


# Panasonic®

## Operating Instructions

## Recording Software

Model No. **WV-ASR500 Series**



This manual covers the following models of WV-ASR500 Series: WV-ASRE501, WV-ASRE501W, WV-ASRE516, WV-ASRE516W, WV-ASRE532, WV-ASRE532W, WV-ASRE564, WV-ASRE564W, WV-ASRA501, WV-ASRA501W, WV-ASRM501, WV-ASRM501W, WV-ASRT500, WV-ASRT500W

Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

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# Preface

The WV-ASR500 Series (hereinafter this software) is a software that runs on the Microsoft® Windows® operating system and enables recording the images from multiple network cameras on the hard disk drives of the personal computer (hereinafter PC).

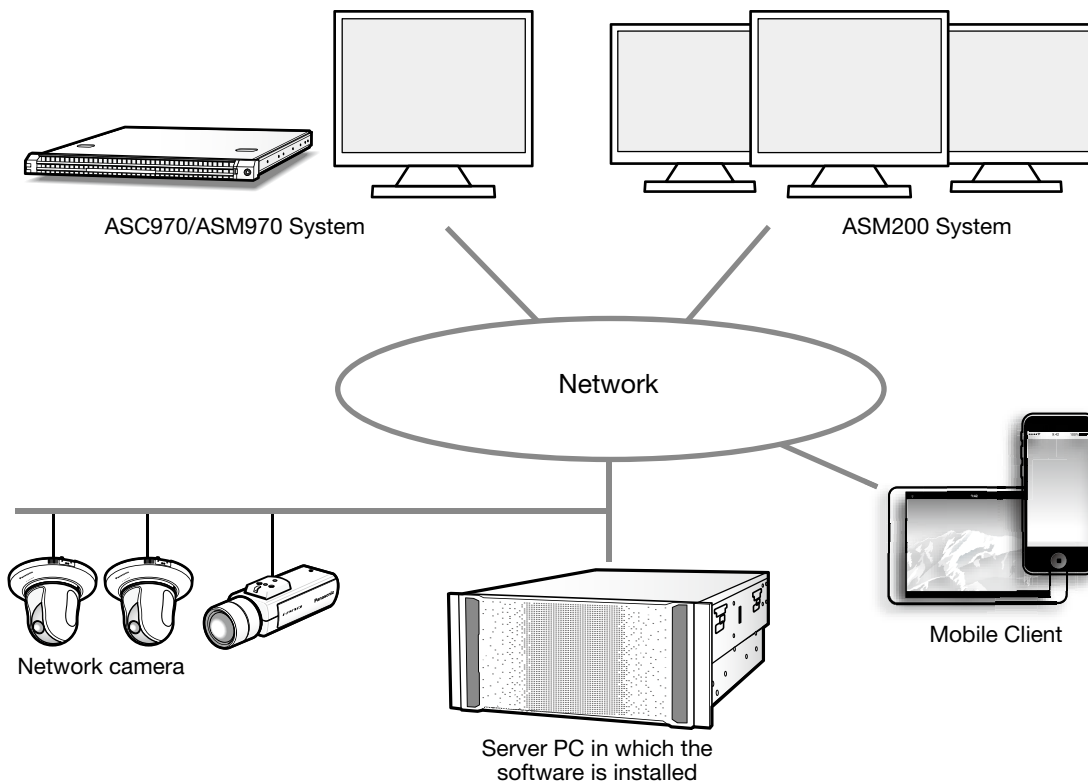
By using this software, it is possible to display live images of the cameras on the monitor of the remote client PC, to play images stored on the hard disk drive on the monitor of the remote client PC by operating the client PC, or to download image files to the hard disk drive of the client PC.

## Software configuration

This software consists of the following 2 applications:

Server	Records images from the camera on the hard disk. Also, search and playback of recorded images can be performed with designated commands.
Client	Configures server settings.

## System configuration



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### Important:

- Do not use cross cables to connect the PC and each device.
-

# System specifications

- Camera registration: Up to 128 cameras
- User levels: 5 levels

## Compatible devices

The following devices are compatible with this software.

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**Important:**

- Some functions may not work depending on the firmware version of the compatible device.  
Refer to the Panasonic support website (<http://security.panasonic.com/pss/security/support/index.html>) for further information.
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### Compatible client software

Model Nos.	Appears in this document as	Version
WV-ASM200	ASM200	4.00 or later
WV-ASM970	ASM970	14.00 or later
WV-ASC970	ASC970	14.00 or later

### Compatible encoder

Model Nos.	Appears in this document as	Version
WJ-NT304	NT304	1.32 or later
WJ-GXE500	GXE500	1.50 or later

WJ-NT304 is only available with CH1.

### Compatible cameras

Model Nos.	Appears in this document as	Version
WV-NF284	NF284	1.64 or later
WV-NP244	NP244	1.84 or later
WV-NP1004	NP1004	1.25 or later
WV-NF302	NF302	1.64 or later
WV-NW502S	NW502S	1.80 or later
WV-NP502	NP502	1.80 or later
WV-SF539	SF539	1.60 or later
WV-SF538	SF538	1.60 or later
WV-SW559	SW559	1.60 or later
WV-SW558	SW558	1.60 or later
WV-SF548	SF548	1.60 or later
WV-SP509	SP509	1.60 or later
WV-SF549	SF549	1.60 or later
WV-SP508	SP508	1.60 or later
WV-SF336	SF336	2.10 or later

Model Nos.	Appears in this document as	Version
WV-SF335	SF335	2.10 or later
WV-SF332	SF332	2.10 or later
WV-SP302	SP302	2.10 or later
WV-SP305	SP305	2.10 or later
WV-SP306	SP306	2.10 or later
WV-SW352	SW352	2.11 or later
WV-SW355	SW355	2.11 or later
WV-SW395	SW395	2.10 or later
WV-SW396	SW396	2.10 or later
WV-SC385	SC385	2.10 or later
WV-SC384	SC384	2.10 or later
WV-SC386	SC386	2.10 or later
WV-ST162	ST162	1.80 or later
WV-ST165	ST165	1.80 or later
WV-SF346	SF346	2.10 or later

Model Nos.	Appears in this document as	Version
WV-SF342	SF342	2.10 or later
WV-SW175	SW175	1.80 or later
WV-SW172	SW172	1.80 or later
WV-SP105	SP105	1.80 or later
WV-SW314	SW314	1.80 or later
WV-SW316L	SW316L	1.80 or later
WV-SW316	SW316	1.80 or later
WV-NW964	NW964	1.64 or later
WV-NS954	NS954	1.64 or later
WV-NW502	NW502	1.80 or later
WV-SP102	SP102	1.80 or later
WV-SF132	SF132	2.11 or later
WV-SF135	SF135	2.11 or later
WV-SW152	SW152	2.11 or later
WV-SW155	SW155	2.11 or later
WV-NW484	NW484	1.64 or later
WV-NW484S	NW484S	1.64 or later
WV-NS202	NS202	1.11 or later
WV-NS202A	NS202A	2.74 or later
WV-NP304	NP304	1.61 or later
WV-SF438	SF438	1.52 or later
WV-SW458	SW458	1.58 or later
WV-SW458M	SW458M	1.58 or later
WV-SF138	SF138	1.05 or later
WV-SW158	SW158	1.05 or later
WV-SW598	SW598	1.60 or later
WV-SC588	SC588	1.60 or later
WV-SFN310	SFN310	1.71 or later
WV-SFN311	SFN311	1.71 or later
WV-SFR310	SFR310	1.71 or later
WV-SFR311	SFR311	1.71 or later
WV-SFV310	SFV310	1.71 or later
WV-SFV311	SFV311	1.71 or later
WV-SFV631L	SFV631L	1.71 or later
WV-SPW611	SPW611	1.71 or later
WV-SPW611L	SPW611L	1.71 or later
WV-SPW631L	SPW631L	1.71 or later
WV-SPW631LT	SPW631LT	1.71 or later
WV-SPN531	SPN531	1.83 or later
WV-SFN611L	SFN611L	1.71 or later
WV-SFN631L	SFN631L	1.71 or later
WV-SFR611L	SFR611L	1.71 or later
WV-SFR631L	SFR631L	1.71 or later

Model Nos.	Appears in this document as	Version
WV-SFV611L	SFV611L	1.71 or later
WV-SFV631LT	SFV631LT	1.71 or later
WV-SPN310	SPN310	1.71 or later
WV-SPN311	SPN311	1.71 or later
WV-SPN611	SPN611	1.71 or later
WV-SPN631	SPN631	1.71 or later
WV-SW115	SW115	2.11 or later
WV-SFN531	SFN531	1.85 or later
WV-SFR531	SFR531	1.85 or later
WV-SFV531	SFV531	1.85 or later
WV-SFN313H	SFN313H	1.85 or later
WV-SFN313LH	SFN313LH	1.85 or later
WV-SPN313H	SPN313H	1.85 or later
WV-SFN532H	SFN532H	1.85 or later
WV-SFN533H	SFN533H	1.85 or later
WV-SFN533LH	SFN533LH	1.85 or later
WV-SPN533H	SPN533H	1.85 or later

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## Features

### Easy connection to IP cameras:

- Each server expandable up to 128 IP cameras
- Supports IP cameras and encoders from multiple manufacturers.
- Supports latest IP camera technology including megapixel cameras, H.264 and analytics.

### Intuitive user interface:

- Intuitive user interface requires little to no training.
- Common client connects to multiple servers to create scalable networks.

### Client-Server architecture:

- Server software runs on Windows Server 2012.
- Client software operates in Windows.

### Mobile Apps: iPhone & iPad, Android:

Mobile Apps provides a host of client features including live view, search and playback, alarm activation and assessment.

### International support:

Language Localization - Select between English, French, German, Spanish, Italian, Russian, Chinese.

### Powerful integration:

Integration with leading access control systems, retail analytics, iSCSI storage, Wireless Networking, Video Analytics, and more.

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**Important:**

- Some functions may not be available depending on the firmware version of the camera in use.
- 

## Standard accessories

Installation Guide..... 1 pc.  
Activation Key Card..... 1 pc.

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**Important:**

- This software will not work if the license is not registered. After installing the software on the PC in use, register the license.
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## Trademarks and registered trademarks

- Microsoft, Windows, Windows Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.
- iPad, iPhone are registered trademarks of Apple Inc., registered in the U.S. and other countries.
- Android is a trademark of Google Inc.
- All other trademarks identified herein are the property of their respective owners.

## Abbreviations

These are descriptions of the basic terms used in these operating instructions.

Microsoft® Windows Server® 2012 (64-bit) are described as Windows Server 2012.

## Open software

This product uses open software subject to the licenses of Free Software Foundation such as GPL/LGPL and others. Related conditions are applied with this software.

Make sure to access the following URL and read the information regarding licenses of GPL/LGPL and open software before using this product.

[http://security.panasonic.com/pss/security/support/oss/asr500\\_oss\\_gpl\\_lgpl\\_licens.html](http://security.panasonic.com/pss/security/support/oss/asr500_oss_gpl_lgpl_licens.html)

Source code approved by the licenses of GPL /LGPL are publicly-released. Please note that those software are not included in the warranty. Complying with the licenses of GPL/LGPL, Panasonic System Networks Co., Ltd. will provide, at its own expense, the complete machine-readable code compatible with GPL/LGPL software and its copyright declaration list to the individual or organization who has contacted Panasonic in this regard at least for three years after the sales of this product. Consult via the inquiry page in the following site regarding the above information including how to obtain the related source code.

<http://security.panasonic.com/pss/security/support/inquiry.html>












This product includes software developed by the OpenSSL Project.

## Disclaimer







Note that some or all information to be recorded may be lost when too many cameras are connected and network performance beyond the specifications of this software or the PC in use is required, when the PC is overloaded by operating other programs together with this software or when unknown/unspecified problem/error occurred.

Panasonic assumes no responsibility or liability, directly or indirectly, for any damage, loss, including recording data loss, or inconvenience resulting from any error or failure including when recording has not been performed. Panasonic also assumes no responsibility or liability for any error or failure caused by using a third party camera or device.

# System installation checklist

	<b>Config (Setup) Page (see "Config (Setup) page overview" (page 13))</b>
	<b>System</b> <ul style="list-style-type: none"> <li>• Set server for static IP address.</li> <li>• Configure the system name, time, and time zone.</li> </ul>
	<b>Storage</b> <ul style="list-style-type: none"> <li>• Ensure all disks are selected for recording except the system drive ("C:\")</li> <li>• Ensure total disk space matches the expected value.</li> </ul>
	<b>Add IP Cameras</b> <ul style="list-style-type: none"> <li>• Add IP cameras to the Servers.</li> </ul>
	<b>Camera Recording (IP cameras)</b> <ul style="list-style-type: none"> <li>• Set resolutions.</li> <li>• Set frame rate.</li> </ul>
	<b>Camera Recording (analog cameras)</b> <ul style="list-style-type: none"> <li>• Set resolutions.</li> <li>• Set frame rates.</li> <li>• Disable cameras that are not connected.</li> </ul>
	<b>Serial Port</b> <ul style="list-style-type: none"> <li>• Set up serial port for RS-485 mechanical PTZ control.</li> <li>• Set up serial port for input from serial devices.</li> </ul>
	<b>Camera Settings</b> <ul style="list-style-type: none"> <li>• Name camera.</li> <li>• Enable onscreen display.</li> <li>• Set motion mask on IP cameras (there are generally no motion windows set on a new camera). The default motion recording schedule won't trigger recording.</li> <li>• Mask motion from irrelevant objects such as moving trees.</li> <li>• Create windows in relevant locations, such as doors and hallways.</li> <li>• Configure quality just high enough to see relevant details.</li> <li>• If supported by the cameras, set recording format to MPEG-4 or H.264 instead of JPEG for better storage.</li> <li>• Watch for blue border around live video window on setup page when motion is occurring to ensure that motion sensitivity and masking are appropriately configured.</li> <li>• Configure mechanical PTZ presets.</li> </ul>
	<b>Schedule</b> <ul style="list-style-type: none"> <li>• Motion is recorded by default. Change any cameras to continuously record or stop recording as needed.</li> <li>• Schedule events for notification only when they are unexpected.</li> </ul>
	<b>Users</b> <ul style="list-style-type: none"> <li>• Add user accounts for the people who will use the system.</li> </ul>
	<b>Trigger Inputs</b> <ul style="list-style-type: none"> <li>• Name input triggers to be used.</li> <li>• Set radio button to normally open or closed to match physical switch.</li> </ul>



	<b>Config (Setup) Page (see "Config (Setup) page overview" (page 13))</b>
	<b>Alarm Outputs</b> <ul style="list-style-type: none"> <li>Name any alarm outputs to be used.</li> </ul>
	<b>Notifications</b> <ul style="list-style-type: none"> <li>Create email profile for system health administrator.</li> <li>Create email profile for security events such as unexpected motion or input triggers.</li> <li>Create email profile for the installer.</li> </ul>
	<b>Auto Export</b> <ul style="list-style-type: none"> <li>Create profile for video sources and duration to store on high-priority event.</li> </ul>
	<b>Event Linking</b> <ul style="list-style-type: none"> <li>Create events to alert administrator via email of system health issues.</li> <li>Create events to record video on input triggers.</li> <li>Create events to email security administrator upon unexpected triggers or motion.</li> <li>Create event to email installer when license subscription is near expiration.</li> </ul>
	<b>Export Settings</b> <ul style="list-style-type: none"> <li>Save settings and license to a USB flash drive to aid the recovery process, if necessary.</li> </ul>

# Installing the software

## Server requirements

### Hardware requirements

Actual hardware requirements vary considerably based on each user's application:

- CPU requirements increase greatly when hosting multiple concurrent web clients.
- The Server application requires a maximum of 4GB, although additional memory is required for the operating system, web hosting, or any other server applications.
- The storage system is often the performance limitation because of the large amount of read and write processes. Your storage system should be capable of sustained reads/writes at least twice the maximum data rate from all cameras. Panasonic highly recommends using RAID 5 or RAID 6 for all video storage to reduce the likelihood of catastrophic failure.
- Enterprise-grade hard drives are highly recommended to handle constant video recording.
- The server operating system and this software should be installed on a dedicated, mirrored operating system drive.
- Servers should always be UPS-powered to avoid data corruption during power failure.

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#### IMPORTANT:

- In regard to the time synchronization of this software, the performance of the PC clock function may generate variation in the time of the recording image. It may cause a problem in the operation. Use an NTP server when the more accurate time & date setting is required for the system operation.
- 

### Operating system requirements

This system must be installed on Windows Server 2012. In addition:

- If automatic updating is enabled, your server might stop recording video when the operating-system restarts.  
To prevent this, disable the automatic updating.
- Anti-virus programs should scan only the operating system and this software drives. Virus scanning should be disabled on all video storage drives to avoid large decreases in drive performance.
- Port blocking is not recommended because many edge devices use multiple or dynamic port assignment.

### MAC addressing requirements

This software is licensed based on MAC addressing. Servers with teamed NICs or other arrangements that obscure the MAC require an additional USB-based NIC to provide a licensing MAC.

## Networking

For the greatest system reliability and performance, the network administrator should observe the following best practices:

- A dedicated VLAN and NIC port for all cameras.
- A dedicated VLAN and NIC port for storage networks (if used).
- A separate VLAN and NIC for all client connections.
- Cameras and Servers should use fixed IP addresses. Clients can use DHCP.
- Camera-to-server network capacity should be twice to maximum video data rate.
- Server-to-thick-client network capacity should be 1.5 times the maximum total data rate of all simultaneously viewed cameras.

# Software overview

## License

Model Name	Sub Name	Ch	Model #	Note
Recording Software	Base Channel License	1ch	WV-ASRE501, WV-ASRE501W	"Base Channel License" is used only for initial installation.
		16ch	WV-ASRE516, WV-ASRE516W	
		32ch	WV-ASRE532, WV-ASRE532W	
		64ch	WV-ASRE564, WV-ASRE564W	
	Channel Expansion License	1ch	WV-ASRA501, WV-ASRA501W	"Channel Expansion License" is required for adding channels (cameras).
	Annual Software Update	1ch	WV-ASRM501, WV-ASRM501W	"Annual Software Update" is to enable software update.
	System Transfer License	1PC	WV-ASRT500, WV-ASRT500W	"System Transfer License" is required for when transferring the license information to other PC. (Maintenance purpose only)

## Logging in

All Servers are shipped with two operating system accounts:

1. Username: admin  
Password: admin256  
Privileges: computer administrator
2. Username: user  
Password: user5710  
Privileges: restricted user

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**Note:**

- Panasonic recommends that the default passwords be changed by the operator and written and secured to prevent unauthorized access or modifications to the system. As part of the initial configuration, Panasonic recommends that the operator configure a new user on the Server with restricted privileges and change the Client settings in the user operating system account to connect to the local Server via this user. See the "Users" section of this manual for instructions on creating a new this system user.
- 

When Servers start, they immediately start the system service, boot into the user account, and start the Client software. Server log-in is not required to start video recording or communication with client PCs. All third-party servers start this system service on startup, but user accounts and automatic login must be manually configured.

The user account functionality is limited to using the Client software for maximum reliability. All server maintenance tasks (such as shutting down this system service) that are not performed within the Client require logging into the operating system's administrator account.

Each operating system user account maintains separate settings for its Client. These settings include user-names, passwords, and network addresses required for Client to access Servers. By default, both the user and admin operating system accounts have settings that provide administrator access to the instance of the Server running on the local computer, which is always via the localhost (127.0.0.1) IP address.

Panasonic recommends that all servers be configured with one system administrator account with Remote Desktop remote access for system support.

The Server can be accessed from multiple Client, which can be running from the same computer as the Server or from remotely networked computers. The Server has been preconfigured with one user.

## About the Client

Click the logo in the upper-right corner of the page to open the "About ASR500 Series Client" window.

1. The window lists the current version and built date.



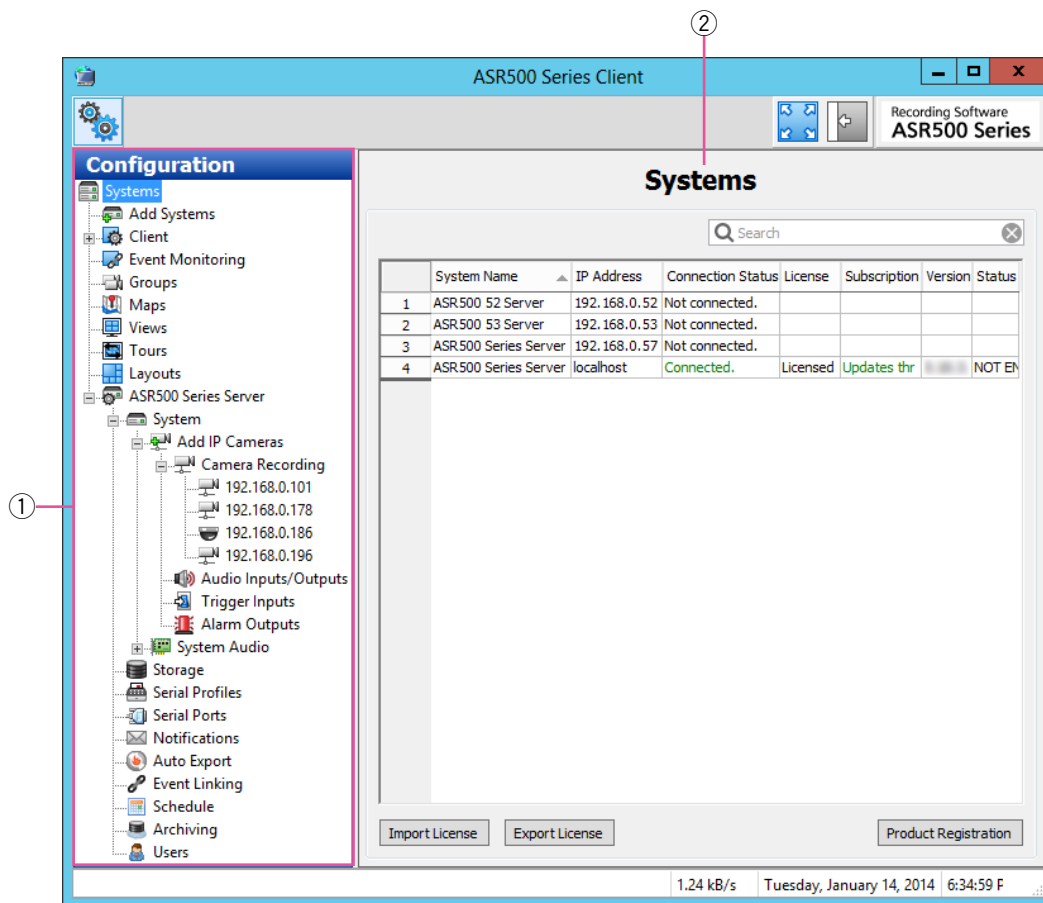
## Main pages

This system has a main operating page, as represented by the following icon:



Config (Setup) Page allows Administrators and Power Users the ability to configure systems.

# Config (Setup) page overview



Config (Setup) Page allows you to configure systems, cameras, and other devices.

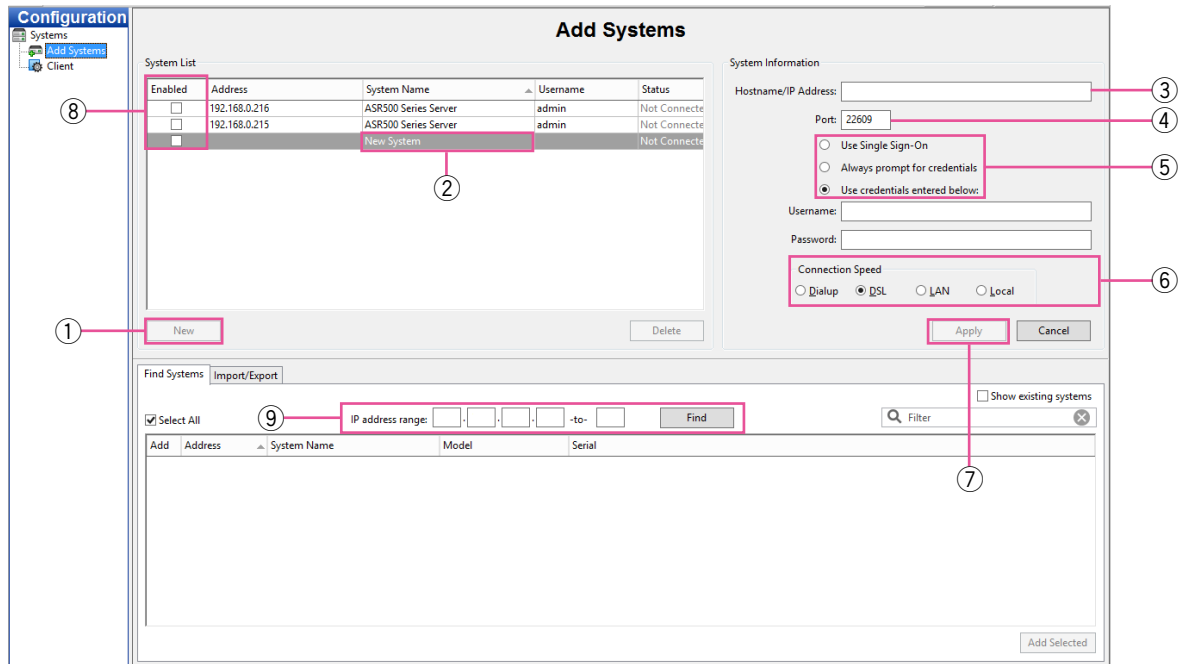
## ① Configuration Tree

This tree allows you to open the various configuration pages for each connected system. Each of the pages is described in detail in the following sections.

## ② Systems

This default Config page displays systems that have been added.

# Add Systems

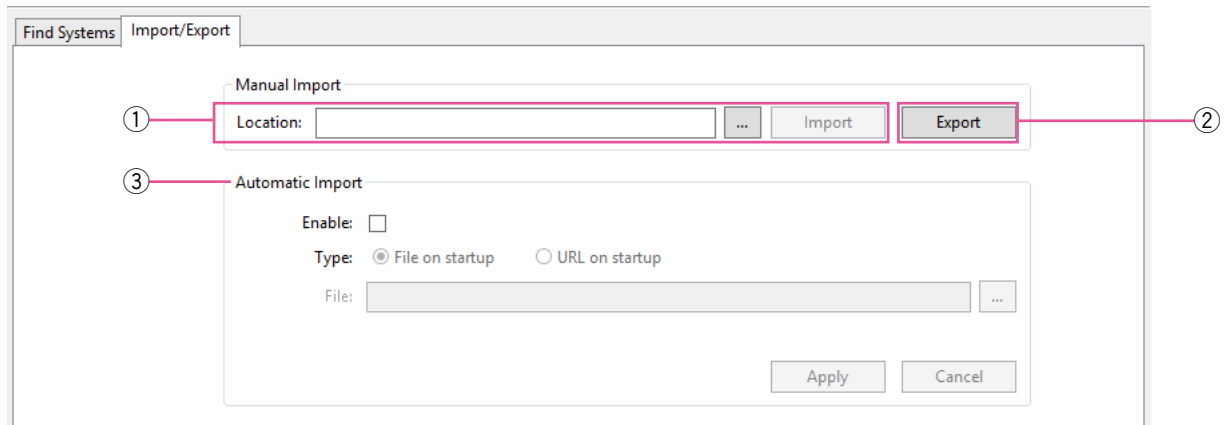


The "Add Systems" page allows you to add systems so that you can connect to them with this System.

- ① To add a system, click the [New] button. (Alternatively, you can find a system, as discussed below.)
- ② The new system is added to the "System List". The "System Information" fields are enabled.
- ③ Enter the system's hostname or IP address. Contact the system administrator for details.
- ④ By default, the port number is 22609; change this only if necessary for your network configuration.
- ⑤ Select one of the following login methods:
  - "Use Single Sign-On" cannot be used for ASR500.
  - To require a username and password entry every time the Client is started, select "Always prompt for credentials".
  - To automatically log in to the system every time the Client is started, select "Use credentials entered below". Then enter a valid Username and Password.
- ⑥ Select a "Connection Speed". It determines the default video multistreaming speed.
- ⑦ When finished, click the [Apply] button. If the entered information is valid, the system is automatically connected.
- ⑧ To disconnect or reconnect a system, select its box in the "System List".
- ⑨ To find a system and its address on your network, enter the IP address range in the "Find Systems" tab. The first three boxes must be the first three elements of the IP address; the fourth and fifth boxes are used to create a range of numbers for the final element of the IP address. Click the [Find] button to list all systems whose IP addresses are in the IP address range. When the search is complete (or when you click the [Stop] button, which replaces the [Find] button), select any of the systems to add the system to the "System List" and populate the "Hostname/IP Address" field. You must still enter a valid username or password to be able to connect to the system. Click the [Apply] button when finished.

Connected systems in the "System List" also appear in the "Configuration" tree. Disconnected systems do not appear in the tree.

## Import/Export Tab



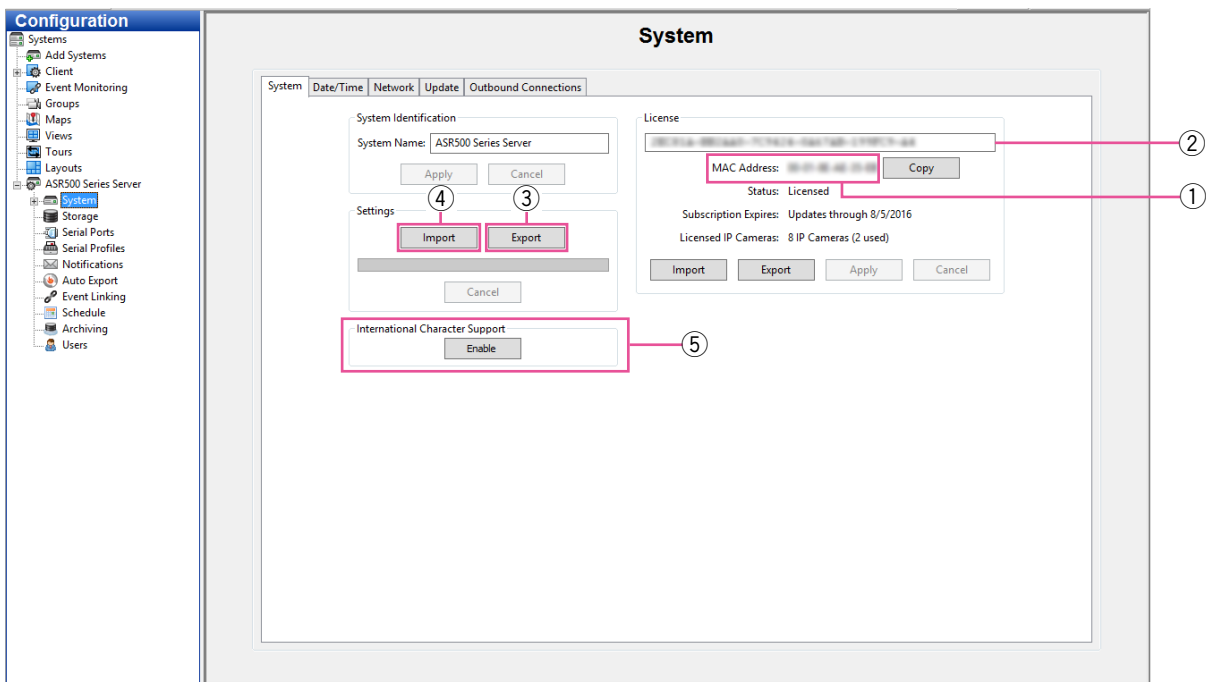
- ① Enter a network location or web site where a server configuration file is located and click the [Import] button to load the list to the client computer. (This will not delete any systems already added.)
- ② Click the [Export] button to save the server configuration file for import on another system.
- ③ "Automatic Import" section cannot be used for ASR500.

# System

The "System" page allows you to set basic system parameters for the client application. The page is separated into the following tabs:

## System Tab

The [System] tab allows you to create a name for the system, export and import settings from other systems, import and export graphics, and manage the licensing of your system.

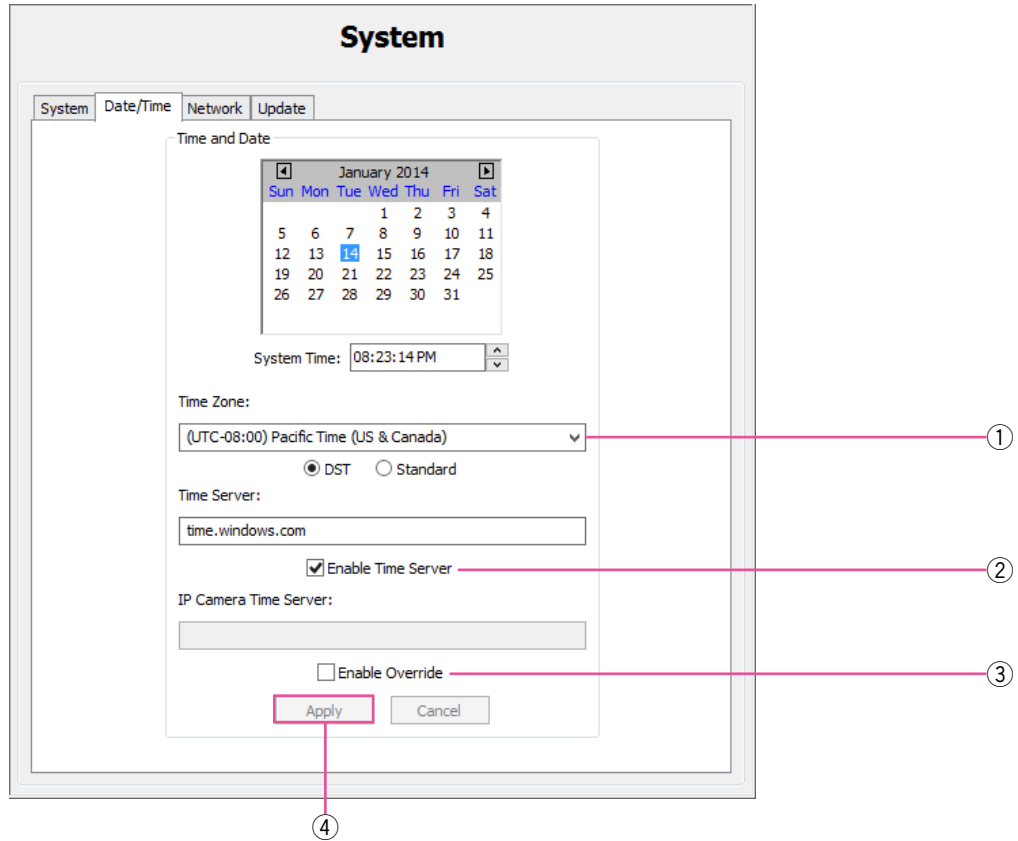


- ① The "MAC Address" of the system's primary network adaptor is used to generate a license key. To obtain a license key online, provide the system MAC address to your dealer. Unlicensed Servers can connect to only one IP device at a time.
- ② After the dealer obtains a license key, enter the key in this box.
- ③ After configuring your system, it is recommended that you click the [Export] button to export system settings to a USB or network drive and store it off-site for recovery from a disaster or malfunction.
- ④ If you ever need to restore the settings or simply import them from another system, click the [Import] button and apply the saved settings.
- ⑤ For proper encoding of international characters, click the [Enable] button. Carefully read the pop-up message before confirming. This action cannot be reversed on the server.



## Date/Time Tab

The [Date/Time] tab displays the Server's time information.



- ① Select the time zone and daylight saving time (DST) information for the server's location.
- ② On systems with Internet access, select "Enable Time Server" and enter a valid Internet time server. On systems without Internet access, select "Enable Time Server" and enter an internal time server (see your network administrator for more information).
- ③ If the IP cameras on the network need to synchronize with a time server other than the Server, select "Enable Override" and enter the server address.
- ④ Click the [Apply] button to save the configuration.

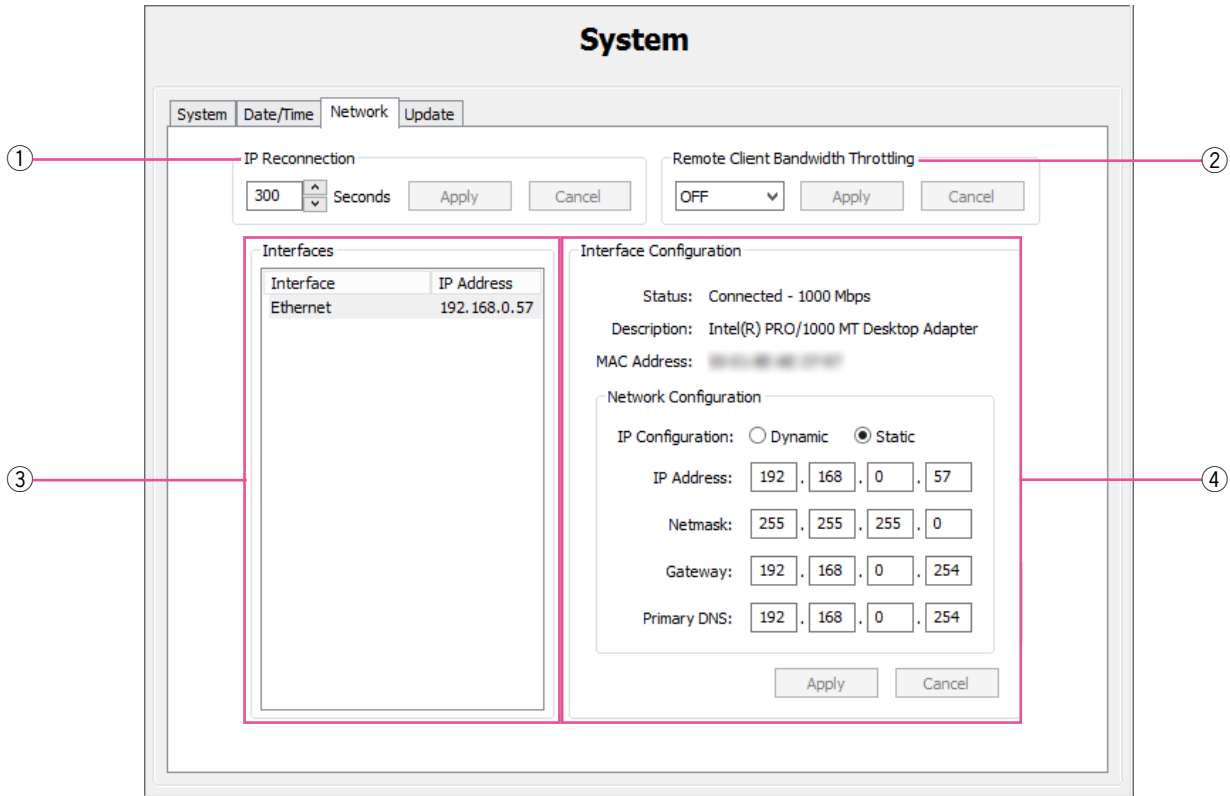
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### Note:

- Though an alert message saying that the time zone is not recognized may be displayed on the date and time setting screen of the PC, this does not affect the performance of this software.
-

## Network Tab

The [Network] tab displays your system's IP Address, Netmask, Gateway, and Primary DNS server.



- ① Select the "IP Reconnection" setting value in seconds. Click the [Apply] button.
- ② Select the correct bandwidth setting to limit network traffic from the server to client computers and iSCSI drives, and click the [Apply] button.

---

**Note:**

- This setting applies to outbound traffic from all NICs in the system.
- 

- ③ Select a network connection from the "Interfaces" list to display its information. Systems with multiple NICs have more than one entry in the list.
- ④ Enter the "Interface Configuration" information for the network connection. "Gateway" and "Primary DNS" information is required to connect with a network time server. Click the [Apply] button.

## Update Tab

This function cannot be used for ASR500.

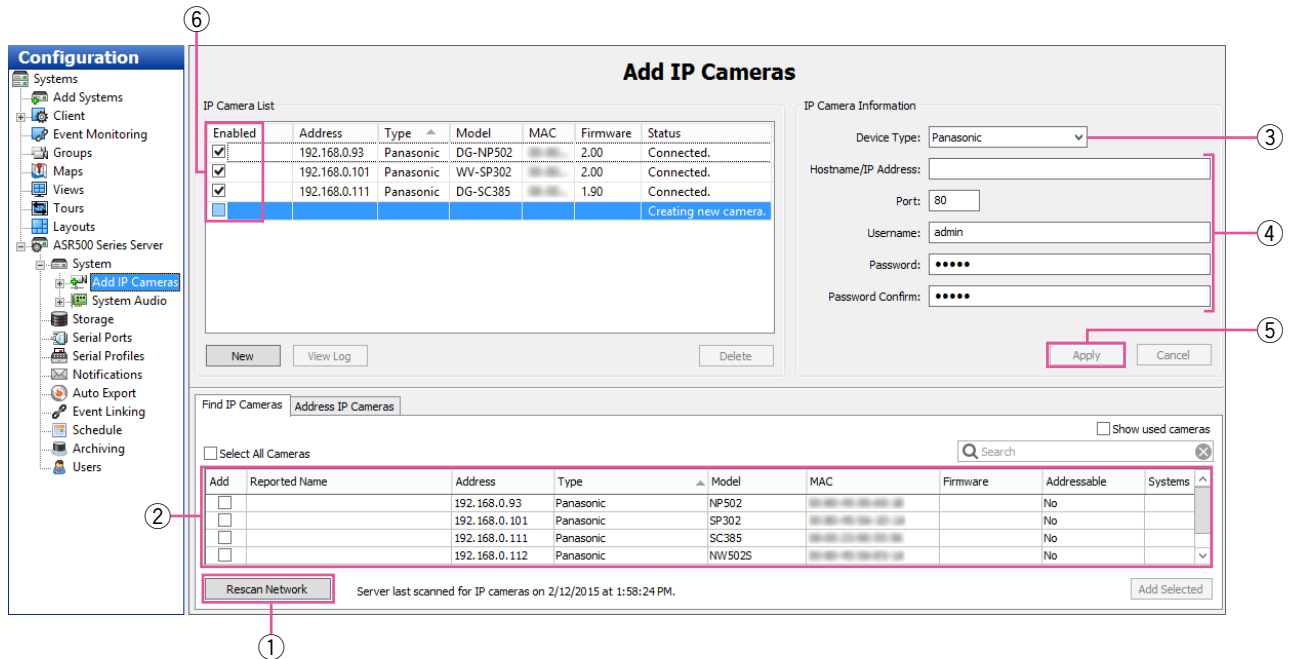
The screenshot shows the 'System' configuration page with the 'Update' tab selected. The page displays the current system version as 5.0.0.0000, with both 'Update Status' and 'Last Status' set to '-'. There is a checkbox for 'Show Advanced Options' which is currently unchecked. Below this, there is a 'Check for Updates' button and a 'Version' dropdown menu. An 'Update' button is located at the bottom right of the configuration area.

## Outbound Connections Tab

This function cannot be used for ASR500.

The screenshot shows the 'System' configuration page with the 'Outbound Connections' tab selected. The 'Show Advanced Configuration' checkbox is unchecked. The 'Enabled' checkbox is checked. The 'Address' field is empty. The 'Status' is 'Not Connected'. 'Apply' and 'Cancel' buttons are located at the bottom right of the configuration area.

# Add IP Cameras



The "Add IP Cameras" page allows you to add IP cameras and devices to the system and configure their settings. The following features are available on the IP Cameras page:

- ① The "Find IP Cameras" tab scans for supported IP cameras available on the same network that the system is connected to. If you don't see an IP camera that you expect to see on the network, verify that the camera has been configured and that the camera can be pinged from a command prompt. If you make any changes to an IP camera, click the [Rescan Network] button and check whether it is listed.
- ② Select a camera in the "Find IP Cameras" list to add it to the "IP Camera List".
- ③ Alternatively, you can manually add a camera by clicking the [New] button and selecting the device type as follows:
  - If the appropriate manufacturer-specific driver is shown in the list, select it.
  - If that is not available and the device is ONVIF-compliant, select the ONVIF driver. (The level of integration can vary by manufacturer or model.)
  - RTSP-compliant cameras can stream video but not motion detection or camera configuration data.
- ④ Enter a username, password, and IP address as configured on the camera.
- ⑤ Click the [Apply] button to save the camera configuration.
- ⑥ To enable a camera, select its checkbox in the "IP Camera List". The number of cameras you can enable is subject to licensing limits.

**Note:**

- If you need to confirm which camera you are installing, right-click the camera in the "IP Camera List" or "Find IP Cameras" list to access the camera's website and view a video image.

The camera should now also be listed in the "Configuration" tree.

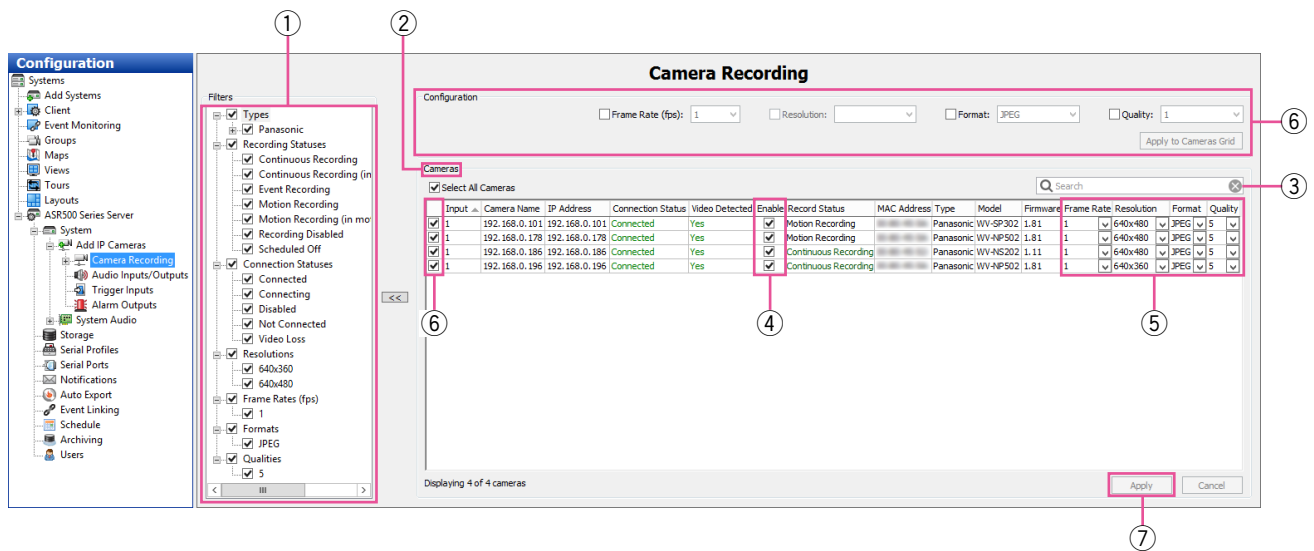
**Note:**

- "Address IP Camera" tab  
This function cannot be used for ASR500.
- When camera is registered, deleted, or settings are changed, the setting of ASM200/ASM970 is required.
- Refer to the Operating Instructions of ASM200/ASM970 for further information.

**IMPORTANT:**

- In the process of camera registration, this software configures the NTP setting of the camera to be registered. Once the NTP setting is configured by this software, do not manually change the NTP setting of the camera.

# IP Camera Recording



The "Camera Recording" page allows you to enable IP cameras to record video and configure recording settings. The following features are available on the IP Cameras page:

- ① The "Filters" list allows you to select which cameras are displayed in the "Cameras" list, based on categories such as camera type, recording status, resolution, and more.
- ② The "Cameras" list displays all cameras on the selected server that match the criteria selected in the "Filters" list. Cameras can be sorted by clicking the title of any column. Several of the columns can also be hidden or displayed by right-clicking any column title, although the checkboxes, camera names, and recording settings (frame rate, resolution, format, and quality) cannot be hidden.
- ③ To search for a camera in the list, enter text in the "Search" field. If any of the information about a camera entry matches the search text in any displayed column, the camera entry is shown; all other camera entries are hidden. To display the rest of the cameras that match the Filter criteria, delete the text in the "Search" field.
- ④ The "Enable" column contains check boxes that allow you to enable or disable recording from that camera. By default, the check box is selected if a signal is detected; however, you can manually disable recording on a camera that is connected and sending a signal to the system.
- ⑤ Recording settings can be changed individually for a camera by selecting any of the drop-down lists in the "Frame Rate", "Resolution", "Format", and "Quality" columns. The options available in each drop-down list can vary by manufacturer and model. If a drop-down list is not displayed for a camera in any of the fields, the camera does not support any other settings for that parameter.
- ⑥ Alternatively, to apply a quality setting to multiple cameras simultaneously, select the checkbox in the first column for each applicable camera (or select the "Select All Cameras" checkbox), select "Quality" checkbox, choose a video quality from the drop-down list, and click the [Apply to Cameras Grid] button. The quality should now be modified for all selected cameras, as shown in the "Quality" column in the "Cameras" list.
- ⑦ Click the [Apply] button to activate any changes.

---

### IMPORTANT:

- It may take time to find images recorded with "JPEG/1 fps" when using client software (ASM200/ASM970) to search. To search smoothly, set the frame rate to 2 fps or more and select the recording format other than JPEG, for example H.264.
-

# Analog Camera Recording

This function cannot be used for ASR500.

**Configuration**

Frame Rate (fps): 1   
  Resolution: 2CIF   
  Format: JPEG   
  Quality: 1

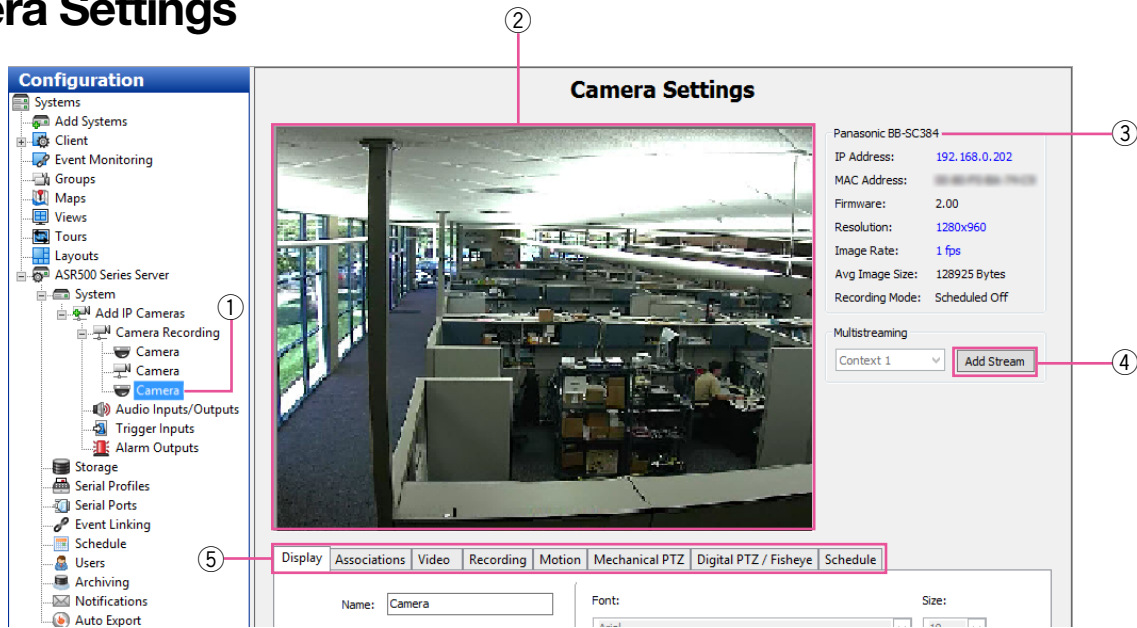
**Cameras**

Select All Cameras   

Input	Camera Name	Video Detected	Enable	Record Status	Model	Firmware	Frame Rate	Resolution	Format	Quality
2	Analog - Main Hall	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	30	RCIF	JPEG	10
3	Analog - Vestibule	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
5	Analog - Color Bars	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
6	Analog - Front Door	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
8	Analog - Front Parking	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	10
10	Analog - Ops Entry	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
11	Analog - West Door	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
12	Analog - West Windows	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
13	Analog - Back Lot	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
14	Analog - S Double Door	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	4
16	Analog - Server Room	Yes	<input checked="" type="checkbox"/>	Continuous Recording	sDVR6516	6.2.0.26	15	RCIF	JPEG	5
1	Analog - TV	Yes	<input checked="" type="checkbox"/>	Continuous Recording (in motion)	sDVR6516	6.2.0.26	30	RCIF	H.264	10
4	Analog - DVD	Yes	<input checked="" type="checkbox"/>	Continuous Recording (in motion)	sDVR6516	6.2.0.26	15	RCIF	H.264	4
7	Analog - Front Cafe	Yes	<input checked="" type="checkbox"/>	Continuous Recording (in motion)	sDVR6516	6.2.0.26	15	RCIF	H.264	7
9	Analog - Disco Ball	Yes	<input checked="" type="checkbox"/>	Motion Recording	sDVR6516	6.2.0.26	15	RCIF	H.264	8
15	Analog - Door	-	<input type="checkbox"/>	Recording Disabled	sDVR6516	6.2.0.26	-	-	-	-

Displaying 16 of 16 cameras

# Camera Settings



The "Camera Settings" page is where you configure the individual IP and analog camera settings such as camera name, onscreen display, PTZ settings, video settings, recording quality and motion and video masks. This page is similar for IP and analog cameras, but certain features might be unavailable depending on the type of camera you are configuring. The following features are available on the "Camera Settings" page:

**Note:**

- Note that the settings of this program and the target camera may have different meanings. For example, if you set the JPEG image (Quality) to "1" in this program, "9" (Low quality) will be set to the camera.

- ① Use the "Configuration" tree to select the camera that you want to configure.
- ② A live view of the selected camera is displayed.
- ③ Basic information about the camera is listed.
- ④ The multistreaming feature appears only for cameras that support multistreaming. It allows you to create streams with different video settings or regions of interest from a single camera view. For example, you might want to limit video quality for remote clients while displaying the same camera in high quality for local clients. Each stream can have custom recording schedules, storage rules, and event triggers.

Each camera has a different limit to the number of streams that can be added. The drop-down list shows the next context (stream) number available; click the [Add Stream] button to name the new context. You can then adjust the quality settings for the stream, or modify the "Crop Window" section (page 26) to create a region of interest. The new stream is listed in the "Configuration" tree as a child of the main camera. To delete a stream, select it in the tree and click the [Delete Stream] button.

- ⑤ A series of tabs allows you to complete the rest of the camera's configuration, as described in the following sections.

**Note:**

- "Associations" tab  
This function cannot be used for ASR500.

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**IMPORTANT:**

- The tabs available for each camera, the settings available on each tab, and the options available for each setting can vary greatly among camera manufacturers and models. If you see a setting in the following sections that does not appear onscreen, that setting is not available for that camera.
- Many IP camera settings that are not available in this system can be accessed through the camera's web page. To view an IP camera's web page, click the hyperlink in the "IP Address" field. If you don't see a hyperlink beside the "IP Address" field, it could be for one of two reasons:
  - A. You are not logged in to the operating system with administrative privileges. You must log in to operating system account with administrative privileges to access the hyperlink.
  - B. Your client computer is not located on the same IP subnet as the IP camera. This could occur if you are using the client from a home computer to access a server at your office, for example. This restriction should cause few issues because camera website settings are typically changed only during initial configuration.

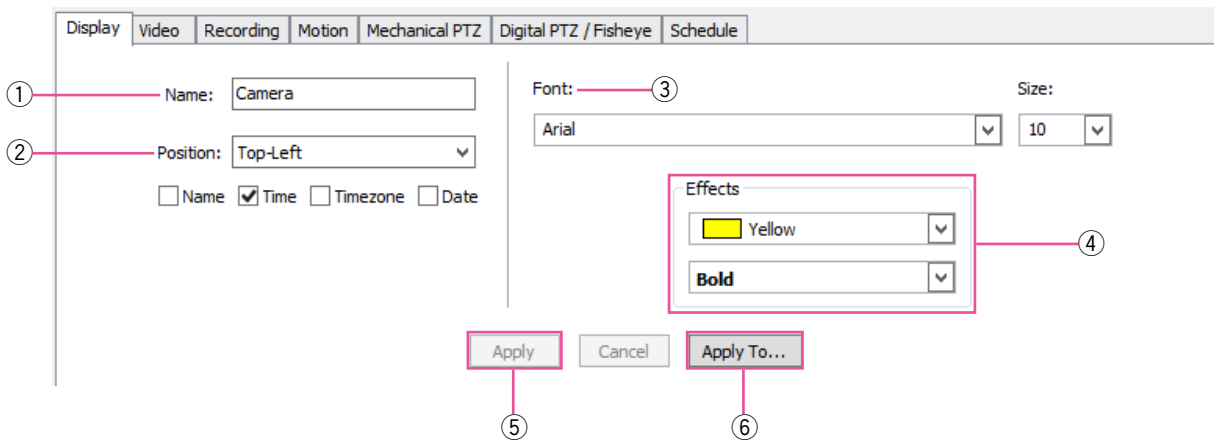
---

**Note:**

- When camera is registered, deleted, or settings are changed, the setting of ASM200/ASM970 is required.
  - Refer to the Operating Instructions of ASM200/ASM970 for further information.
-



## Display Tab

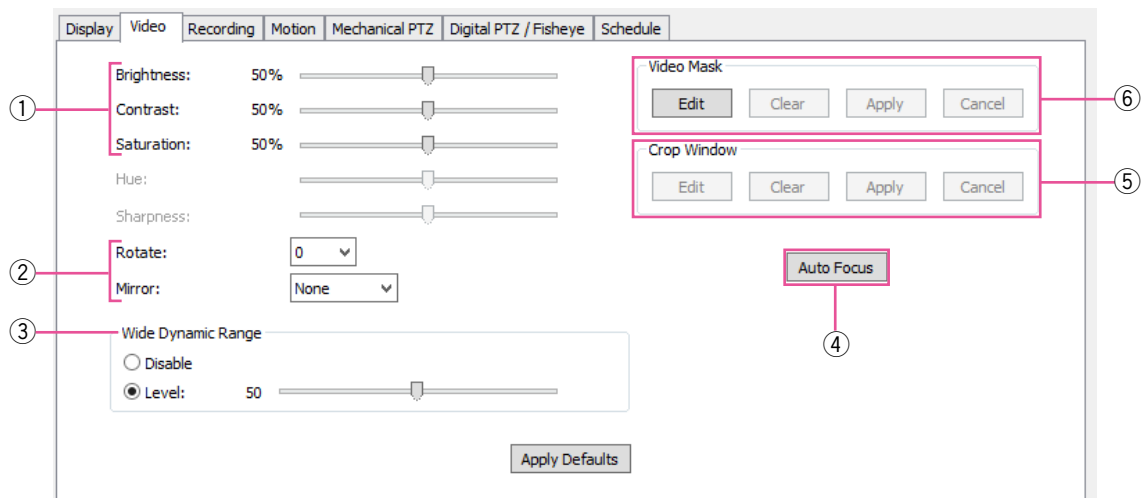


- ① Enter a name for the camera.
- ② Select the position of the onscreen display (OSD) of the camera, along with the camera information included in the display.
- ③ Select a font and size of the OSD.
- ④ Select the color of the OSD, along with bold/italics options.
- ⑤ To enable changes of settings on this tab, click the [Apply] button.
- ⑥ To enable the settings on this tab to multiple cameras on the server, click the [Apply To...] button.

## Video Tab

### Note:

- The following settings on the "Camera Settings" page are not available on RTSP interfaces, and they vary on ONVIF and certain proprietary interfaces.



- ① The sliders allow you to adjust the image as it is displayed on your screen.
- ② "Rotate" and "Mirror" allow you to change the orientation of the camera's video. This can be useful if the camera's mount points the camera in a direction that causes video to be displayed vertically instead of horizontally.
- ③ "Wide Dynamic Range" allows you to compensate for very bright or dim lighting in the area where the camera is installed.
- ④ Click the [Auto Focus] button allows you to adjust the clarity of the camera view.
- ⑤ "Crop Window", available on certain IP cameras, allows you to crop unimportant portions of a camera image in order to save disk space. Click the [Edit] button and then use the mouse cursor to draw a box on the video window. This box will be the portion of the camera's view that will be recorded and displayed (the rest of the view will be ignored). Click the [Apply] button to activate the crop; click the [Edit], [Clear], and [Apply] buttons to deactivate the crop.
- ⑥ The following types of masks can be created on cameras connected to this system:
  - A "Motion Mask" is an area of a video window where motion is ignored.
  - A "Video Mask" is used to block an area of a camera's view so that it cannot be seen onscreen in live or recorded video.

### Note:

- The type of masks available varies by camera. The following special section contains more detailed information about masks.

## Motion Mask, Video Mask, and Motion Window

A motion mask reduces unwanted recording by ignoring motion events that occur in certain areas of an image. For example, if a camera is pointed at a room that has a moving ceiling fan in the field of view, you can avoid continuous motion recording by masking out the fan while still recording motion that occurs in the rest of the camera's field of view.

"Motion Mask" save storage space, extend recording time, and make it easier to visually see motion events on the video timeline. A motion window is simply the opposite of a motion mask.

To create a motion window, complete the following steps:

- ① Press the [Edit] button shown in the "Motion Window" of the "Camera Settings" page.
- ② To add a "Motion Window", press the [Add] button.  
The blue rectangle will be displayed on the live video from the camera.  
Draw masks on the live video.  
Adjust the "Sensitivity" and "Percentage" by moving each slider.  
Select "Include" or "Exclude".  
Repeat step 2 until desired area is obtained.
- ③ To delete a mask, click the masks tab first, and press the [Remove] button.

- ④ Click the [Apply] button to enable the motion mask or motion window.

To create a motion mask, complete the following steps:

- ① Press the [Edit] button shown in the "Motion Mask" of the "Camera Settings" page.
- ② To add a "Motion Mask", click on the live video from the camera.  
The blue rectangle will be displayed.
- ③ Click the [Apply] button to enable the motion mask.

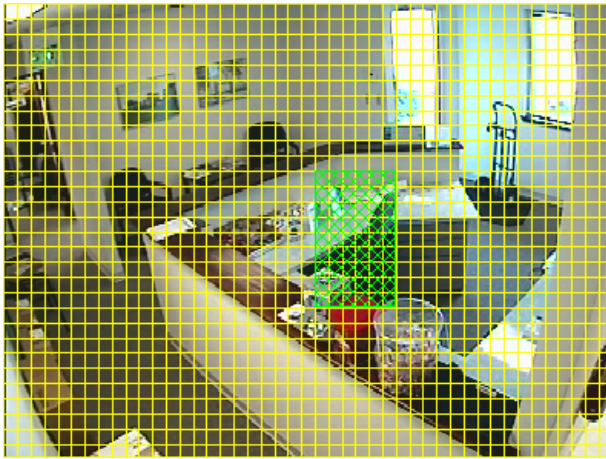


To delete a motion mask or window, click the [Edit], [Clear], and [Apply] button.

A "Video Mask" is used to block an area of a camera's view so that it cannot be seen onscreen in live or recorded video. This can be useful if you don't want system users to see a combination safe or keypad that is in the camera's field of view, for example.

To create a video mask, complete the following steps:

- ① On the "Camera Settings page", click the [Edit] button in the "Video Mask" section. This displays a yellow grid over the live video from the camera.
- ② Draw the mask directly in the grid by left-clicking while dragging the cursor over the area of the grid you want to mask. A green rectangle indicates the masked area.

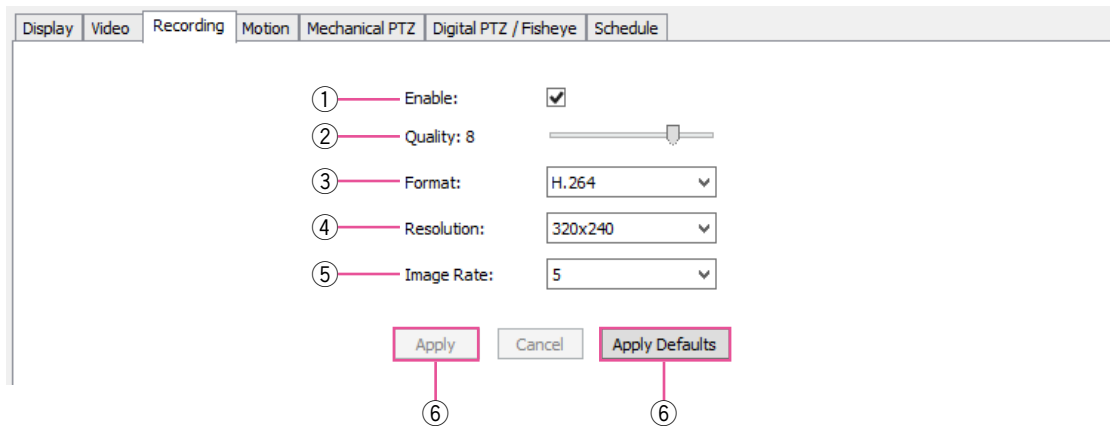


Click the [Apply] button. The yellow grid disappears and green rectangle is replaced by a solid gray rectangle. This area is now masked from both live and recorded video. To clear the mask, click the [Clear] button.

## Recording Tab

### Note:

- The following settings on the "Camera Settings" page are not available on RTSP interfaces, and they vary on ONVIF and certain proprietary interfaces.

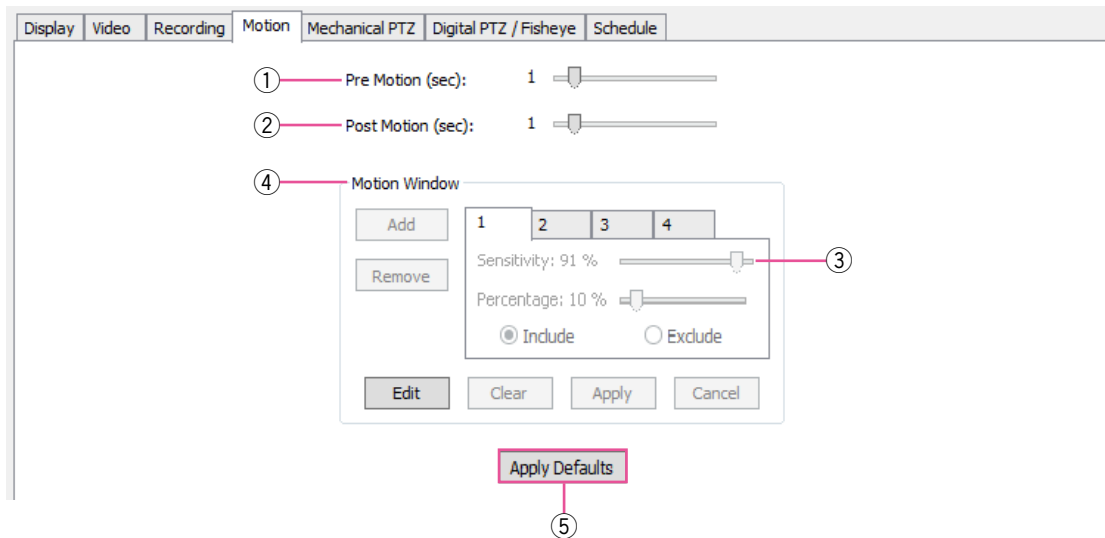


- ① Select "Enable" to record video from the camera based on the configured schedule.
- ② The "Quality" slider allows you to modify the image quality by increasing or decreasing its size. Decreasing image quality saves disk space by reducing the size of the video as it is recorded. (1:Low <- 5:Normal -> 10:Fine)
- ③ The "Format" setting allows you to select the compression format.
- ④ The "Resolution" setting allows you to select the size of the video.
- ⑤ The "Image Rate" setting allows you to select the number of images recorded per second from the camera.
- ⑥ Click the [Apply] button to enable changes, or [Apply Defaults] button to revert to the factory default settings.

## Motion Tab

### Note:

- The following settings on the "Camera Settings" page are not available on RTSP interfaces, and they vary on ONVIF and certain proprietary interfaces.

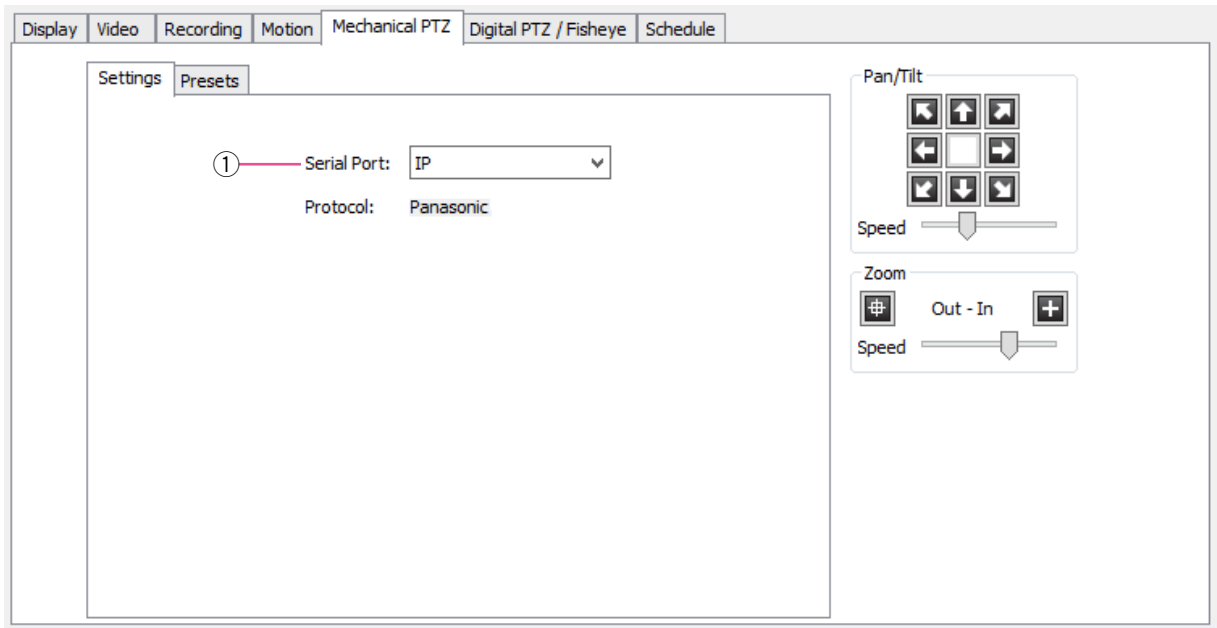


- ① The "Pre Motion" slider adjusts the number of seconds of video that are saved before the motion event occurs. For example, suppose "Pre Motion" is set to 5; when you play back motion video from that camera, you will see five seconds of video that was recorded before the motion event occurred, followed by the motion event itself.
- ② The "Post Motion" slider is the same as "Pre Motion", except that the slider adjusts the number of seconds of video that are saved after the motion event has completed.
- ③ The "Sensitivity" slider allows you to configure how much motion must occur in the camera's view to trigger motion recording (if enabled on the "Schedule" page). A low sensitivity setting can reduce false motion created by video noise or shadows.
- ④ For more information about motion masks and motion windows, see the special information in the "Video Tab" section.
- ⑤ Click the [Apply Defaults] button to revert to the factory default settings.

## Mechanical PTZ Tab

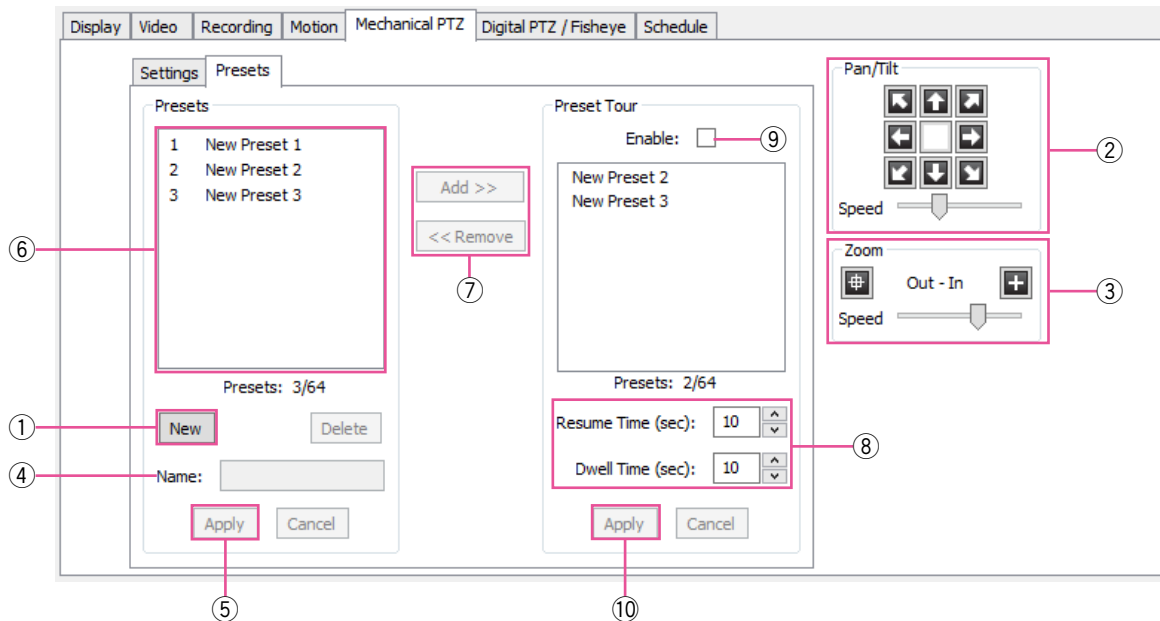
This tab contains two additional tabs: [Settings] and [Presets].

The [Settings] tab allows you to configure the COM port and address of the PTZ camera.



- ① Select the camera's COM port from the "Serial Port" drop-down list. This port is configured on the "Serial Ports" page.  
Select the camera's Address as configured on the camera hardware. (The protocol is automatically displayed based on the "Serial Port" selected.)

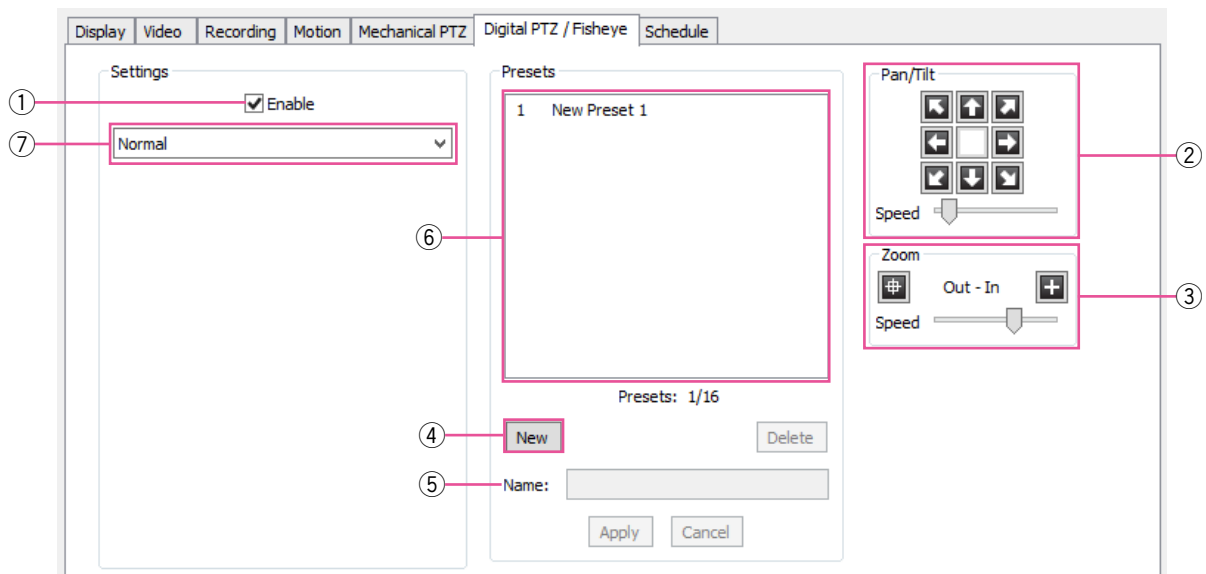
The [Presets] tab allows you to configure PTZ presets on the camera.



- ① Click the [New] button.
- ② Use the buttons of "Pan/Tilt" to point the camera at the desired preset location. If the camera moves too quickly or too slowly, move the "Speed" slider left (slower) or right (faster).
- ③ Adjust the "Zoom" settings as desired.
- ④ Enter a name or number for the preset in the "Name" field.
- ⑤ Click the [Apply] button to enable the preset.
- ⑥ The preset is listed under "Presets". The total number of presets configured and supported is shown under the list.
- ⑦ To create a "Preset Tour", select a preset from the "Presets" list and click [Add>>] button to show it in the "Preset Tour" list.  
Repeat for each remaining preset that you want to include in the tour. You can re-order the presets in the "Preset Tour" list by clicking and dragging them to the desired place in the tour. To delete a preset from the tour, select it in the "Preset Tour" list and click the [<<Remove] button. A preset can be included multiple times in the tour.
- ⑧ "Resume Time" is the number of seconds that certain PTZ functions (such as a tour, a linked event, or a soft trigger) can resume after a user manually controls PTZ functions. "Dwell Time" is the amount of time that the camera stays on each preset.
- ⑨ Select "Enable" to activate the tour.
- ⑩ Select the [Apply] button to complete the process.



## Digital PTZ/Fisheye Tab



- ① This feature is available even if the camera is not mechanically capable of PTZ functions.
- ② Use the buttons of "Pan/Tilt" to point the camera at the desired preset location. If the camera moves too quickly or too slowly, move the "Speed" slider left (slower) or right (faster).
- ③ Adjust the "Zoom" setting as desired.
- ④ Click the [New] button to enable the preset.
- ⑤ Enter a name or number for the preset in the "Name" field.
- ⑥ The preset is listed under "Presets". The total number of presets configured and supported is shown under the list.
- ⑦ Select a "Mode" for cameras with this system-supported fisheye lenses. If you select "ImmerVision", additional drop-down lists appear that allow you to select a model and mounting options.

---

### Note:

- When you create a PTZ preset, it is initially named "New Preset 1" by default. Then, if a PTZ preset named "New Preset 1" exists, the next PTZ preset is named "New Preset 2". However, if you create a new digital preset, it will also be named "New Preset 1", regardless of whether there is already a PTZ preset with that name. To avoid having both a PTZ preset and a digital preset with the same name, make sure you enter a unique name for each preset that you create.
-

## Schedule Tab

### Note:

- This tab allows you to create a recording schedule specifically for this camera. The [Schedule] tab includes additional options for creating a schedule for all cameras on the server.

- ① In the grid, draw a rectangle that corresponds to the hours for each device that you want to schedule.
- ② When you hover the cursor over a square, note the details displayed in the "Information" section.
- ③ Select the appropriate setting button to determine whether video should always be recorded from this camera "Free Run", or only when "Motion" or "Alarm" events occur.
- ④ To configure time-lapse recording, select the number of images you want to record every second or minute, and then click the [Set] button.
- ⑤ Click the [Apply] button to enable the schedule for this camera, or click the [Apply To...] button if you want to enable the schedule on all cameras on the server.

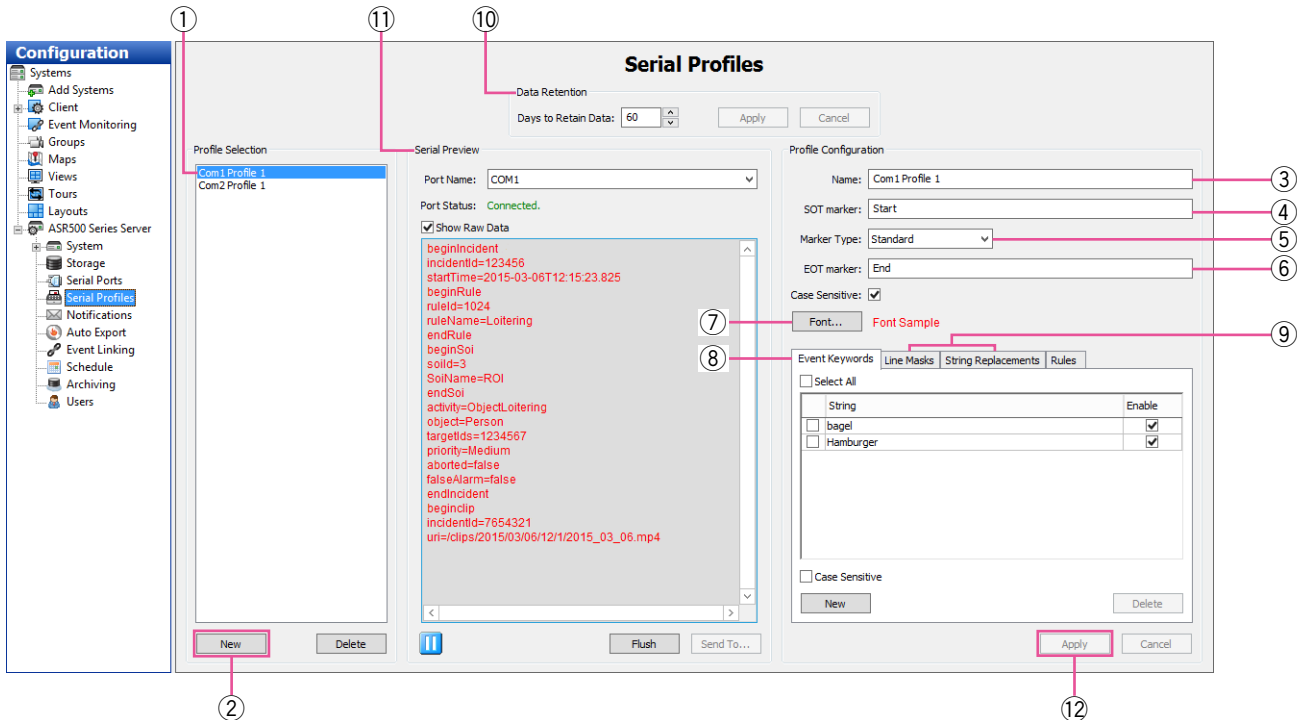
The screenshot shows the 'Schedule' tab in a software interface. At the top, there are tabs for 'Display', 'Video', 'Recording', 'Motion', 'Mechanical PTZ', 'Digital PTZ / Fisheye', and 'Schedule'. Below the tabs, there are several sections:

- Legend:** Includes 'Event Recording' (checkbox with red square) and 'Camera Time Lapse' (checkbox with green square).
- Setting:** A box containing four buttons: 'Motion' (blue), 'Free Run' (green), 'Alarm' (grey), and 'None' (grey). Callout ③ points to this box.
- Camera Time Lapse:** A box containing a numeric input field with '1', a 'Seconds' dropdown menu, and 'Set' and 'Clear' buttons. Callout ④ points to this box.
- Grid:** A grid with columns for hours (12, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) and rows for days (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday). The grid is divided into AM and PM sections. A blue shaded area covers the grid from 12 AM to 11 PM on Sunday. Callout ① points to the grid.
- Information:** A box at the bottom containing labels for 'Time Span:', 'Time Lapse:', 'Record Setting:', and 'Event Recordings:'. Callout ② points to this box.

At the bottom right, there are three buttons: 'Apply', 'Cancel', and 'Apply To...'. Callout ⑤ points to the 'Apply' button.

# Serial Profiles

The "Serial Profiles" page enables the Server to integrate with serial data devices such as point-of-sale (POS) and bank machine systems.



- ① To view an existing profile, select it from the list.
- ② To add a new profile, click the [New] button below the list of profiles.
- ③ Enter a unique name in the "Name" field in the "Profile Configuration" box.
- ④ The "SOT marker" (Start of Transaction) tells this system when the transaction has started. For example, you could enter the first line shown on a receipt. This entry is case-sensitive.
- ⑤ Select the marker type ("Standard" or "XML").
- ⑥ The "EOT marker" (End of Transaction) tells this system when the transaction has ended. For example, you could enter the last line shown on a receipt. This entry is case-sensitive.
- ⑦ The [Font...] button allows you to select the font.
- ⑧ The [Event Keywords] tab allows you to set alarms that will be triggered through key words on a receipt after you link the profile through the Event Linking system.
- ⑨ The [Line Masks] and [String Replacements] tabs are discussed on the following page.
- ⑩ The "Data Retention" section allows you to select the number of days that serial data is stored before it is automatically deleted.
- ⑪ The "Serial Preview" section allows you to see an example of the serial data coming through the selected port in the selected profile. Select "Show Raw Data" to see all the invisible characters between lines of data (sometimes the desired EOT or SOT is hidden in the invisible data).
- ⑫ When finished, click the [Apply] button.

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**Note:**

- "Rules" tab

This function cannot be used for ASR500.

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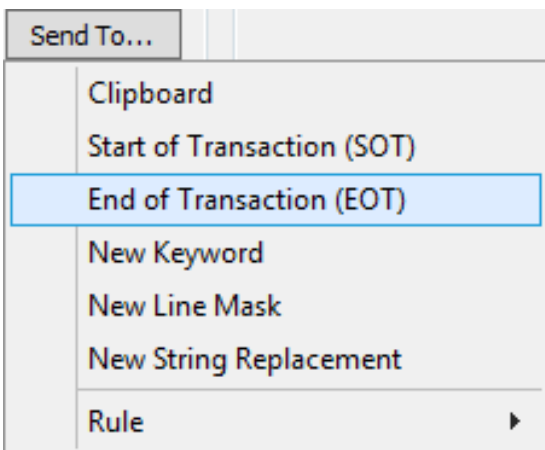
The steps 7, 8, and 9 will be enabled only when changing the existing profile. You have now created the new serial profile. If you entered any data in the "Event Keywords" box, you must link the profile to the appropriate Action through the "Event Linking" page, selecting "Serial Profile" as the "Event Type".

**Please read the important notes regarding serial profiles on the following page.**

**Notes on Serial Profile:**

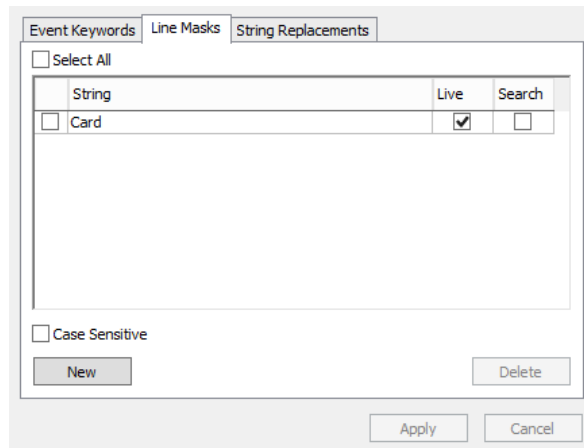
- You can require case sensitivity for all strings or all key words by selecting the appropriate "Case Sensitive" option under each list.
- To enter the ESC (0x1b) ASCII character as the SOT, EOT, mask, or key word, enter "/x1b" in the appropriate field. CR, LF, or 80 characters terminates a line.
- The [Send To...] button allows you to copy a string from the "Serial Preview" section and save it as a SOT, EOT, keyword, line mask, or string replacement. You can also save the string from one rule to a new rule or an existing rule. This feature helps you avoid the difficulty of typing complex strings.

To use this feature, pause the serial preview display, highlight the string, click the [Send To...] button, and select an option from the pop-up menu.

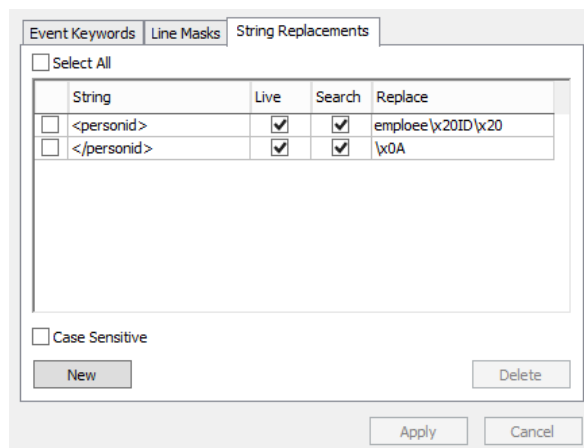


- The [Flush] button allows you to display the next line of data in the "Serial Preview" window, if the serial port timeout is zero, and the data has not reached the Max Line Length, and an EOT has not been transmitted. See the following section for more information about configuring serial ports.
- Configured rules are available as an "Event Source" on the "Event Linking" page. See the "Event Linking" section for more information.

The [Line Masks] tab allows you to black out lines so they are not visible on the live camera or through recorded data. (This can be used to hide credit card information.) Enter one or more signal words in the "String" field, and the system will black out the entire line on the live display screen, on the search results, or in both cases, as selected.



The [String Replacements] tab allows you to modify serial data to a human-readable format. In the "String" column, enter information as it appears in the serial data; in the "Replace" column, enter substitute information that is easier to read and understand. Select whether the strings should be replaced in serial data on the live display screen, on the search results, or in both cases.

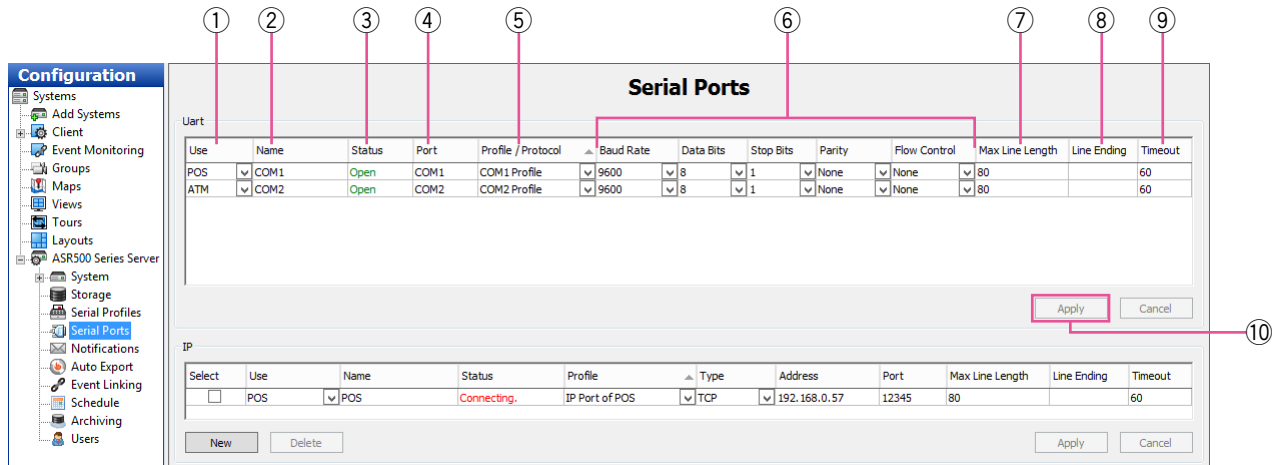


**Note:**

- Certain characters must be entered in ASCII format. For example, spaces should be entered as "/x20," and carriage returns should be entered as "x0A." It might require several adjustments to make the replacement text appear exactly as desired.

# Serial Ports

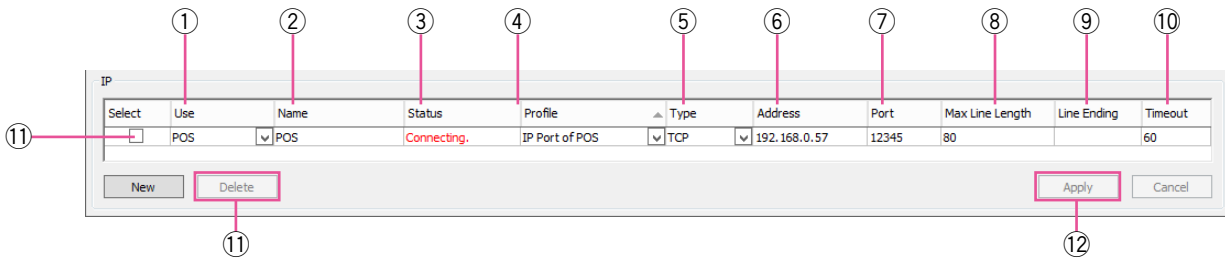
The "Serial Ports" page allows you to configure serial ports on this system so that they can be used to communicate with serial devices such as POS terminals or pan-tilt-zoom (PTZ) cameras. There are two "Serial Ports" sections — one for standard UART (Universal Asynchronous Receiver/Transmitter) and one for serial ports over IP.



For a UART serial port, connect the wires to the serial port and then configure the port. The system automatically detects and displays the serial ports. You can configure the following settings on each port:

- ① Select the intended use of the serial port from the drop-down list in the "Use" column. The choices are "Unused", "PTZ" (pan/tilt/zoom), "POS" (point of sale), "ATM" (automatic teller machine), or "Access Ctrl". Generally, the POS mode is used to record transactions at a cash register. By default, the last serial port listed is the built-in RS-485 port.
- ② Enter a unique name in the "Name" field.
- ③ The "Status" column displays the current status of the serial port.
- ④ The "Port" is automatically selected by the Operating System.
- ⑤ The "Profile/Protocol" column allows you to select one of the profiles configured on the "Serial Profile" page.
- ⑥ The "Baud Rate", "Data Bits", "Stop Bits", "Parity", and "Flow Control" must match the device you are connecting to. See the device's documentation for more information.
- ⑦ The "Max Line Length" is 80 by default. Generally, you should not change this.
- ⑧ "Line Ending" is the number of characters received before an end-of-line character is inserted automatically. This prevents lines from becoming extremely large.
- ⑨ "Timeout" is the number of seconds after which an end-of-line character is entered if a serial device has not sent text. This is useful if the serial data does not have an end-of-line character but it hasn't reached the number of characters entered in "Line Ending".
- ⑩ When you are finished, save the settings by clicking the [Apply] button at the bottom of the list.

The "IP" section is explained as follows.

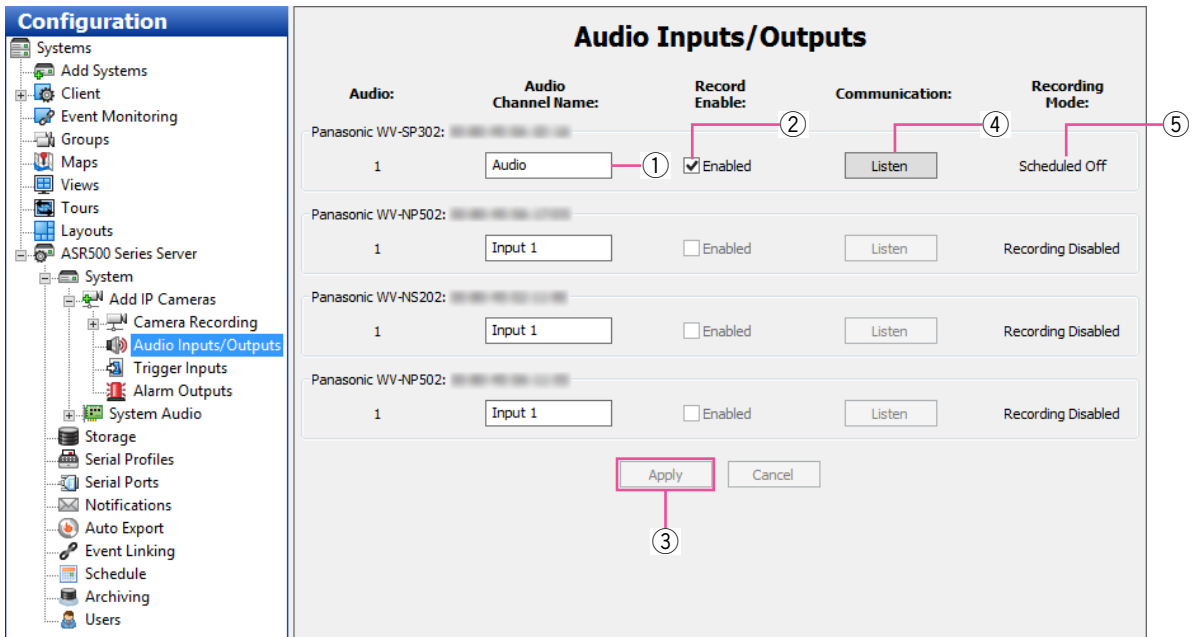


For serial over IP, you must add the port by clicking the [New] button; the system does not automatically detect and list IP serial ports.

You can configure the following settings on each port:

- ① Select the intended use of the port ("Unused", "POS", "ATM", or "Access Ctrl").
- ② Enter a unique and descriptive name for the port.
- ③ The "Status" column displays whether the port is currently connected.
- ④ Select a profile from the drop-down list. "Profile", which are created on the "Serial Profiles" page, are used to filter an incoming serial string to isolate useful information.
- ⑤ Select the transport type as defined by the source device manufacturer's documentation.
- ⑥ Enter the IP address of the source device.
- ⑦ Enter the TCP port of the source device as defined by the device manufacturer's documentation.
- ⑧ Enter the maximum number of characters per line sent by the source device. If you are unsure of the correct value, use the default setting of 80. Setting this number too low could result in missing characters at the end of certain lines.
- ⑨ "Line Ending" is the number of characters received before an end-of-line character is inserted automatically. This prevents lines from becoming extremely large.
- ⑩ "Timeout" is the number of seconds after which an end-of-line character is entered if a serial device has not sent text. This is useful if the serial data does not have an end-of-line character but it hasn't reached the number of characters entered in "Line Ending".
- ⑪ To delete an IP port, choose its "Select" checkbox and click the [Delete] button.
- ⑫ When you are finished, save the settings by clicking the [Apply] button at the bottom of the list.

# Audio Inputs/Outputs



- ① Enter a name for the audio input channel.
- ② Select "Enabled" to enable audio recording on the input.
- ③ Repeat this process until all audio inputs have been named, and then click the [Apply] button.
- ④ Click the [Listen] button to verify the audio input connected to a channel. This is sometimes helpful when assigning names to multiple audio inputs.
- ⑤ The "Recording Mode" column shows the recording mode selected for the audio input on the "Schedule" page.

# Trigger Inputs

Trigger Input:	Trigger Name:	Normal State:	Status:
Panasonic WV-NP502: [Device ID]			
1	Trigger Input 1	<input checked="" type="radio"/> NO <input type="radio"/> NC	NORMAL
2	Trigger Input 2	<input checked="" type="radio"/> NO <input type="radio"/> NC	NORMAL
Panasonic WV-NS202: [Device ID]			
1	Trigger Input 1	<input checked="" type="radio"/> NO <input type="radio"/> NC	NORMAL
2	Trigger Input 2	<input checked="" type="radio"/> NO <input type="radio"/> NC	NORMAL
Panasonic WV-NP502: [Device ID]			
1	Trigger Input 1	<input checked="" type="radio"/> NO <input type="radio"/> NC	NORMAL
2	Trigger Input 2	<input checked="" type="radio"/> NO <input type="radio"/> NC	NORMAL

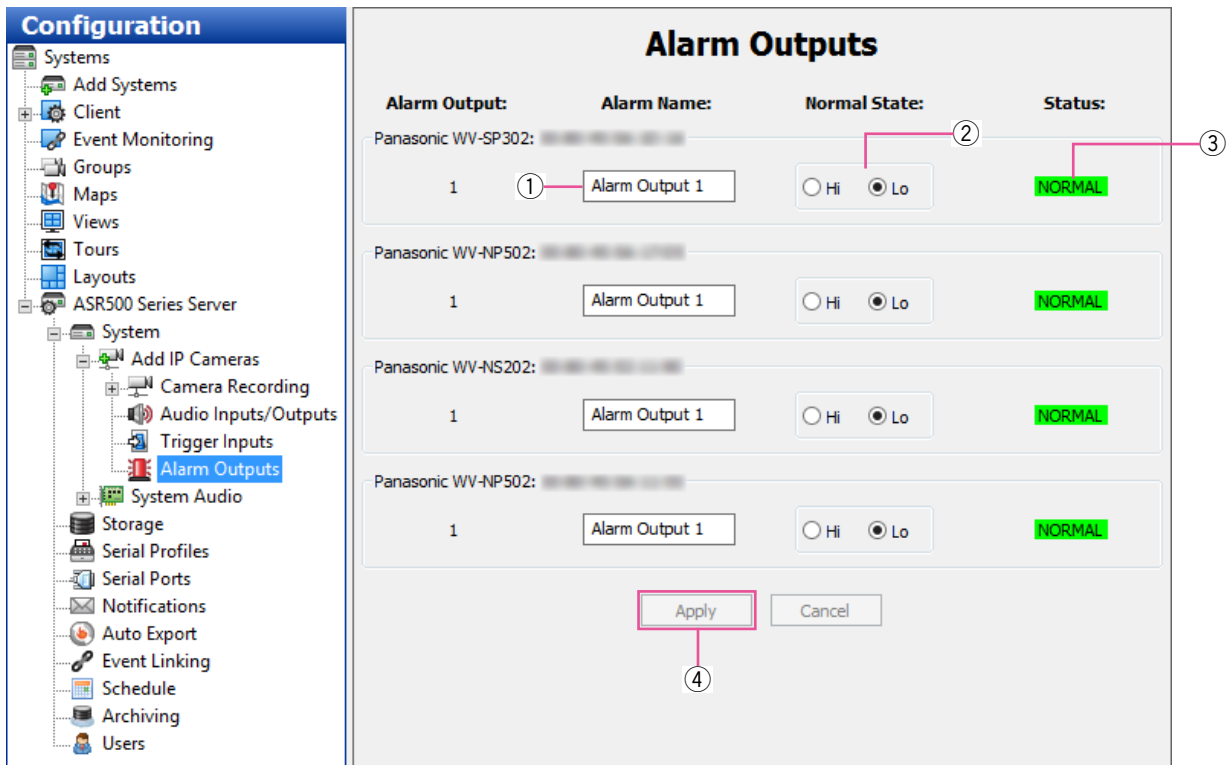
Apply Cancel

The "Trigger Inputs" page allows you to assign a name and configuration to the discrete inputs on hybrid systems and certain IP cameras with alarm inputs. These triggers can be configured to trigger video recording or a relay using the "Event Linking" page.

- ① Enter a name for each trigger input in the "Trigger Name" column.
- ② Configure the trigger input's "Normal State" as Normally Open (NO) or Normally Closed (NC).
- ③ The "Status" column indicates whether the trigger input is in its normal (green) state or in its alarm (red) state.
- ④ When you are finished configuring trigger inputs, click the [Apply] button.



# Alarm Outputs



The "Alarm Outputs" page allows you to assign a name and configuration to the alarm outputs on hybrid systems and certain IP cameras.

- ① Enter a name for each alarm output in the "Alarm Name" column.
- ② Configure the alarm output's "Normal State" as "Hi" (5VDC) or "Lo" (0VDC).
- ③ The "Status" column indicates whether the alarm output is in its normal (green) state or in its alarm (red) state.  
The output can be triggered to alarm state by an event configured on the "Event Linking" page.
- ④ When you are finished configuring alarm outputs, click the [Apply] button.

# Video Output

This function cannot be used for ASR500.

**Configuration**

- Systems
  - Add Systems
  - Client
  - Event Monitoring
  - Groups
  - Maps
  - Views
  - Tours
  - Layouts
  - ASR500 Series Server
    - System
      - Add IP Cameras
      - sDVR6516
        - Camera Recording
        - Audio Inputs/Outputs
        - Trigger Inputs
        - Alarm Outputs
        - Video Output 1**
        - Video Output 2
  - Storage
  - Serial Profiles
  - Serial Ports
  - Notifications
  - Auto Export
  - Event Linking
  - Schedule
  - Archiving
  - Users

**Video Output**

Edit Video Output Tour

Layout

1x1  2x2  3x3  4x4

Dwell Time = 5.0 sec

Apply Cancel

Cameras in Tour

- sDVR6516
  - Input1
  - Input2
  - Input3
  - Input4
  - Input5
  - Input6
  - Input7
  - Input8
  - Input9
  - Input10
  - Input11
  - Input12
  - Input13
  - Input14
  - Input15
  - Input16

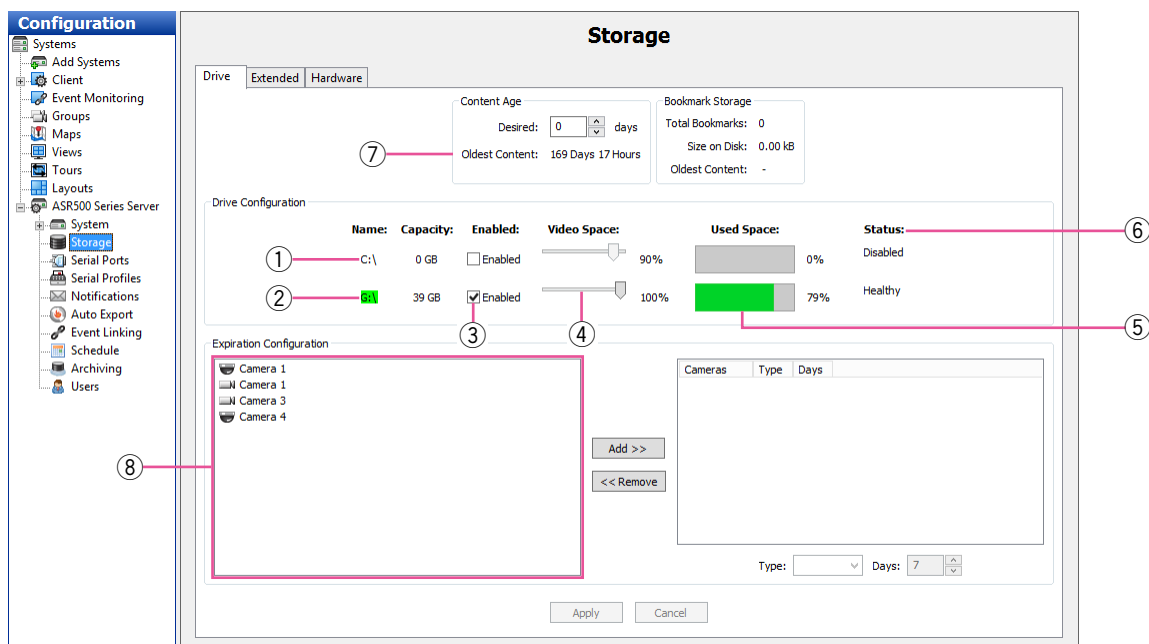
# Storage

The "Storage" page allows you to configure the system's hard drives for video storage and monitor the health of drives and RAID arrays. The following tabs are available on the "Storage" page:

- The [Drive] tab displays all the installed drives, their capacity, available storage space, and status.
- The [Extended] tab allows you to configure drives on extended storage servers.
- The [Hardware] tab allows you to monitor attributes of each hard drive and RAID controller.

## Drive Tab

The following features are available on the [Drive] tab:



- ① The system drive ("C:\") is reserved for this system software and operating system and is not enabled for video storage. Do not record video to this drive.
- ② The storage drives are listed below the system drive.
- ③ To enable a drive for video storage, select its "Enabled" box.
- ④ To adjust the maximum amount of drive space that can be used for data storage, adjust the "Video Space" slider for each storage drive.
- ⑤ "Used Space" displays how much of the hard drive capacity is currently full.
- ⑥ "Status" displays the current state of the hard drive.
- ⑦ "Oldest Content" indicates the age of the oldest video recorded on this system. This does not affect cameras added in the "Expiration Configuration" section.
- ⑧ "Expiration Configuration" allows you to set minimum or maximum time periods for video from each camera to be stored. For example, you could configure one camera's video to be stored for at least 30 days before it is deleted, and another camera's to be deleted after no more than 7 days. See the following IMPORTANT before using this feature.

**Note:**

- Performance can decrease if you set the "Video Space" slider greater than 85 %.

**Note:**

- "Bookmark Storage" section  
This function cannot be used for ASR500.

---

**IMPORTANT:**

- The system normally retains recorded video from all cameras for as long as possible, deleting the oldest video only when required to create room for newly recorded video. Thus, it is recommended that you use the "Expiration Configuration" feature only when necessary, such as when video must be deleted after a specific maximum time period as required by law.
  - When using the feature, the "Days of Recorded Video" indicator should be higher than the greatest number of minimum days configured for a camera in the "Expiration Configuration" area. For example, if you configure a camera's video to be stored for at least 30 days, the "Days of Recorded Video" indicator should be at least 30 (assuming the system has been recording video for at least 30 days). If the "Days of Recorded Video" indicator were lower than 30, video recording would stop for that camera until the oldest video stored from that camera got deleted (after 30 days).
  - To resolve issues with video expiration, you can expand your storage capacity by adding hard drives, reducing the minimum time that video needs to be stored, or reducing frame rates or quality settings for the applicable cameras. The best way to determine your needs is by trial and error; allow the system to record at your desired settings and then monitor the "Storage" page to ensure that the settings will meet the storage requirements.
- 

To configure video expiration, select a camera name in the list on the left and click the [Add>>] button. (You can select multiple cameras by pressing the [Ctrl] or [Shift] keys.) Then select the camera name in the list on the right. You can configure two types of expiration:

- To delete video after a certain amount of time, select "At Most" from the "Type" drop-down list and use the arrows to select the maximum number of days the video should be stored.

---

**Note:**

- If an "At Most" setting is configured for a camera, the camera cannot be selected for archiving.
- 
- To save video for a minimum amount of time, select "At Least" from the "Type" drop-down list and use the arrows to select the minimum number of days the video should be stored.

Repeat for each camera that requires expiration rules. To remove expiration rules, select one or more camera names in the list on the right and click the [<<Remove] button. Click the [Apply] button when finished.

## Extended Tab

This function cannot be used for ASR500.

### Storage

DriveExtended

Portals

Portal	Status

IP Address:

Port:

Targets

Portal	IQN	Enabled	Username	Password	Status

Show passwords in clear text

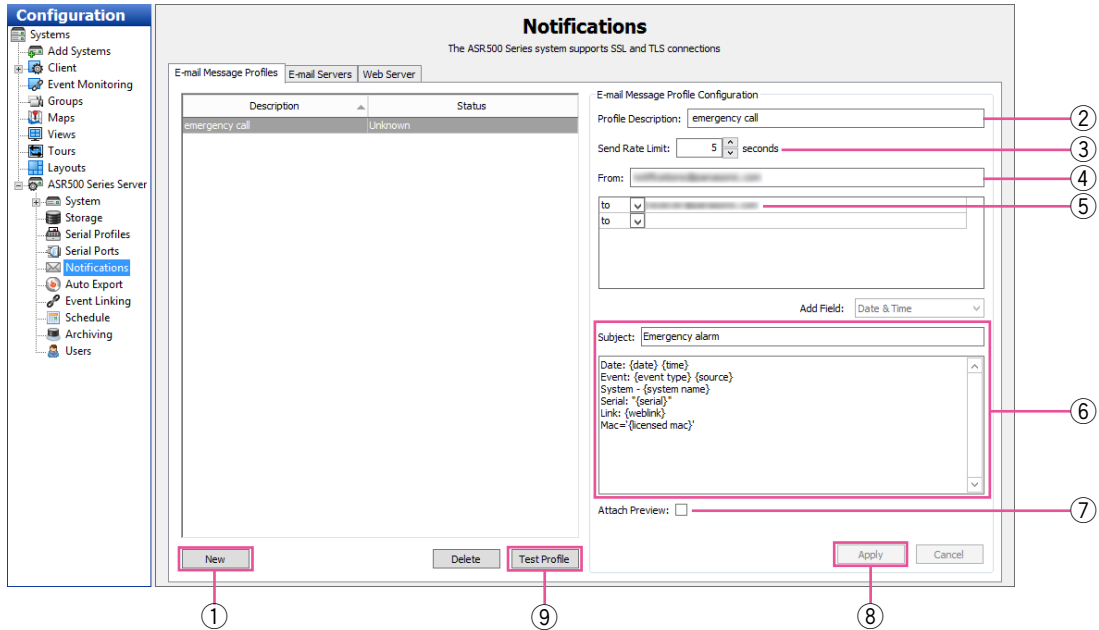
Partitions

Portal	IQN	Mount	LUN	Partition	Size (GB)	Status

# Notifications

The "Notifications" page allows you to configure an e-mail server and message profile that will send an email message when an event occurs. To configure events that cause an email notification to be sent using these email settings, see the "Event Linking" section of this manual.

The "Notifications" page is separated into three tabs: [E-mail Message Profiles] [E-mail Servers], and [Web Server].



## E-mail Message Profiles Tab

The [E-mail Message Profiles] tab allows you to configure email notification content and recipients.

- ① Click the [New] button.
  - ② Enter a brief description in the "Profile Description" field. This description will also appear in the "Action Target" field on the "Event Linking" page.
  - ③ To reduce the number of email notifications sent, select the minimum number of seconds between notifications from the "Send Rate Limit" box. This is useful if you receive a large number of repeated messages about certain events. For example, if you configure a notification every time a motion event occurs, a thunderstorm at night could trigger thousands of emails over a short period of time. Limiting notifications about the motion events to a maximum of one every 15 or 30 minutes (900 or 1800 seconds) could drastically reduce unnecessary emails.
  - ④ Enter the e-mail address of the person the email is coming from.
  - ⑤ Enter the e-mail addresses of the recipients.
  - ⑥ Enter a Subject and Message information that should appear in the email notification. You can automatically insert camera names using the bracketed tag {source} and the date and time using {date format=%H:%M:%S}. You can also include a link to the video {weblink}, serial information {serial}, the MAC address {licensed mac}, and more (see the image above for a syntax sample). Only the first instance of each tag is replaced; additional usage of the same tag in the same profile will cause the tag itself to appear in the message.
  - ⑦ Select "Attach Preview" to attach a brief video clip (in .MOV format) or image of the notified event. The preview will be a video clip instead of a single image only if the camera is streaming in H.264 or MPEG-4 format.
  - ⑧ Click the [Add/Apply] button to add the message profile to the list of profiles.
- 
- Note:**
- The [Apply] button may not become active when a destination address is added after selecting an already created profile. In this case, it will become active by editing the subject or body.
- 
- ⑨ You can test the profile by selecting it from the list and clicking the [Test Profile] button.

## E-mail Servers Tab

The [E-mail Servers] tab allows you configure the outgoing SMTP mail server that sends email from this system. This information can be provided by the network administrator.

The screenshot shows the 'Notifications' configuration page for an ASR500 Series system. The 'E-mail Servers' tab is active. On the left, a table lists existing servers with columns for 'Username' and 'Address'. Below the table is a 'New' button (1) and a 'Delete' button. On the right, the 'E-mail Server Configuration' form is shown. It includes a 'Server Description' field (2), an 'Outgoing Mail Server (SMTP)' section with 'Address' (3) and 'Port' (25) fields, and an 'Authentication' section with 'Username' (4), 'Password', and 'Confirm' fields. An 'Apply' button (5) and a 'Cancel' button are at the bottom right. A red box around the up/down arrow buttons is labeled with a circled '6'.

- ① Click the [New] button.
- ② In the "Server Description" field, enter a unique, descriptive name of email server.
- ③ In the "Outgoing Mail Server (SMTP)" section, enter the address and port number (25 is the default) of the outgoing mail server.
- ④ If your email server requires authentication, enter a valid "Username", "Password" and "Confirm" in the "Authentication" section.
- ⑤ Click the [Add/Apply] button to add the email server to the list.
- ⑥ To change the order of the email servers, select a server from the list and then click the up or down button.

## Web Server Tab

The [Web Server] tab allows you to enter the IP address of the web server so that email notifications can include a direct link to video associated with a notification.

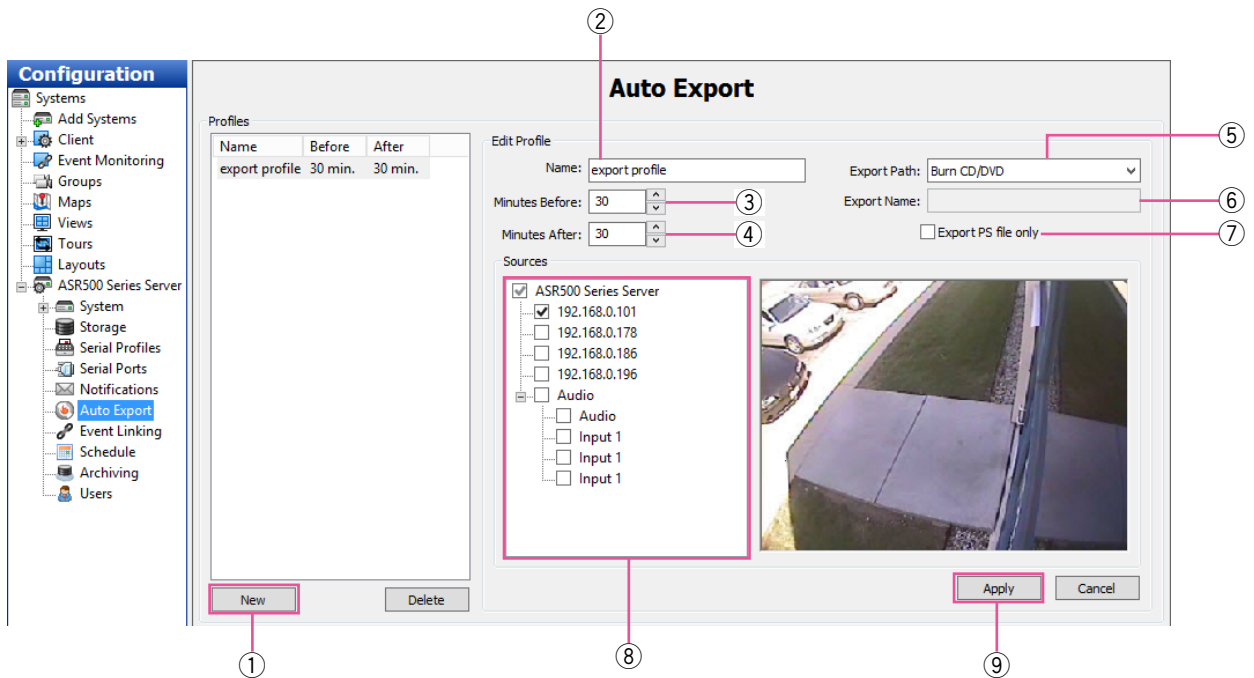
The screenshot shows the 'Web Server' tab in the 'Notifications' configuration page. The 'Address' field contains the IP address '192.168.0.57'. Below the field are 'Apply' and 'Cancel' buttons.

# Auto Export

"Auto Export" quickly exports video from specified inputs to hard drives, or removable drives.

**Note:**

- "Auto Export" to a CD or DVD is not available for ASR500.



- ① If you want to create a profile that can be used on the "Event Linking" page, click the [New] button. Otherwise, skip to step 10 on the following page.
- ② Enter a Name for the profile.
- ③ Select a "Minutes Before" value, which is the amount of video that occurred before the "Auto Export" was started that should be included in the export.
- ④ Select a "Minutes After" value, which is the amount of video that occurs after the "Auto Export" was started that should be included in the export. This can be useful when an event of interest is still occurring.
- ⑤ Select the destination of the export files from the "Export Path" drop-down list. All local Windows drives, and USB drives should be listed. (Windows shared directories are not listed.) The correct file extension will be added automatically.
- ⑥ If you choose a drive, enter a name for the drive in the "Export Name" field. If you want to generate different automated names for each export, you can enter {date format} and any combination of the following variables:

%a	weekday abbrev
%A	weekday name
%b	month abbrev
%B	month name
%c	full date/time
%d	day of month
%H	hour (24h format)
%I	hour (12h format)
%j	day of year (001-366)
%m	month (01-12)
%M	minute
%p	AM/PM
%S	second
%U	week of year (start Su)
%w	day of week (Su=0, Mo=1)
%W	week of year (start Mo)
%x	date (xx/xx/xx)
%X	time (xx:xx:xx)
%y	last 2 digits of year
%Y	year (20xx)
%Z	time zone abbrev.
%%	percent symbol

For example, you could enter {date format = "video automatically exported on %x at %X"} or simply {date format = "%H, %M, %S, %x"}.



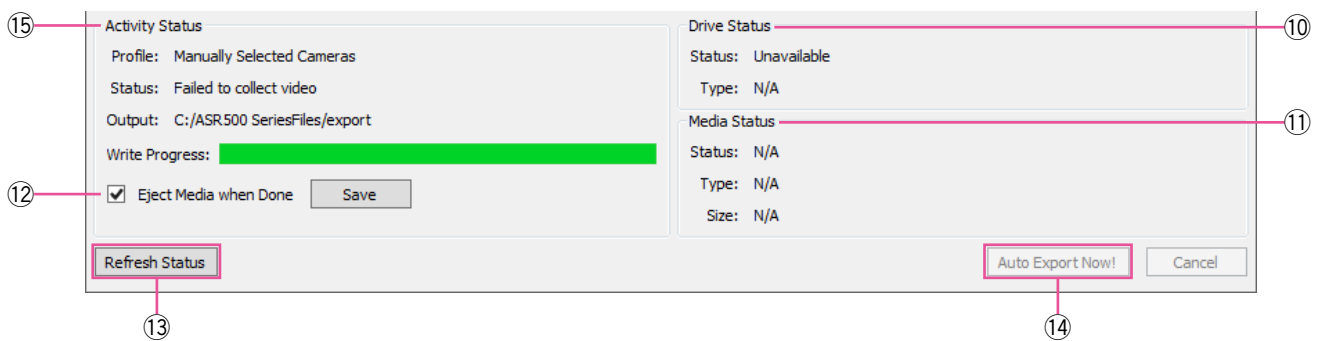
- ⑦ To enable export files greater than 4GB (up to 137GB), select "Export PS file only". Otherwise, the file export will be in .exe format. A .ps file must be viewed in a separate video player.
- ⑧ Select the cameras to be included in the export profile.

- ⑨ Click the [Apply] button to finish creating an "Auto Export" profile and add it to the "Profiles" list. This button is not available until you modify the default profile name (New Profile).

**Note:**

- The system will NOT use the profile until you link it to an event on the "Event Linking" page using "Button Input" as the "Event Type" and "Auto Export" as the "Action Type".

The rest of the "Auto Export" page is described as follows.



- ⑩ "Drive Status" indicates whether the system has a writable CD/DVD drive and compatible formats.

- ⑭ To initiate an export, click the [Auto Export Now!] button. This opens the "Auto Export" window.

**Note:**

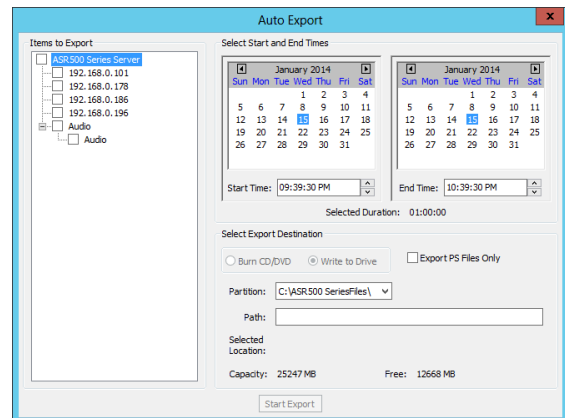
- "Auto Export" to a CD or DVD is not available for ASR500.

- ⑪ "Media Status" indicates whether a blank disc is loaded in the drive and its format and storage size.
- ⑫ The "Eject Media When Done" option configures the CD/DVD drive to open automatically when the system finishes exporting the data to the disc. (Note that if the front door on the system is latched, the drive cannot open.) Click the [Save] button if you change the setting.

**Note:**

- "Auto Export" to a CD or DVD is not available for ASR500.

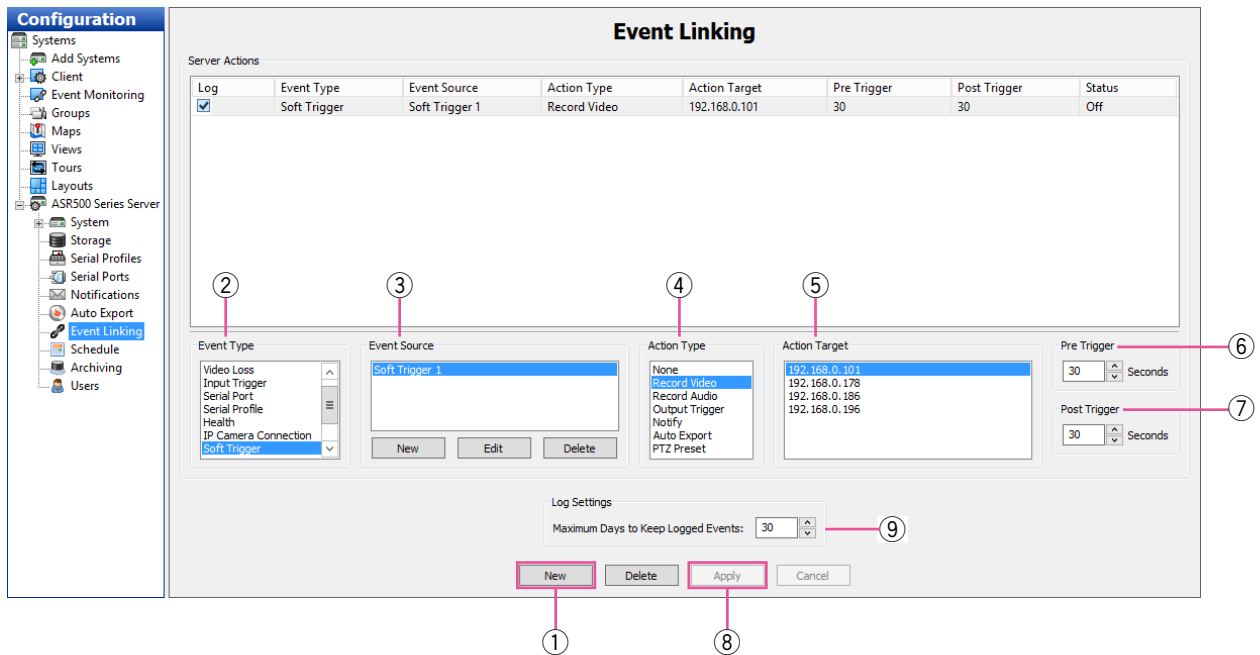
- ⑬ If you insert a disk while the "Auto Export" page is open, click the [Refresh Status] button.



This window allows you to select cameras, a start and end date and time, and an export destination. When the export configuration is complete, click the [Start Export] button.

- ⑮ The "Activity Status" box indicates the status of Auto Export. This can include Idle, Gathering Video, Creating ISO Image, In Use, and so on. It also contains a "Write Progress" bar that shows how much of an active Auto Export has completed.

# Event Linking



The "Event Linking" page allows you to connect different types of events, such as the activation of an input trigger, to an action, such as recording video or triggering an alarm. Event Linking provides quicker searches for specific event types. For example, you might normally search for motion video captured on a camera pointed toward a door; however, if the door has a sensor, you could improve your search by looking for video recorded whenever the door opened by linking that event with video recording.

You can see how it works by looking at the lists from left to right below the main Event List, as shown in the figure above.

When the specified "Event Type" ② occurs on an associated "Event Source" ③, "Action Type" ④ is triggered on an "Action Target" ⑤. These events are then stored in a database (if "Log" is selected in the "Event List") to provide easy search capabilities. To create a new event, complete the following steps:

- ① Click the [New] button to add the event to the "Event List".
- ② Select the "Event Type".
- ③ Select the "Event Source". (If "Soft trigger", "Time Trigger", or "Source Group" is selected, you can create or edit the event source using the buttons that appear immediately below the selection box.)
- ④ Select the "Action Type".
- ⑤ Select the "Action Target".
- ⑥ "Pre Trigger" allows you to store buffered data that was captured up to 100 seconds before the event occurred. This feature can be used only with certain Event Types. Very large Pre Trigger can negative impact system performance.
- ⑦ "Post Trigger" continues the Action Type for up to 100 seconds of video after the event concludes.
- ⑧ Click the [Apply] button to save all changes to the selected event.
- ⑨ The "Log Settings" field determines how long the event will be stored in the Event database, from zero to 365 days.

---

**Note:**

- See the charts on the following pages for information about available Event Types, Event Sources, Action Types, and Action Targets.
-

The following Event Types are available:

Event Type	Description
Video Motion	Camera detects motion.
Video Loss	Analog video signal is disconnected.
Input Trigger	Discrete input on hybrid server or IP camera with alarm input is activated.
Serial Port	Key word entered on "Serial Profile" page is detected on a pre-selected port.
Serial Profile	Key word is detected on any Serial Port with that profile.
Health	Detected problem involving the health of the Server hardware.
IP Camera Connection	Network can't connect to the IP Camera.
Soft Trigger	Signal sent from the client to the server.
Time Trigger	Time of day or day of week reached.
Analytics	Video analytics event detected.
Source Group	Multiple event types for advanced event linking.

The Event Source list varies depending on the Event Type selected:

Event Type Selected	Event Source
Video Motion	Any of the cameras connected to the Server.
Video Loss	Any analog camera connected to the Server.
Input Trigger	Any input trigger on the back of the server or IP camera connected to the server. The system defaults to a device and input number, but these can be customized on the "Trigger Input" page. See the "Trigger Inputs" section of this manual for details.
Serial Port	Any of the serial ports configured on the server. See the "Serial Ports" section of this manual for details.
Serial Profile	Any of the serial profiles you have configured. You can select all key words associated with a serial profile by selecting the profile name, or you can select an individual key word configured in the profile.
Health	Includes failures or temperature problems on a device; problems with storage configuration; subscription expiration; video throttling alarms; alarms related to parameters monitored on the [Hardware Monitoring] tab on the "System" page; failed connection to shared network drive for archiving.
IP Camera Connection	Any of the IP cameras connected to the Server.
Soft Trigger	Select the [New] button to create a new soft trigger with a default name. Click the [Edit] button to name it, or click the [Delete] button to remove it. You can also select any of the preconfigured soft triggers that are listed.
Time Trigger	Select the [New] button to open the pop-up window. Name the time trigger, select a start and end time (Client Time or Server Time), and select the days of the week when the selected action should occur. (For example, you could perform an Auto Export at 2:00 every morning.) Click the [Apply] button to save the configuration. Click the [Edit] button to change Time Triggers, or click the [Delete] button to remove it.
Analytics	A list of video analytics events (configured through the provider's interface).
Source Group	Select the [New] button to open the pop-up window. You can then select any combination of event types and event sources and determine whether any or all of them must occur to trigger the selected action.

The following Action Types are available:

Action Type	Description
None	No action will be performed. The event will be logged in the Event Database.
Record Video	Video will be recorded.
Record Audio	Audio will be recorded.
Output Trigger	A wired output trigger on the back of the server or IP camera will be activated.
Output Video 1	The analog monitor will switch to a full-screen view of the selected camera.
Notify	An email notification will be sent according to profile created on the "Notifications" page.
Auto Export	Data will be saved to a CD/DVD based on an Auto Export profile. See the "Auto Export" section of this manual for details.  <div style="border: 1px solid black; padding: 5px;"> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• "Auto Export" to a CD or DVD is not available for ASR500.</li> </ul> </div>
PTZ Preset	The camera will be pointed in a specific direction. See the "Camera Settings" section of this manual for details.

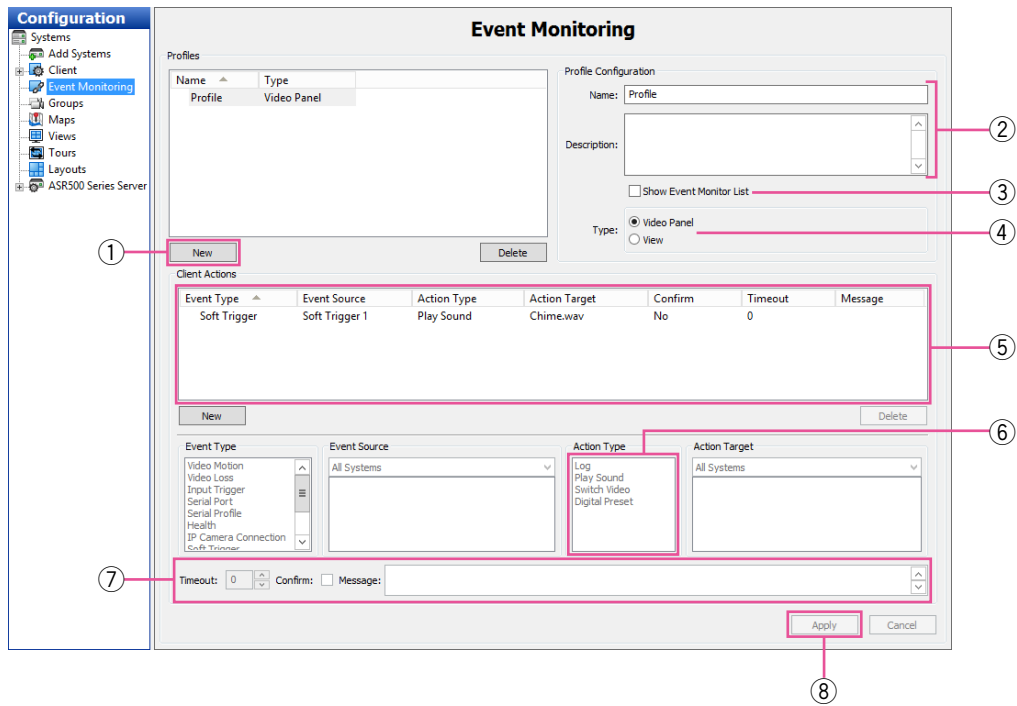
The Action Target list varies depending on the Action Type selected:

Action Type Selected	Action Target
None	No Action Target available.
Record Video	Any of the cameras connected to the Server.
Record Audio	Any of the audio inputs connected to the Server.
Output Trigger	Any output trigger on the back of the Server or IP cameras.
Output Video 1	Any of the analog cameras connected to the Server.
Notify	Any of the profiles that configured on the "Notifications" page.
Auto Export	Any of the profiles that configured on the "Auto Export" page.
PTZ Preset	Any of the presets associated with the camera on the "Camera Settings" page.

# Event Monitoring

This function cannot be used for ASR500.

The "Event Monitoring" page allows you to configure this system to react to events that take place on connected servers. First, you must create and define Event Monitoring Profiles, which are a set of actions (such as displaying live video or triggering a sound) that are triggered by events (such as motion or triggered inputs).



- ① To create a new profile, click the [New] button in the "Profiles" section.
- ② Enter a name and description for the profile.
- ③ Select "Show Event Monitor List" to automatically display the "Event Monitor List" when one or more monitored events occur.
- ④ Select the type of profile you would like to create:
  - A "Video Panel" profile can display a single camera when a specific event type occurs.
  - A "View" profile displays a preconfigured view when a specific event type occurs.
- ⑤ Add an event to monitor. This works in a similar way as the Event Linking discussed in the "Event Linking" section of this manual. Select an "Event Type", "Event Source", "Action Type", and "Action Target". The options listed in "Event Source" vary depending on which Event Type (such as triggers, serial ports, and serial profiles) is selected and how it is configured. For more information, see the sections of "Config (Setup) Page Overview" chapter that are related to the desired Event Type.

- ⑥ The "Action Type" list allows you to select an action that will occur when the selected "Event Type" occurs on the selected "Event Source". When you select an Action Type, a list of options is displayed in the "Action Target" list. Following are the available Action Type options and their associated Action Target options:

**Note:**

- The list of "Action Type" varies based on whether the profile is a "Video Panel" or "View".

Action Type	Description	Action Target Options
Log (Video Panel or View)	A notification of the event is saved in the system log file.	None
Play Sound (Video Panel or View)	A sound is played.	A list of sounds.
Switch Video (Video Panel)	Video from a camera is displayed.	All cameras enabled on all connected systems (or on the system selected from the drop-down list)
Digital Preset (Video Panel)	A PTZ preset configured on a camera is displayed.	All PTZ presets configured on all connected systems (or on the system selected from the drop-down list)
Switch View (View)	A single view is displayed until a specific event occurs.	Any view configured on the client computer. The view is automatically displayed when the event occurs.
Switch View Tour (View)	A tour is displayed until a specific event occurs.	Any tour configured on the client computer. The tour is automatically displayed when the event occurs.

- ⑦ If you selected "Show Event Monitor List", three more options are activated:
- "Timeout" allows you to determine how long, in seconds, an event is shown in the "Event Monitor List". If you select 0, the event listing is displayed until it is acknowledged.
  - "Confirm" requires a confirmation before the event is removed from the list.
  - "Message" is any general information that you want to display with the event, such as an action that a guard should take when the event occurs.
- ⑧ Click the [Apply] button when you have finished your profile.

# Schedule

The "Schedule" page allows you to configure your recording schedule. By default, this system is scheduled to record motion and events. There are four modes of video recording, which are color-coded on the "Schedule" page: "Motion" (blue), "Free Run" (green), "Alarm" (red), and "None" (white). Free run is continual recording. This type of recording uses a large amount of disk space.

## Note:

- To configure time lapse recording, select the "Capture an image every" check box, select a number, and then select "Seconds", "Minutes", or "Hours" from the drop-down list. Click the [Apply] button. Time lapse recording is not associated with the schedule configured in the grid on the "Schedule" page.

There are two scheduling tabs: [Days] and [Sources].

## Days Tab

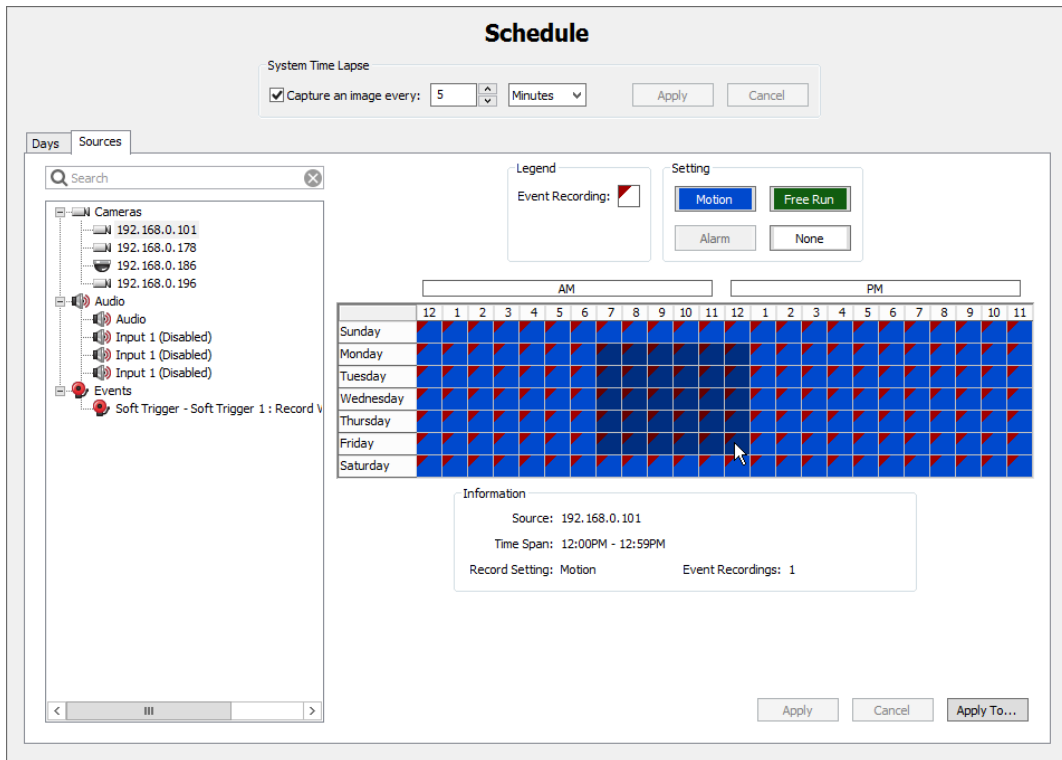
On the [Days] tab, you can configure recording of all video, motion video, or just alarm video. To create a schedule, complete the following steps:

- ① Select the appropriate tab for the day of the week.
- ② In the grid, draw a rectangle that corresponds to the hours for each device that you want to schedule.
- ③ When you hover the cursor over a square, note the details displayed in the "Information" section.
- ④ Select the appropriate button in the "Setting".
- ⑤ To copy the schedule from one day of the week to another, select the appropriate days of the week in the "Copy Current Configuration" section, and then click the [Set] button.
- ⑥ Click the [Apply] button.

The screenshot shows the "Schedule" configuration page. On the left is a "Configuration" sidebar with a tree view containing items like Systems, Client, Event Monitoring, Groups, Maps, Views, Tours, Layouts, ASRS00 Series Server, System, Storage, Serial Profiles, Serial Ports, Notifications, Auto Export, Event Linking, Schedule (highlighted), Archiving, and Users. The main area is titled "Schedule" and has two tabs: "Days" (selected) and "Sources". At the top, there is a "System Time Lapse" section with a checked box "Capture an image every", a value of "5", a "Minutes" dropdown, and "Apply" and "Cancel" buttons. Below this is a "Legend" section with "Event Recording:" and a red square icon. To the right is a "Setting" section with four buttons: "Motion" (blue), "Free Run" (green), "Alarm" (red), and "None" (white). The central part is a grid with days of the week (Sunday to Saturday) as columns and hours (12 AM to 11 PM) as rows. A mouse cursor is hovering over the 12:00 PM cell on Wednesday. Below the grid is an "Information" section showing details for the selected cell: Source: 192.168.0.196, Time Span: 12:00PM - 12:59PM, Record Setting: Free Run, and Event Recordings: None. To the right of the information is a "Copy Current Configuration" section with checkboxes for each day of the week (all checked) and a "Set" button. At the bottom right, there are "Apply" and "Cancel" buttons. Numbered callouts 1 through 6 point to various elements: 1 points to the "Days" tab, 2 points to the grid, 3 points to the "Information" section, 4 points to the "Free Run" button, 5 points to the "Set" button, and 6 points to the "Apply" button.

## Sources Tab

On the [Sources] tab, you can configure a separate recording schedule for each device:



Select the device from the tree and schedule it in the same way as described for the [Days] tab.

---

### Note:

- You can apply the one device's schedule to another device by clicking the [Apply To...] button.
- 

### IMPORTANT:

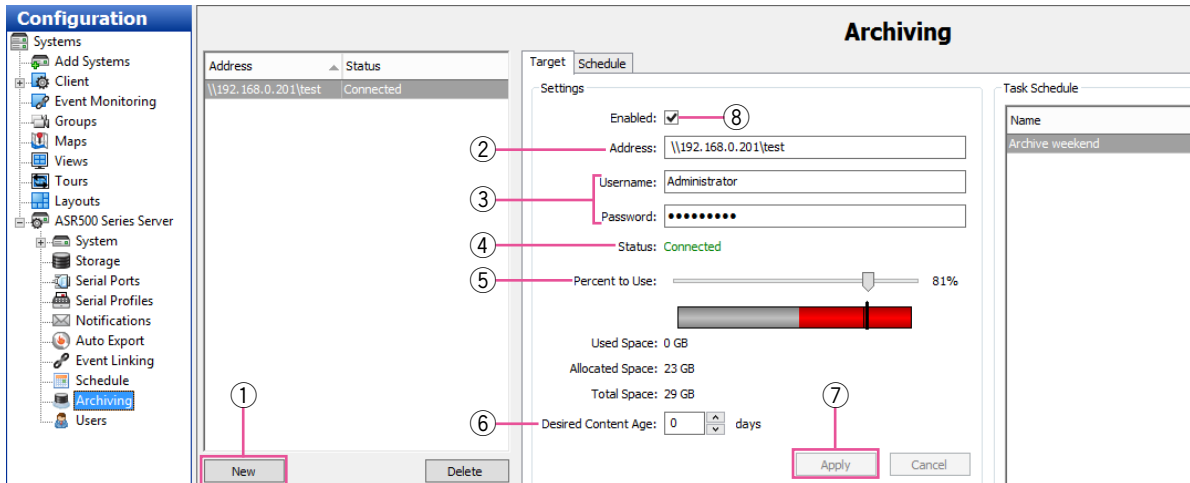
- Your recording schedule can be created by the hour with the grid but may have a few minutes of variation at the start and the end of the schedule when it runs.
  - When recording audio, schedule it in accordance with the video recording.
-



# Archiving

## Note:

- Archiving uses a significant amount of a system's resources. Thus, video recording rates could be automatically throttled while archiving is in progress, especially on a wide area network with limited bandwidth. To avoid throttling of video recording, it is highly recommended that archiving be scheduled for periods when video recording rates are reduced. For example, if motion video is normally recorded at a retail location, schedule archiving for overnight hours when the location is closed to customers.



The "Archiving" page allows you to configure an SMB shared network drive (a Windows share) for archiving of video and other data. The archive provides storage of recorded video data. Multiple Servers can archive to the same drive.

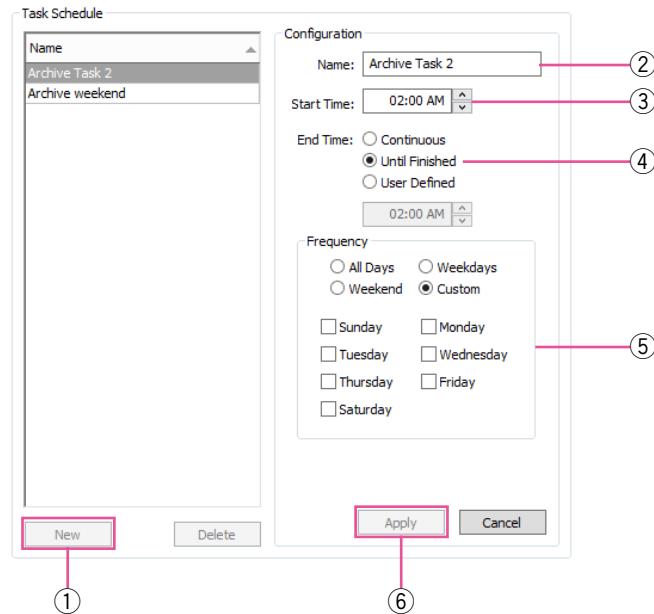
## Target tab

To enable and identify the location of the shared network drive, complete the following steps in the "Settings" section on the [Target] tab:

- ① Click the [New] button to configure the first archive server.
- ② In the "Address" field, enter the path to the shared network folder. Include the subdirectory in the shared folder used in the configuration of the archiving task.
- ③ Enter a valid "Username" and "Password" required to log in to the shared network drive.
- ④ The "Status" portion of the "Settings" section shows whether the server has successfully connected to the shared network drive. The following status messages can appear:
  - Invalid Address: The address entered is not in a valid format. It must be entered as \\ipaddress\share\folder or \\hostname\share\folder ("folder" is optional in each case).
  - Disconnected: The system cannot connect to the shared network drive because of an invalid address or username/password.
  - Connected: The system is successfully connected to the target server.
- ⑤ Move the "Percent to Use" slider to configure the targeted amount of the drive that should be used for archiving. The blue portion shows the amount of space used for this archiving configuration. The gray portion shows the unused space. The red portion shows the amount of space already used for other storage and archiving from other systems. You can select a percentage that includes the red portion, but that portion of the drive will not actually be used for archiving unless the stored data is deleted.
- ⑥ Select the target period of video that you would like to archive data. If data is deleted before that target is reached, it creates an event that can trigger an action as configured on the "Event Linking" page.
- ⑦ Click the [Apply] button to save the information that has been entered.
- ⑧ To activate the drive for storage of video data, select the "Enabled" checkbox.

To add another archive server, repeat these steps.

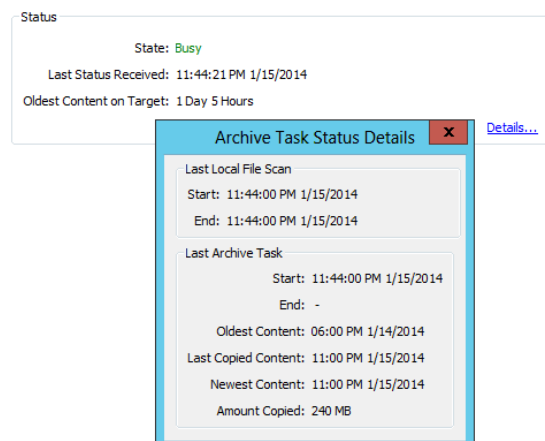
To configure an archive task schedule, complete the following steps in the "Task Schedule" section on the [Target] tab:



- ① Click the [New] button.
- ② Enter a name for the archive task.
- ③ Select a start time.
- ④ Select an end time. There are three types of end times:
  - Continuous: The system will scan for data to archive every five minutes. (See the note at the beginning of this section before selecting this option.)
  - Until Finished: Archiving will continue until all applicable data is archived. There will be no additional scans for data to archive until the start time on the next day.
  - User Defined: Archiving will end at the specified end time. Enter the time desired. If the archive period is not long enough to archive all applicable data, the remaining data will be archived during the next applicable task.
- ⑤ If you select "Until Finished" or "User Defined", select a "Frequency" for the task. Custom allows you to select days of the week individually.
- ⑥ Click the [Apply] button.

If desired, you can configure multiple archive tasks.

The "Status" section of the [Target] tab displays information about the current archive task:



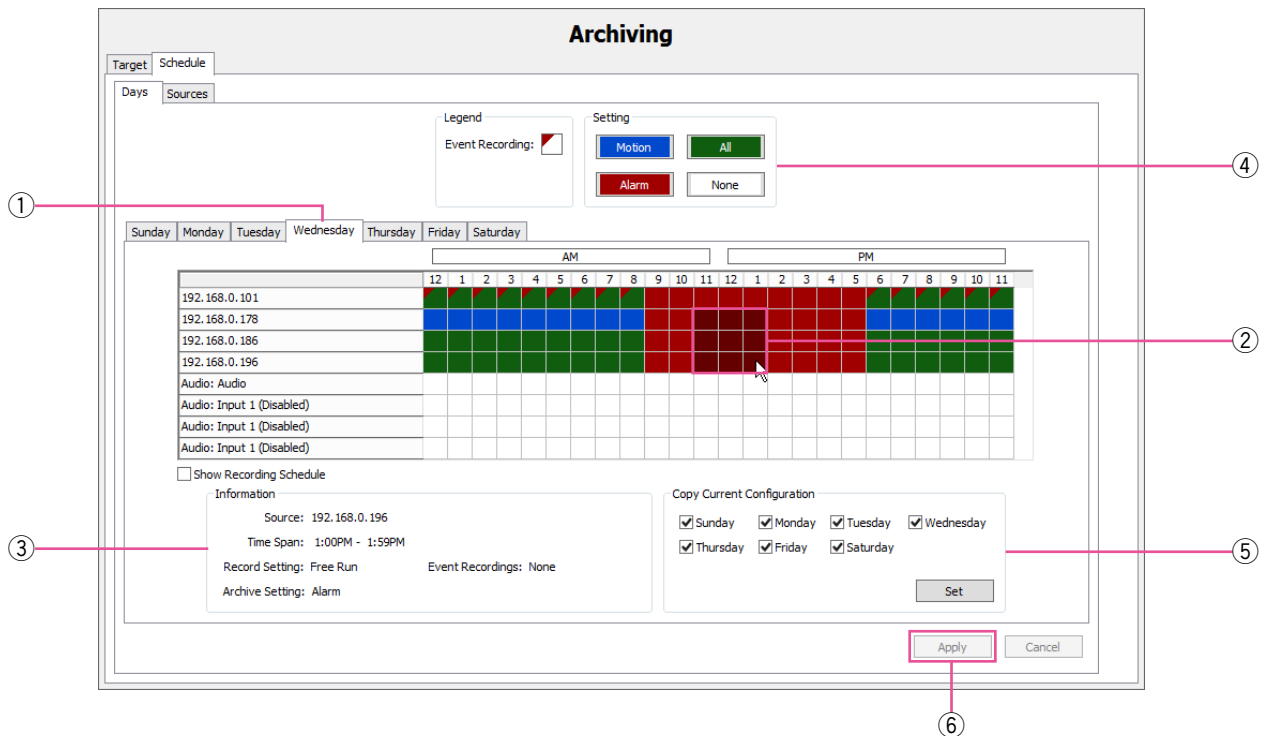
Click the [Details...] button to view additional details in the pop-up window.

**Note:**

- The oldest applicable data will always be archived first. If you see a message in the "Status" section that indicate the archive didn't complete, consider increasing the length of the user-defined task. Also, any applicable data recorded while the archive task is in progress will be archived if there is enough time remaining in the task.

## Schedule Tab

The [Schedule] tab on the "Archiving" page allows you to select the types of data and devices to archive:



On the [Days] tab, you can configure archiving of all data, motion video (which includes alarm video), or just alarm video. To change the "Setting", complete the following steps:

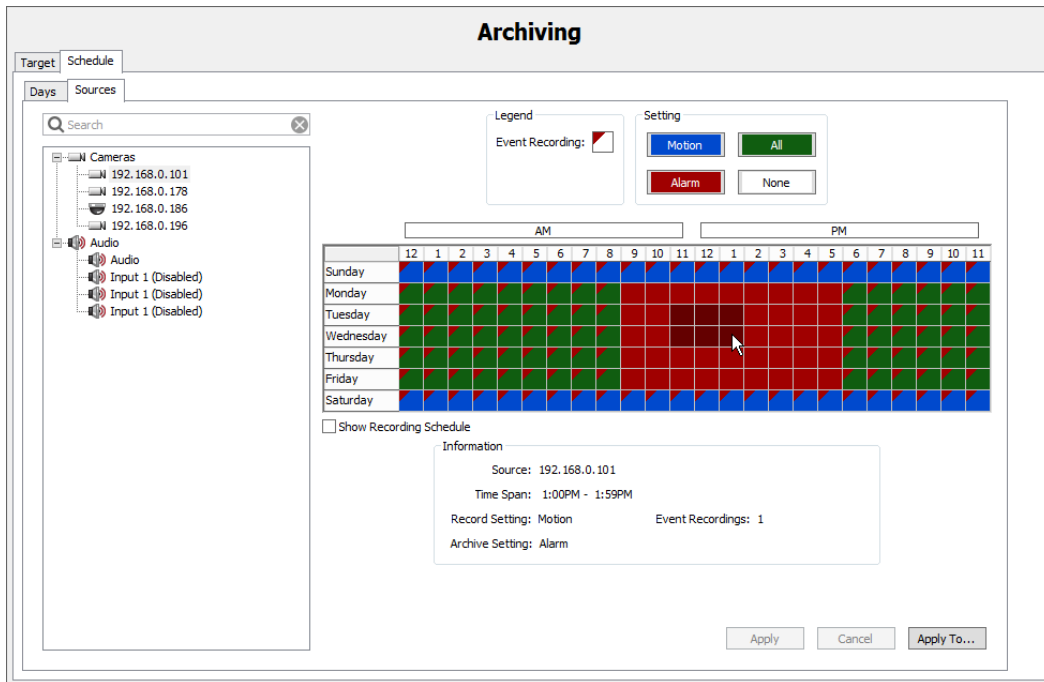
- ① Select the appropriate tab for the day of the week.
- ② In the grid, draw a rectangle that corresponds to the hours for each device that you want to configure.
- ③ When you hover the cursor over a square, note the details displayed in the "Information" section.
- ④ Select the appropriate button in the "Setting".
- ⑤ To copy the schedule from one day of the week to another, select the appropriate days of the week in the "Copy Current Configuration" section, and then click the [Set] button.
- ⑥ Click the [Apply] button.

### Note:

- Record settings and the "Archiving" settings do not have to be configured for the same type of data. For example, you could record Free Run video on a system at a certain time, but then archive only the motion video recorded during that period. However, if only motion/alarm video was recorded, the All setting on the "archive" page will cause only motion/alarm video to be archived. The amount of video available for archiving cannot exceed the amount of video recorded during that period.

- ④ Select the appropriate button in the "Setting".

On the [Sources] tab, you can configure a separate archiving schedule for each device:

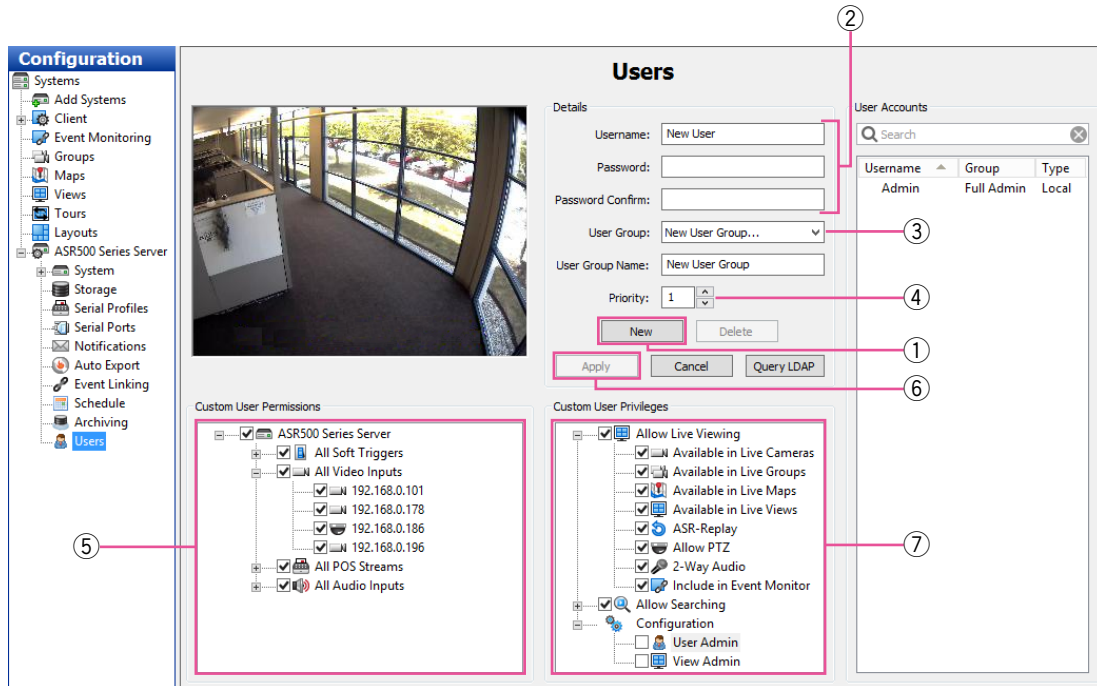


Simply select a device from the tree and then configure archiving the same way as described for the [Days] tab.

**Note:**

- You can apply the one device's schedule to another device by clicking the [Apply To...] button.

# Users



The "Users" page allows you to add and delete users, configure a user's group access level, and assign permissions for viewing cameras. After a user has been added to the system, the user can log in and view live and recorded video according to the permissions assigned to them.

- ① To add a new user, click the [New] button. (To change the password or permissions for a user, select the existing username.)
- ② Enter the name of the user in the "Username" field. Enter or change the password in the "Password" and "Password Confirm" fields.
- ③ Select a permission level from the "User Group" drop-down list:
  - "Full Admin" has access all features of the system.
  - "Power User" has access all features except for adding or deleting users.
  - "Live Only" can view live video from all connected cameras.
  - "Search Only" can search for recorded video.
  - "Live + Search" can view live video and search for recorded video from all connected cameras.
  - Any user or custom group whose permissions and privileges have been modified from one of the standard groups listed above.
- ④ Assign a "Priority" level to the user. When two users attempt to control the PTZ functions of the same camera simultaneously, the user with the higher priority level (up to 10) is granted PTZ control. If a second user attempts to control PTZ functions on a camera that is already being controlled by a user with the same priority, control remains with the first user. Admin users automatically have PTZ priority over any non-Admin user, and Power Users have priority over all users except for Admin users.
- ⑤ The "Custom User Permissions" section allows you to select which devices the user or group can see and operate in this system. You might have to deselect "View Admin" and "User Admin" under "Custom User Privileges" (if available) to allow the "Custom User Permissions" data to be edited.
- ⑥ When finished, click the [Apply] button.

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⑦ The "Custom User Privileges" section contains the following list of privileges that can be assigned to a user:

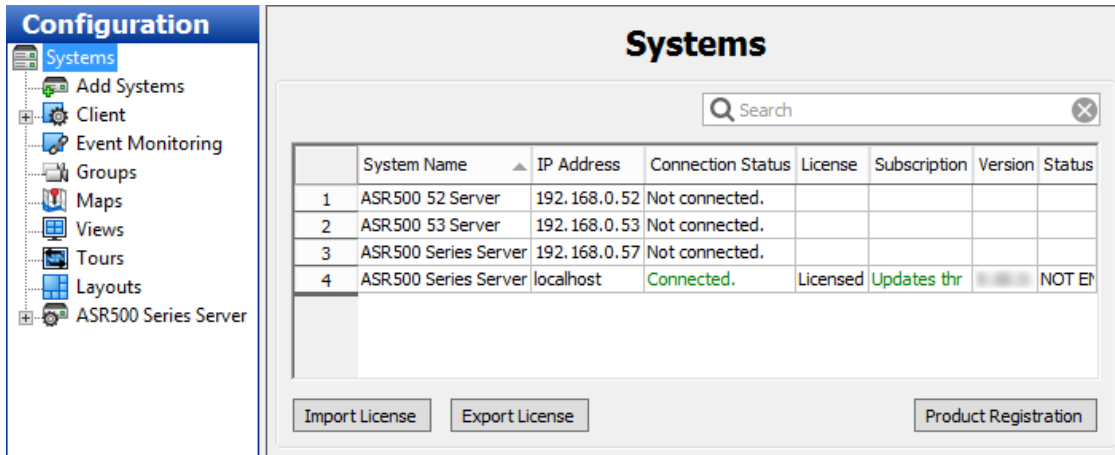
- Allow Live Viewing
  - Available in Live Cameras
  - Available in Live Groups
  - Available in Live Maps
  - Available in Live Views
  - ASR-Replay
  - Allow PTZ
  - Include in Event Monitor
- Allow Searching
  - Available in Search Cameras
  - Available in Search Groups
  - Available in Search Maps
  - Available in Search Views
  - Available in Search Events
  - Save Image & Copy to Clipboard
  - Print Image
  - Burn Disc
  - Export
  - Smart Search
- Configuration
  - User Admin
  - View Admin

---

**Note:**

- If you change the permissions or privileges for a user or group, enter a name for the new custom group and click the [Apply] button.
  - When accessing by Client, higher priority will be given to the Client user settings.
-

# Systems



The "Systems" page lists all added systems, along with their serial number, Model Number, IP address/host-name, connection status, license type, MAC address, subscription information, version information, status (such as, Normal, Alarm, or Motion), and days of recorded video.

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**Note:**

- To display or remove a column on the "Systems" page, right-click any column header and select the column from the pop-up menu.

The following actions can be performed on the "Systems" page:

- To connect to or disconnect a system, right-click its connection status and select a "Connect" option or "Disconnect" from the pop-up menu. To connect to or disconnect multiple consecutive systems simultaneously, click on the connection status for the first system, and then press the [Shift] key while you drag the cursor up or down (and then right-click).
- To view the "System Information" page for a system, double-click the information listed in any column for that system.
- To view model number and serial number information for a system, right-click the system name.
- To view a MAC address and license key for a system and copy it to the clipboard, right-click its information in the "License", "MAC Address", or "Subscription" column for that system and select "Copy to Clipboard" (select the right arrow if necessary to see that option). You can then paste the information into an email or other applications.
- To update a license key for a system, right-click its information in the "License" column, select "Update", and select one of the options. If you select "Update License from file", you can browse to a .KEY file that contains license information and click the [Open] button. If you select "Update License from text", you can type the license key manually and click the [OK] button.

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**Note:**

- Alternatively, you can click the [Import License] button at the bottom of the page to enter multiple licenses from a .CSV file, or click the [Export License] button to compile all listed licenses into a .CSV file to import into another client.

- To view additional version information for a system, right-click the information in the "Version" column for that system.
- To view additional information about Alarm or Motion status, hover the mouse pointer over the word while it appears in the "Status" column.

**Note:**

- If the physical connection between the client computer and server is interrupted while you are connected to the server in this system, the "Connection Status" will be displayed as Network Activity Timeout. The status will then be displayed as Disconnected after a specific amount of time that varies among operating systems.

## Device

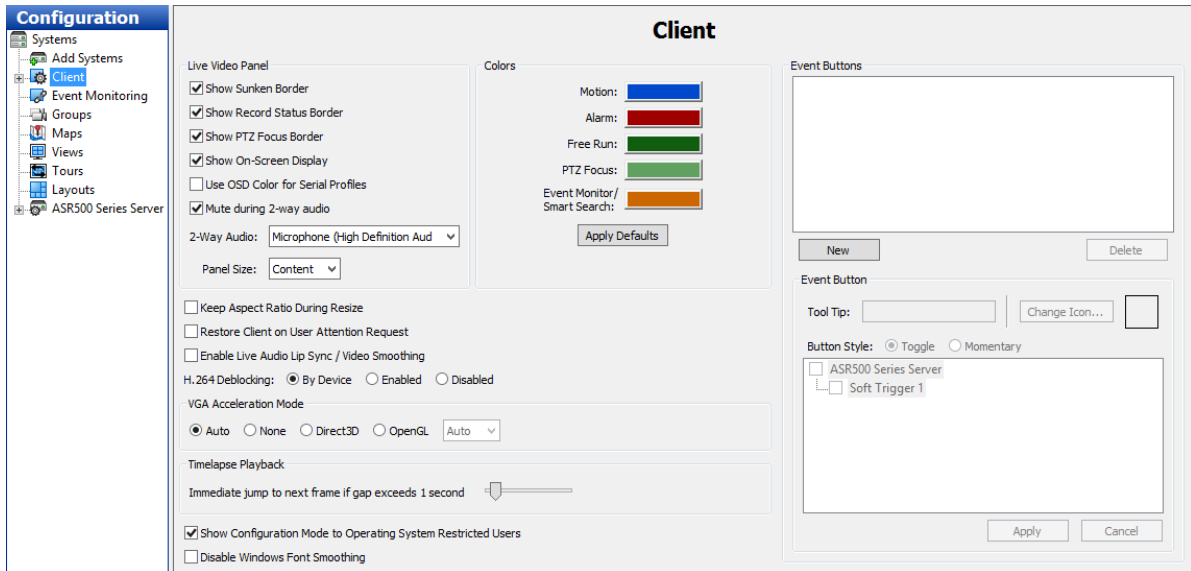
This function cannot be used for ASR500.

The image shows a software configuration interface. On the left is a 'Configuration' tree view with the following items: Systems, Add Systems, Client, Event Monitoring, Groups, Maps, Views, Tours, Layouts, ASR500 Series Server, System, Add IP Cameras, System Audio (highlighted in blue), Storage, Serial Profiles, Serial Ports, Notifications, Auto Export, Event Linking, Schedule, Archiving, and Users. On the right is a 'Device' configuration panel. It contains a 'Device Information' box with the text 'Type: System Audio'.



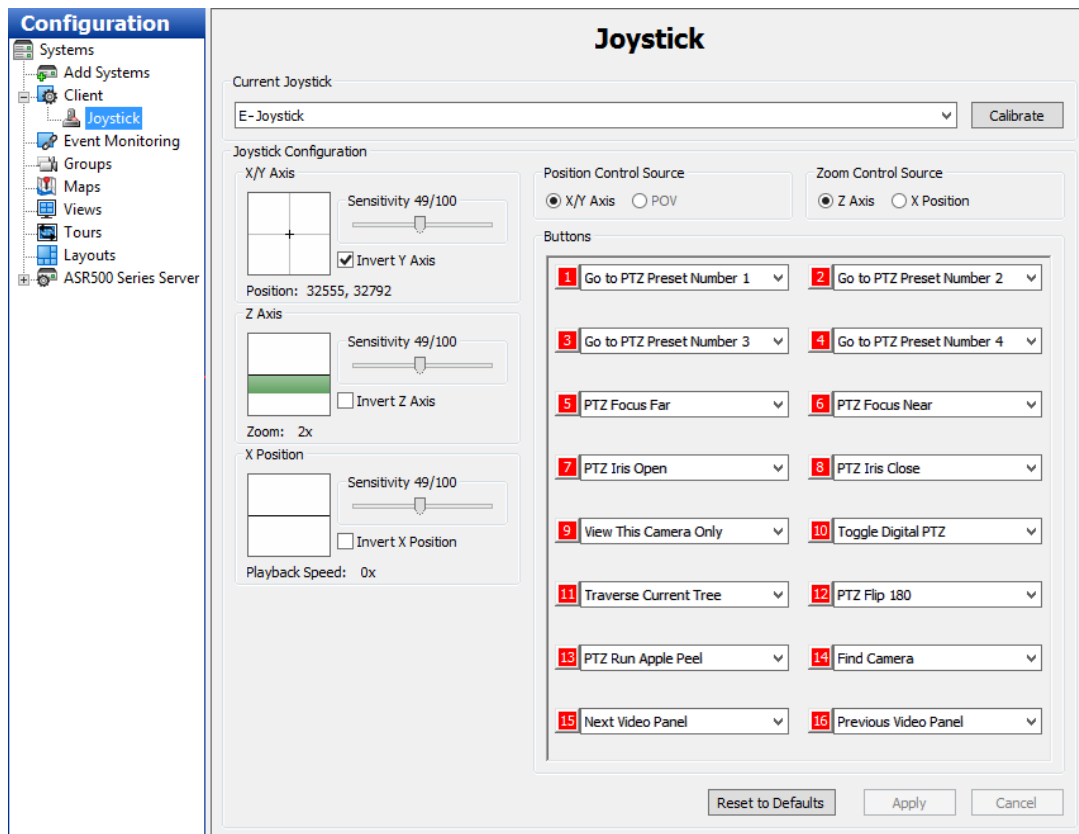
# Client

This function cannot be used for ASR500.

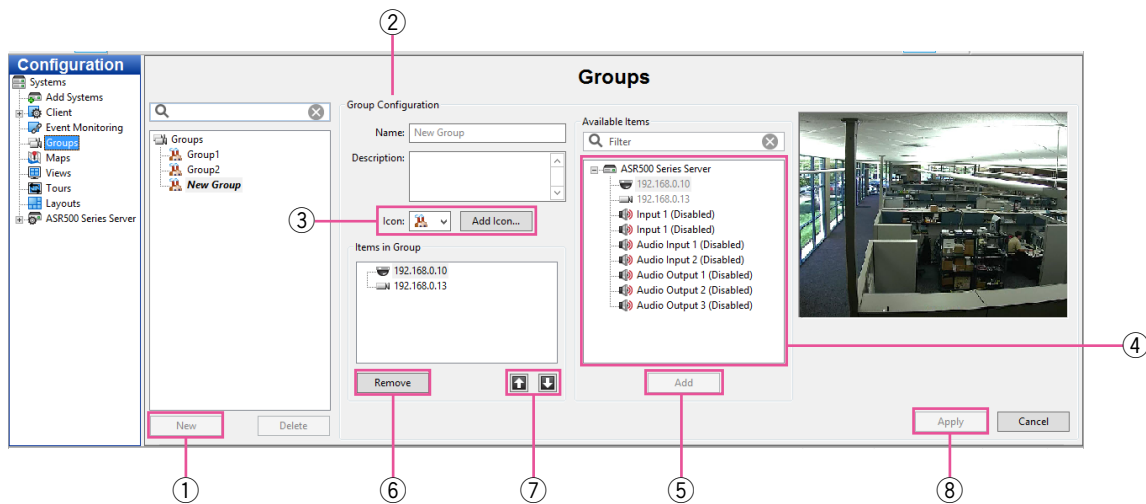


# Joystick

This function cannot be used for ASR500.



# Groups

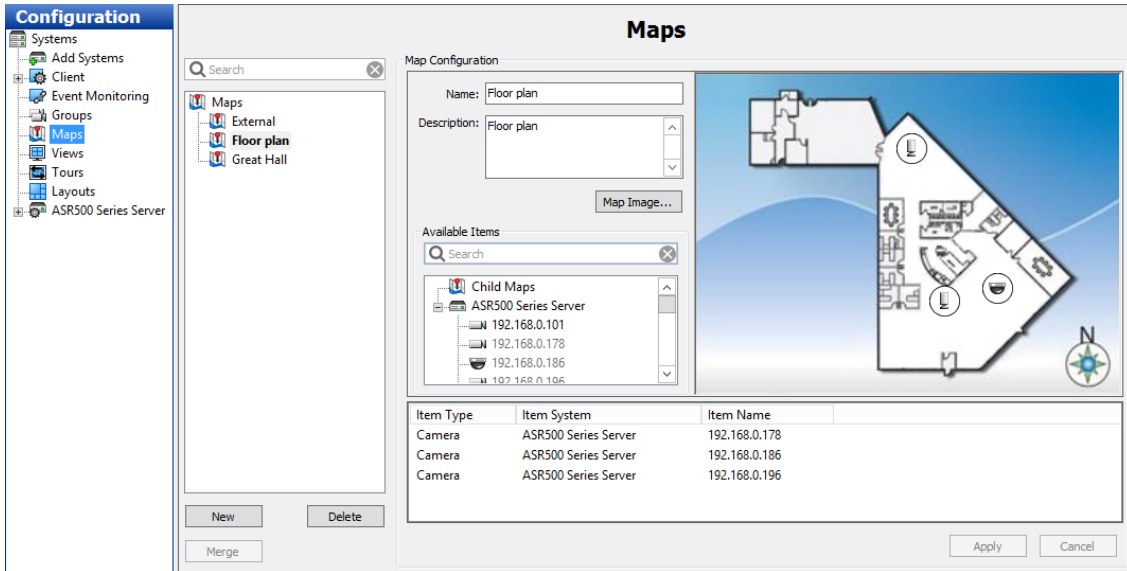


The "Groups" page allows you to create logical groups of cameras and other items connected to one or more systems. This is a useful when you have multiple systems with a large number of cameras spread across a large building or campus, and you would like to place cameras in logically named groups such as First Floor, Second Floor instead of viewing your cameras in default groups based on their connection to the systems.

- ① Create a new group by clicking on the [New] button.
- ② In the "Group Configuration" section, enter a name and description for the group.
- ③ Select an icon to represent the group in the Live and Search site trees.  
Alternatively, you can select a custom icon in a variety of file formats by clicking the [Add Icon...] button and then browsing the location of the file.
- ④ Select a camera from the "Available Items" list. Video from the camera is displayed in the video window.
- ⑤ Click the [Add] button to include the camera name in the "Items in Group" section. Continue adding cameras until your group is complete.
- ⑥ To remove a camera from the group, select it in the group list and click the [Remove] button.
- ⑦ To change the group list order, select an item in the "Items in Group" list and click the up or down arrow.
- ⑧ When finished, click the [Apply] button.

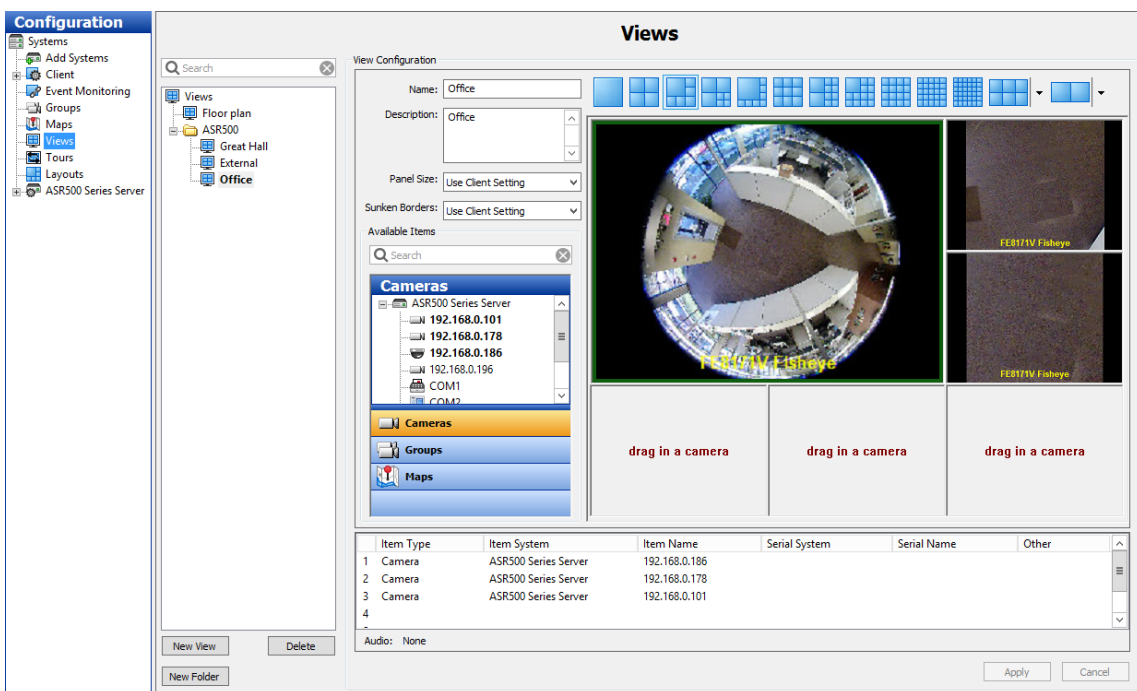
# Maps

This function cannot be used for ASR500.



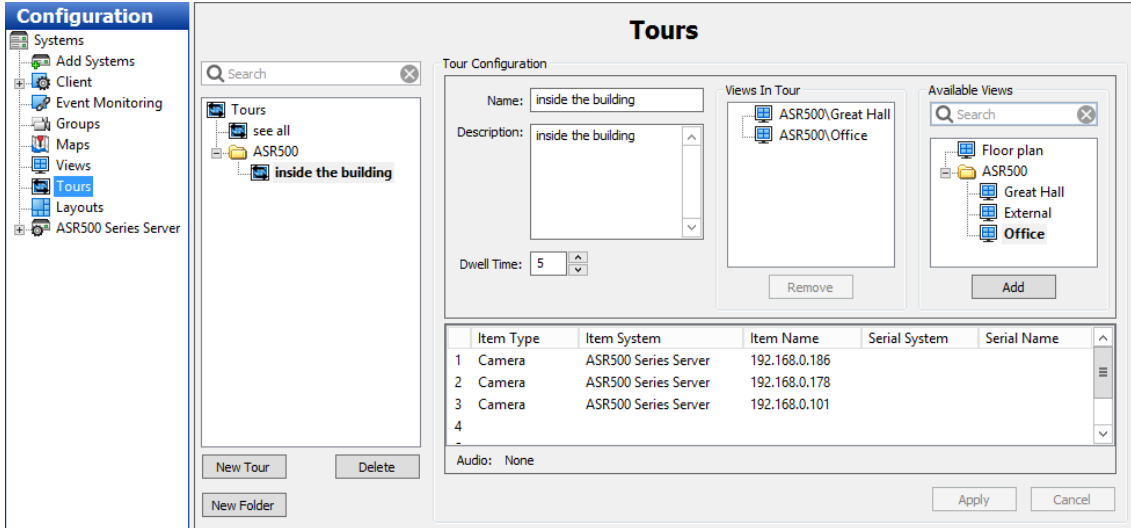
# Views

This function cannot be used for ASR500.



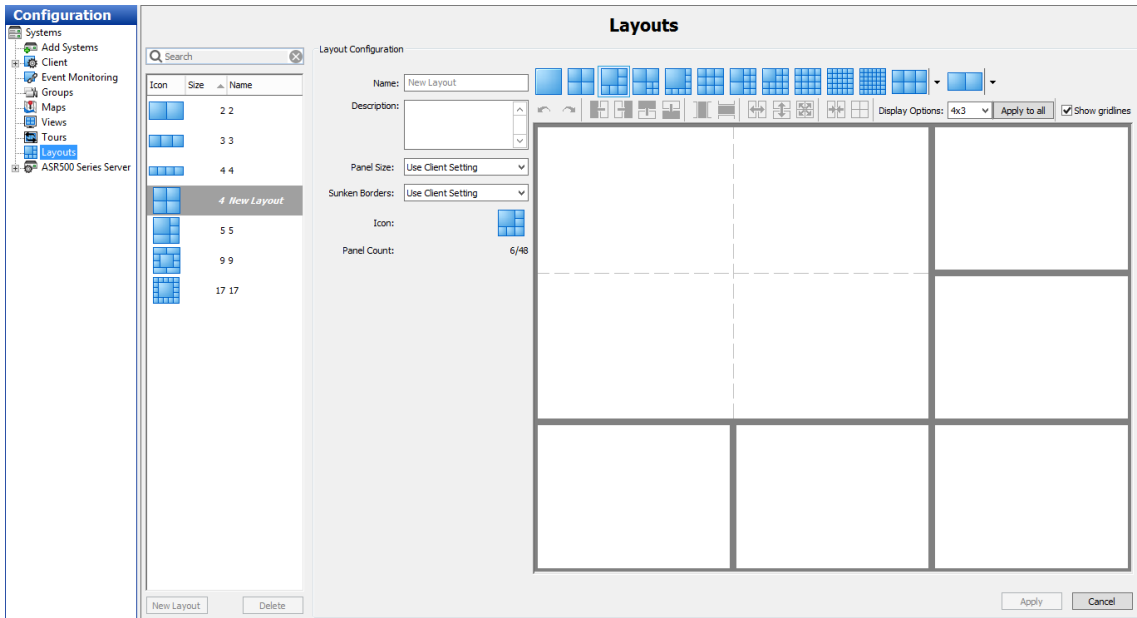
# Tours

This function cannot be used for ASR500.

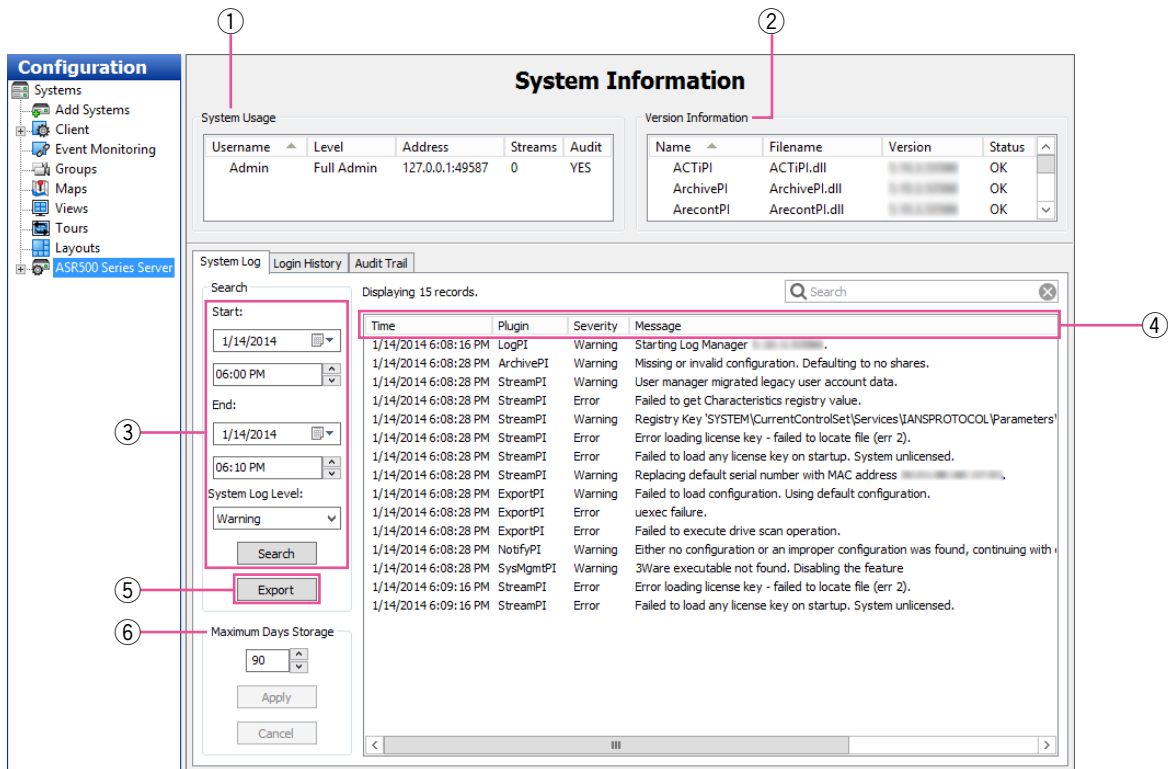


# Layouts

This function cannot be used for ASR500.



# System Information



The "System Information" page displays information about users that are currently logged into the system, plug-in file version information number and status, and the system log. This page is displayed when you click on the system name in the "Configuration" tree.

## System Log Tab

- ① "System Usage" displays the users that are currently logged in, the user's access level and IP address, and the number of streams being viewed.
- ② "Version Information" displays the version numbers for each of this system file. This information can be useful when contacting technical support.
- ③ To view the system log, select a start date and time, end date and time, and select the type of messages you want to see from the "System Log Level" drop-down list, and click the [Search] button. All messages that meet the search criteria are listed.
- ④ To sort the list, click any of the column titles.
- ⑤ To view the system log with a text editor, click the [Export] button and save the file. Then you can open the file from the location where you saved it.
- ⑥ "Maximum Days Storage" determines the maximum number of days that information is maintained in the system log. Click the [Apply] button to save the configuration.

---

### Note:

- If you cannot see all the fields and buttons on the [System Log] tab, drag the horizontal bar under the "System Usage" section up.
-

## Login History Tab

The "System Information" page also includes a [Login History] tab and an [Audit Trail] tab when you are connected to a compatible system.

Time	Address	Username	Type
1/14/2014 7:14:40 PM	127.0.0.1:49188	admin	Logout
1/14/2014 7:20:34 PM	127.0.0.1:57910	admin	Login
1/14/2014 10:50:06 PM	192.168.0.52:58686	admin	Login
1/14/2014 10:50:19 PM	192.168.0.52:58686	admin	Logout
1/14/2014 10:54:04 PM	192.168.0.52:58758	admin	Login
1/14/2014 10:54:27 PM	192.168.0.52:58758	admin	Logout
1/15/2014 12:40:06 AM	127.0.0.1:57910	admin	Logout
1/15/2014 5:09:43 PM	127.0.0.1:49251	admin	Login
1/15/2014 9:21:17 PM	192.168.0.52:52683	admin	Login
1/15/2014 9:21:26 PM	192.168.0.52:52683	admin	Logout
1/15/2014 9:21:34 PM	192.168.0.52:52687	admin	Login
1/15/2014 9:21:38 PM	192.168.0.52:52687	admin	Logout
1/15/2014 9:51:04 PM	192.168.0.52:53279	admin	Login
1/15/2014 9:53:44 PM	192.168.0.52:53279	admin	Logout

To view the login history for the system, complete the following steps:

- ① Select a start date and time and end date and time.
- ② Click the [Search] button to list all login and logout actions in that time range.
- ③ To filter the list, enter a word in the "Search" column. Only actions containing the word are then displayed.
- ④ To resort the list, click any column title.
- ⑤ Click the [Export] button to save the information as a separate log file.

## Audit Trail Tab

The screenshot shows the Audit Trail interface with the following components and callouts:

- 1**: Start date and time selection (1/15/2014 10:15 PM).
- 2**: Search button.
- 3**: Search input field.
- 4**: Details column in the table.
- 5**: Column header (Time).
- 6**: Export button.
- 7**: Maximum Days Storage section (set to 30).

Time	Address	Username	Type	Sources	Details
1/15/2014 10:15:20 PM	127.0.0.1:49251	admin	Configuration		Double-click to view XML.
1/15/2014 10:15:42 PM	127.0.0.1:50573		Discovery(0/0)		
1/15/2014 10:15:51 PM	127.0.0.1:49251	admin	Configuration		Double-click to view XML.
1/15/2014 10:18:01 PM	127.0.0.1:49251	admin	Configuration		Double-click to view XML.
1/15/2014 10:19:29 PM	127.0.0.1:49251	admin	Configuration		Double-click to view XML.
1/15/2014 10:20:35 PM	127.0.0.1:50592		Discovery(0/0)		
1/15/2014 10:25:28 PM	127.0.0.1:50610		Discovery(0/0)		
1/15/2014 10:30:01 PM	127.0.0.1:49251	admin	Live	192.168.0.152	Subscribe, double-click to view XML.
1/15/2014 10:30:21 PM	127.0.0.1:50630		Discovery(0/0)		
1/15/2014 10:31:27 PM	127.0.0.1:49251	admin	Configuration	192.168.0.152	Double-click to view XML.
1/15/2014 10:31:35 PM	127.0.0.1:49251	admin	Configuration	192.168.0.152	Double-click to view XML.
1/15/2014 10:31:36 PM	127.0.0.1:49251	admin	Configuration	192.168.0.152	Double-click to view XML.
1/15/2014 10:31:37 PM	127.0.0.1:49251	admin	Configuration	192.168.0.152	Double-click to view XML.
1/15/2014 10:31:40 PM	127.0.0.1:49251	admin	Live	192.168.0.152	Unsubscribe, double-click to view XML.
1/15/2014 10:31:59 PM	127.0.0.1:49251	admin	Configuration		Double-click to view XML.
1/15/2014 10:32:03 PM	127.0.0.1:49251	admin	Live	192.168.0.152	Subscribe, double-click to view XML.
1/15/2014 10:32:44 PM	127.0.0.1:49251	admin	Configuration	192.168.0.152	Double-click to view XML.
1/15/2014 10:33:55 PM	127.0.0.1:49251	admin	Live	192.168.0.152	Unsubscribe, double-click to view XML.
1/15/2014 10:34:50 PM	127.0.0.1:49251	admin	Live	192.168.0.152	Subscribe, double-click to view XML.
1/15/2014 10:34:52 PM	127.0.0.1:49251	admin	Live	192.168.0.152	Unsubscribe, double-click to view XML.
1/15/2014 10:35:15 PM	127.0.0.1:50649		Discovery(0/0)		
1/15/2014 10:40:09 PM	127.0.0.1:50669		Discovery(0/0)		
1/15/2014 10:41:14 PM	127.0.0.1:49251	admin	Auto Export		Double-click to view XML.

To view an audit trail of various actions that have been performed on the system, complete the following steps:

- ① Select a start date and time and end date and time.
- ② Click the [Search] button to list all actions in that time range.
- ③ To filter the list, enter a word in the "Search" column. Only actions containing the word are then displayed.
- ④ To view an action in XML, double-click its entry.
- ⑤ To resort the list, click any column title.
- ⑥ Click the [Export] button to save the information as a separate log file.
- ⑦ Select the "Maximum Days Storage" that the actions should be stored on the system and click the [Apply] button.

# Troubleshooting

## Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution	Ref. pages
Cannot access from the client software (ASM200/ASM970).	<ul style="list-style-type: none"> <li>• Connection to a LAN is not established or a network is not working correctly. Refer to a system administrator for further information.</li> </ul>	10
	<ul style="list-style-type: none"> <li>• Contact your system administrator to confirm that the valid IP address is set.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Contact your system administrator to confirm that the specified IP address is not provided to other devices.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are there contradictions between the address and the network subnet to be accessed?</li> </ul>	
	<ul style="list-style-type: none"> <li>• When the recorder and the client (PC) are on the same subnet, set the same subnet for the IP addresses of the recorder and the PC.</li> </ul>	
It may take time to start playback when using the client software (ASM200/ASM970).	<ul style="list-style-type: none"> <li>• It is because recorded data is being buffered before playback. It is a normal performance.</li> </ul>	3
Live image display or recording is not successfully performed using the client software (ASM200/ASM970).	<ul style="list-style-type: none"> <li>• Check if the compression method and resolution is compatible with the registered camera.</li> </ul>	4
	<ul style="list-style-type: none"> <li>• Check the settings of IP address, subnet mask and default gateway for the network cameras and PC.</li> </ul>	10
	<ul style="list-style-type: none"> <li>• When trying to display H.264/MPEG-4 images via Internet, images may not be displayed. Refer to the network administrator because of the effects of the network devices including router setting.</li> </ul>	
<p>With the client software (ASM200/ASM970), the following is observed:</p> <ul style="list-style-type: none"> <li>• Refresh of live images is unstable.</li> <li>• Network performance is poor.</li> <li>• Downloaded images are not displayed correctly.</li> <li>• The images are not displayed, recorded or played back.</li> </ul>	<ul style="list-style-type: none"> <li>• The configured settings for transmission rate/recording rate may be beyond the maximum network performance. Lower the value/rate of the settings relating to the network such as the transmission rate, recording rate, etc.</li> </ul>	10
The [Check for Updates] button in the "Configuration/System/Update" window does not function.	<ul style="list-style-type: none"> <li>• This function is not available.</li> </ul>	19
"Record Setting" may be inoperable in "Camera Settings".	<ul style="list-style-type: none"> <li>• The setting may be inoperable depending on the model of the camera. In that case, directly set up from the camera. Refer to the operating instructions of the camera for how to set up.</li> </ul>	26



Symptom	Cause/solution	Ref. pages
It takes time when searching using the client software (ASM200/ASM970).	<ul style="list-style-type: none"> <li>• When searching images recorded with "JPEG/1 fps", it may take time. To search smoothly, set the frame rate to 2 fps or more and select the recording format other than JPEG, for example H.264.</li> </ul>	21
Operation of this software is unstable.	<ul style="list-style-type: none"> <li>• Make sure that Administrator privileges is set as an OS user account.</li> </ul>	10
	<ul style="list-style-type: none"> <li>• Set a static IP address for the server PC.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Set the OS automatic updates function off.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do not use the OS remote desktop function.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do not sign out the PC or turn off the power while software is running.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do not activate other heavy load application while software is running</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do not use any multi-byte characters in the user name.</li> </ul>	

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