
MatrixView

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MatrixView

MatrixView lets you combine multi-instance DVR sites and display up to 64 channel on single monitor, output up to 4 program screen with 1/4/6/9/12/16/20/24/25/30/36/48/56/64 split screen or customized split layout.

Launching MatrixView

To launch MatrixView, run this program from the Windows "Start" menu by selecting Start - Programs - huperVision v1.6 - MatrixView.

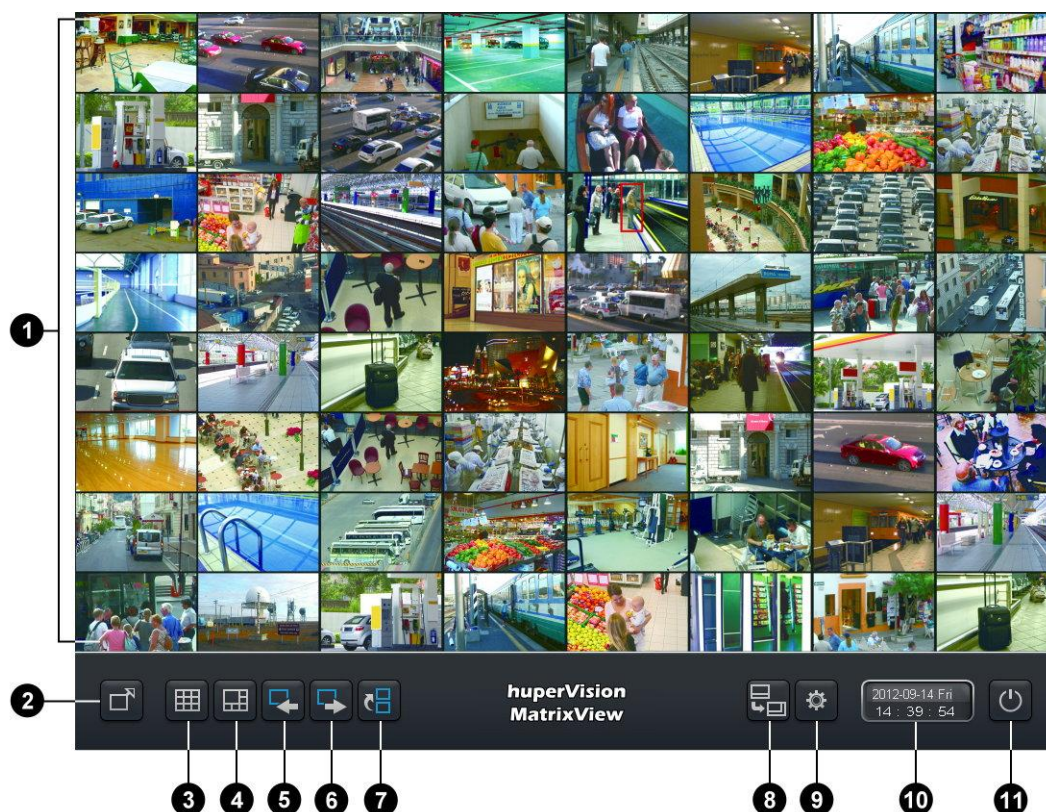
By default, MatrixView will allow any user to have access to the program. To restrict the program's access rights only to the local Administrator or to an authorized user account, you can enable access control via Account Manager. For more information on this, see Account Manager section.



When access control is enabled, you will be prompted to logon to the MatrixView. In the Log in dialog box, enter "Administrator" or the authorized user account name as the Login name and enter the Password. Then click OK.



MatrixView Interface: Main Console

Main console display is the main program to display standard split or custom split. The interface components are listed below.



- | | | |
|----------|---------------------|---|
| 1 | Video display | The multi-screen display can have up to 64 split screens to show live video from different video camera. |
| 2 | Full screen mode | Toggle between full screen and normal display modes |
| | |  Switch to full screen mode |
| | |  Switch to normal display mode |
| 3 | Standard split menu | Pop-up standard split menu, can change split layout between 1/4/6/9/12/16/20/24/25/30/36/48/56/64 split. |
| 4 | Custom split menu | Pop-up custom split menu, can change split layout edited by custom layout editor. |

- 5** Previous view

It preforms differently with various split display types

Under standard split: Display previous available split page. It will display the last page if click this button at first page.


Under custom split: Display previous loop camera of split screen. It will display the last camera of the list if click this button at first camera.
- 6** Next view

It preforms differently with various split display types


Under standard split: Display next available split page. It will display the first page if click this button at last page.

Under custom split: Display next loop camera of split screen. It will display the first camera of the list if click this button at last camera.
- 7** Loop display switch

Toggle between loop or non-loop display mode



Non-loop display mode



Loop display mode
- 8** huperVision program switch menu

Pop-up huperVision surveillance suites program menu, can switch program between huperVision surveillance suites.

Show Site Server : Switch to Site Server program interface

Show Record Player : Switch to Record Player program interface
- 9** Settings menu

Open a pop-up menu containing the items below:

Display Settings : Show Display Settings interface to show/hide title bar, set video looping interval and adjust program window size & position

Account Manager : Show Account Manager interface to add/modify user & group privileges

Custom Layout Editor : Show Custom Layout Editor interface to customize split layout

About : Show About interface of MatrixView program
- 10** System clock

Display current date & time

11 Power button

Open a pop-up menu containing the items below:

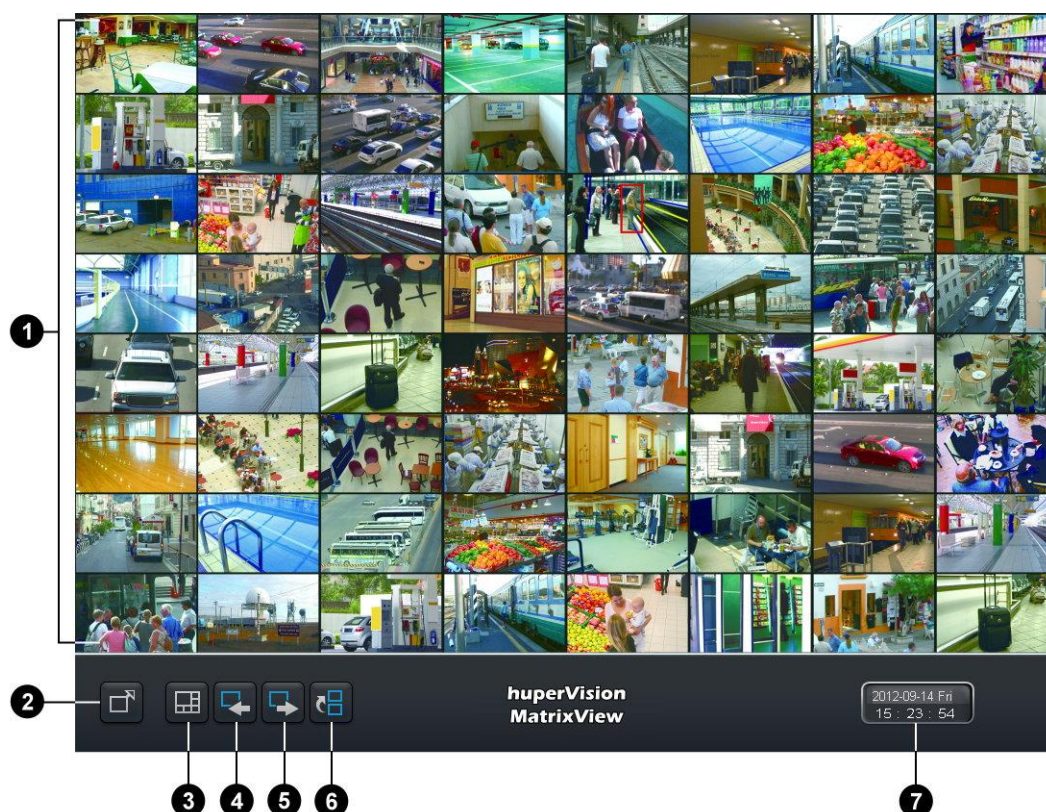
Login / Logout : Login / Logout the MatrixView program when access control is enabled in Account Manager.



Minimize : Minimize all the MatrixView program windows onto the Windows taskbar



Exit MatrixView : Close the MatrixView program

MatrixView Interface: Extended Display

Extended display is the extra program output window that can let you display more split layout except for main console, it only supports with custom split display. Please refer to Display Settings section for setup details.



- 1** Video display The multi-screen display can have up to 64 split screens to show live video from different video camera.
- 2** Full screen mode Toggle between full screen and normal display modes
 -  Switch to full screen mode
 -  Switch to normal display mode
- 3** Custom split menu Pop-up custom split menu, can change split layout edited by custom layout editor.
- 4** Previous view Display previous loop camera of split screen. It will display the last camera of the list if click this button at first camera.


































- 5** Next view Display next loop camera of split screen. It will display the first camera of the list if click this button at last camera.
- 6** Loop display switch Toggle between loop or non-loop display mode
 -  Non-loop display mode
 -  Loop display mode
- 7** System clock Display current date & time

Split Screen

Each split window in MatrixView contains a split screen. It can display live video, camera & event status and perform some operation like snapshot or digital PTZ.

Split Screen Components

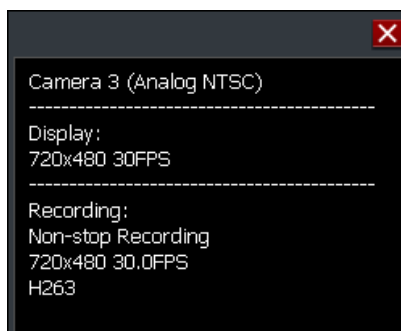


- | | | | | | | | | | |
|---|---|---|--|---|---|---|---|---|--|
| <p>1 Title bar</p> | <p>Display camera name and event status. This title bar can be hidden through the setting in Display & Layout dialog.</p> <p>The status of title bar:</p> <table border="0"> <tr> <td> camera name</td> <td> Camera without event</td> </tr> <tr> <td> camera name</td> <td> Camera with event</td> </tr> <tr> <td> camera name</td> <td> Selected camera without event</td> </tr> <tr> <td> camera name</td> <td> Selected camera with event</td> </tr> </table> |  camera name |  Camera without event |  camera name |  Camera with event |  camera name |  Selected camera without event |  camera name |  Selected camera with event |
|  camera name |  Camera without event | | | | | | | | |
|  camera name |  Camera with event | | | | | | | | |
|  camera name |  Selected camera without event | | | | | | | | |
|  camera name |  Selected camera with event | | | | | | | | |
| <p>2 Recording signal</p> | <p>Display recording status of source video</p> <table border="0"> <tr> <td></td> <td>Recording is on</td> </tr> <tr> <td></td> <td>Recording is off</td> </tr> </table> |  | Recording is on |  | Recording is off | | | | |
|  | Recording is on | | | | | | | | |
|  | Recording is off | | | | | | | | |
| <p>3 Audio status</p> | <p>Display audio status of source video</p> <table border="0"> <tr> <td></td> <td>Camera has audio source</td> </tr> </table> <p>Display nothing if the camera doesn't have audio source</p> |  | Camera has audio source | | | | | | |
|  | Camera has audio source | | | | | | | | |
| <p>4 Live video</p> | <p>Display camera live video. Extra information displayed in live video like captions or privacy mask depends on the video option settings in Preferences Camera page. For more information, please refer to "Configuring the Site Server ~ Video camera settings" section of Site Server manual.</p> | | | | | | | | |

Split Screen Menu Commands

Right-click on the split screen opens the following pop-up menu:

Snapshot	Capture current video as image and pop up snapshot interface
Recording off / Recording on	Set the video source stop recording / start recording. The icon status of the title bar will be changed after performing this command. <div data-bbox="574 694 906 730" data-label="Image"> </div> Recording is ON <div data-bbox="574 741 906 777" data-label="Image"> </div> Recording is OFF
Digital PTZ	Pop up the digital ptz floating panel. For more details, please see Digital PTZ section.
Fit in window all	Set all split screens display as “fit in window”
Keep aspect ratio all	Set all split screens display as “keep aspect ratio”
Camera info	Pop up the camera info panel.





Customize Split Layout



You can create custom layout with custom layout editor to build various split combinations from standard split layout and

Editing Custom Layout

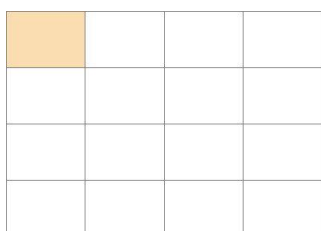
To edit custom layout, follow the steps below:

1. Click  button and select Custom layout from pop up menu.
2. Click  to add a blank new layout.
3. Select a split layout to start edit.

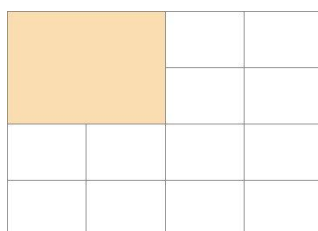


4. To assign camera location, select camera from the camera list and drag to the target split cell. The video of split cell can display looped (when the loop display mode is enabled) if more than one camera is dragged into the same split cell.
5. To change split cell size, select split cell and press  (expand) or  (shrink).

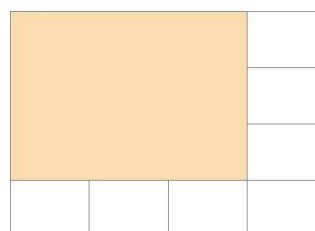
It only expands split cell toward right down corner and make the cell one step larger, for example, $1 \rightarrow 4 \rightarrow 9$ (see the pictures below). It cannot be expanded if reach to the border or adhere to another expanded cell.





Un-expand



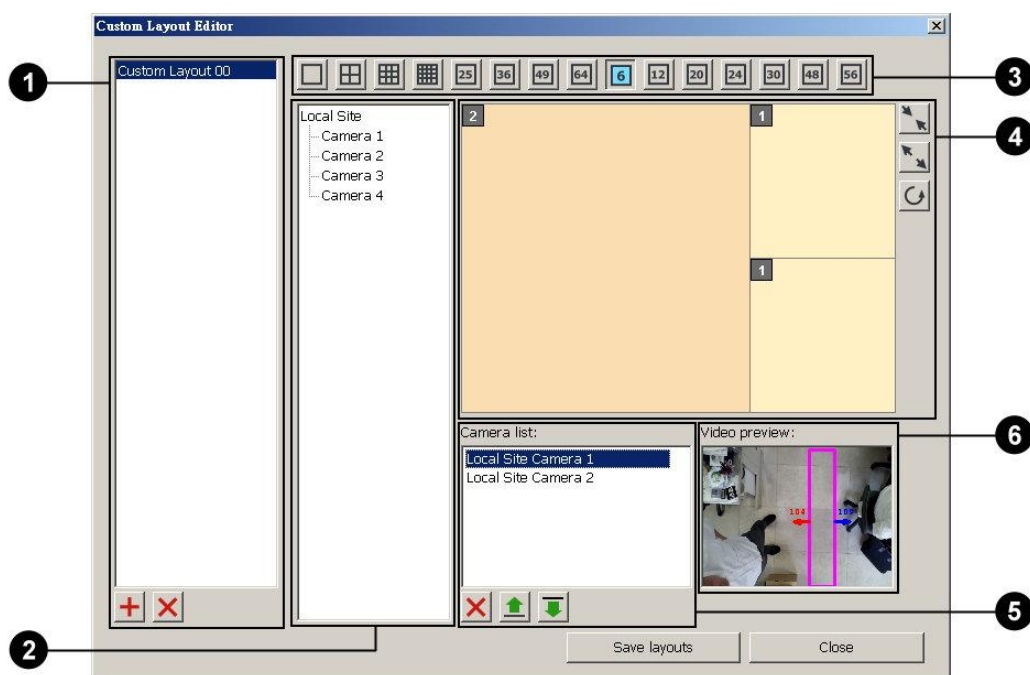
Expand once



Expand twice

6. To save editing result, click **Save current layout** button.
7. To finish editing, click **Close** button.
8. To view the editing result, click  button and select the previous edited layout from pop up menu. You can also enable loop display mode and check the looping result by clicking  button if there is a loop split cell.

Custom Layout Editor Interface



1 Layout list

List of custom split layout



: Add a new blank layout



: Remove selected layout from list

2 Camera list

List of current connected cameras

3 Split selection

Select split layout for editing. Change split selection will prompt warning and remove all editing results.

4 Split editing area

Split layout editing area






: Expand selected split screen one step larger




: Expand selected split screen one step smaller

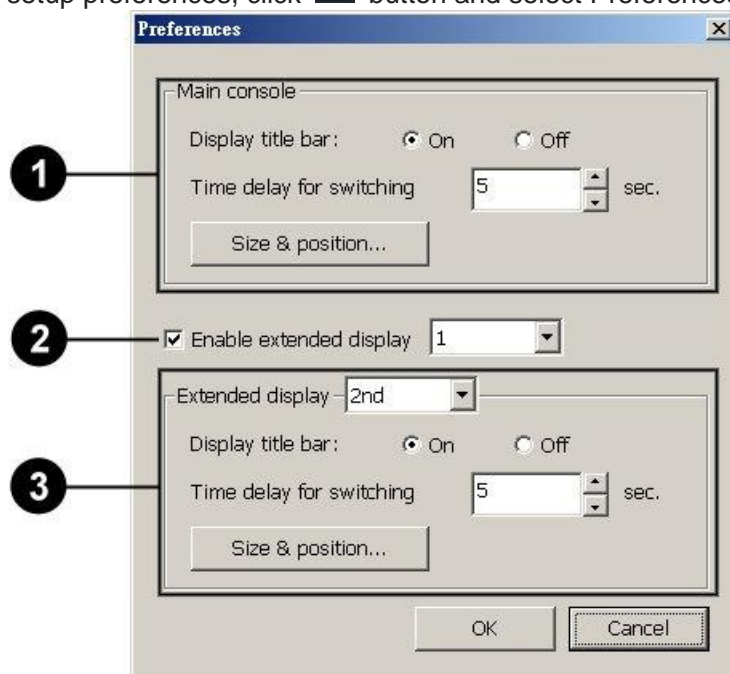


: Remove all current editing results and reset to selected split selection

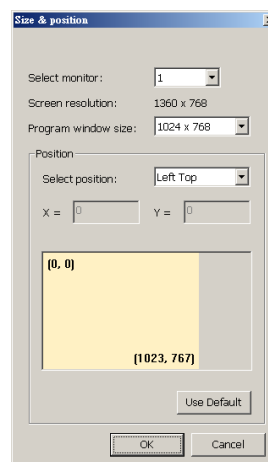
- 5** Looping cameras List of looped cameras of split screen
 -  : Remove selected camera from list
 -  : Move selected camera forward
 -  : Move selected camera backward
- 6** Video preview Display selected camera video preview in the loop camera list
- 7** Save layouts Save all unsaved editing results.
- 8** Close Exit Custom Layout Editor
It will prompt message to save layout if there is unsaved editing result.

Preferences

To setup preferences, click  button and select Preferences from pop up menu.



- | | | |
|----------|--------------------------|--|
| 1 | Main console | Settings for main console program window |
| | Video title bar | Switch of split screen title bar display in main console program window |
| | Time delay for switching | Video switch interval of main console program window with looping display mode |
| | Size & position | Pop up Size & position dialog to adjust main console program window size & position. |
| | | The Size & position dialog can set main console program window monitor location, window size and position. |



- | | | |
|----------|--------------------------|--|
| 2 | Enable extended display | Check to enable up to 3 extra display windows. |
| 3 | Extended display | Settings for individual extended display program window.
Use pull down menu to switch & modify settings between different extended display windows. |
| | Video title bar | Switch of split screen title bar display in extended display program window |
| | Time delay for switching | Video switch interval of main console program window with looping display mode |
| | Size & position | Pop up Size & position dialog to adjust extended display program window size & position. The setting dialog is the same as main console. |

ePTZ

ePTZ is ideal for capturing raw data video from megapixel cameras since video image will be no longer limited to the divide picture. You can easily capture video shot you want and zoom in to the proper ratio. This feature enables to remain original size of raw data by proportional zoom-in for better image performance.

Using features of ePTZ, just select target video window and press right button to pop up menu. The ePTZ related menu items are listed below:



ePTZ

Pop up the ePTZ floating panel.

Fit In Window All

Set all split screens display as “fit in window”


Keep Aspect Ratio All

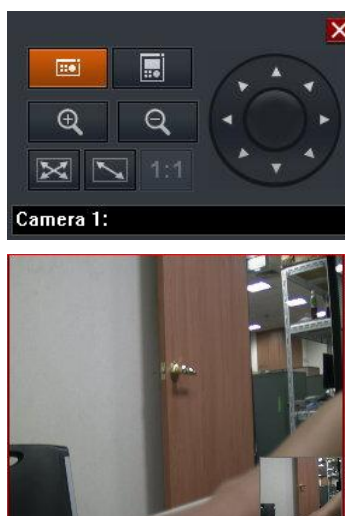
Set all split screens display as “keep aspect ratio”

ePTZ Interface










Switch to  mode
PIP on floating panel



Switch to  mode
PIP embedded in video display



The detail features of ePTZ floating panel are listed below:

Close panel		Press this button to close ePTZ floating panel.
		Press this button to switch to panel display off mode.
		Press this button to switch to panel display on mode.
Zoom in		Press this button to zoom in video.
Zoom out		Press this button to zoom out video.
Fit in window		Press this button to display video as "fit in window".
Keep aspect ratio		Press this button to display video as "keep aspect ratio".
Original size		Press this button to display video in original dimension. This command is available only in single view or single split screen mode.
Zooming frame adjustment		Press any of the 8-directional arrow buttons on the wheel to adjust zooming frame position within PIP by small amount.
PIP video		Display the full view
Display area		The display area is located below the function buttons described above. This area displays the current selected camera name.

On-screen Operation

You can perform some on-screen operation when ePTZ feature is enabled as below:

- Drag frame to zoom in



Dragging frame on video

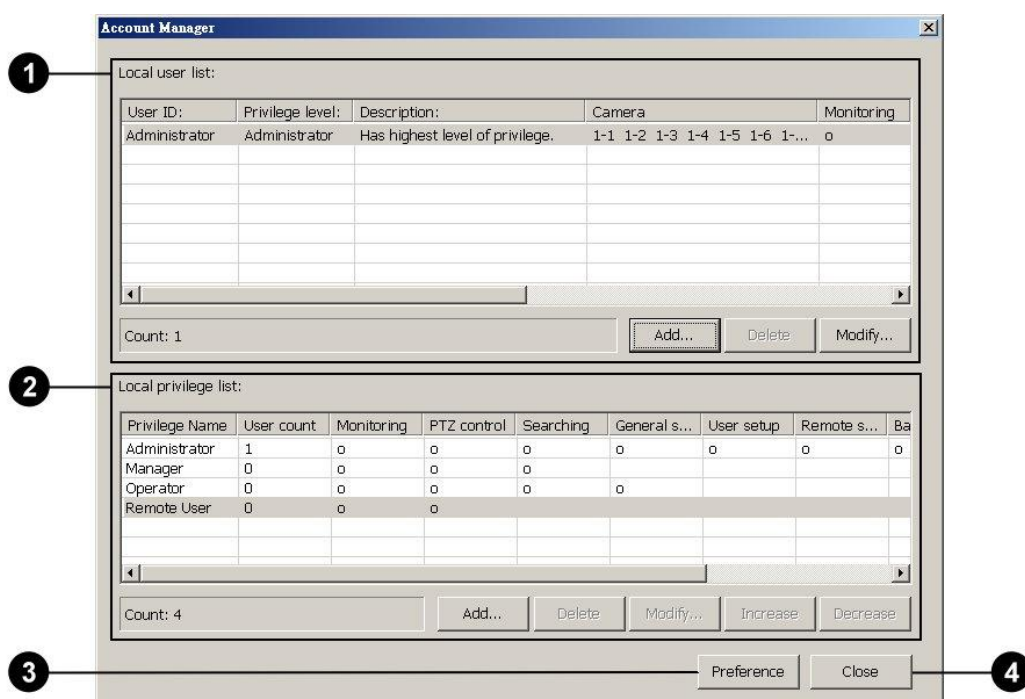
Zoom in video

- Zoom in / out with mouse center wheel
- Point or drag zooming frame on PIP

Account Manager

Account Manager is re-integrated and becomes an independent module that can manage accounts & privileges for both multi-instance Site Server & MatrixView. It can create and manage user accounts, add new privilege levels, enable local or centralized control over Site Server & MatrixView, and enable automatic login access to the DVR server. It is necessary to input username & password to access Account Manager interface.

Account Manager Interface



- 1** Local user list List of user account. Can add/delete/modify user account. For more details, please check Managing Accounts section.
- 2** Local privilege list List of user group privilege. Can add/delete/modify user group privilege contents and priority. For more details, please check Managing Privileges section.
- 3** Preferences Pop up Preferences setting interface. For more details, please check Setting Preferences section
- 4** Close Close Account Manager interface

Managing Accounts

Local user list:

User ID:	Privilege level:	Description:	Camera	Monitoring
Administrator	Administrator	Has highest level of privilege.	1-1 1-2 1-3 1-4 1-5 1-6 1-...	o

Count: 1

Creating and maintaining user accounts

To create a new user account:

1. Click "Add". The Add User dialog box then appears.

Add User

User ID:

Password:

Confirm password:

Privilege level:

Description:

Authority

<input checked="" type="checkbox"/> Monitoring	<input checked="" type="checkbox"/> Remote setup
<input checked="" type="checkbox"/> PTZ control	<input checked="" type="checkbox"/> Backup
<input checked="" type="checkbox"/> Searching	<input checked="" type="checkbox"/> Shutdown
<input checked="" type="checkbox"/> General setup	<input checked="" type="checkbox"/> Privacy Mask
<input checked="" type="checkbox"/> User setup	

Camera

- ☒ Site 1
 - ☒ Camera 1
 - ☒ Camera 2
 - ☒ Camera 3
 - ☒ Camera 4
 - ☒ Camera 5
 - ☒ Camera 6
 - ☒ Camera 7
 - ☒ Camera 8
 - ☒ Camera 9
 - ☒ Camera 10
 - ☒ Camera 11
 - ☒ Camera 12
 - ☒ Camera 13
 - ☒ Camera 14
 - ☒ Camera 15
 - ☒ Camera 16

2. Enter a "User ID", and enter the "Password" twice in the provided text boxes.
3. Select a "Privilege level" to assign to the user account. (See the table below)

User	Privilege
Administrator	Highest level of privilege. A user who is assigned with an "Administrator" privilege will be able to view all cameras, customize preference options, and add/delete/modify user accounts.

Manager	A user who is assigned with a "Manager" privilege can view cameras assigned with "Manager", "Operator" or "Remote user" privilege, but does not have rights to customize preference options.
Operator	A user who is assigned an operator privilege: <ul style="list-style-type: none"> Can view cameras that were assigned with "Operator" or "Remote user" privilege. Does not have access rights to the Account Manager. Does not have rights to modify preference settings of camera that were assigned with "Administrator" or "Manager" privilege.
Remote user	A user who is assigned with a "Remote user" privilege can only view cameras that were assigned with the same level of privilege remotely through a Web browser or remote viewer tool.

- Enter a textual "Description" about the user account.
- In the Camera list, check the surveillance cameras that this user account will be permitted to have access. If the privilege level assigned to this user account does not permit access to all cameras, the restricted cameras will be grayed out and cannot be selected in the Camera list.

Note: For multi-instance DVR system, all cameras will be displayed in the camera list. You can access cameras across local sites with one single account.

- In the Authority group box, the permitted rights for performing certain actions will be selected by default for the chosen privilege level. (For instance, if you assigned the Administrator level in step 3, all rights will be selected. Whereas if you assigned the Remote User level, only Monitoring and PTZ control will be selected and the others will be grayed out.) If you want to exclude some rights, deselect their checkboxes.

To make changes to a user accounts

- Select the user ID of the account that you want to modify.
- Click "Modify" and then make adjustments in the Modify User dialog box.

To delete a user accounts

1. Select the user ID of the account that you want to remove.
2. Click "Delete".

Note: Default user Administrator cannot be deleted or modified.

Managing Privileges

Local privilege list:

Privilege Name	User count	Monitoring	PTZ control	Searching	General s...	User setup	Remote s...	Ba
Administrator	1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manager	0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operator	0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remote User	0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Count: 4

Add... Delete... Modify... Increase Decrease

There are four default privilege levels: Administrator, Manager, Operator, and Remote User. If you want to add more privilege levels and assign them with different sets of actions, click the Add button under Local privilege list. This will open the Privilege Level dialog box where you add, modify, delete, increase, or decrease privilege levels.

Note: Default privilege levels cannot delete, modify or change privilege priority.

To create a new privilege level:

1. Click "Add" to open the Add Privilege dialog box.

Add Privilege

Privilege

Authority

☐ Monitoring ☐ Remote setup

☐ PTZ control ☐ Backup

☐ Searching ☐ Shutdown

☐ General setup ☐ Privacy Mask

☐ User setup

OK Cancel

2. Enter a name for the new privilege level.
3. In the Authority group box, select the checkboxes of those actions that you want to assign to this privilege level. (See the table below for details on each type of action.)
4. Click "OK".

Authority	Actions
Monitoring	View live camera video either on the local site or remote site.
PTZ Control	Control PTZ cameras. (Does not include rights to customize settings)
Searching	Perform any action on video recordings except for backup. It allows access to the Record Player, Remote Record Player, and huperRemote to play back video recordings.
General Setup	<ul style="list-style-type: none"> ▪ Modify settings on the Preferences dialog box of Site Server. In the Camera tab, only cameras that have lower or equal privilege levels to the login user are allowed to do modifications. ▪ Enable or disable detection on the Site Server. ▪ Modify settings on the detection dialog boxes of Site Server. ▪ Modify settings on the PTZ Control Panel. ▪ Adjust the brightness, contrast, hue, and saturation settings for cameras on the Site Server.
User Setup	Add, delete, or modify user accounts in Preferences - User tab.
Remote Setup	Use remote desktop control.
Backup	Run the Backup Scheduler program to modify settings and back up recordings.
Shutdown	Close the DVR Site Server program

Setting Preferences

1 ☐ Enable access control

2 ☒ Local Control

☐ Authenticate with Active Directory Server

Active Directory Domain:

☐ Central Control

Server IP address:

TCP port:

3 ☐ Auto DVR login

Login name:

Password:

OK Cancel

- | | |
|--|---|
| 1 Enable access control | Select this option if you want to restrict the Site Server / MatrixView program's access rights. When access control is enabled, you need to login to access the programs. |
| 2 Local control / Central control | Select Local Control to maintain user accounts to be added and managed locally on the Site Server. Otherwise, select Central Control if you want all user accounts to be registered to the List Server, which acts as a central server for maintaining user data for all networked DVR systems. |
| 3 Auto DVR login | Select this option if you want to assign specified user accounts to login to the Site Server / MatrixView automatically. |

Auto DVR login

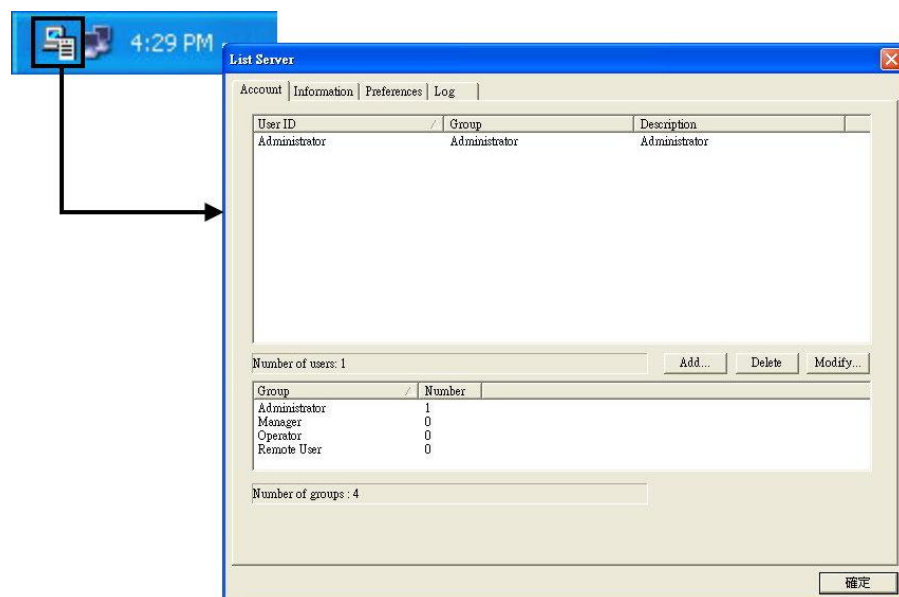
The Auto DVR login option, when selected, allows only certain user accounts to log into and access the Site Server.

To allow a certain user account to have login access to Site Server:

1. First, create a user account. See the section "Creating and maintaining user accounts" for details on how to create a new user account.
2. Select the Auto DVR login checkbox and enter the Login name and correct password to specify the user account that will be allowed to log into the Site Server.

Central Control and Local Control

By default, the "Central Control" option is selected which allows user account information to be registered in the centralized database of the List Server. With this option selected, new user accounts that you create will be added to the List Server.



List Server can be installed and ran on a separate computer on your local network. If you have this type of set up, specify the correct TCP port and Server IP address of the List Server computer in order for the Account Manager to connect to the List Server computer and to register user account information on that computer.

☒ Central Control

Server IP address:

127.0.0.1

TCP port:

10240

On the contrary, if you prefer the user account information to be added and maintained locally. Select the “Local Control” option.

Note: The default user account for List Server is: User name: administrator, Password: system