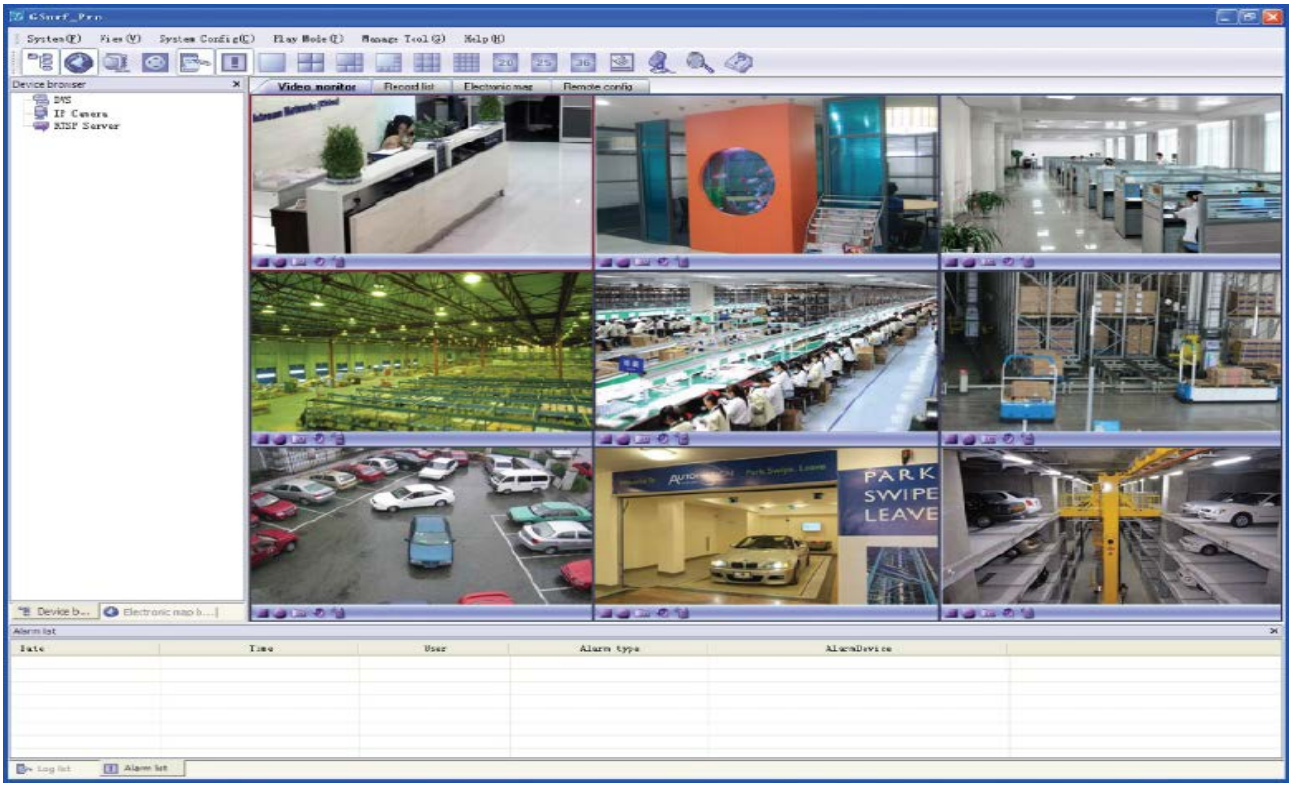
Grandstream Networks, Inc.

GSurf_Pro

Video Management Software



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WELCOME

Thank you for using Grandstream GSurf_Pro Network Video Surveillance System. Based on TCP/IP, Gsurf_Pro utilizes C/S architecture on distributed system, managing up to 10*36 channels. It can effectively reduce the network traffic and cameras' workload by providing the transferring mechanism. Also, users could search and download the recording files remotely via the file management. Featuring functions of electronic map, preview, search, recording, alarm, playback, PTZ and etc., Gsurf_Pro is a powerful monitoring and recording system with intuitive interface as well as easy operation.

This user manual is designed to help you understand how to integrate your cameras and digital video servers with GSurf_Pro software.

Note:

This document is subject to change without notice. The latest electronic version of this user manual is available for download here:
http://www.grandstream.com/support

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PRODUCT OVERVIEW

FEATURE HIGHTLIGHTS

- Built-in transfer server to forward the front-end real-time video streaming across network
- Capability to configure primary stream and secondary stream display according to the PC platform
- Embedded file sharing server for searching and downloading recorded files remotely
- PTZ control
- Integrated tools to synchronize time on the cameras, transform format for the recording files
- 36 channels video streams for group viewing or patrol mode
- Two-way audio/video monitoring and alarm
- Flexible alarm mechanism including relay output control and email alarm

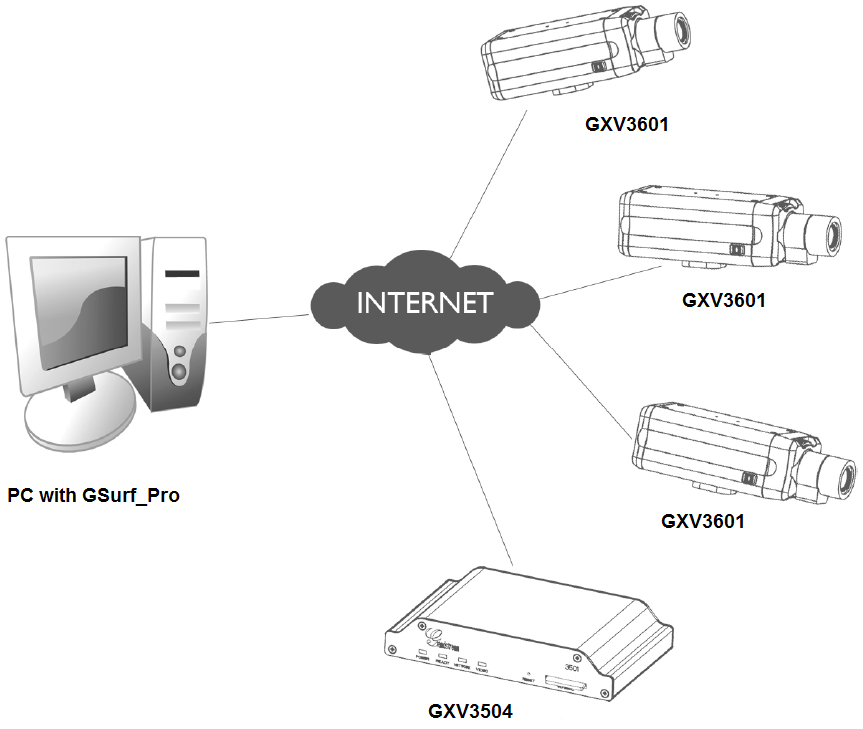

Figure 1: GSurf_Pro Overview

INSTALLATION GUIDE

MINIMUM COMPUTER SYSTEM REQUIREMENT

SERVER:

Operating System: Windows 2003/2008 Server; Windows XP SP2/SP3; Windows 7 32bit/64bit
Processor: Intel® Core™ i3; 2.6GHz or above recommended
Memory Capacity (RAM): 4GB or above
Hard Drive Capacity: 320G (depending on video recording requirement)
Graphics Card Type: Discrete Graphics Card (nVIDIA GEFORCE® GTX660 or above recommended)
Network Adapter: 1000Mbps network adapter

CLIENTS:

Operating System: Windows XP SP2/SP3; Windows Vista; Windows 7 32bit/64bit; Windows 8
Processor: Intel® Core 2 Duo ™ or above
Memory Capacity (RAM): 2GB or above
Hard Drive Capacity: 120G (depending on recording requirement)
Graphics Card Type: Discrete Graphics Card recommended
Network Adapter: 100Mbps network adapter, 1000Mbps recommended

INSTALL GSURF_PRO

Click to run the GSurf_Pro installation .exe file. Follow the instructions in the prompted windows to start installation. Once done, the following screen will show.

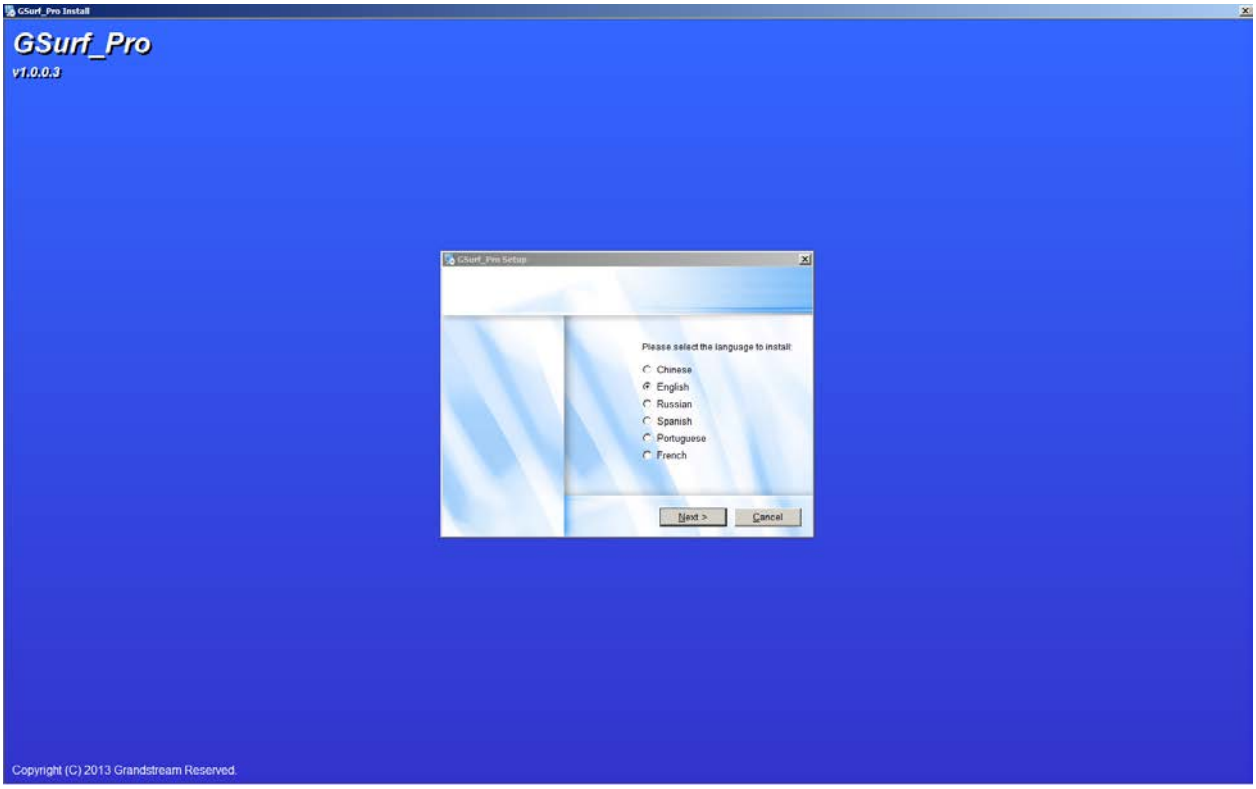

Figure 2: GSurf_Pro Installation

NOTE:

- *The initial installation only supporting English.*
- *Once program installed, user can switch to supported different languagested*.

UNINSTALL GSURF_PRO

To uninstall GSurf_Pro, in your windows PC **Start** Menu->**Programs**->**GSurf_Pro**, click on **Uninstall GSurf_Pro** to start uninstall process. Or you could uninstall the program from your windows PC's Control Panel.

LOGIN GSURF_PRO

Click to run GSurf_Pro. The login page will prompt for your User ID and Password. The administrator User ID and Password are both set to ***admin*** at the factory default settings.

For security purpose, please change the password after the first time you log in to GSurf_Pro.

Figure 3: GSurf_Pro Login

GSURF_PRO MAIN WINDOW

The GSurf_Pro user interface is designed for ease-of-use to offer quick access to cameras and recording in the system. Please refer to the following figure and table for main window descriptions.

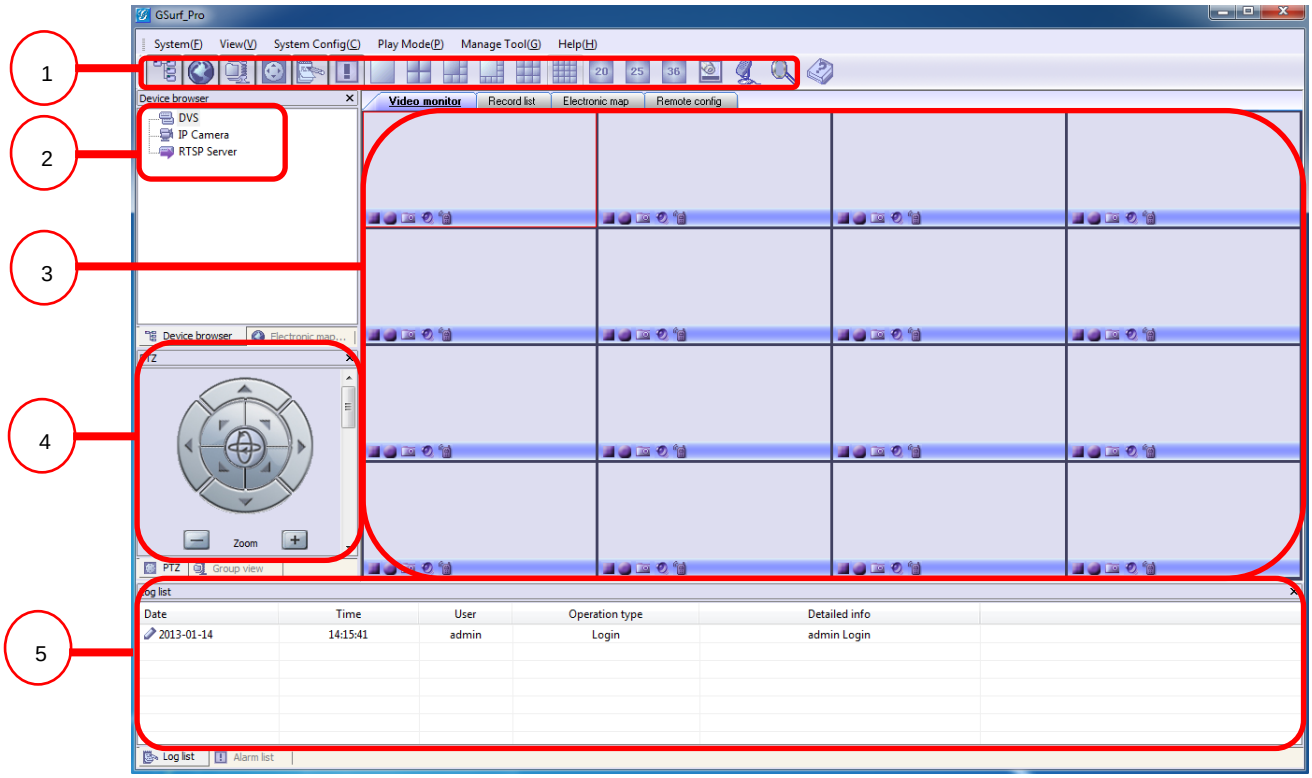

Figure 4: GSurf_Pro Main Window

Table 1: GSURF_PRO MAIN WINDOW ITEMS

1	**Toolbar**	Quick access to designated functions
2	**Device Browser**	View, add and manage devices; view electronic map
3	**Video Display**	Display up to 36 video streams. Double clicking on one video will display its primary stream in full window.
4	**PTZ Control**	PTZ control (PTZ device is required on the camera)
5	**Log List**	View operation log and alarm log

GSURF_PRO TOOLBAR

Table 2: GSURF_PRO TOOLBAR ICONS

	Browse and manage the connected DVS or cameras
	Open Electronic Map Browser. Right click to add a new map
	Open Group View panel, manage groups and video channels.
	Open RS-485 panel for PTZ control
	Display log list
	Display alarm list
	Choose different number of channels to be displayed on the main window (max number 36).
	Open/hide play bar in each video display window.
	Send audio (broadcasting) to selected device in the list
	Search all the cameras' IP within the same LAN
	Show GSurf_Pro software information

GSURF_PRO VIDEO PLAY BAR

In the video display window, each video channel has a play bar on the bottom.

Figure 5: GSurf_Pro Video Display Window - Play Bar

Table 3: GSURF_PRO VIDEO PLAY BAR ICONS

	Stop the displayed video in the channel
	Start recording the video in the channel. By default, the recorded video file will be saved in directory C:\Record
	Capture a snapshot of the current video in the channel. By default, the captured snapshot will be saved in directory C:\Snapshot
	Turn on/off sound of the current channel. The default setting is off
	Turn on/off two-way audio of the current channel. The default setting is off

After installing GSurf_Pro, it must be configured for your network cameras or digital video servers. This section describes how to configure GSurf_Pro, as well as how to set up auto recording, motion detection, alarms and etc.

ADD/DELETE DEVICE

ADD DEVICE

1. In the top Menu bar, click **System Config**->**Device Config**.
2. In the Device Configuration window, click **Add** button to open the **Add Device** dialog.
3. Enter the device information.
    - **Device Name:** Enter a name for the device.
    - **Device Type:** Select the device type, DVS or IPCAM.
    - **Count of channels:** Select the number of channels that your device supports. For example, the GXV3504 has 4 channels.
    - **IP:** Enter the IP address of the device.
    - **Domain Name:** Enter the domain name of the device.
    - **RTSP Port:** Enter the RTSP port for video streaming. If the device's web access port is 80, enter 554 as RTSP Port. Otherwise, add 2000 to the device's web access port and enter here.

4. Click **Ok** to save.

After successfully adding the device, users could view the video by double-clicking on the device name in the **Device browser** panel on the left.

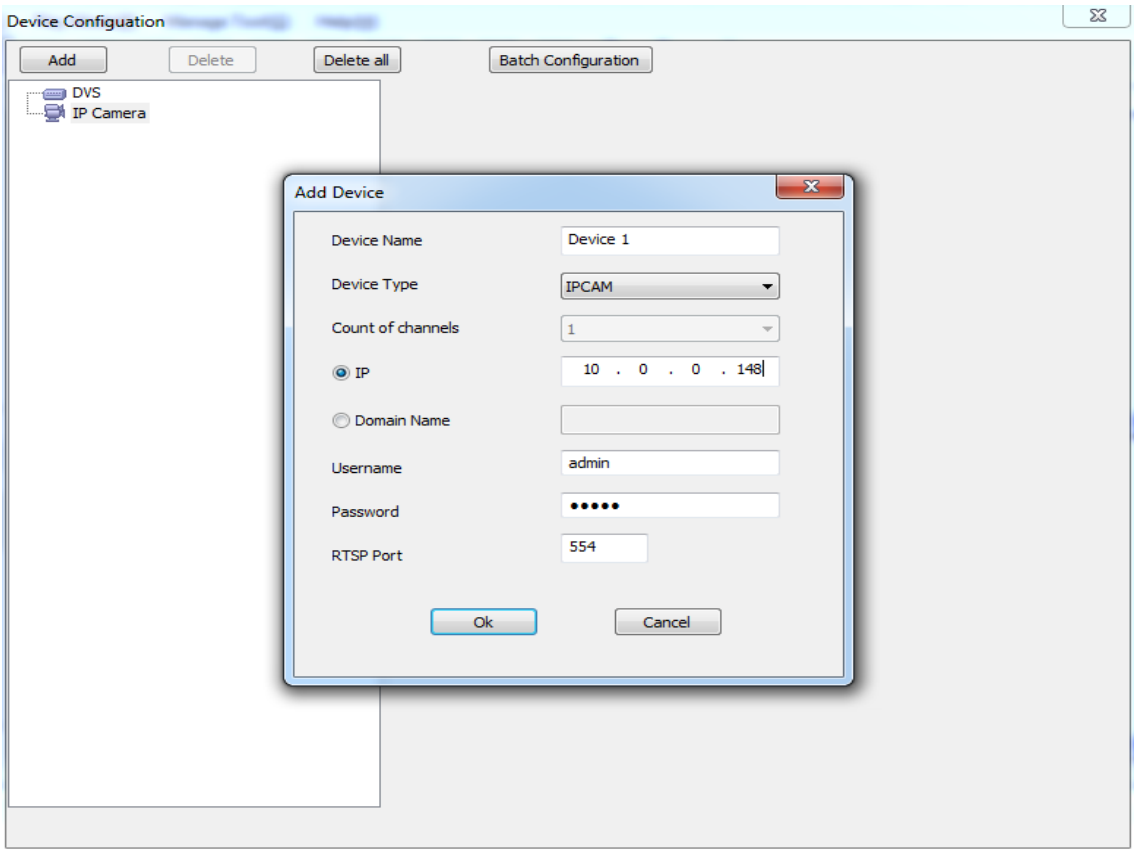

Figure 6: Add Device

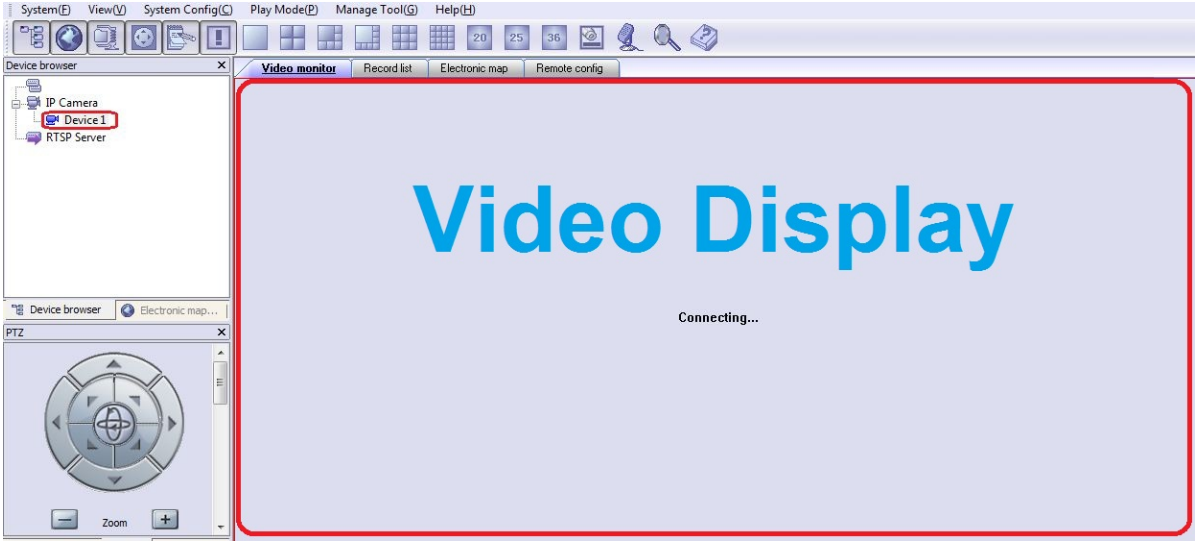

Figure 7: Video Display After Adding Device

DELETE DEVICE

1. In the top Menu bar, click **System Config**->**Device Config**.
2. In the **Device Configuration** window, Select the device to be deleted.
3. Click **Delete** button.
4. Or, users could click on **Delete all** to remove all the added devices.

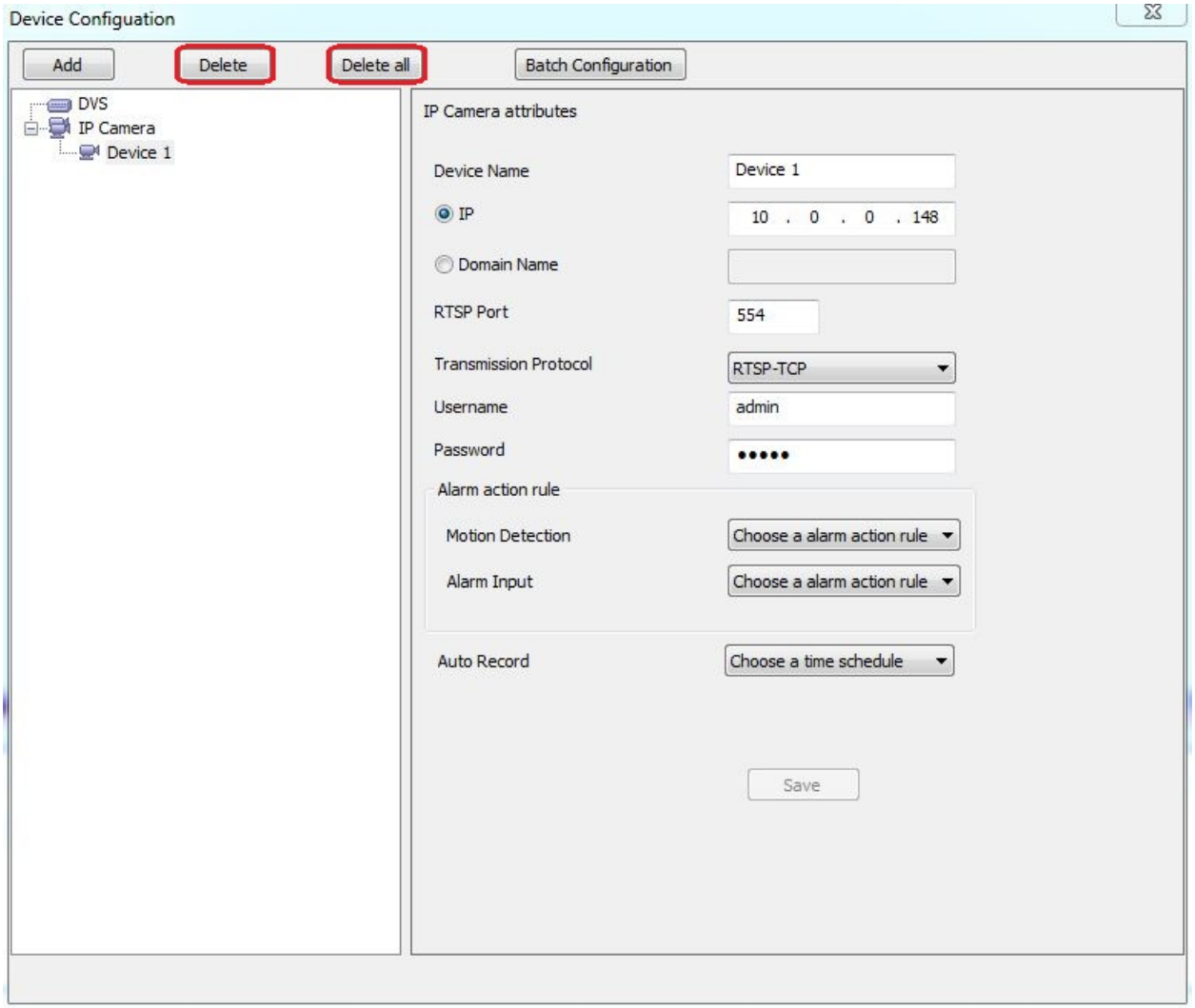

Figure 8: Delete Device

SEARCH DEVICE

The built-in Search tool in GSurf_Pro allows user to search all the DVS and IP Camera devices within the same LAN. Additionally, users could modify the IP address for the devices listed in the searching result.

SEARCH DEVICE

1. In the GSurf_Pro toolbar, click button.
2. In the Search tool, click **Search** button. A list of surveillance devices will display in the list.

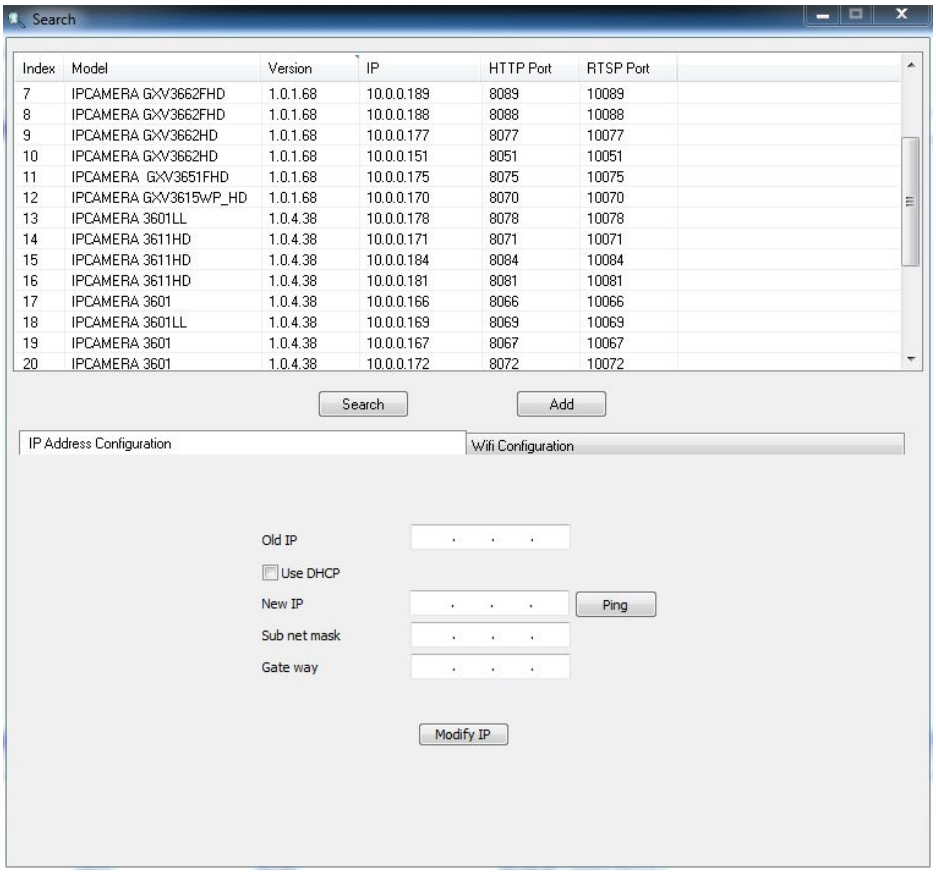

Figure 9: GSurf_Pro Search Tool - Search Devices

MODIFY IP

1. Select the device in the searching result.
2. To set up new static IP, input the new IP, subnet mask and gateway, then click on **Modify IP** button. To make sure the new static IP is available in the network, after filling out the new IP address, click on **Ping** button and the result will show in the prompted message.
3. To set up new IP with DHCP, user could check the option **Use DHCP** so a new IP will be automatically assigned.

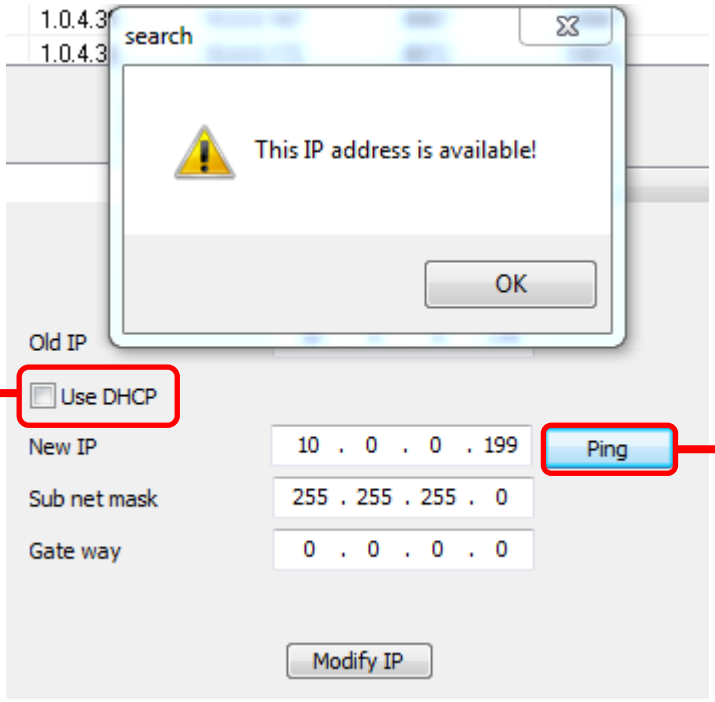

Figure 10: GSurf_Pro Search Tool - Modify IP

CONFIGURE TIME SCHEDULE

The GSurf_Pro time schedule is used to configure automatic recording. Up to 10 schedules can be configured.

1. In the top Menu bar, click **System Config**->**Time Schedule**.
2. The **Time Schedule** window will pop up.
3. Select a schedule on the left panel to be configured.
4. Select the time frame for each day. The scheduled interval will be marked in blue (See Figure 11: Gsurf_Pro Time Schedule).
5. Click **Save** button.

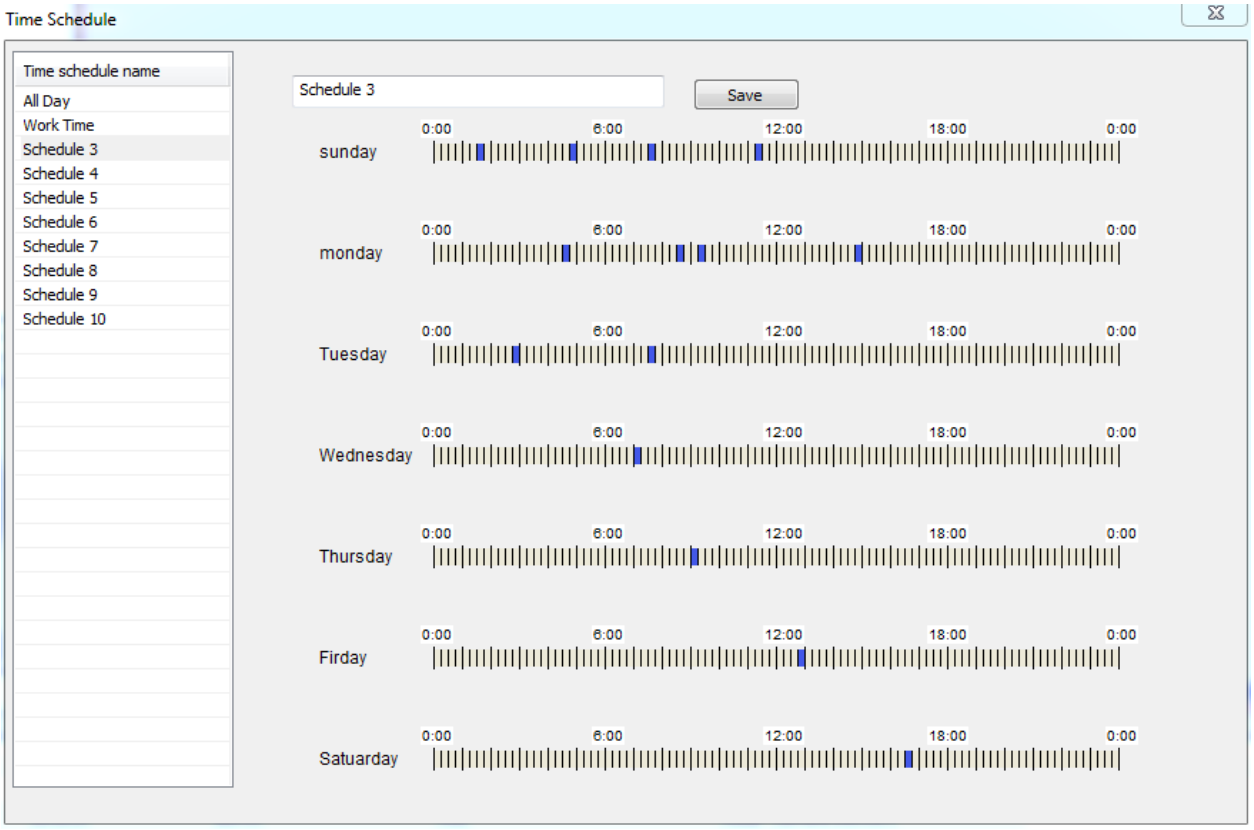

Figure 11: Gsurf_Pro Time Schedule

6. To assign this schedule to a device, open **System Config**->**Device Config**.
7. Select the device from which you would like to record the videos.
8. In **Auto Record** option, select schedule from the drop down list.
9. Click **Save** button.

This channel will then start automatically recording as specified in the designated time schedule.

Additionally, users could select **Batch Configuration** to assign the same time schedule to multiple devices.

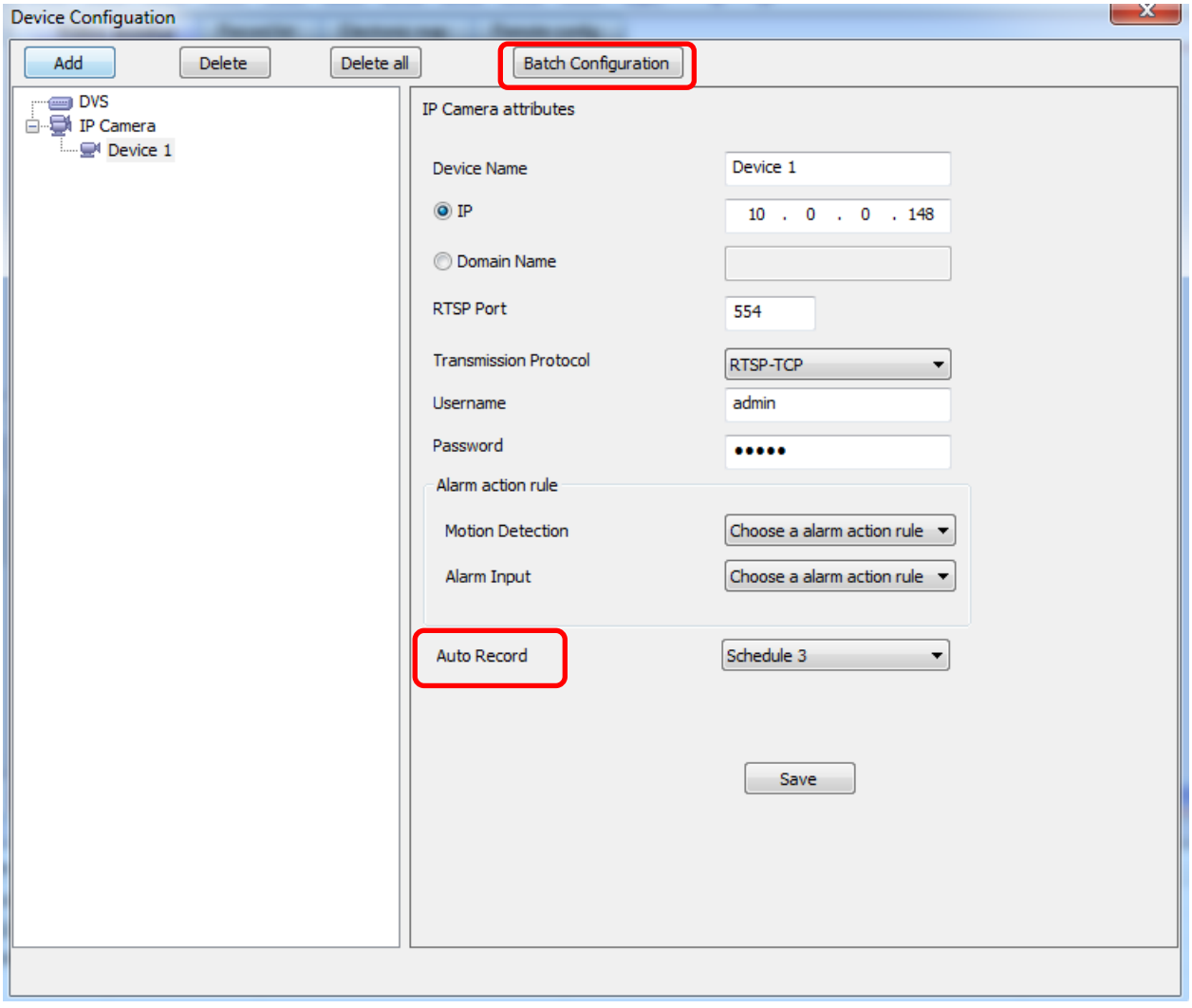

Figure 12: GSurf_Pro Auto Record Time Schedule

CONFIGURE ALARM TRIGGERS AND RULES

Grandstream's network cameras and digital video servers support motion detection and alarm events. They can report motion detection or alarm events to GSurf_Pro. On the GSurf_Pro side, it can be configured to take actions, i.e., to notify such events to users. Up to 10 rules can be set up with different alarm actions. The instructions below will assist you with this setup.

1. In the top Menu bar, click **System Config**->**Alarm Config**.
2. In the **Alarm action rule** window, select the Alarm index and configure the action.
   - **Sound:** If it's checked, GSurf_Pro will play a sound when receiving an alarm report. Make sure to select a sound file and the duration for it to play.
   - **Record:** If it's checked, GSurf_Pro will record the video upon receiving an alarm report. Users could also select the duration for the recording.
   - **Pop up video window:** If it's checked, a pop up video window will appear on receiving an alarm report.
   - **Warning on the E-map:** If it's checked, the corresponding icon of that channel in the electronic map will flash in red upon receiving an alarm report.
   - **Save to database:** If it's checked, the alarm event will be written to the alarm log.

3. Click **Save** button to save the settings.

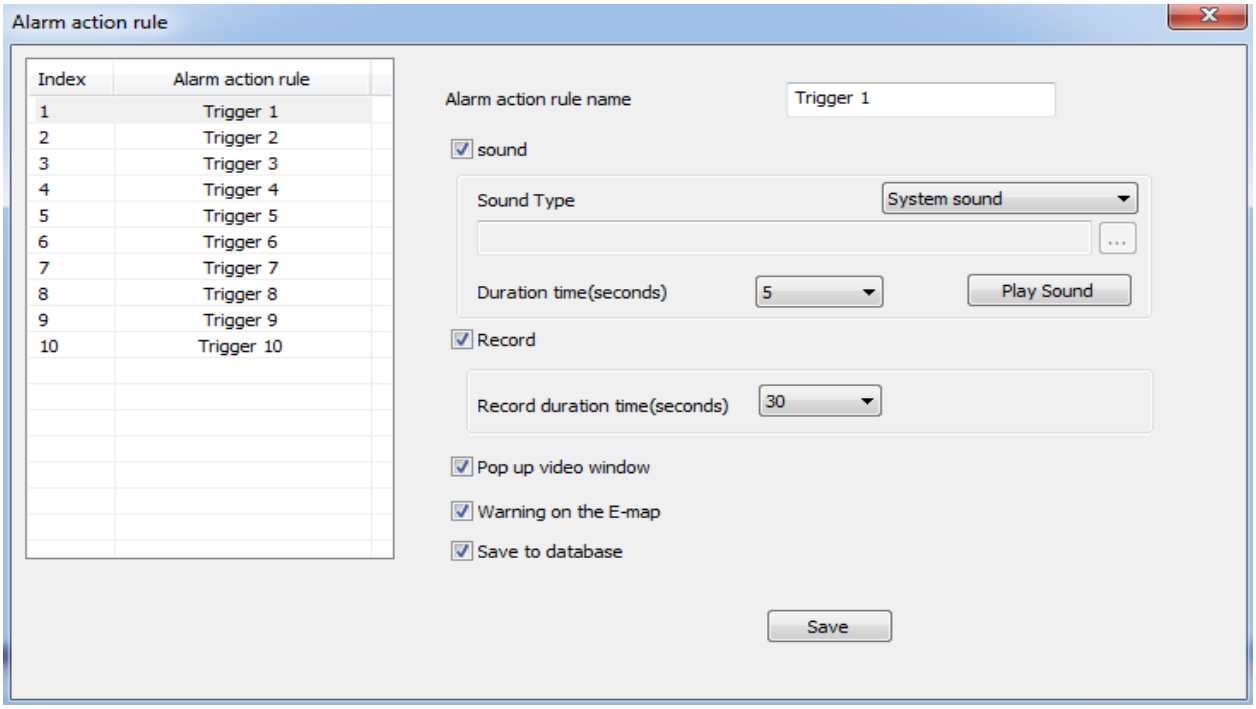

Figure 13: GSurf_Pro Alarm Action Rule

4. To assign this alarm action rule to a device, open **System Config**->**Device Config**.
5. In the **Device Configuration** window, select the device.
6. Select an Alarm action rule for **Motion Detection** to monitor motion detection events; select an alarm action rule for **Alarm Input** if you would like to monitor alarm input events.
7. Click **Save** button to save the settings.

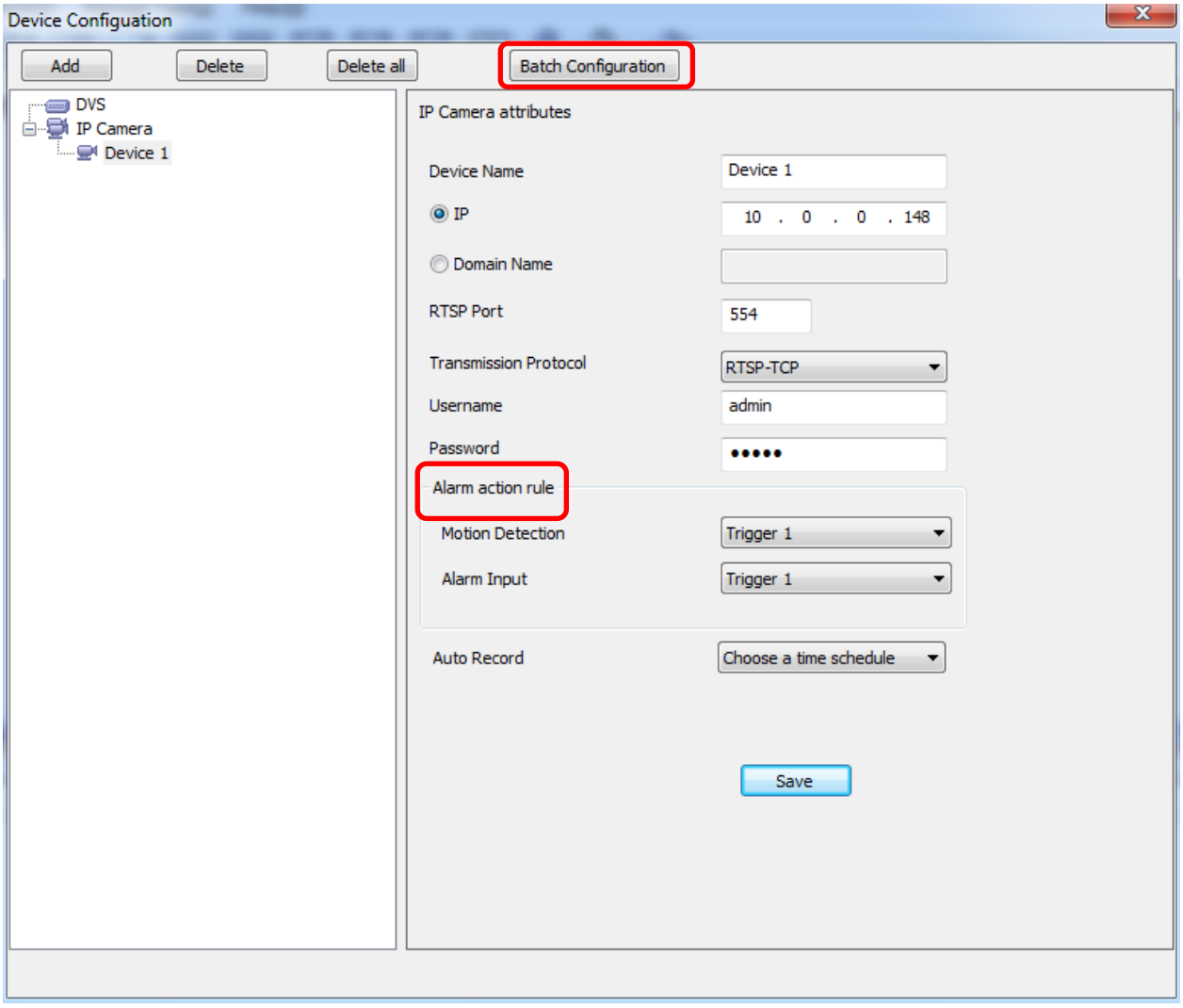

Figure 14: Assign Alarm Action Rule To Device

Additionally, users could select **Batch Configuration** to assign the same alarm action to multiple devices.

LOCAL CONFIGURATION

Click on **System Config**->**Local Config** to configure software and local recording features for GSurf_Pro.

SOFTWARE CONFIGURATION

Configure log reserved days, video window layout and startup options.

RECORD CONFIG

- **Record Path:** This section displays name, total space and free space of the local disks. Users could select the local disk to store recorded video files. If users select multiple disks, GSurf_Pro will start from the first disk until the free space equals the reserved space, and then go to the next one.
- **Reserved free space:** Configure the reserved free space for the disk. When the disk free space is less than the reserved free space (1 GB in this example), the video will be recorded in the next selected disk.
- **Record file duration time:** Configure the duration for each recording file.
- **Disk Full:** When the disk is full, users could choose to stop recording, or keep recording while storing new recording by deleting the old files.
- **Capture Path:** Configure the path to save the snapshot pictures.

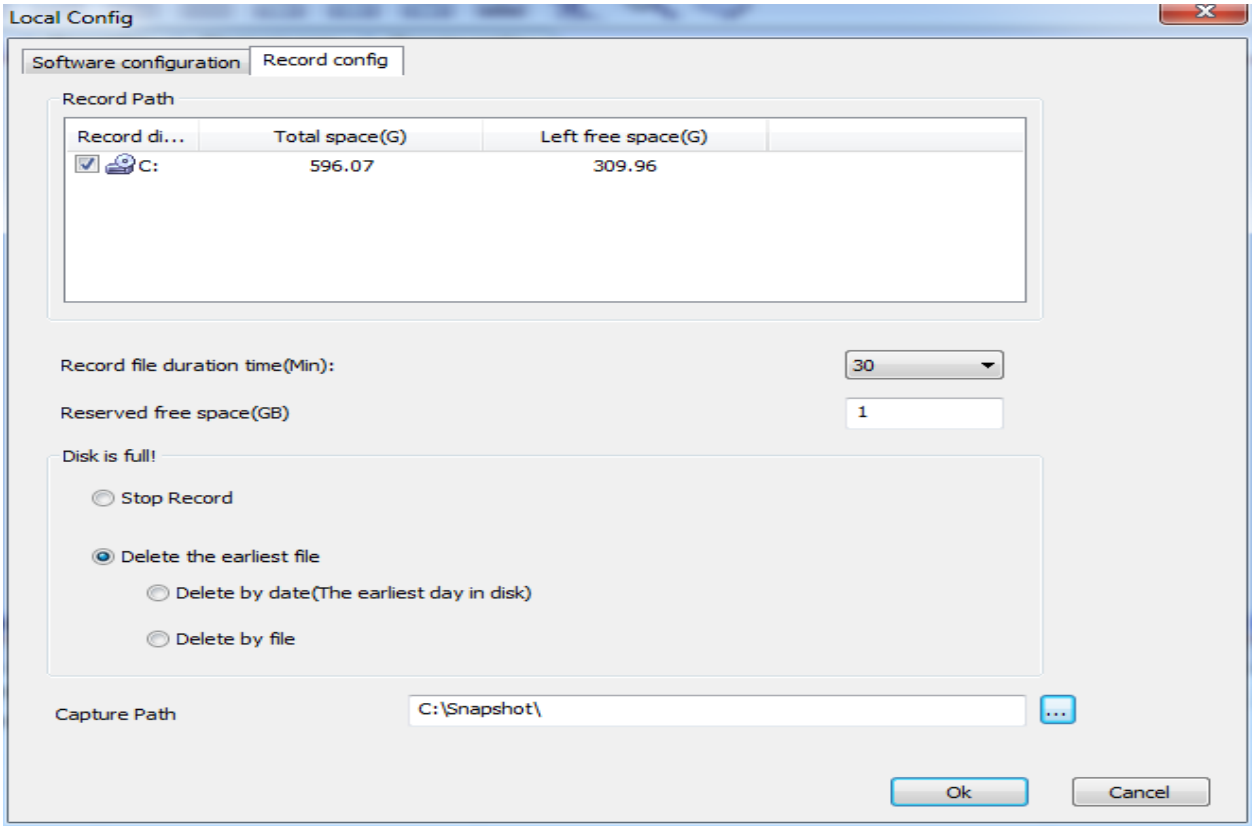

Figure 15: GSurf_Pro Local Configure - Record Configure

DEVICE CONFIGURATION

Click **System Config**->**Device Config**, the device configuration window will prompt for users to add, delete and edit devices. Once a device is selected, users could configure the device properties, alarm action rule and record option.

- **Device Properties:** Device Name, Device IP, Domain Name, RTSP Port and Transport protocol.
- **Alarm Action Rule:** Select alarm action rule for motion detection and alarm input.
- **Auto Record:** Select time schedule for auto record.

LANGUAGE DISPLAY

In the GSurf_Pro interface, users could switch language at any time. Go to **System Config**->**Language** and select the language to be displayed.

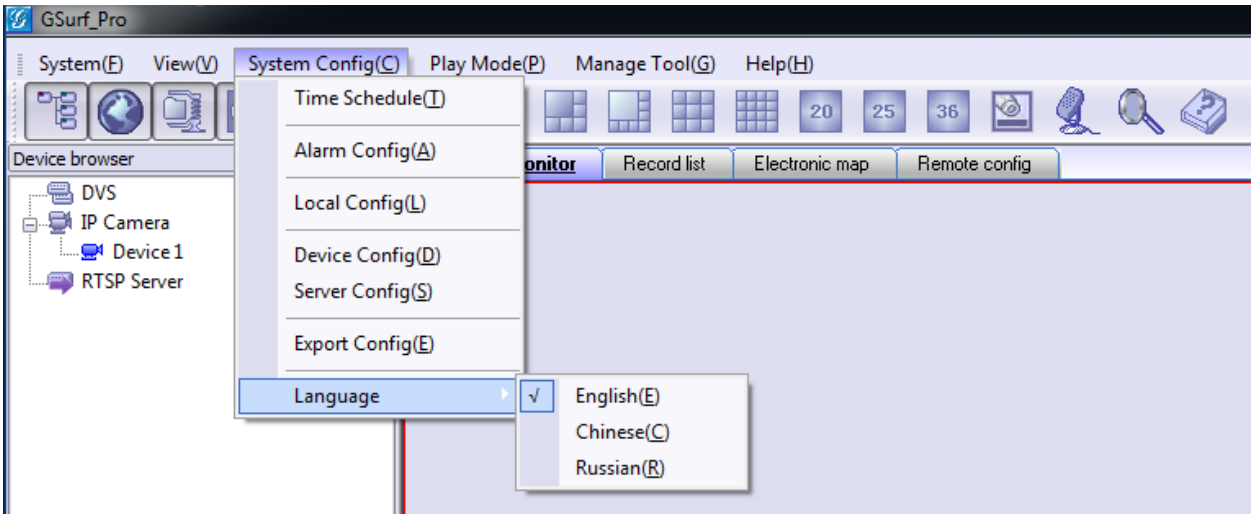

Figure 16: Language Display

RECORD CONFIGURATION

MANUAL RECORD

In the video display window, click on the Record button to start recording.

Figure 17: Manual Record

AUTOMATIC RECORD

The automatic record will be running in the background. The recording time is specified in **Auto Record** option after selecting device under **System Config**->**Device Config**.

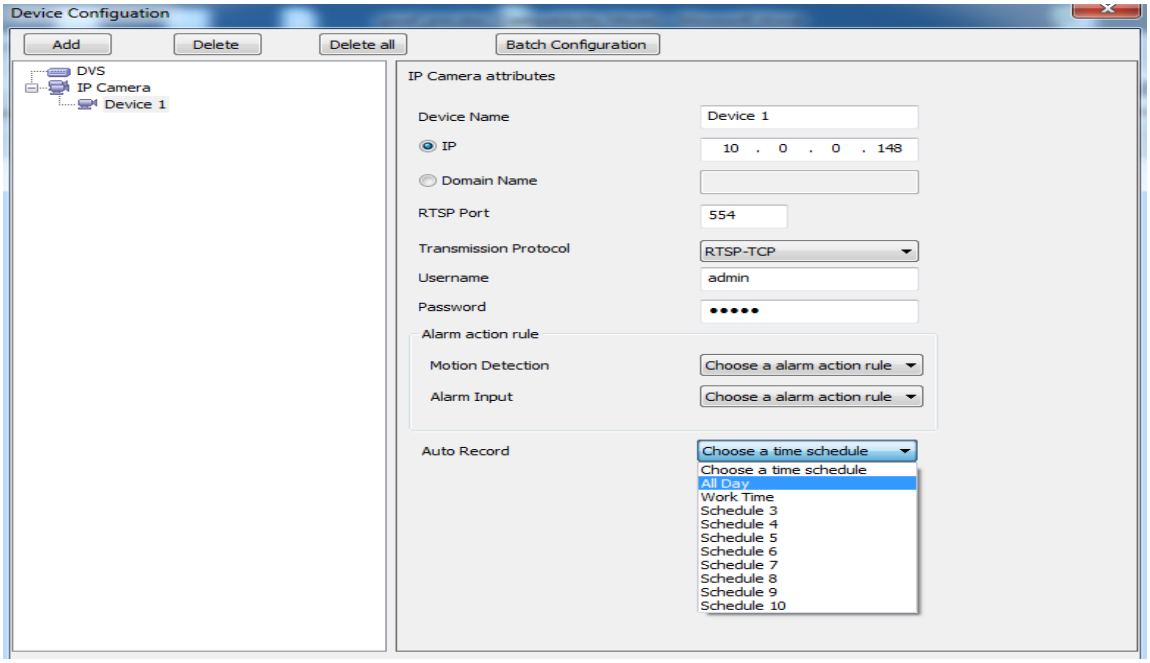

Figure 18: Automatic Record

REPLAY

The GSurf_Pro Replay tool provides the ability to replay recorded videos. It also provides a search function which allows you to perform a search based on start time, end time, IP address, channel and etc. To replay the recorded video, in the top Menu bar, go to **Manage Tool**->**Replay Tool** to open the Replayer. Select time, device, channel, file type and disk to search the video. Then click on the video file to play.

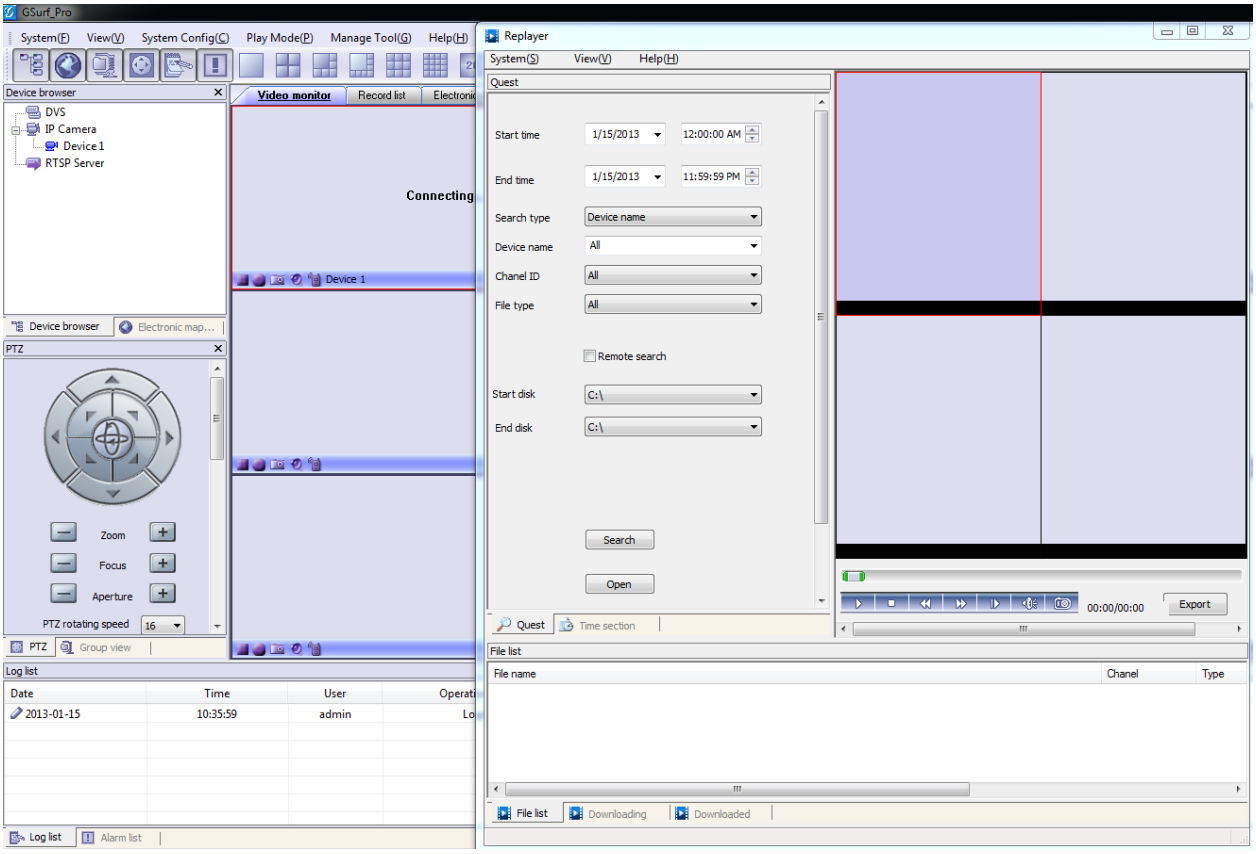

Figure 19: Replay

In the replayer, users could also open up the Time selection tab to specify the recorded files by filtering the start time. All the configured start time will be marked in green in the time chart.

ELECTRONIC MAP

E-map is an important feature in video surveillance system to provide users a visual overview of the cameras in your installation. A map is an image file on which you place cameras and views. GSurf_Pro supports an electronic map for users to identify the locations of your cameras and the status of their alarms.

To configure E-map on GSurf_Pro, open the map browser by clicking in the toolbar.

ADD MAP

1. In the Electronic map browser, right click and **Add map** option will show up.
2. Choose a map image from your local PC to upload. Then it will be displayed in the electronic map field.

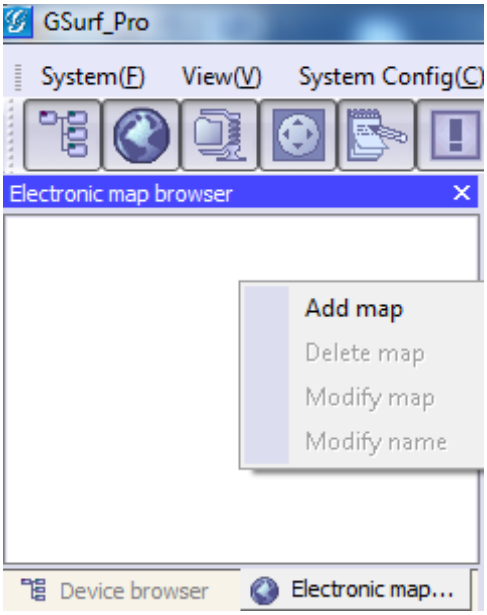

Figure 20: Add Map

Note:

The supported image files are bmp, jpg or gif. GSurf_Pro will display the electronic map in full resolution. And the users can use the scroll bars to view the whole image.

ADD DEVICE TO MAP

1. Open your map in the main window.
2. In the left side panel, click on **Device browser** so your devices will show in the list.
3. Click on the device/channel, drag and drop it to the preferred destination on the map.
4. An icon with the device name and the channel number will now be shown on the map. Right click on the icon to change the icon settings.

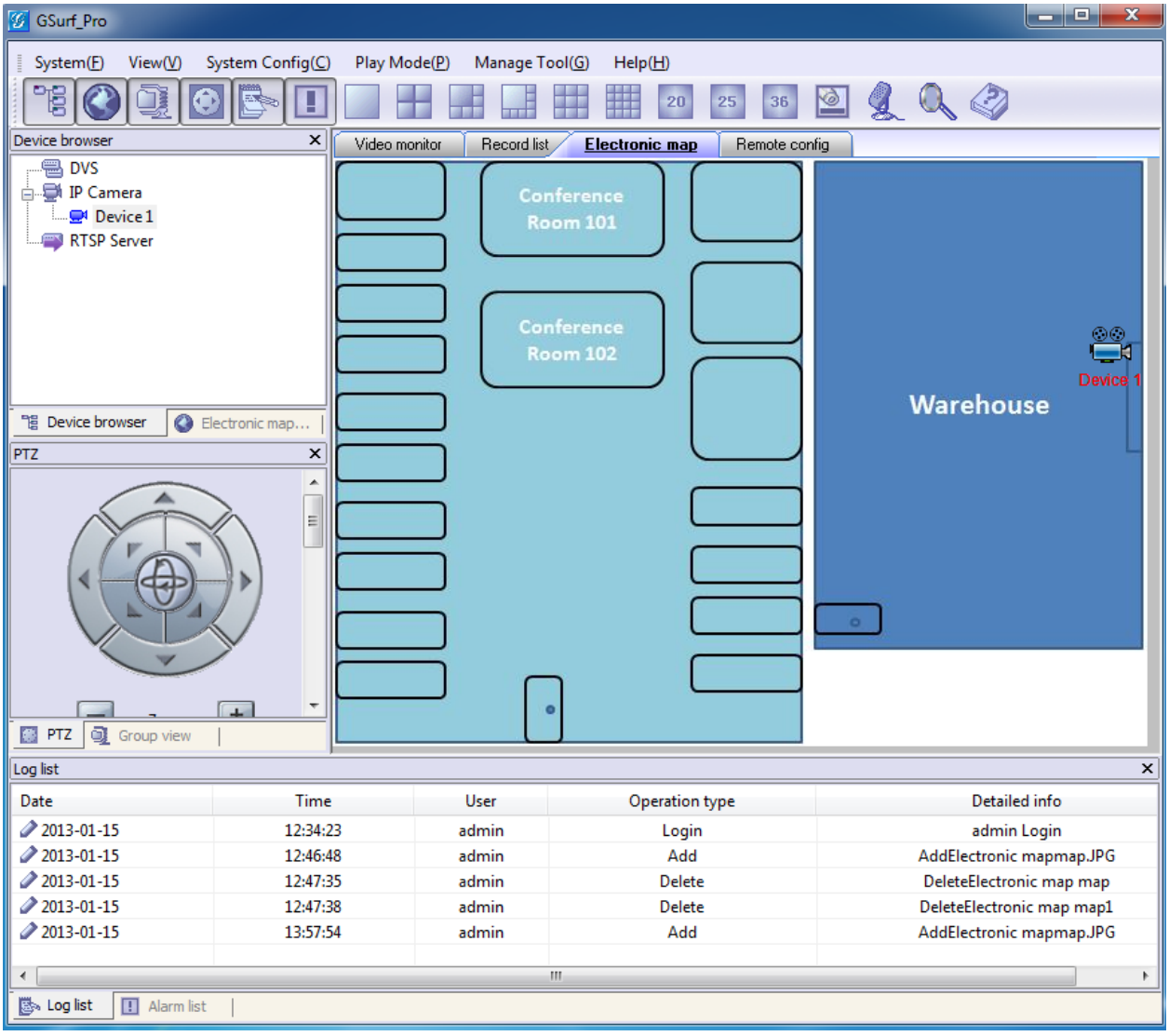

Figure 21: Add Map Alarm

SET ALARM ON MAP

1. After adding the device to the map, go to **System Config**->**Alarm Config** to configure alarm action rule. Make sure the option **Warning on the E-map** is checked.
2. Go to **System Config**->**Device Config**. Select your device and configure the alarm action rule set up in step 1.

3. When GSurf_Pro receives an alarm report, the corresponding icon on the map will flash in red .

LOCK/UNLOCK MAP

To avoid changing the positions of cameras on the map accidently, the users can lock the map after adding all devices. Right click on the map, lock/unlock option will be available in the pop-up menu,

When the map is unlocked, users could drag devices to the map. When the map is locked, double-clicking on the camera will open up a new window for real time video from this camera.

REMOVE DEVICE FROM MAP

On the map, right click on the icon and click **Delete Icon** to remove the device from the map.

REMOTE CONFIGURATION

The IP Camera devices can be remotely accessed via web browser. Select a device on the left side panel and click on Remote config tab to access the camera's web GUI.

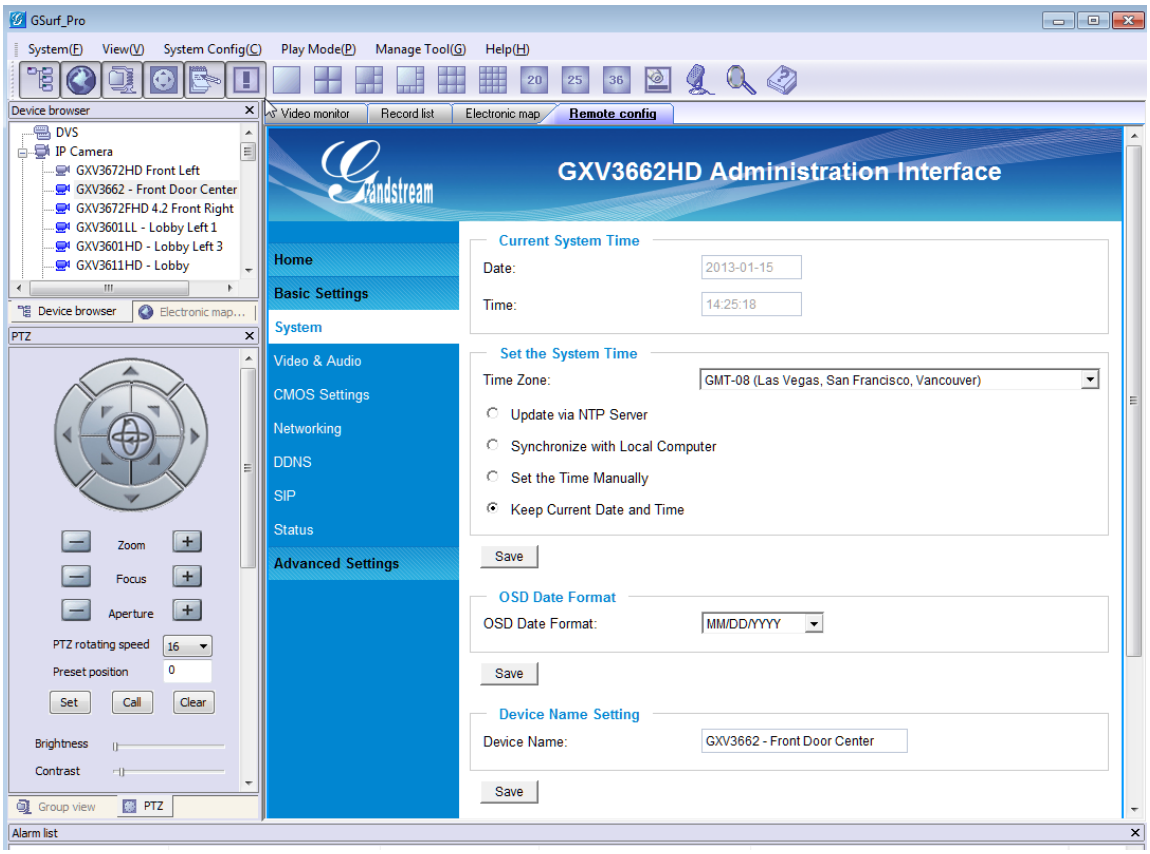

Figure 22: Remote Configuration

PTZ CONTROL

In the toolbar, click to open PTZ control panel. If the connected devices are PTZ cameras or have a PTZ device connected, users can use the console to adjust the focus, brightness, contrast, rotating speed, IRIS, and also pan/tilt the devices.

Note:

Before using PTZ control, PTZ device needs to be set up in RS-485 port and properly configured.

VIDEO MONITOR

INDIVIDUAL VIEW

Drag the device from the device browser to video display window to watch the video immediately.

GROUP VIEW/PATROL MODE

1. In the tool bar, click on to open the Group view panel.
2. Drag the device in Device browser panel to the group in Group view panel.

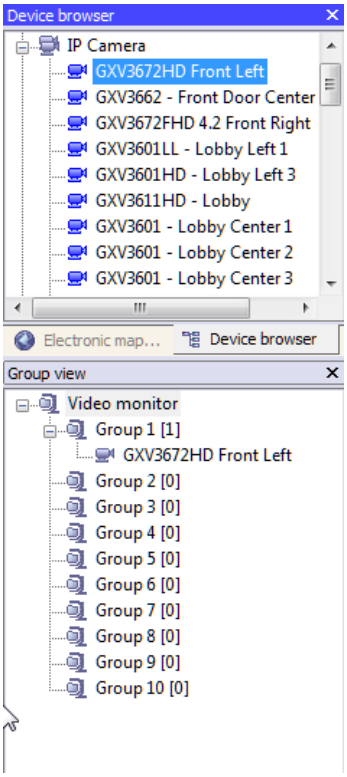

Figure 23: Add Device To Group

3. Right click on the group to configure the group attributes. Check the **Allow Patrol** option and configure **Pause time** which is the patrol interval for the group.

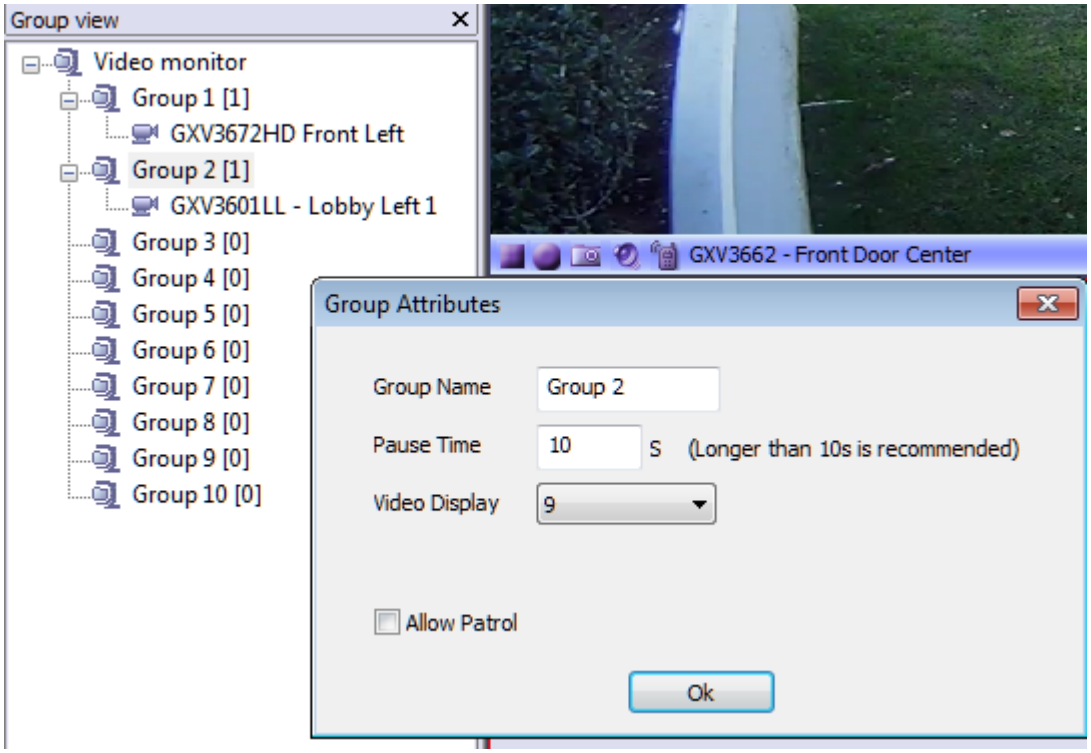

Figure 24: Configure Group Attributes For Patrol Mode

4. Click **Ok** to save the settings.
5. In the top Menu bar, click on **Play Mode**->**Patrolling View** to start playing videos from different groups in a loop.

BROADCAST

1. In the tool bar, click the button to open up broadcast window.
2. Add broadcast device by selecting the devices from the left side list to the right side list.
3. Click **Start Broadcasting** button to start sending audio from PC's microphone.

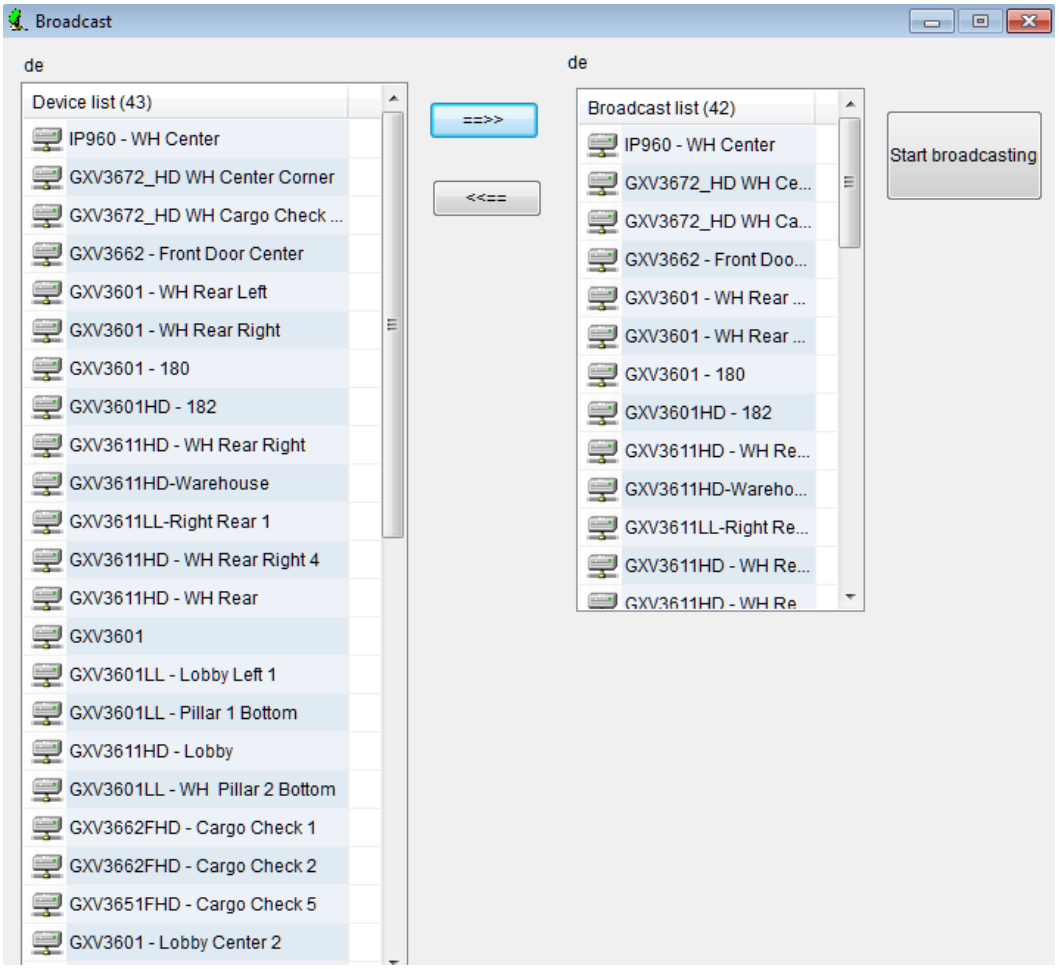

Figure 25: Broadcast

SYNCHRONIZE DEVICE TIME

In the top Menu bar, click on **Manage tool**->**Synchronize device time**. Then users could sync up the device time with local PC time.

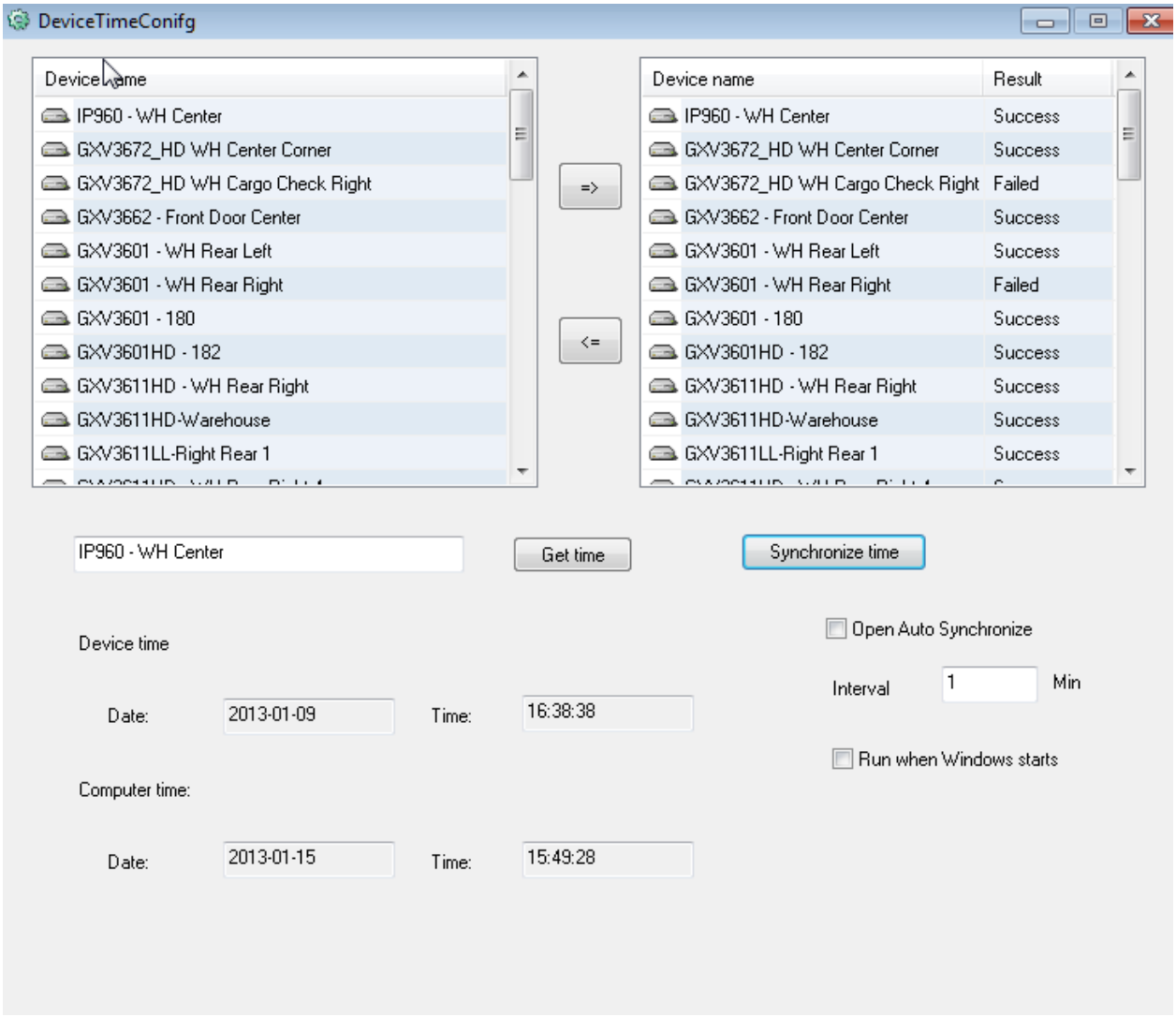

Figure 26: Device Time Configuration

CONVERT VIDEO FORMAT

The recorded video is saved in H264 format, which might not be supported by certain video players. An AVI converter tool is provided in GSurf_Pro. Click on **Manage tool**->**AVI Conversion Tool** to open the converter. Add video to be converted and the output file will be saved in the configured directory in AVI format.

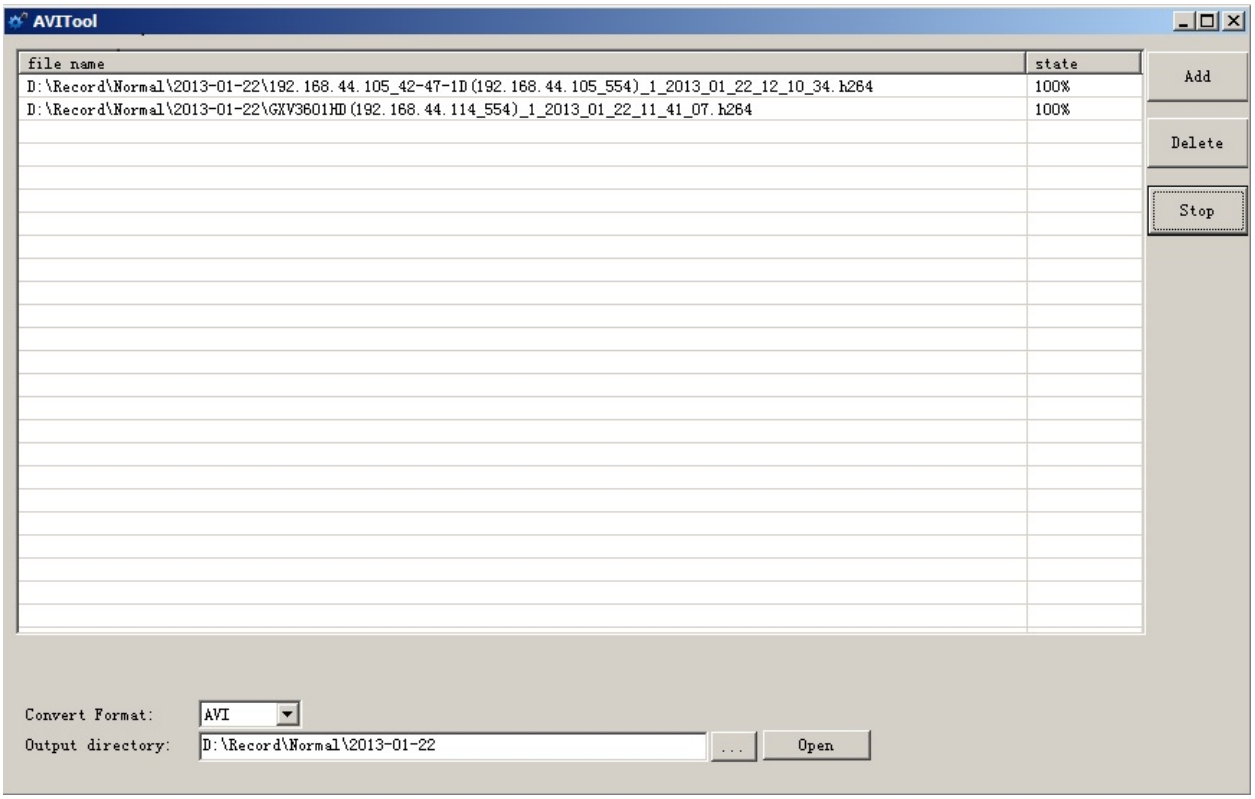

Figure 27: Media Convert Tool

USER MANAGEMENT

The GSurf_Pro administrator can add, modify and delete users as well as issue users different privilege levels.

1. Click on **Manage tool**->**User Manage**.
2. In the User Manage window, users could add, edit and delete users. A list of configuration authorities is provided so each user could be assigned with different privileges.

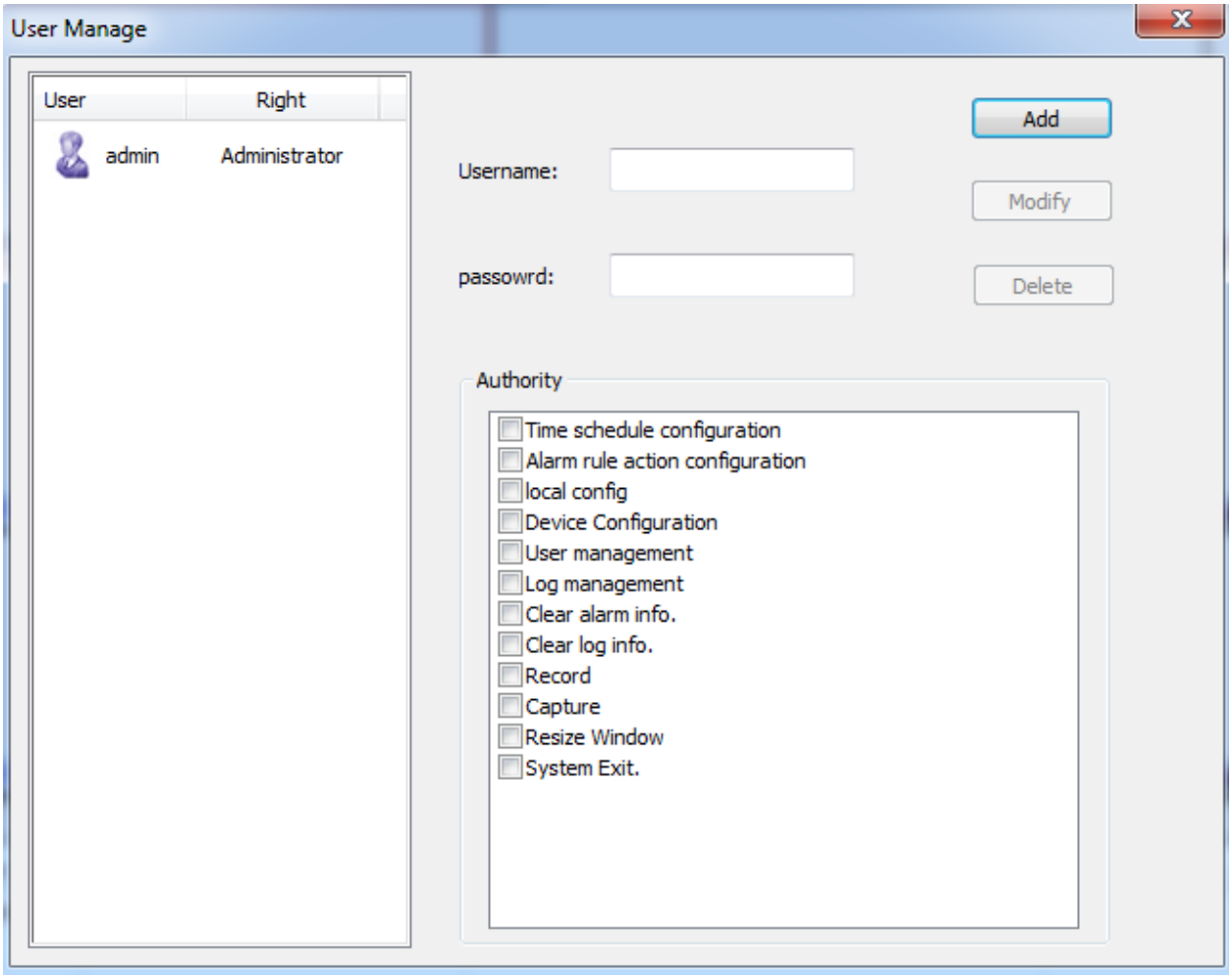

Figure 28: User Management

IMPORT/EXPORT CONFIGURATION

The GSurf_Pro configuration can be imported or exported for backup and restore purpose. Click on **System Config**->**Export Config** to open the import/export window. Users could also select the configurations for the backup file.

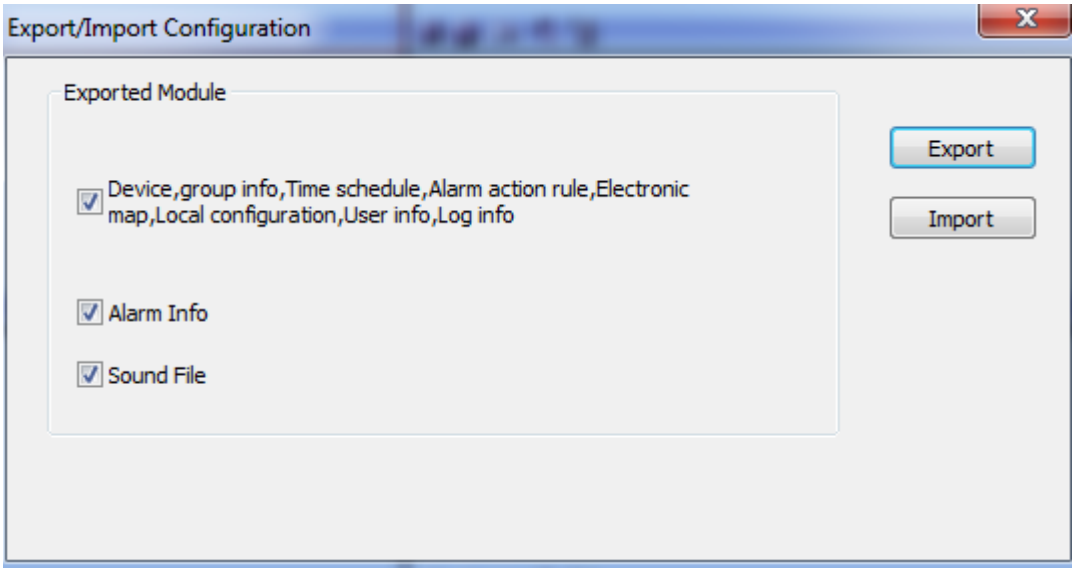

Figure 29: Configuration Import and Export

GSURF_PRO TRANSFER SERVER

The GSurf_Pro embedded transfer server can cooperate with client side to effectively reduce the workload on the front-end cameras. The surveillance system utilizes the transfer server as the medium to monitor the devices in a distributed manner.

SERVER SIDE

1. Open the Transfer server from **Manage Tool**->**Tran Server**. A login window will pop up.

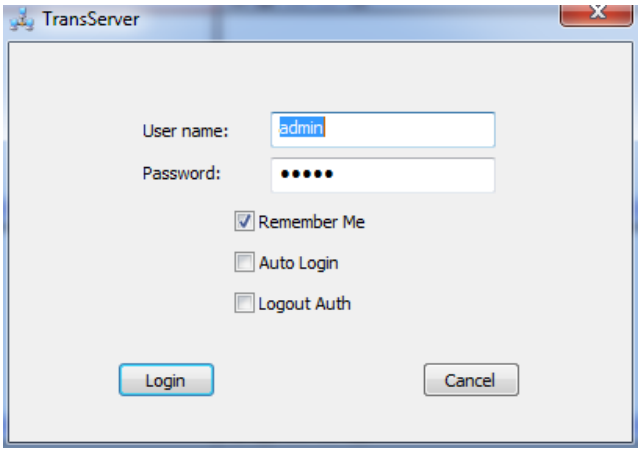

Figure 30: Transfer Server Login

2. After login, click on **Config**->**System Config** to open the following server configuration window. The listening IP address is the PC's IP address. For the port number, it is recommended to use default value or big value.

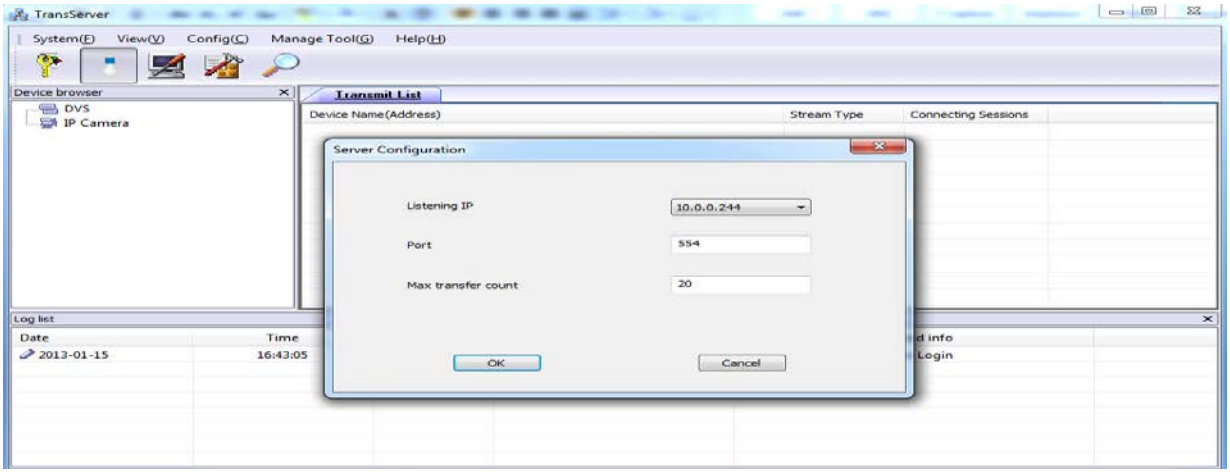

Figure 30: Transfer Server Configuration

3. Click on to open the search tool.
4. In the search tool, press **Search** button to get a list of devices in the same LAN.
5. Select the devices in the result list and click **Add**.

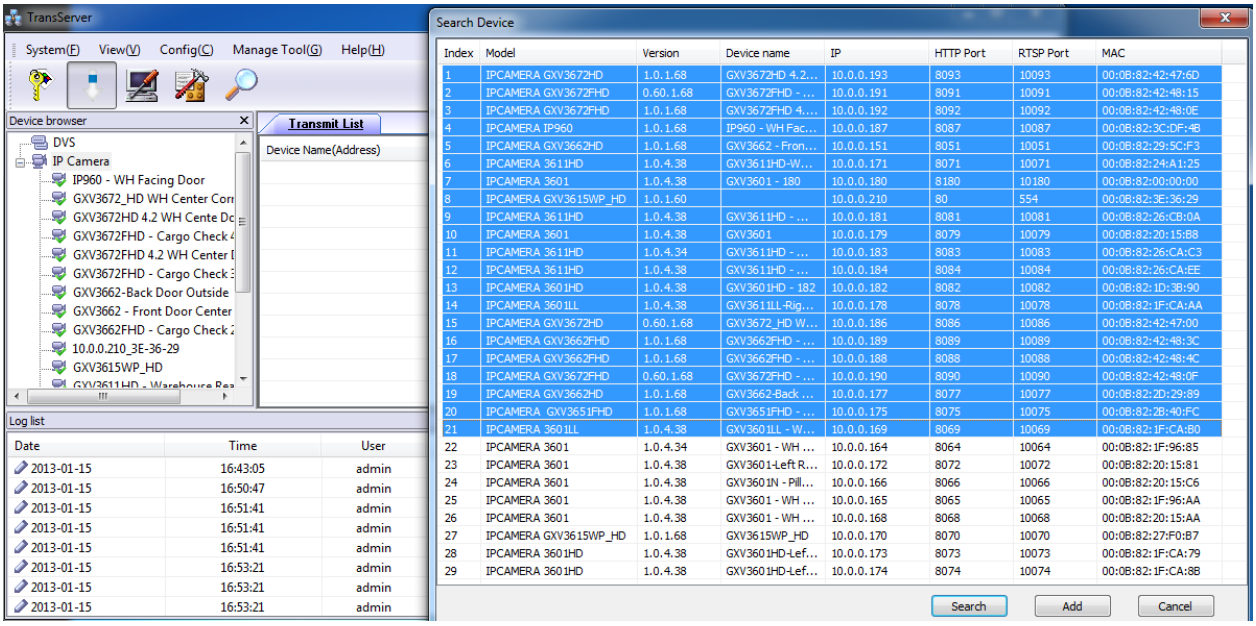

Figure 31: Add Devices to Transfer List

6. Those devices will then be displayed in the transfer list.

The main display window will show the traffic status when the traffic starts.

CLIENT SIDE

The client side is the GSurf_Pro RTSP server.

1. In the **Device browser**, right click on **RTSP server**.
2. Click **Server Config** to add devices to the local list.

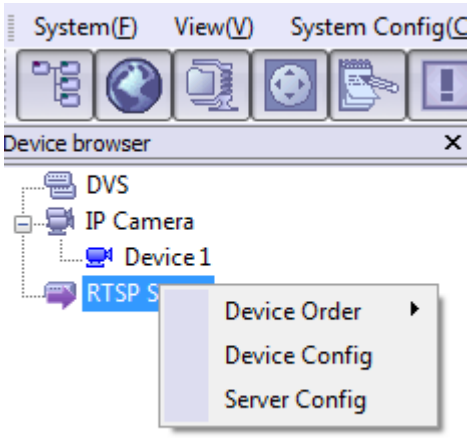

Figure 32: RTSP Server

GSURF_PRO FILE SERVER

SERVER SIDE

The file server can provide the record files in local disk to other hosts within the network for search, download and replay. To configure the GSurf_Pro as the file server, go to **Manage Tool**->**File Server**. Click on the **Configuration** button to set up listening IP and port. Then start the server.

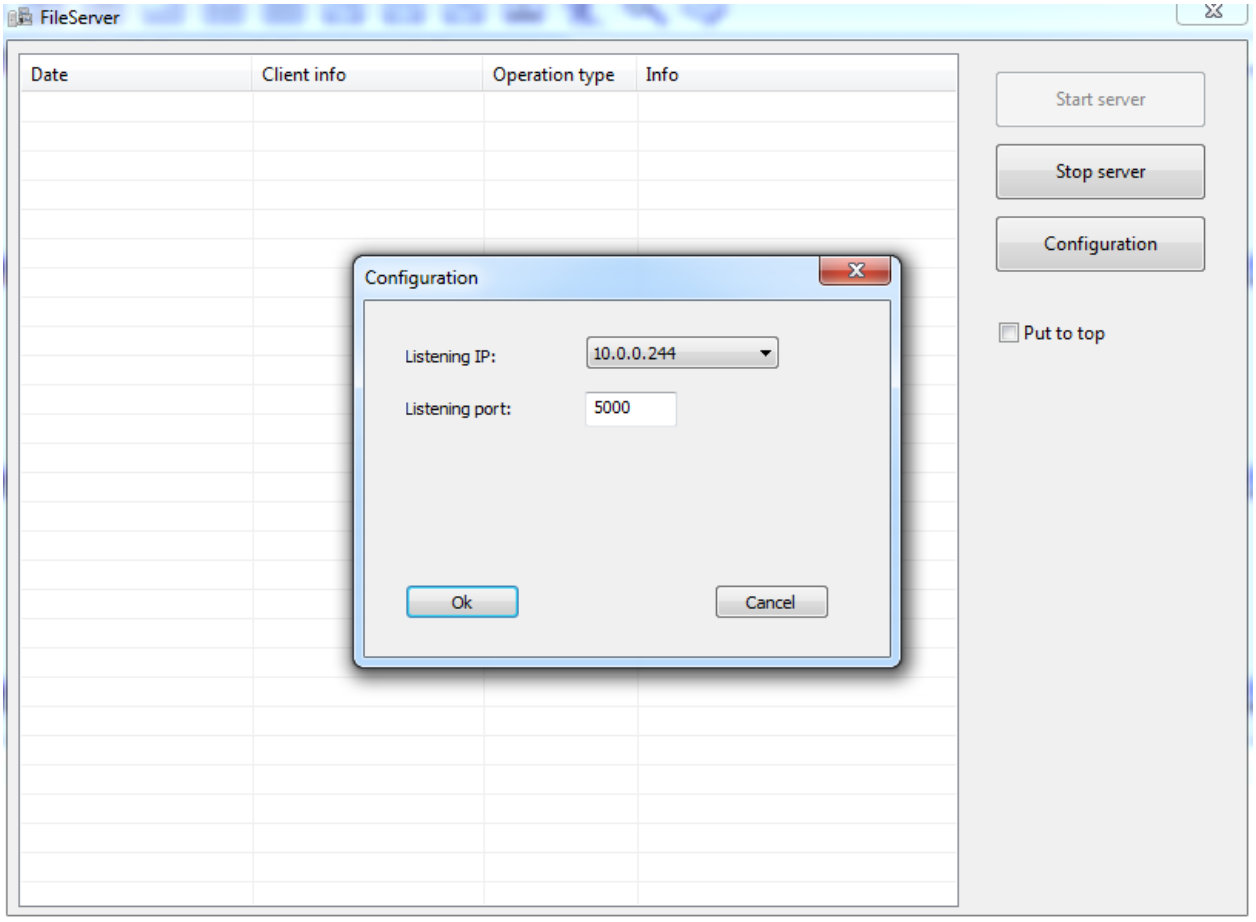

Figure 33: GSurf_Pro File Server

CLIENT SIDE

The client side is the replay tool in the GSurf_Pro. Go to **Manage Tool**->**Replay Tool** to open the replayer. When option **Remote Search** is selected, users would need fill in Recorder address and Recorder port of the server side. Once searching is done, the record files can be downloaded and played locally.

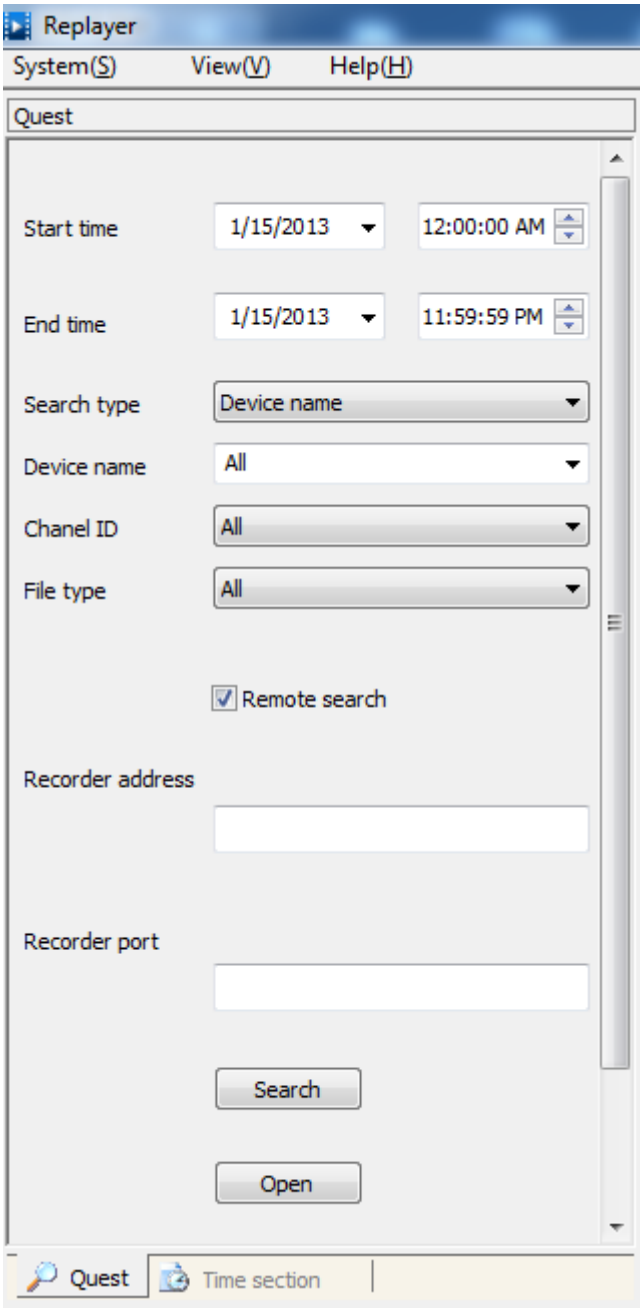

Figure 34: Replayer Remote Search

FREQUENTLY ASKED QUESTIONS

Q: How many cameras does GSurf_Pro support?
A: The GSurf_Pro can support up to 10 groups x 36 channels cameras at the same time. However, when using HD camera (720P and up), the maximum number might be limited by the PC processor. When displaying multiple videos, the GSurf_Pro will adjust the display to secondary stream to increase system resource efficiency. If users click on one of the video, the display will be automatically converted to primary stream for better quality.

Q: Does GSurf_Pro have any requirement on the PC where it's installed?
A: Yes. Please refer to section [MINIMUM COMPUTER SYSTEM REQUIREMENT] for details. Before installing GSurf_Pro, it is recommended to evaluate the system requirement (network traffic, disk space, file directory and etc).

Q: Is there any requirement on the transfer server?
A: In most of the cases, the transfer server will have large amount of network flow going through. Therefore, it is recommended to use the machine with Gigabyte network interface card.

Q: What are the factors that might affect the disk space?
A: The disk space is mainly affected by the primary stream bit rate. Normally HD video will take more space than standard definition video.

Q: I have configured the alarm action on GSurf_Pro already but I still didn't get alarm. Why?
A: Besides configuring alarm action on GSurf_Pro side, the alarm has to be activated on the camera side and configured to report to the alarm center. Users could configure this by directly accessing camera's web GUI or via GSurf_Pro's remote configure interface.

EXPERIENCING THE GRANDSTREAM GSURF_PRO

Please visit our website: http://www.grandstream.com to receive the most up- to-date updates on firmware releases, additional features, FAQs, documentation and news on new products.

We encourage you to browse our product related documentation, FAQs and User and Developer Forum for answers to your general questions. If you have purchased our products through a Grandstream Certified Partner or Reseller, please contact them directly for immediate support.

Our technical support staff is trained and ready to answer all of your questions. Contact a technical support member or submit a trouble ticket online to receive in-depth support.

Thank you again for using Grandstream GSurf_Pro Network Video Surveillance System.

Table 4: COMPARISON OF GSURF_PRO AND GSURF

Feature Comparison	Gsurf	Gsurf_Pro
Realtime Play	√	√
Realtime Recording	√ (primary, 2nd stream)	√ (Primary Only)
Backend Recording		√
Primary/2nd stream switchable based on arrangement of display windows.		√
Electronical Map	√	√
Operation and Alarm Log	√	√
Control Console	√	√
Group Patrol Viewing	√	√
Sorting Display Window Order when in Group Patrol Mode		√
1,4,6,8,9,16,20,25,36 Display Window	√	√
Time Table Configuration in Automatic Recording	√	√
Configuraton of Alarm DO/DI	√	√
Local Configuation	√	√
Local Configuration - Smart Deletetion		√
Local Configuration – WatchDog Switch ON/OFF		√
Local Configuration - Autorun as service when power on	√	√
Local Configuation - Display window arrangement of primary stream		√
Device Configuation	√	√
Device Configuation - Batch configuation of automatic scheduled (time) recording		√
Server Configuation		√

Import, Export Configuation	√	√
Play Mode (Manual, Patrol)	√	√
Multi-Language Switch		√
Management Tool - User management, Log management	√	√
Management Tool - Replay Tool	√ (Single Window Replay)	√ (upto 4 Window Replay, Remote download Replay)
Management Tool - Search Tool	√	√
Mangement Tool – Search Tool with Wi-Fi Configuration		√
Transaction Server		√
File Server		√（Combined with Replay Tool）
Multi-Screen Display		√
H264 - AVI Convert Tool		√
Synchronization tool for device time		√
Broadcasting Tool	√	√
Smart Delete Module	√ (Only delete based on files with ealiest date, not accurate)	√ (Delete based on Date, delete based on earliest file, more accurate)