **Playback mode** ① or select the date and time and then use the **Previous/Next Image** buttons, to browse the recordings or you can start the playback using the **Forward/Backward Playback** buttons. The playback mode is initially set to **Event Recording** ②. If you want to play back all recordings, switch to **Entire recordings** ③.

Browsing Recordings for Event Images

You can select the recordings according to these events:

- **Event images:** Only shows event images.
- **Pre-event images:** Shows only the first recorded image for each event.
- **Marked events:** Shows only the images, which had been marked as important before.

1. In the Player, select the **Playback mode** by right-clicking the button and selecting the desired mode ④.



- Browse the recordings using the **K** and **▶** buttons. Beginning at the current event image, these buttons show the previous or next event image **5**.

Browsing Recordings for a Specific Date and Time

If you have set up continuous recording for certain times and you want to check for events during those times, for example, you can limit the search to these times. You can search for events at a given time, by using time leaps or time-lapse playback.

Searching for a Specific Date and Time



- Click on the displayed date and time **1** and enter the date and time to search for.
- The event image jumps to the event in the recordings that is closest to the specified date and time. Click on **Playback**.

or



- Click on the **Calendar** slider **2**. The date and time will be shown above the slider. Move the slider until you reach the date and time that is closest to the date and time you want to examine. The event image jumps to the event in the recordings that is closest to the specified date and time. Click on **Playback**.

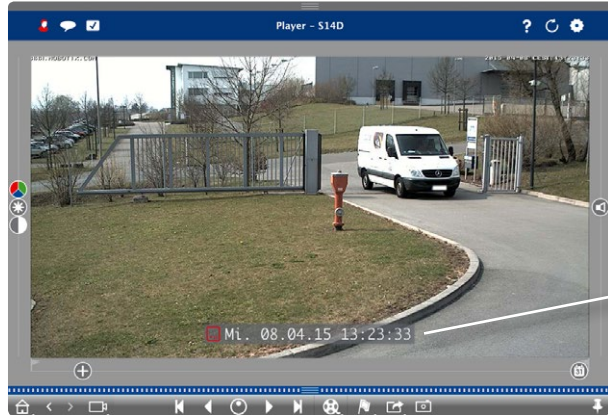
Hint: The farther away you move the mouse pointer from the slider, the more precise your setting will be.



Searching Several Cameras for Persons or Objects


Camera A is overlooking the gate and signals an event. The event image in the Event bar shows a delivery truck driving through the gate. You want to know if the truck has also passed the area monitored by camera B.

1. Move the mouse pointer over the event image to see three icons. Open the Player by clicking on .
2. Play back the recording (end of recording .



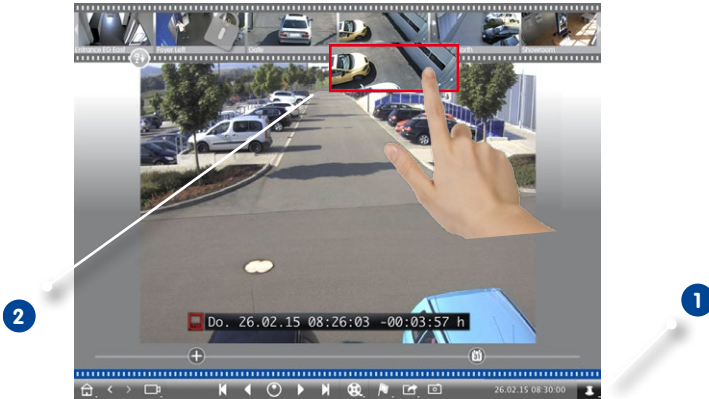
3. Drag&drop camera B from the camera bar into the Player.



4. The playback automatically selects the recording that follows the end of camera A's recording . You can repeat this for as many cameras as needed.

Searching Several Cameras for a Specific Point in Time

You want to know if other cameras have recorded something at a specific point in time:



1. Set the reference time using the **Pin** button **1**.
2. Drag&drop the cameras from the camera bar one by one **2**.
3. The application shows the event images of each camera that are closest to the specified point in time.

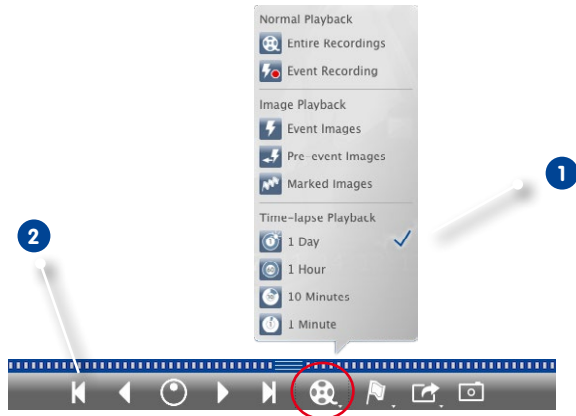


Limiting the Search Range for an Incident

Your camera monitors a parking lot from which a car had been stolen during the day. Follow these steps to locate the event as quickly as possible:

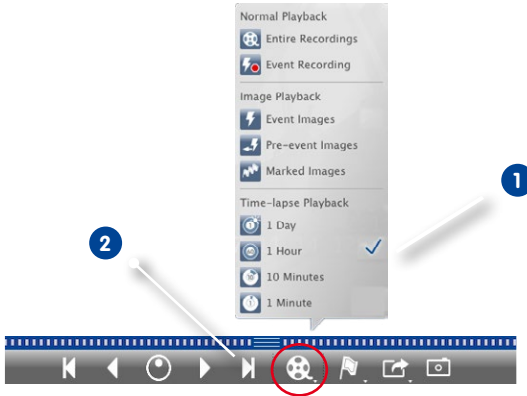


1. Start the **Playback mode** (right-click ) and select an interval (e.g., 1 day) **1**.
2. Keep clicking on **Previous image** **2** until the car is in the image.

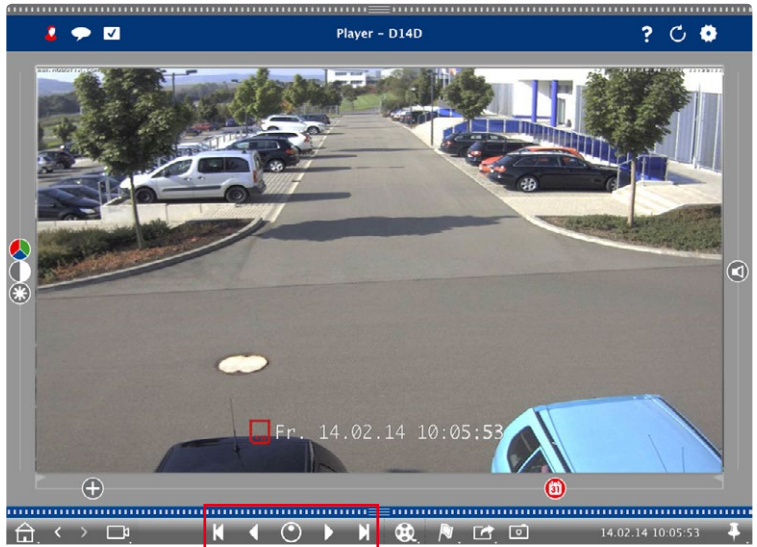


3. Select a shorter interval (e.g., 1 hour) **1**.
4. Keep clicking on **Next image** **2** until the car is not in the image any more.
5. Keep on using shorter intervals, until you have found the exact point in time of the incident.

Note that you can also use the **Forward/Backward Playback** buttons to play back using the same time leaps.



Playing Back Recordings







Forward/back-
ward playback

Playback speed
Up to 16x faster

One image forward/
backward

Hint: Precise Positioning by Image

If you want to examine a scene very closely, you can check the recordings one image at a time. To do so, stop the the playback (click on  or ). Now use the two buttons  (forward) and  (backward) to navigate the images one by one.

Hint: Playback Priority

To optimize the camera for fast playback, the **Playback has Priority** option has already been set. You can change this setting in **Setup Menu > General Image Settings > Playback has Priority**.

3.4.2 Searching and Playing Back in the Grid Player

To show the Grid Player, right-click on the Navigation button and select **Grid Player**.



The Grid Player provides synchronized searching and playback of the recordings of entire camera groups.



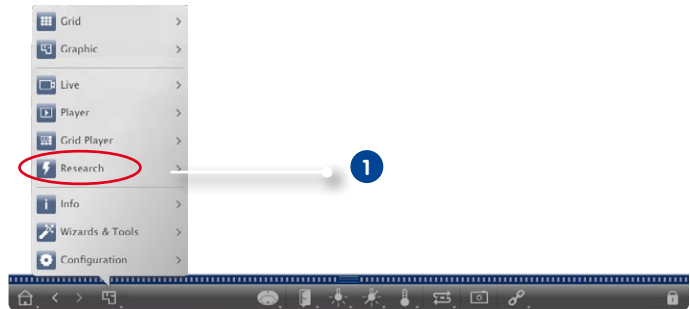
1. Use the timestamp in the focus window **1** or the calendar slider **2** to set the time.
2. Drag&drop the desired camera group from the group bar.
3. All cameras jump to the event image that is closest to the specified point in time. The timestamp beneath each camera image shows the time and date of the image. The difference to the reference time is shown at the right.

Hint:

You can also use the Grid Player by dragging a group onto the player. The original camera will be shown in the focus window.

3.4.3 Searching and Playing Back in the Research View

To show the Research view, right-click on the Navigation button and select **Research** 1.

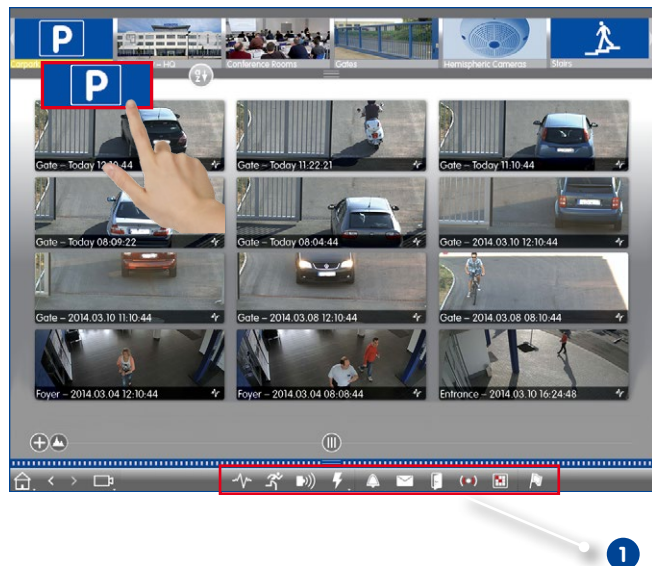


The Research view allows searching all event images of one camera or of the cameras of a group. You can filter the events according to event types.

Showing the Event Images of a Camera/a Camera Group










Camera: Drag&drop the desired camera from the camera bar into the display area of the view.

Camera Group: Drag&drop the icon image of the desired camera group into the display area of the view.



Filtering by Event Types

Initially, the event images of the selected cameras are sorted by time. You can filter the events according to event types **1**. To activate the event types, click on the corresponding buttons:

- : MxActivitySensor Events
- : Video Motion Events
- : PIR Events
- : Environment events: Sounds, temperature, illumination, signal input
- : Ringing Events
- : Mailbox Messages
- : Door Station Events
- : Invalid RFID card
- : Invalid PIN

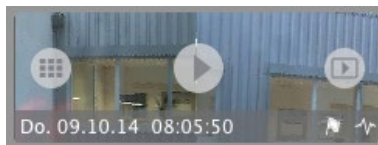
Marking Events



When browsing event images, you can right-click on an image and mark it as "important". The same applies to event images that you have marked as "important" in the Player or in the event list – you can see them in one collection in the Research view.



Playing Back an Event

You can see the recording to each event directly in the view. To do so, move the mouse pointer over the event image. Three icons appear.



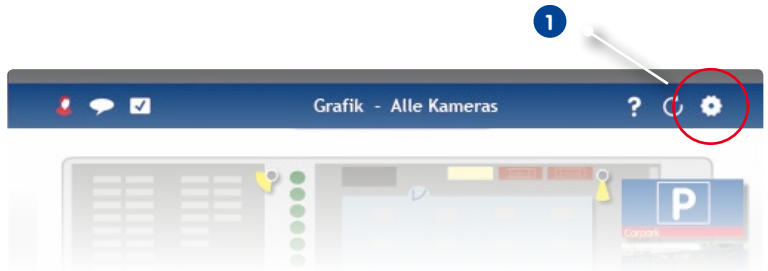
- Click on  to show the recording.
- Click on  to switch to the Player.

3.5 Working With Different Network Environments

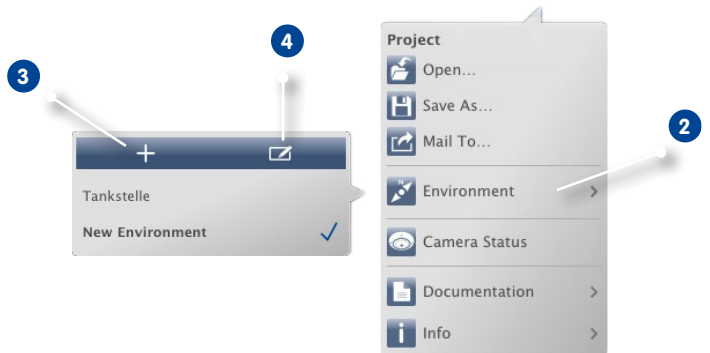
Using MxManagementCenter, you can access cameras from different locations. This usually means that each location requires using different network access data. To avoid changing the network access data every time, you can set up different network environments with the corresponding network access data.

3.5.1 Creating Environments

Create your environments to begin with. Next, use the **Camera management** to select the cameras for each environment. This is also where you can set the DynDNS access for the cameras (if you did not specify this when adding the cameras).



1. In the header, click on **Projects and Environments** **1** and then on **Environment** **2**.




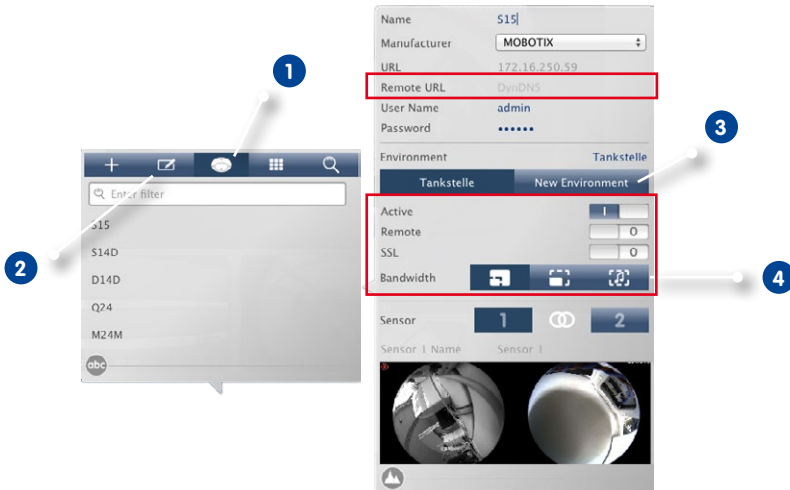
2. Click on **Add** **3**. This adds an environment with the "New environment" default name. You should change the name by clicking on **Edit** **4** and entering a descriptive name.










3.5.2 Changing Network Data and Selecting Environments

After creating the environments, you can select the cameras that will be active for each environment and adjust the network data as needed.

1. Open the **Camera management** (in the Graphic, Grid, Live and Info views) by right-clicking on  in the command bar.



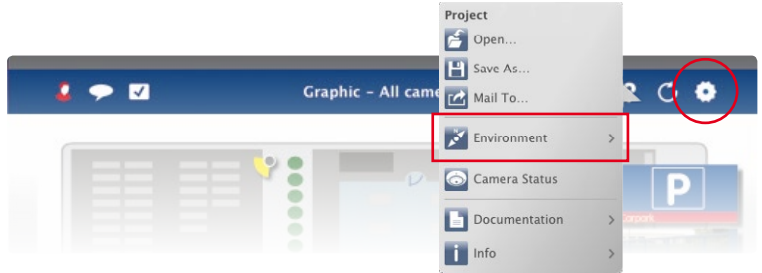
2. Click on **Camera**  and then on **Edit** . Select the desired camera.
3. Select the desired environment .
4. Select the bandwidth to use for this environment: 
 -  **HiRes:** The images are transferred using the current camera settings. transferred.
 -  **LoRes:** The images are provided with the specified frame rate, image size and quality (see "Program settings").
 -  **Audio Only:** No images (still image can be pulled upon request), good audio quality with low bandwidth requirements.





Selecting an Environment

1. In the header, click on **Projects and Environments** and then on **Environment**. Select the desired environment.



Hint: Limiting the Frame Rate

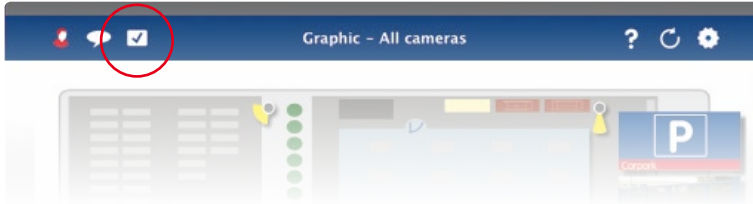
If the recorded images are loaded too slowly, you can enhance the performance by limiting the frame rate to 8 fps, for example. The camera uses the free resources to generate images with reduced size, quality and frame rate for transfer while providing regular images for live display and storage.





1. Open the camera's user interface in the browser.
2. Click on **Setup Menu > Image Control > General Image Settings > Frames per Second**.
3. Make sure that **Limit Frame Rate When Idle** has been activated.
4. Set the maximum **Frames per Second**.

3.5.3 Temporarily Adjusting the Bandwidth

By assigning a bandwidth to an environment, you can specify how the images are pulled from the cameras given different connection speeds. This basically controls how the images can be displayed for live viewing and event research. Selecting a bandwidth thus also controls the image quality. Note that you can temporarily overwrite the bandwidth setting without actually changing the camera setting.

1. Click on **Bandwidth** in the header.



2. Click on the button to switch from one setting to the next.
 -  **HiRes:** The images are transferred using the current camera settings. transferred.
 -  **LoRes:** The images are provided with the specified frame rate, image size and quality (see "Program settings").
 -  **Audio Only:** No images (still image can be pulled upon request), good audio quality with low bandwidth requirements.
 -  **Unchanged:** Uses the original setting of the camera.

3.6 Working With Door Stations

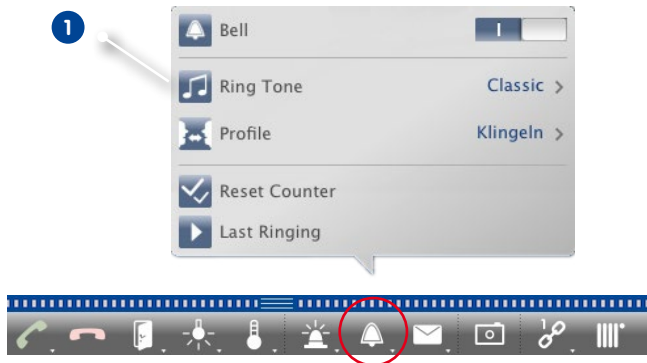
3.6.1 Setting up Door Stations

In general, the door stations are configured when adding them to the system. Note that you can change the bell behavior and the mailbox settings also while the system is up and running. You can do this in the Live view in the bell and the mailbox settings. The settings apply to the currently displayed camera image.

Bell Settings

Setting the Ring Tone

1. In the Live view, right-click on the **Bell** icon to open the **Bell settings**.



2. Click on **Ring Tone** **1** and select the desired melody.
3. Move the **Volume** slider until you have found the desired volume.



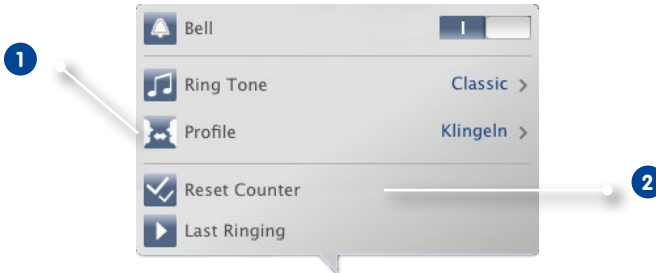
Selecting a Bell Profile

A bell profile basically controls the reaction if someone is ringing at the door station. The camera provides several **pre-defined** bell profiles.

- **No phone ring:** MxMC and all other remote stations will not react, i.e., you will not notice if someone is ringing (neither visually nor by sound).
- **Ringin:** You will hear if someone rings the doorbell. The visitor cannot leave a message.
- **Ring and Mailbox:** You will hear if someone rings the doorbell. If you do not react within a given period of time, the door station plays back an announcement and the visitor can leave a message.

- **Mailbox:** After ringing, the door station immediately plays back an announcement and the visitor can leave a message.
- **Announcement only:** After ringing, the door station immediately plays back an announcement. The visitor cannot leave a message.

1. Click on **Profile** 1.
2. Then click on the desired profile in the list.



Reset Counter

The counter in the Live view is incremented upon every ringing of the doorbell, regardless of whether or not you react to the ringing. Resetting the counter will help in recognizing if you have missed a ringing, you should therefore always reset the counter to Zero. Once you have reset the counter, you will be informed how long ago the last reset took place.

1. Click on **Reset Counter** 2.
2. The counter has been reset and will not be shown next to the **Bell Settings** button.

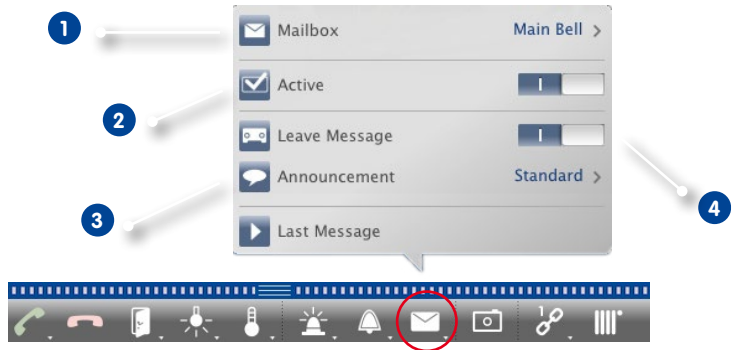


Mailbox Settings

Select Mailbox

Depending on the installed options and the configuration of the door station, you may have several bell buttons or – in case a MOBOTIX keypad module has been installed – several contact numbers. Each of these bells or contact numbers has its own mailbox. The corresponding mailboxes are presented in the list (below the name of the bell).

Note: All settings made in the **Mailbox** function always apply to the selected mailbox. This also means that the new messages counter only applies to this mailbox. To get the messages and recordings of a different mailbox, select that mailbox first.



1. In the Live view, right-click on the **Mailbox** icon to open the **Mailbox settings**.
2. Click on **Mailbox** **1** to select the desired mailbox from the list.

Proceed by selecting a bell profile for each mailbox. For instructions on how to do this, see "Selecting a Bell Profile".

Activate the Mailbox and Select a Welcome Message

Activate **2** the mailbox. Select the message that will be played to the visitor **3**.

Enable the Message

If visitors should be allowed to leave a message, activate the **Leave Message** option **4**.



3.6.2 Operating Door Stations

Answering Ringing


There are different ways to indicate that someone has rung the doorbell.

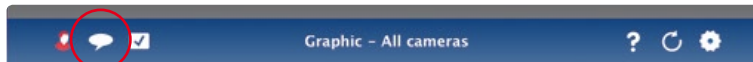
Notification on Ringing

If alarm messaging has been activated (**Live View > Alarm > Alarm Message**), a notification will be shown if someone rings the doorbell – regardless of the currently active view.

Using the notification buttons, you can open the door **1** or start a conversation **2**.



You can temporarily disable notifications. To do so, click on **Notification** in the header. The button indicates that it is currently disabled .




Event Bar

Note that you will still see if someone is ringing even though notifications have been disabled – the event bar will turn green.



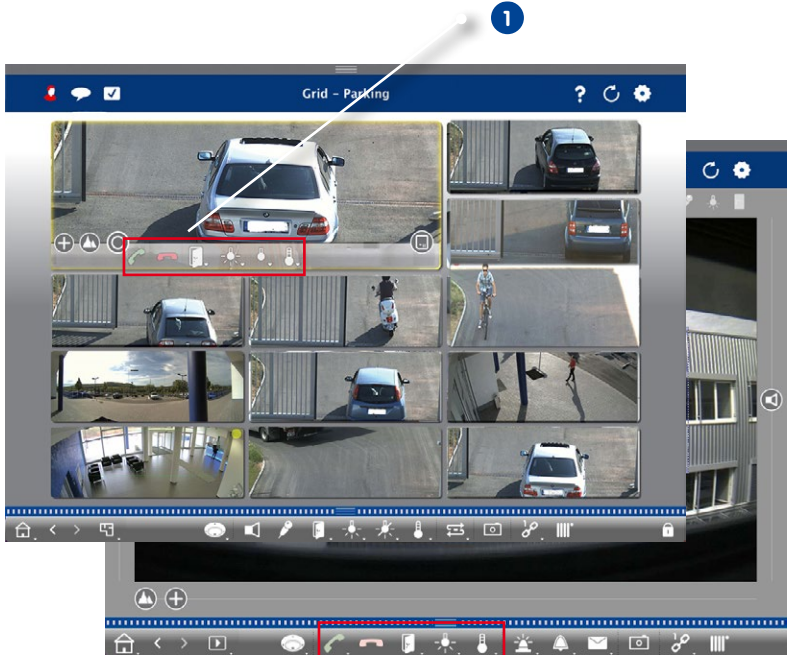
- In **Live view**, drag&drop the event image into the live image. Use the buttons in the command bar to start a conversation and to open the door.
- In **Grid view**, drag&drop the event image into the focus window. Use the controls of the focus window to start a conversation and to open the door.
- In **Graphic view**, drag&drop the event image from the event bar onto the ground/floor plan. A small temporary live image is shown at the bottom; use its controls to start a conversation and to open the door.

- From **all other views**, switch to the Grid view (by clicking on  in the mouse-over), then drag&drop the event image into the focus window. Use its controls to start a conversation and to open the door.

Opening the Door/Switching Lights

If the door station has been set up properly, you can use MxManagementCenter to open the door and to switch the lights. Use the buttons in the command bar of the focus window (Grid view) **1** and in the command bar of the Live view **2**.

Grid view





Live view

Working With Door Stations

Playing Back Door Station Events

Playing Doorbell Recordings

If you have missed a visitor, you can use the Event bar to see who rang the doorbell and when that happened.

1. To do so, move the mouse pointer over the event image. Three icons appear.
2. To see the doorbell recording directly in the Event bar, click on **Play** .
3. To see the recording in the Player, click on **Player** .


Accessing the Mailbox Messages

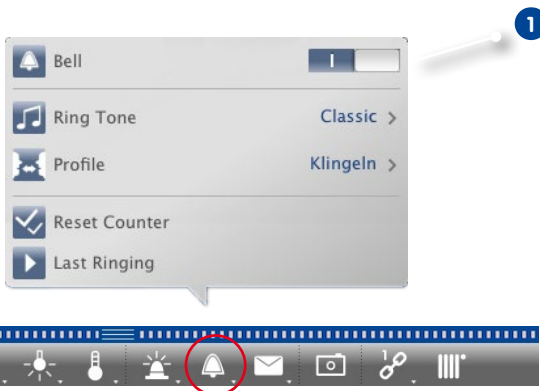
If visitors have left messages during your absence, you will immediately notice the **counter next to the Mailbox button** in the Live view, which is incremented every time someone leaves a message. Once you have played back the message in the Player, the message is automatically marked as "seen" and the counter is reduced by one.



Deactivating the Doorbell

If you do not want to be disturbed by the doorbell, you can deactivate a specific bell or contact number. This means that the ringing of the doorbell will neither be indicated nor registered at the door or at one of the door stations. It also means that you will not get any information about visitors you missed, that these visitors will not be able to leave messages and that nothing will be recorded.

1. In the Live view, right-click on the **Bell** icon to open the **Bell settings**.
2. Deactivate the **Bell** switch .



3.7 Exporting Recordings

3.7.1 Saving Snapshots



Snapshot images can be created in the Live view and the Player for the displayed camera, in the Grid view and the Grid Player for all displayed cameras. Click on the **Snapshot** button in the command bar.

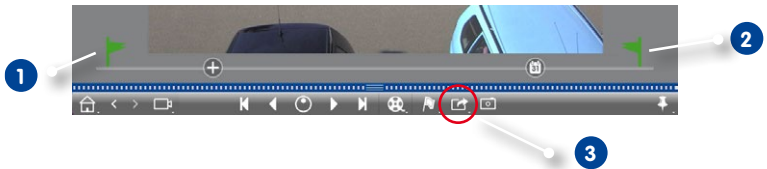
By default, the images are stored on the desktop. Snapshots from the Grid view or the Grid Player are stored in a folder on the desktop that contains the images of all cameras of the group. To set the target folder and image settings for the snapshot images, open **MxManagementCenter > Preferences > Snapshots** in the menu.

3.7.2 Exporting Recordings

Exporting the Recordings of One Camera

The Player allows to set a time range for a recording (event or continuous recording) to select it for exporting.

1. Open the Player.
2. Drag&drop the desired camera from the camera bar.
3. Find the recording you are interested in.
4. Mark the start of the clip by clicking on the green flag on the left **1**. Play back the recording until you have reached the end of the clip you want to export. Mark the end of the clip by clicking on the green flag on the right **2**.



5. Click on **Export** **3** and select MOBOTIX.
6. Select a target folder in the Export dialog and enter a file name. Click on **Save**. The clip is saved to the file.

Hint: Automatic Import

If you activate the **Automatically import after export** option, the exported clip is automatically added to the camera bar.

Exporting the Recordings of Camera Group

The Grid Player allows to set a time range for a recording (event or continuous recording) to select it for exporting from several cameras.

1. Open the Grid Player.
2. Drag&drop the desired camera group from the group bar.
3. Find the recordings you are interested in.
4. Mark the start and the end of the clip as described in **Exporting the Recordings of One Camera**.



5. Export the clips as described in **Exporting the Recordings of One Camera**. Instead of in one file, the program creates a folder that contains all exported clips.

Hint: Automatic Import

If you activate the **Automatically import after export** option, the exported clips are automatically added to the group bar.

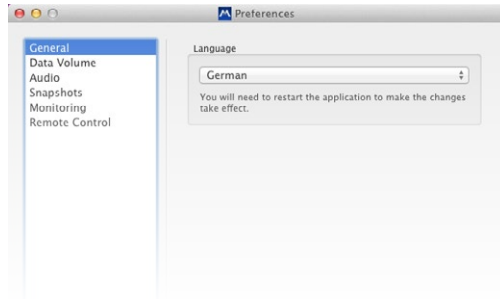
3.8 Program Settings

3.8.1 Setting Options and Selecting Defaults

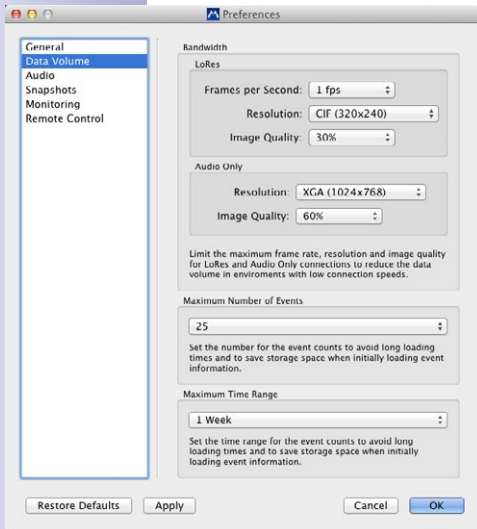
Open **MxManagementCenter > Preferences** in the menu.

General Settings

The general settings allow changing the language of the user interface. You may have to restart the software in order to apply your changes.



Data Volume



- **Bandwidth:** By using environments (see Section 3.4, «Working with Different Environments»), the images can be pulled from the cameras with different size, quality and frame rate. You can limit the bandwidth by adjusting the values for LoRes and Audio Only connections. By using lower values, you can limit the bandwidth required to transfer the data, thus allowing you to adapt the system to the connection speed. Default values for the settings:

- LoRes: 1 fps, CIF, 30%
- Audio Only: XGA, 60%

Note that these settings are by no means camera settings; you are only limiting the frame rate, image size and quality of the video stream that is transferred to MxMC. If you set a value that is higher than the value set on the camera, the camera value will be used.

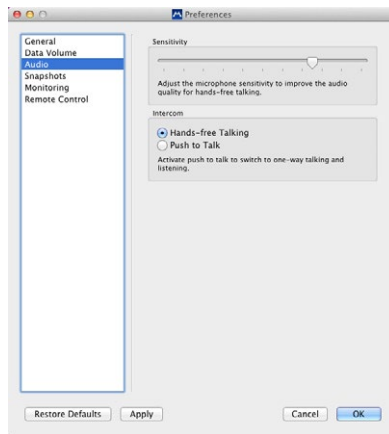
- Maximum Number of Events/Maximum Time Range:** The number of events and the time range are controlling how far into the past MxMC will look for event information after the next launch of the application. The settings apply to the event counter in Live view and the event preview images in the Research view. This avoids long loading times and saves storage space when initially loading the event information.

Setting the Intercom Mode of Door Stations

Use the slider to set the sensitivity for recording the sound from the camera microphone. The default setting has been optimized for Intercom connections and should only be changed in very noisy or very quiet door station surroundings.

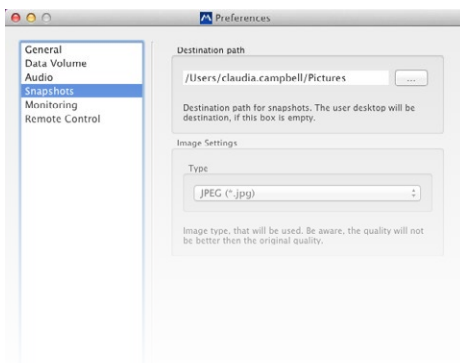
Hands-Free Talking and Push to Talk

The Hands-free Talking option is activated by default. If the surroundings are very noisy or if audio connection problems persist, you should try to use the Push to Talk setting.



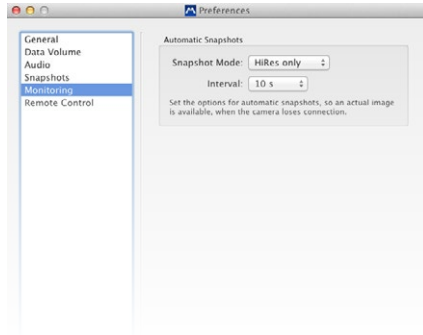
Snapshots

You can save snapshots from live images or from recordings. These settings control the location and the quality of the snapshot images stored by MxMC. If you do not specify a folder, the files will be created on the desktop (see Section 3.6.1, «Saving Snapshots»).



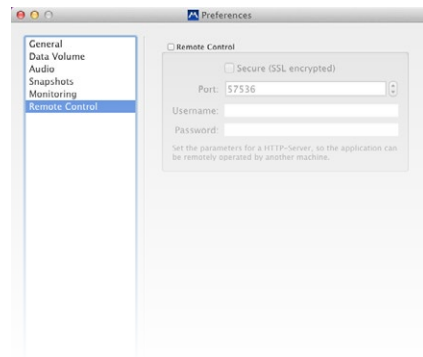
Monitoring

Use this section to have the application automatically store snapshots of all cameras at regular intervals. Every new snapshot of a camera overrides the previous snapshot. If the connection to a camera fails, you will have a fairly recent snapshot of that camera.



Remote Control

MxMC can be remote-controlled from other programs using HTTP requests. Activate this feature and set a proper port if you want to use this feature.



3.8.2 Saving and Loading Program Settings

Saving a "project" will store all program settings of the cameras and the camera groups, including the layouts. If you provide such a project via email, you can choose to include the encrypted access data for each camera (user name and password). If you do not supply the access data, the user name and password will have to be entered manually for each camera.



Saving a Project

1. In the header, click on **Projects and network environments**.
2. Click on **Save As**.
3. Activate the **Include access data** checkbox if you want to include the camera access data. Click on **Save**.



Sending Projects

1. In the header, click on **Projects and network environments**.
2. Click on **Email To**.
3. Activate the **Include access data** checkbox if you want to include the camera access data. Click on **OK**. The file is automatically attached to a new email. Send the email.



Opening a Project

1. In the header, click on **Projects and network environments**.
2. Click on **Open** and select the project file. Decide if you want to add the project to the current one or if you want to replace the current project.



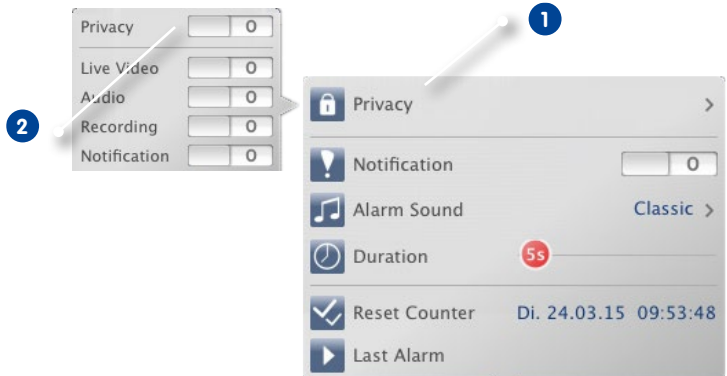
Opening Projects Received by Email

1. Open the attached file in the email.
2. Click on **Open in MOBOTIX**. MxManagementCenter opens automatically. Decide if you want to add the project to the current one or if you want to replace the current project.

3.8.3 Activating/Deactivating the Privacy Mode

You can lock or deactivate specific functions of a camera for a certain period of time. This is easily done by activating the privacy mode. This mode is valid for 24 hours unless you deactivate it before.

1. In the Live view, right-click on the **Alarm** icon to open the **Alarm settings**.
2. Click on **Privacy** 1.



3. Activate the features that should be blocked when entering the Privacy mode. Activate the **Privacy** switch 2.
4. Deactivate the **Privacy** switch if want to stop this mode. The privacy settings will be stored and will be reused the next time you are activating this mode.

Note: If the Privacy mode icon appears in the top right corner of the camera image, this mode has been activated.



Innovations – Made in Germany

The German company MOBOTIX AG is known as the leading pioneer in network camera technology and its decentralized concept has made high-resolution video systems cost-efficient.

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