

Grandstream Networks, Inc.

GSurf_Prov2

Video Management Software

User Manual





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DOCUMENT PURPOSE

This document describes the basic concept and tasks necessary to use and configure your GSurf Pro. In addition, it covers the topic of connecting and configuring the GSC36xx IP Cameras and how to manage them from GSurf Pro Menu.

Please visit http://www.grandstream.com/support to download the latest "GSurf Pro User Manual".

This guide covers following topics:

- <u>Welcome</u>
- Product overview
- Installation guide
- Configuration guide
- Gsurf prov2 transfer server
- Gsurf_prov2 file server
- Http server
- Frequently asked questions
- Experiencing the grandstream gsurf_pro





CHANGE LOG

This section documents significant changes from previous versions of user manual for GSurf Pro. Only major new features or major document updates are listed here. Minor updates for corrections or editing are not documented here.

Software Version 1.0.3.34

- Added sliding bar of Zoom In/Out for new AF IP Camera GSC36xx. [Gsurf_Prov2 Main Window]
- Added support for abnormal reboot alarm action. [Configure Alarm Triggers and Rules]
- Added Replay Tool v3 for new IP cameras. [Replay]

Software Version 1.0.3.24

Added support for GSC3610 and GSC3615 IP Cameras.

Software Version 1.0.3.19

No major changes.

Software Version 1.0.3.18

No major changes.

Software Version 1.0.3.13

No major changes.

Software Version 1.0.0.6

This is the initial version.





WELCOME

Thank you for using Grandstream GSurf_Prov2 Network Video Surveillance System. Based on TCP/IP, Gsurf_Prov2 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_Prov2 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 Prov2 software.



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 Highlights

- 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
- 72 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_Prov2 Overview





INSTALLATION GUIDE

Minimum Computer System Requirement

SERVER:

Operating System: Windows 2003/2008 Server; Windows XP SP2/SP3; Windows 7 32bit/64bit, Windows

8/10

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 8/10

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

NOTE:

UPS is required for SERVER to prevent database or video record file corruption caused by power outage.





Install Gsurf_Prov2

Click to run the GSurf_Prov2 installation .exe file. Follow the instructions in the prompted windows to start installation. Once done, the following screen will show.



Figure 2: GSurf_Prov2 Installation

NOTE:

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





Uninstall Gsurf_Prov2

To uninstall GSurf_Prov2, in your windows PC Start Menu->Programs->GSurf_Prov2, click on Uninstall GSurf_Prov2 to start uninstall process. Or you could uninstall the program from your windows PC's Control Panel.

Login Gsurf_Prov2

Click to run GSurf_Prov2. 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_Prov2.



Figure 3: GSurf_Prov2 Login





Gsurf_Prov2 Main Window

The GSurf_Prov2 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.

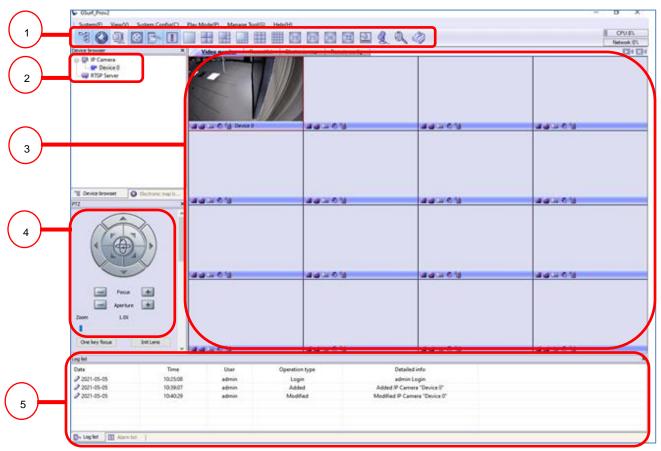


Figure 4: GSurf_Prov2 Main Window

Table 1: Gsurf_Prov2 Main Window Items

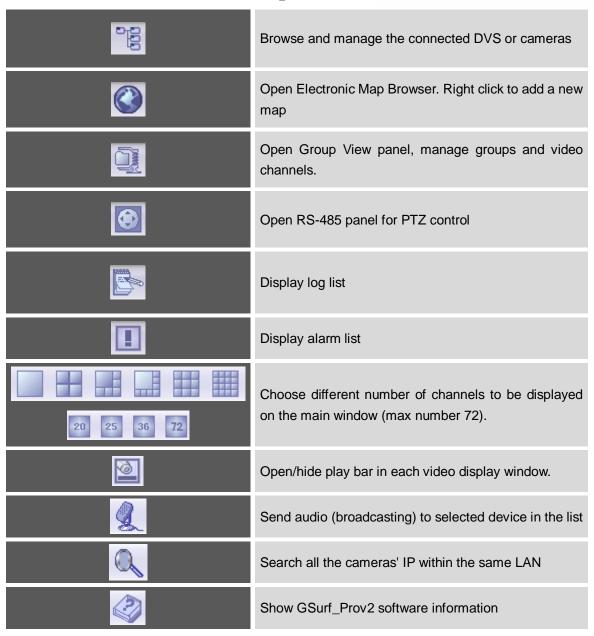
1	Toolbar	Quick access to designated functions
2	Device Browser	View, add and manage devices; view electronic map
3	Video Display	Display up to 72 video streams. Double clicking on one video will display its primary stream in full window.
4	PTZ Control	PTZ control (PTZ device is required on the camera)
5	Log List	View operation log and alarm log





Gsurf_Prov2 Toolbar

Table 2: GSurf_Prov2 Toolbar Icons



Gsurf_Prov2 Video Play Bar

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

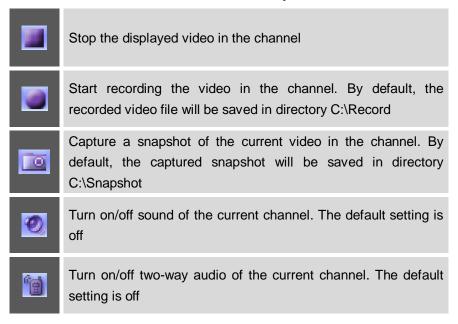






Figure 5: GSurf_Prov2 Video Display Window - Play Bar

Table 3: GSURF_Prov2 Video Play Bar Icons







CONFIGURATION GUIDE

After installing GSurf_Prov2, it must be configured for your network cameras or digital video servers. This section describes how to configure GSurf_Prov2, 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(C)->Device Config(D).
- 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 GSC3610 has 2 channels.
 - IP: Enter the IP address of the device.
 - **Domain Name:** Enter the domain name of the device.
 - Username/Password: Enter the Device's Admin Credentials.
 - 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.





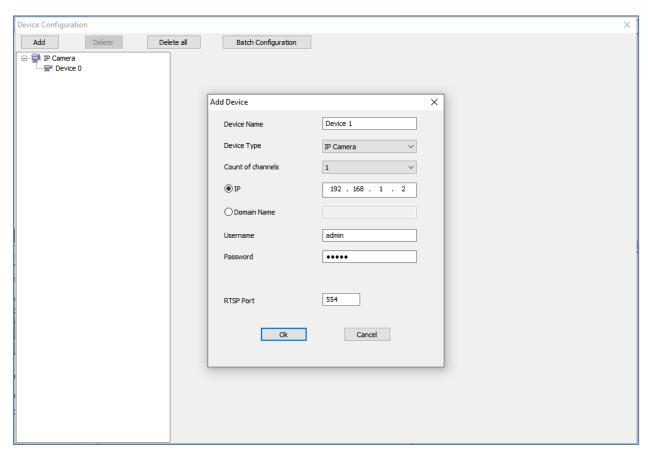


Figure 6: Add Device

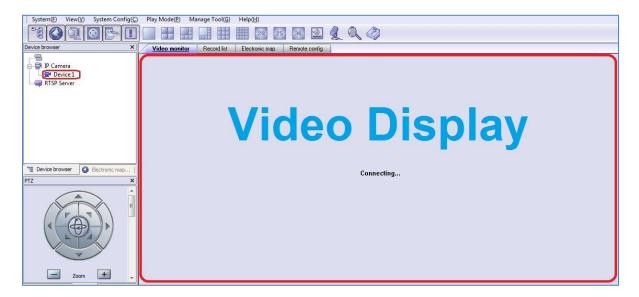


Figure 7: Video Display After Adding Device





Delete Device

- 1. In the top Menu bar, click System Config(C)->Device Config(D).
- 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.

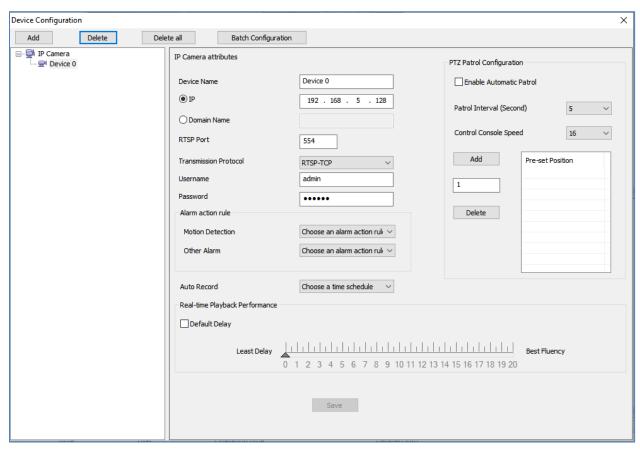


Figure 8: Delete Device





Search Device

The built-in Search tool in GSurf_Prov2 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

- In the GSurf_Prov2 toolbar, click button
- 2. In the Search tool, click **Search** button. A list of surveillance devices will display in the list.

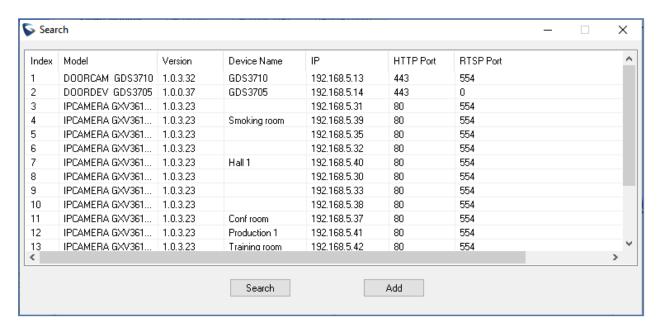


Figure 9: GSurf_Prov2 Search Tool - Search Devices





Configure Time Schedule

The GSurf_Prov2 time schedule is used to configure automatic recording. Up to 10 schedules can be configured.

- 1. In the top Menu bar, click System Config(C)->Time Schedule(T).
- 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 10: Gsurf Prov2 Time Schedule).
- 5. Click Save button.



Figure 10: Gsurf_Prov2 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.

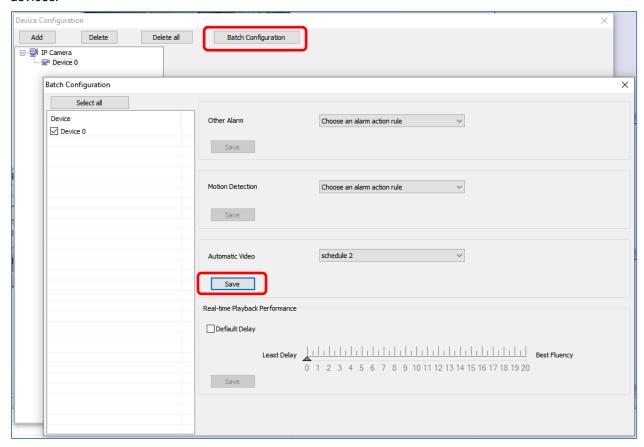


Figure 11: GSurf_Prov2 Auto Record Time Schedule





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_Prov2. On the GSurf_Prov2 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_Prov2 will play a sound when receiving an alarm report. Make sure to select a sound file and the duration for it to play.
 - 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.
 - **Record:** If it's checked, GSurf_Prov2 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.
- 3. Click **Save** button to save the settings.

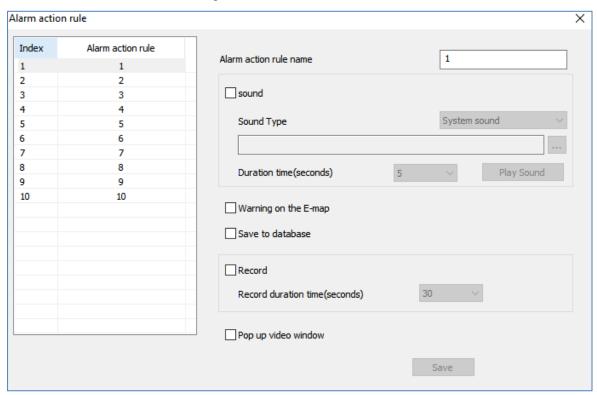


Figure 12: GSurf_Prov2 Alarm Action Rule

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. Or to **Other Alarm** for other types of conditions such as abnormal reboot.
- 7. Click Save button to save the settings.

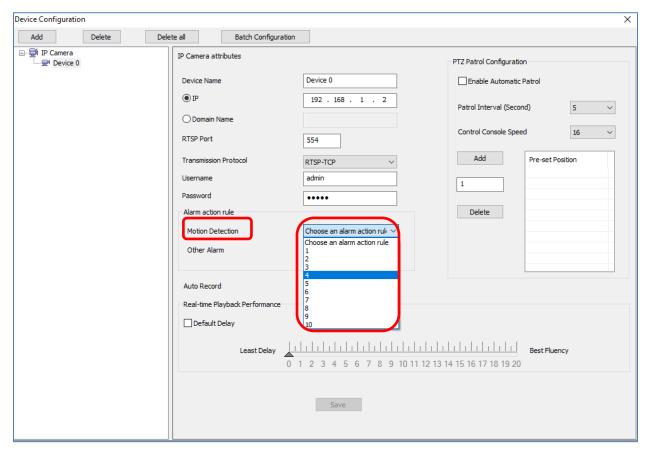


Figure 13: Assign Alarm Action Rule To Device

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_Prov2.

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.

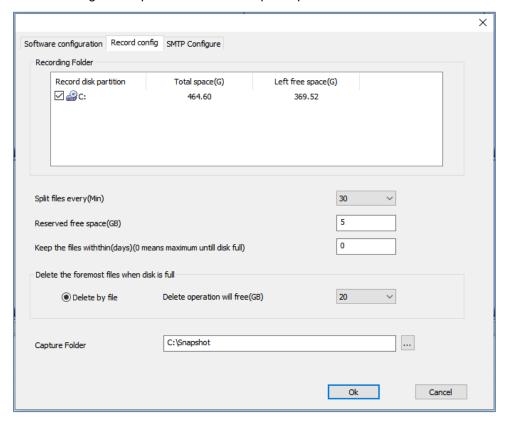


Figure 14: GSurf_Prov2 Local Configure - Record Configure

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_Prov2 interface, users could switch language at any time. Go to **System Config->Language** and select the language to be displayed.

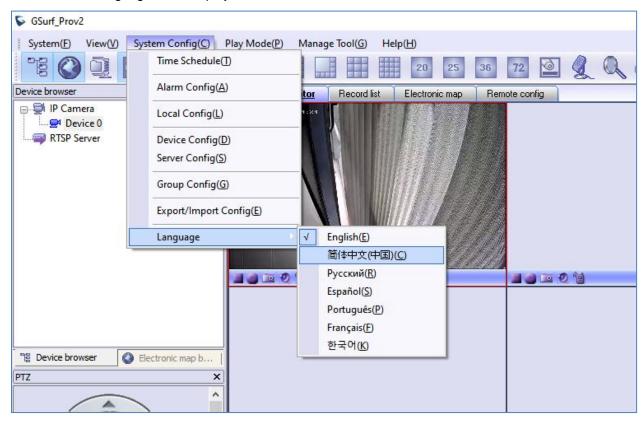


Figure 15: Language Display





Record Configuration

Manual Record

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



Figure 16: 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**.

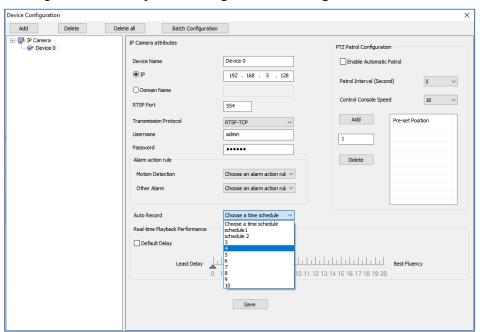


Figure 17: Automatic Record

Note: It is recommended to use continuous recording only and not combine it with recording by motion detection.





Replay

Both the GSurf_Prov2 Replay v2 (GXV36xx Models) and Replay v3 (For GSC36xx Models) tools provide the ability to replay recorded videos. These tools also provide 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.

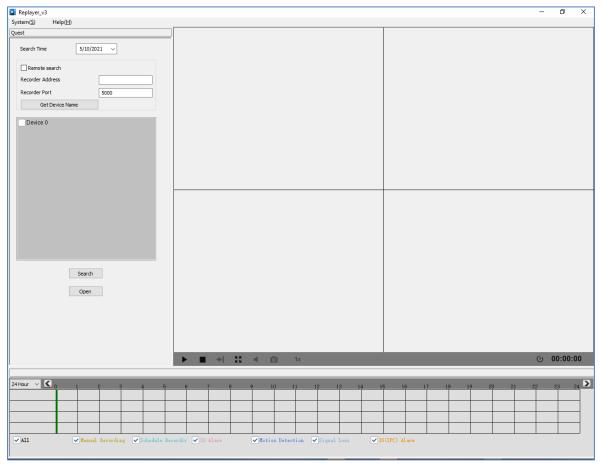


Figure 18: Replayer v3

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_Prov2 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_Prov2, 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.

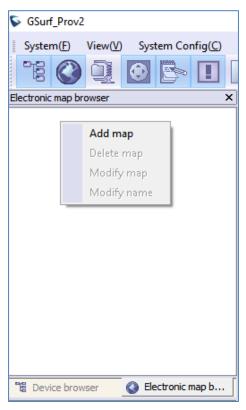


Figure 19: Add Map

Note:

The supported image files are bmp, jpg or gif. GSurf_Prov2 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.

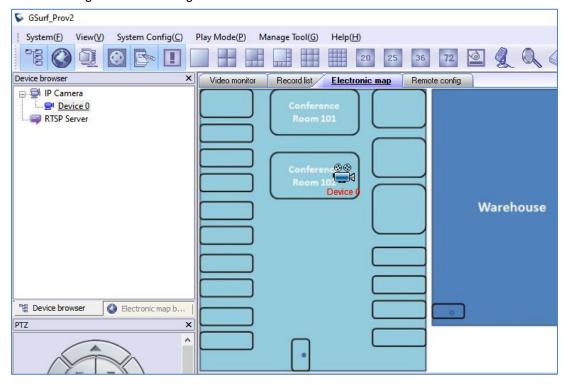


Figure 20: Add Map Alarm

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_Prov2 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.

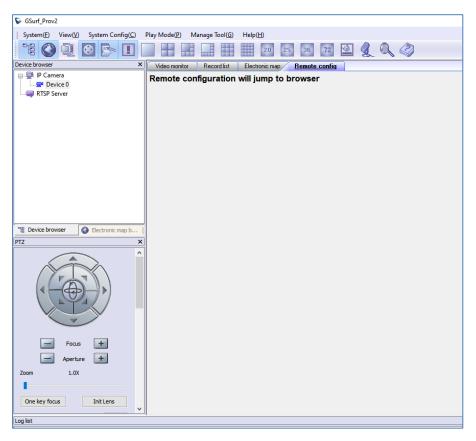


Figure 21: Remote Configuration





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.

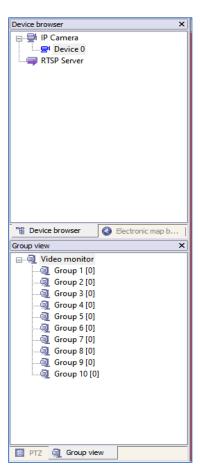


Figure 22: Add Device To Group

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.





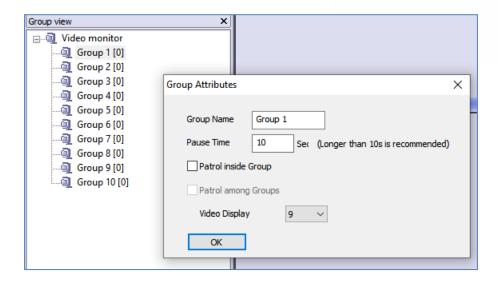


Figure 23: Configure Group Attributes For Patrol Mode

- 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.

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.





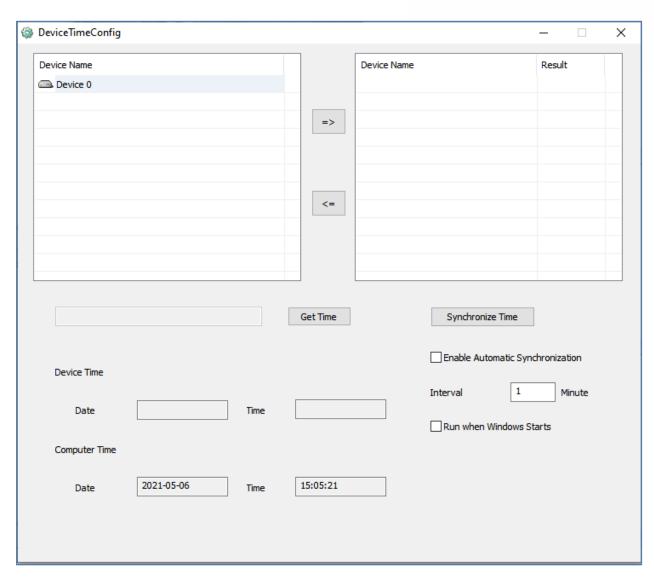


Figure 24: Device Time Configuration





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_Prov2. 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.

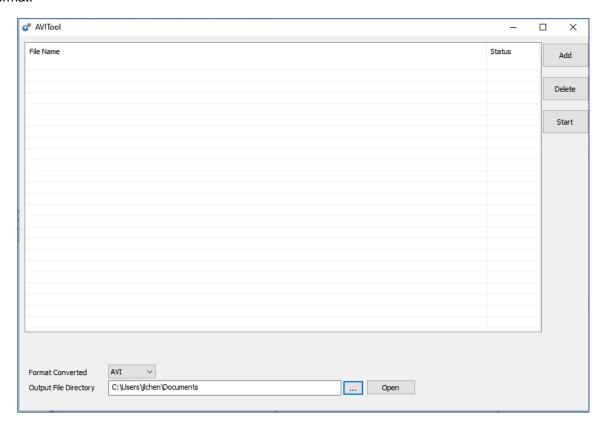


Figure 25: Media Convert Tool





User Management

The GSurf_Prov2 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.

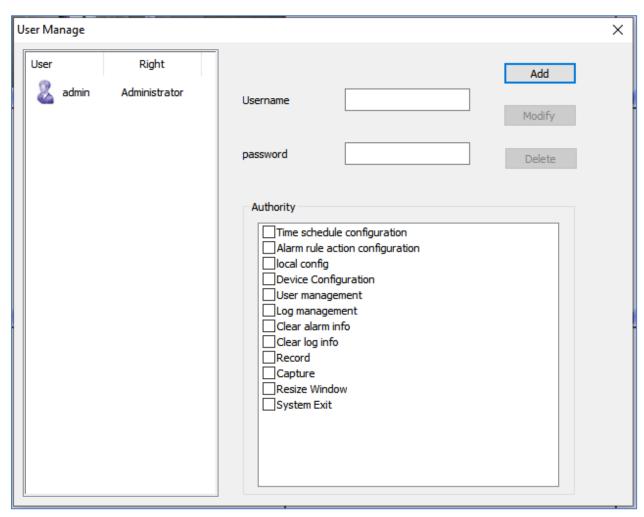


Figure 26: User Management





Import/Export Configuration

The GSurf_Prov2 configuration can be imported or exported for backup and restore purpose. Click on **System Config->Export/Import Config** to open the import/export window. Users could also select the configurations for the backup file.

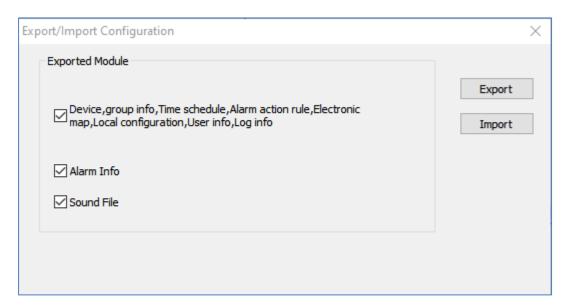


Figure 27: Configuration Import and Export





GSURF_PROV2 TRANSFER SERVER

The GSurf_Prov2 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.

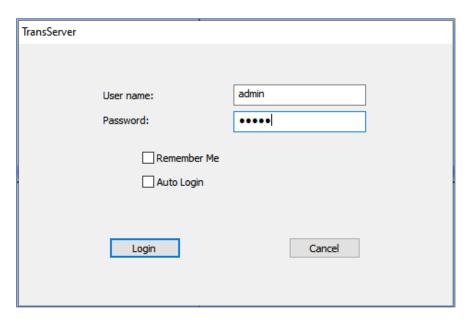


Figure 30: Transfer Server Login

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.





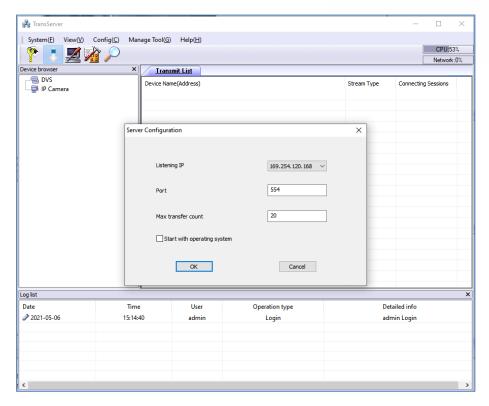


Figure 28: Transfer Server Configuration

- 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.

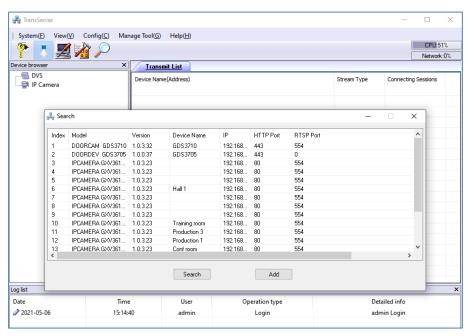


Figure 29: Add Devices to Transfer List





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_Prov2 RTSP server.

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

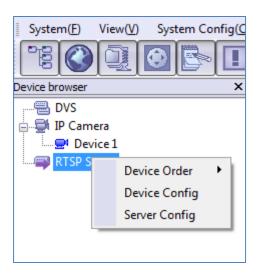


Figure 30: RTSP Server





GSURF_PROV2 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_Prov2 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.

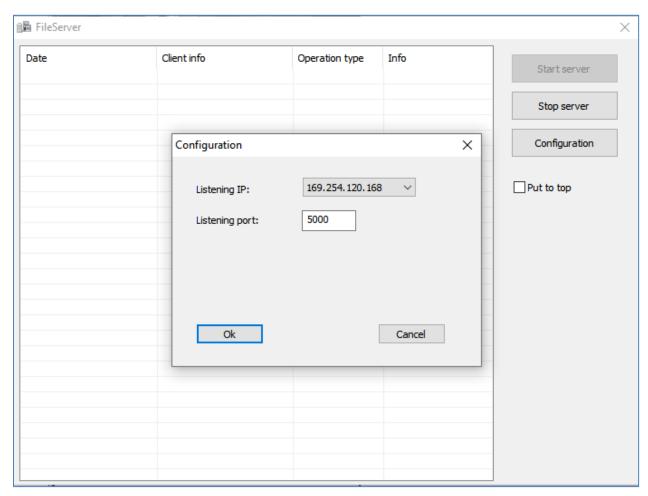


Figure 31: GSurf_Prov2 File Server





Client Side

The client side is the replay tool in the GSurf_Prov2. Go to **Manage Tool->Replay Tool** to open the Replayer. Once searching is done, the record files can be downloaded and played locally.

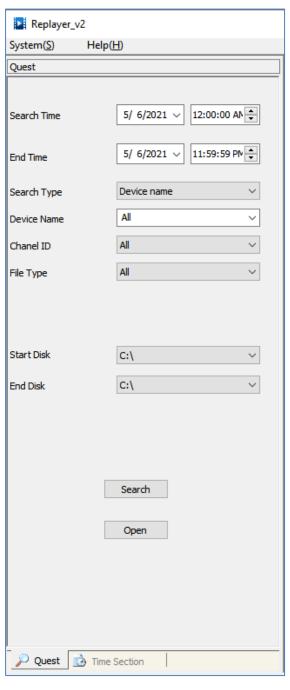


Figure 32: Replayer Remote Search





HTTP SERVER

GSUpgrade Tool

This HTTP server allows user to configure a local HTTP server on the same machine running GSurf Pro which can be used to execute firmware update from this tool on IP Cameras either one by one or via batch upgrade by selecting them all. Go to **Manage Tool->HttpServer**. Click on the **Configuration** button to set up listening IP and port. Then start the server.

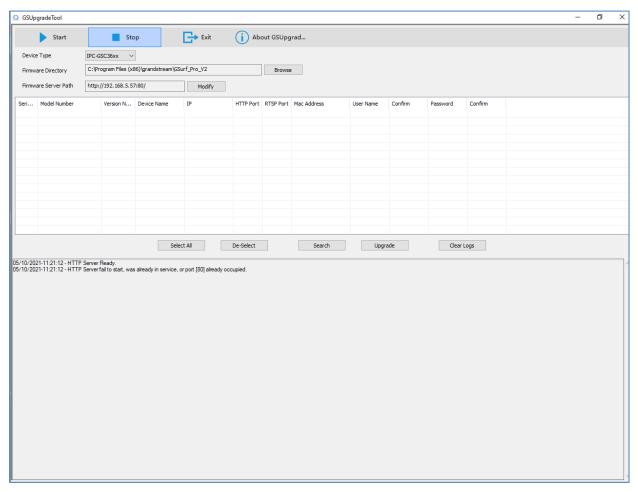


Figure 33: GSurf_Prov2 HTTP Server





FREQUENTLY ASKED QUESTIONS

Q: How many cameras does GSurf_Prov2 support?

A: The GSurf_Prov2 can support up to 10 groups or 72 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_Prov2 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_Prov2 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_Prov2, 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 Prov2 already but I still didn't get alarm. Why?

A: Besides configuring alarm action on GSurf_Prov2 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_Prov2'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 <u>product related documentation</u>, <u>FAQs</u> and <u>User and Developer Forum</u> 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 <u>submit a trouble ticket online</u> to receive in-depth support.

Thank you again for using Grandstream GSurf_Prov2 Network Video Surveillance System.





Table 4: Comparison of GSurf_prov2 and GSurf

Feature Comparison	Gsurf	Gsurf_Prov2
Real-time Play	$\sqrt{}$	V
Real-time Recording	$\sqrt{\text{(primary, 2nd stream)}}$	√ (Primary Only)
Backend Recording		\checkmark
Primary/2nd stream switchable based on arrangement of display windows.		V
Electronic Map	\checkmark	\checkmark
Operation and Alarm Log	$\sqrt{}$	\checkmark
Control Console	$\sqrt{}$	$\sqrt{}$
Group Patrol Viewing	$\sqrt{}$	√
Sorting Display Window Order when in Group Patrol Mode		\checkmark
1,4,6,8,9,16,20,25,36,72 Display Window	\checkmark	\checkmark
Time Table Configuration in Automatic Recording	\checkmark	\checkmark
Configuration of Alarm DO/DI	\checkmark	\checkmark
Local Configuration	\checkmark	\checkmark
Local Configuration - Smart Deletion		√
Local Configuration – WatchDog Switch ON/OFF		V
Local Configuration - Autorun as service when power on	\checkmark	\checkmark
Local Configuration - Display window arrangement of primary stream		√
Device Configuration	$\sqrt{}$	\checkmark
Device Configuration - Batch configuration of automatic scheduled (time) recording		√
Server Configuration		\checkmark
Import, Export Configuration	1	√





Play Mode (Manual, Patrol)	\checkmark	$\sqrt{}$
Multi-Language Switch		$\sqrt{}$
Management Tool - User management, Log management	\checkmark	V
Management Tool - Replay Tool	√ (Single Window Replay)	√ (up to 4 Window Replay, Remote download Replay)
Management Tool - Search Tool	$\sqrt{}$	V
Management Tool – Search Tool with Wi-Fi Configuration		V
Transaction Server		$\sqrt{}$
File Server		$\sqrt{\text{(Combined with Replay Tool)}}$
Multi-Screen Display		√
H264 - AVI Convert Tool		$\sqrt{}$
Synchronization tool for device time		V
Broadcasting Tool	\checkmark	$\sqrt{}$
Smart Delete Module	√ (Only delete based on files with earliest date, not accurate)	√ (Delete based on Date, delete based on earliest file, more accurate)

