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Overview

NVRSof**t** is a digital video recording and remote surveillance software package for Windows. NVRSof**t** accepts video streams from all major Network (IP) cameras and servers, Frame Grabbers and any Direct Show compatible devices including Webcams and USB cameras. This along with the NVRSof**t** client-server architecture allows you to build fully scalable solution sizing from a single camera up to thousands of cameras.

NVRSof**t** was designed to primarily be used to:
1. View live video streams from multiple sources locally and remotely, over the Internet.
2. Record video from multiple sources and play them back later locally or remotely.
3. Export previously recorded video to preserve it and to present it as evidence.

NVRSof**t** offers a principally new concept for DVR solutions – “One Software/Choice of Hardware”. NVRSof**t** DVR software can be either integrated with supported hardware or acquired from a NVRSof**t** reseller as a part of a complete digital video recording and remote surveillance solution.

NVRSof**t** consists of two major components: DVRServer and DVRClient. The DVR Server is a behind-the-scene application that captures, processes and records video and then serves it to a local or remote DVR Client software. The DVR Client is the application that shows live and recorded video streams from a single DVR Server or multiple DVR Servers; it also allows users to configure and control DVR Server(s).

In order to better suit our customers’ needs and budget, NVRSof**t** has 5 editions. These editions range from SOLO to Enterprise and each edition varies in the number of allowed cameras, the number of simultaneous remote DVR Client connections as well as other limitations, or lack thereof. However, all of the NVRSof**t** editions have the same user-friendly interface and functionality.

NVRSof**t** DVR SOLO Edition is a shareware product, which means you can try it first, and then buy it if you like it.

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Chapter 1

Frame Grabbers

What is Frame Grabber? Frame Grabber is a PCI board that is installed into the PC and CCTV cameras (Cameras with BNC or RCA connectors) are attached thereto. These boards come in various configurations 4 camera inputs, 8 inputs, 16 inputs, etc. and boards are made by various manufacturers. Also, depending on the Frame Grabber certain criteria is expected from the PC. Some frame grabbers require a minimum amount of PC power as where others require more. Frame Grabbers have the following terminology:

Inputs = The amount of cameras the board can handle (4, 8, 16, 24, 32)
Frame Rate = Frame Grabbers supported by NVRSoft come in 60Frames, 120Frames and 240Frames per second. These frames however, are the entire frame rate numbers divided by the amount of inputs; therefore if you have a 60FPS (Frame Per Second) board with 4 inputs, that means 4 divided by 60FPS = 15FPS per camera.

The other important factor in Frame rates is FPS viewing and FPS recording. What this means, is that you may view at 15FPS but choose to record any of your cameras at a lower FPS to save storage space. Remember, the higher the FPS the more storage space it needs since the data is larger. The same principle applies to image quality. The higher the image quality you choose, the more space is required. More on image quality on page 31

You can purchase these boards from any NVRSoft authorized reseller, or if you currently purchase or own any of the above cards, you only need to purchase the appropriate NVRSoft Edition.

NVRSoft works with any and all CCTV cameras. CCTV cameras are analog cameras, even though some of them might have written the word Digital written on them, which only means that a DSP chip is used, but the Frame Grabber is what makes the signal truly digital. Therefore, if you decided to retrofit existing installation or make a new one based on analog CCTV cameras, make sure that you choose a NVRSoft supported frame grabber card or acquire a complete system from a NVRSoft reseller. You can check the perpetually growing list of supported Frame Grabber cards on the NVRSoft website.
**Network (IP) Cameras**

**What is Network (IP) Camera?** Network camera, IP addressable camera, IP Camera, all referring to the same type of cameras, is a digital camera that can be directly connected to the Internet through a CAT5 or WiFi connection. Network cameras send already digitized and compressed video streams. Network Cameras are the fastest growing trend in the Surveillance industry. Here are some of the benefits of IP cameras:

- Existing local network infrastructure could be used for the installation.
- Comparably less cabling required compared with an analog CCTV installation.
- Network cameras have built-in motion detectors and compression engines, which enable the DVR Server to use a minimum of its computer resources; therefore, the same computer can also be used for other tasks.
- There are no requirements on CPU or chipset manufacturers, since Network Cameras do not require any additional hardware to be installed in to the computer.
- There are Network (IP) cameras with very high resolution (1.3 Mega pixels and more). Analog cameras are incapable of achieving such resolution.
- Network (IP) camera installations are highly scaleable and upgradeable. There is no need to buy and install additional video capture boards for the DVR system in the event you want to add a camera or increase performance of the system.
- Any analog camera can be converted to a network camera by using a Network (IP) server. There is no geographical limitation for the installation.
- Effective offsite recording (either by itself or in addition to onsite recording) eliminates the possibility of destruction of the video medium due to deliberate actions or an accident (fire, flooding, etc.).
- Some of the network cameras also can be used as a webcam to serve as an advertising engine for a business.

*NVRSOFT supports Network Cameras from all major manufacturers. Please visit the NVRSOFT website for the perpetually growing list of supported Network cameras.*
PTZ Cameras

What are PTZ Cameras? PTZ camera is the camera with the mechanical assembly for Panning, Tilting and Zooming the camera. There are many types of PTZ cameras available and their cost varies based on Speed, Zoom capacity, Manufacturer, etc. Analog CCTV PTZ cameras require additional set of wires compliant with RS422/485 protocol standard to control PTZ movements. Therefore, usually it is necessary to put a RS232 to RS422/485 converter to a DVR system. NVRSoft currently supports the most popular Analog CCTV PTZ command protocols, including Pelco-D, Bosch and MeritLilin. Network PTZ cameras does not require any addition wiring or devices, since PTZ commands are being send over TCP/IP network; therefore, making installation process much simpler and eliminating a lot of compatibility and configuration issues.

USB and Web Cameras

Can I use my USB or Web Cameras? Yes, NVRSoft is the world’s leader in the best most economic, versatile and powerful DVR. We want everyone to be able to use our software and if you have a USB cam or a Web Cam, feel free to try our software for free and purchase as many licenses as you wish. Of course don’t forget that you are limited to USB ports with this option but for small users, NVRSoft is for you.
NVRSoft Terminology

Pane - Panel, window.

Toggle- To alternate between two or more electronic, mechanical, or computer-related options, usually by the operation of a single switch or keystroke.

NVRSoft Icons-

Toolbar

Toolbar- The toolbar that you see at the top of your screen gives you various options such as open, save and various screen manipulations, at the click of a button.

Open Configuration- This button on the toolbar allows you to open previous NVRSoft configurations. It is most useful if you are exporting configurations from one machine to another.

Save Configuration- This button on the toolbar allows you to save any changes that you have just made to your DVR, it will continue to save to the same file unless you click on File and Save As then you can save to a different file or even to a floppy.

Structure Pane- This button toggles whether you see or don’t see the structure pane on the left side of your NVRSoft window. The structure pane is most useful when you are looking at cameras from multiple locations and multiple NVRSoft servers. We will discuss the structure pane later on in this chapter.

Events - This button toggles the events window. The events window gives you important notifications such as, when you are connecting to a server successfully. It lets you know if you have input improper user names and passwords and gives you error codes when needed.

PTZ Control- This button toggles the PTZ control pane. If you do not have a pan-tilt-zoom camera connected to your system then this button does no need to be pressed.

Video amplification- This button toggles the video amplification pane. When this button is pressed a pane will come up from which you will be able to adjust the brightness, contrast, saturation, sharpness, and hue for any camera.

Full Screen- This button toggles full screen mode. In full screen, none of the panes will be seen and the cameras will be expanded to their maximum size to fill the full screen of your monitor.

Wizards- The wizard’s icon on the toolbar gives you a shortcut to various server, and camera options and configurations. You can also access these features through the right click menus in the software.

Views- These buttons on the toolbar allow you to manipulate your views and camera layouts to your own preference.
**Screen Footer** - The screen footer button on the toolbar allows you to display various information underneath each camera window. It can display frame rate, time, picture quality, recording, motion detection, and image size. The screen footer is the text below each camera.

**Stream Selection** - The stream selection button allows you to pick which camera you would like to view in the selected camera window. This can also be done through the right click menus and by dragging the desired camera from the structure pane to the desired display window, or right click on any camera window and select stream.

**Show Motion** - The show motion toolbar button toggles whether or not you want the motion outlined on the selected camera screen. Note: Motion detection must be setup before this feature can be activated.

**Maximize** - When pressed the maximize button puts the selected camera into a single view, if pressed again it will return to the previous view. This can also be accomplished by double clicking on the camera of choice.

---

**Structure Pane**

The structure pane is the control center of your DVR. In the structure pane is where you will setup all of your cameras, and DVR's. The structure pane makes it possible for you to manage many DVR servers from one window by right click on the DVR of your choice.
**Server**

**What is NVRSoft Server?** NVRSoft server is the Windows application, which can run as Windows service or Windows tray-application. NVRSoft Server grabs video streams from the configured sources, analyzes it for motion, broadcasts it to local (running on the same computer) and remote clients and records it to a local hard drives. NVRSoft server is the only application in the NVRSoft suite, which requires licensing, which can be activated via software key.

Through Console Root an unlimited number of cameras and servers can be manage, configured, and adjusted, without the need to be at the server site.

Right mouse click on any camera or server to drop down a list of various options like camera setup, recording settings, user management, ...etc.

Right Mouse Click on any camera screen to bring up the archive (playback recorded feed).

Wizards for easy navigation and step-by-step setup to perform configurations and other setup tasks.
**Client**

*What is NVRSof Client?* NVRSof Client Application is the component to monitor live and recorded video from several NVRSof servers. Also NVRSof Client is the main tool to manage and configure local and remote NVRSof servers.
The Client component is the control interface of your NVRSoft Software is the Interface to control your NVRSoft surveillance system. The client is the piece of software that controls every aspect of your server. This software can be installed on the main machine running the server or on any machine that can access the server via TCP/IP. The client application can be used to control and fully administer your server or an unlimited number of servers from any computer connected on the Internet. You never need to go on-site again to make changes to your DVR.

Benefits – By not having to ever be on-site to administer your DVR is a tremendous advantage and one that NVRSOFT offers. We have revolutionized the DVR world with this application feature enabling full flexibility to the DVR operator. Another advantage to not installing the Client on the Server Site is your DVR is now Tamper Proof. Since NVRSoft server can run as a Windows service, The server/Computer running the software can be logged out of Windows and have login password protected.

Web Based Remote
The Client Application is of course your main remote viewing option giving you full control of your DVR, all of its recorded video, etc., however; we wanted to give you a web based option as well in case you are ever in need to check on your location and the client software is not an option. For these instances, you can log onto your site using our web application located at http://www.NVRSoft.com/webclient/login.html
Enterprise Scalability: Control and fully administer your server or an unlimited number of servers from any computer connected on the Internet with NVRSoft client. Engineer not to use any network resources for the open server connections and only use network resources for the cameras you monitor at the given time. Can be connected to unlimited server and control unlimited cameras within those servers.

Layouts: Create custom layouts by grouping cameras from different DVR Servers/Location into groups for more efficient monitoring, and better management.
Chapter 2
Server Installation

*Let's Begin Installing* - Insert your **NVRSoft CD** into your CD drive, or if you have downloaded NVRSoft begin the installation process by double clicking the NVRSoft file.

1st Screen- “Welcome to the NVRSoft Digital Video Recorder Setup Wizard”  
2nd Screen- “Software License Agreement” Please read and choose accept  
3rd Screen- “Release Notes”  
4th Screen- “Select installation Destination” changing the location is optional but not recommended.  
5th Screen- “Select Components” Here **you will need to check** the top **Unchecked** option “**NVRSOFT SERVER APPLICATION**”  
   This option needs to be checked now, since we are now Installing The Server portion of the NVRSoft package. If you would also like to install the GUI (Graphic User Interface) or the CLIENT put a checkmark next to NVRSoft client application. Then leave the rest of the boxes unchecked. If you would like to Have the server run without the client, please uncheck the remaining Boxes.

6th Screen- “Select Start Menu Folder” changing the location is optional But not recommended.  
7th Screen- “Additional Icons” These are shortcuts and are recommended but optional.  
8th Screen- “Ready to Install” NVRSoft Server and options will now be Installed.  

If you want to be able to view and manage the server from the same machine check both NVRSoft Client & Server Application.
9th Screen- “Completing the NVRSoft Recorded Setup Wizard” Here there is an option for “run server setup wizard” Leave it checked And lets continue.  

Software Activation

1st Screen- “Wizard explanation”

2nd Screen- IF YOU HAVE DOWNLOADED NVRSOFT THE SHAREWARE VERSION, click cancel and skip down to page eight of your manual “Install Server Configuration. For those who have purchased NVRSoft or wish to purchase NVRSOFT at this time

3rd Screen- “Product Activation Options” If you have purchased a License or would like to make a purchase now, choose option one

4th Screen- “Enter your Activation Key” carefully enter your product License key here. (If you are now making the purchase Choose “buy online” now. Once you have made your purchase you can come back to this screen at any time)

5th Screen- “Product has been successfully activated” you will also see the description of your edition and your access limitations.

Install Server Configuration

1st Screen- “Server Properties” Here is where you will enter your Machines unique Identifying name and server title. Underneath You will see an option that is by default UNCHECKED “Compact the configuration database” it is a good choice to check This option for it will help optimize your configuration database in The future.

2nd Screen- “Server Administrator Settings” Here you are setting up The settings for the Administrator. Leave the default User name to “admin” and enter a unique password in Both lines. You will have the chance to add additional users At a later time.
3rd Screen-
Server Network Settings and Port settings
The default firewall port that NVRSowt uses is 60554 but you can change that to any port that you would like as long as it is open on your firewall. Please check with your network administrator or internet service provider about your firewall settings.

4th Screen- “Server Execution Mode” Here you have two options

Application Mode.
This means that the program (NVRSof) will need to somehow be manually started. It then gives you a drop down list with options on how that can happen. “Manually” is one option. That means you will physically have to double click the program to get it started. “Automatically with any user logon” is another option. This option will turn the software on when any user logs into Windows on that machine. “Automatically with current user logon” is the last option. This means that the user currently logged into Windows, will be the user that activates NVRSof upon Windows login.
Service Mode.

This option is RECOMMENDED. This Option is an amazing feature offered exclusively through NVRSoft. With Service Mode checked, the software will always be running in the background even though nobody has yet logged into Windows. This means you can lock everyone out of windows and never have to worry about any of your data. Also, if your power ever goes out, upon power recovery your system will turn on and nobody needs to physically log into windows or turn your NVRSoft program on, in order to keep your data flowing both locally and remotely.

Click Next

5th Screen- “Server Execution Control” Here depending on which option you Chose in the previous screen, will show you your options. Again your options will be limited to your previous selection. Choose to either “Start Server Application” or “Start Server Service”

Click Next

6th Screen- “Stop Server Application” or “Stop Server Service” Just showing
you how you can now stop the Server if desired.  

7th Screen- “Wizard Complete”

Click Next

Click Finish

Your Server Application is now complete.  

End of Server Installation

How to stop and start DVR services

The NVRSoft Software if it is setup on service Mode can be stopped by browsing the windows services (see Page 17). Or by using the DVR SERVER WIZARD

Client Server Connections

Lets Begin Installing- Insert your NVRSoft CD into your CD drive, or if you have downloaded NVRSoft begin the installation process by double clicking the NVRSoft file.

1st Screen- “Welcome to the NVRSoft Digital Video Recorder Setup Wizard”

Click next

2nd Screen- “Software License Agreement” Please read and choose accept

Click next

3rd Screen- “Release Notes”

Click next

4th Screen- “Select installation Destination” changing the location is optional but not recommended.

Click next

5th Screen- “Select Components” Leave the “NVRSOFT SERVER APPLICATION” unchecked, since we are now installing only the Client or the GUI (Graphic User Interface) portion of the NVRSoft package. The remaining options are for the NVRSoft “Quick Guide” a quick guide to getting started (optional) and the NVRSoft Demo connection, which will install a connection to our live Demo (optional). You can always remove our connection at a later time if you so choose.

Click next
6\textsuperscript{th} Screen - “Select Start Menu Folder” changing the location is optional. But not recommended. Click next.

7\textsuperscript{th} Screen - “Additional Icons” These are shortcuts and are recommended but optional. Click next.

8\textsuperscript{th} Screen - “Ready to Install” NVRSOFT Video Recorder and options will now be installed. Click Install.

9\textsuperscript{th} Screen - “Completing the NVRSOFT Digital Video Recorder Setup Wizard” Click Finish.

Your Client Application Installation is now complete. Now let’s configure your NVRSOFT Digital Video Recorder and get you viewing your cameras.

**Control Server or Servers from your client application.**

Double click your NVRSOFT Client icon from your desktop.

We will now add your Server information to your Client application.

From the top bar menu
- Locate the word “Server”
- Choose “Add Server”

**Add a new server.**
- The Add Server Wizard will open
- Choose Next

“Adding New Server” Screen is where you will enter your data

**Auto Connect on start:** this will auto connect to your server as soon as you open the Client.

**Auto reconnect on disconnection:** will automatically try to reconnect you in the event of disconnection.

The IP or the DNS of the server you want to connect. If the server is on the same Machine Type localhost

The port your server is running on

**Remember Password:** If you choose to leave this field unchecked every time you try to log on the server will request a password to let you in.

Click Next.
Now go to File – Save As- Find your NVRSsoft Client on your desktop – highlight it so the name appears in the save as portion- click save. It will tell you that Client already exists and if you want to override it, click yes or your new server will not be saved in your server list on the left and you will have to reenter your information when you reopen the program.

Wizard Complete. You should now have video feed of your cameras. The next two chapters will teach you how to configure your DVR to your specifications.

*End of Client Installation*
Server Recording Properties -
Right click on your server
Choose Tasks
Recording Properties

Directories - This is where you will see your available hard drive space. When you check and highlight either drive, the details option below will become available for further data entry. If you do not want your C drive to be used for storage, do not check it. If you do but only wish for a small portion to be used, below is where we will define that need.

Statistics - Here you can check on used space and available space left on the hard drives being used by NVRSof.

Priority - Your priority option, is for you to choose which of your drives records first. You must first check and then highlight (by clicking one time) the drive you wish to customize in this portion.

Quota - Here you chose the amount of space you would like to designate for storage on that particular hard drive. NOTE: NEVER, choose 100% for the C Drive. This may cause your machine to eventually crash due to not available virtual memory for page.

End of Server Recording Properties
**Server Communication Properties**

Right click on your server
Choose Tasks
TCP Communication Properties

**Tab Explanations:**

- **Connections**: Here you can see at all times who is connected to your server. The IP address, user name and connection time can all be seen. Click refresh at any time for an updated list.

- **Settings for the HTTP Server for remote connections from a web-browser**

---

**End of Server Communication Properties**

**Server Watchdog**

Your Server Watchdog performs an important operation, protecting your software from improperly working due to system problems. Configuring your watchdog is not necessary, if you chose to enable it during installation. The default settings will work well, however if you are having frequent restarts or for maintenance adjusting it may become vital.

Right click on your server
Choose Tasks
Manage Watchdog

**Watchdog**: In order to use the Disable, Enable and Properties tabs, you must first highlight “Software Watchdog” by left clicking one time.

---

Click Properties
**Server Watchdog Properties**

**State**- Start or Stop Running Watchdog.

**Start Watchdog with Server**- Will begin the Watchdog application when server is started.

**Enable Watchdog**- Will keep Watchdog running at all times.

---

**Watchdog Operation**

**Grace Interval Seconds**- The grace period given when starting the application.

**Reboot Interval Minutes**- The amount of time Watchdog will allow between reboots.

**Number of Failure to Reboot**- The amount of failed attempts to fix, whatever problem has been detected, by restarting only the NVRSof application. Once this number has been reached, Watchdog will now reboot Windows and the NVRSof application.

---

**Maintenance**-

**Enable Periodic Restart**- Enabling this feature will restart the Server Application at times specified. It is recommended to restart the Server Application to Refresh system resources. **The Watchdog Server-Restart will go Virtually unnoticed by the user.**

*If you made any changes click Apply then OK*

---

End of Watchdog
Server User Management

You can start the Server Security Wizard by right-click on the server within the Structure pane, then Tasks and then by choosing the “Server Security Wizard”.

Explanations-

Create Users or modify existing user rights

This wizard guide you step by step to add, remove, or modify user permissions.
System/User Permissions

As you see NVRSoft User Permissions provides Global Scope permissions for better user management.

In addition server administrators can grant or revoke certain permissions on a camera by camera basis by checking this box.

End of User Management
Submitting A Problem Report

Manually- if you go to the Help icon, you will see
“Problem Report Wizard”
Click on it and fill in the information requested.
NVRSsoft greatly appreciates, your efforts and
takes all problem reports seriously. Thanks

End of Submitting A Problem Report
Chapter 4

Setting up an IP camera...

There are two ways of setting up an IP camera to work with NVRSoft:
One-way is to let the software find the cameras automatically
Another is to manually input all of the camera’s IP information.

IP Servers
Note: NVRSoft also works with IP servers such as PiXORD-4000, which are Internet-based digital video server appliances, capable of connecting one or several channels of video sources to distribute their compressed live video into Intranet-Internet through Ethernet connection. IP Servers let you use regular CCTV cameras as IP cameras; therefore getting rid of the sixteen camera limitation that is seen with most DVR applications. Also if all of your cameras are connected to an IP server with a WAN IP then you do not need to install NVRSoft on the premises, but instead you can have NVRSoft running miles away (SEE PAGE 11) as long as it is connected to the internet.

Configure your IP cameras automatically.
-Right click on your server name
-Left click tasks
-Left click find network cameras.
-Choose Local Area Network and check
-"Intelligent Camera Search"
-Click Next

NVRSoft will now begin scanning your network and specified ports for any IP cameras. Once it is finished it will give you a list of the cameras that it found and give you an option to add them to NVRSoft.

Configure your IP cameras manually.
-Right click on the server name
-Choose tasks
-Choose camera setup wizard
-From the first window in the wizard select “Add new Network (IP) Camera”
-Click Next.
Device Title - Name the camera.
Click Properties
Properties- Tab Explanations
Access Tab

Note: If you are using a video server you can select the output channel for this camera from the advanced menu.

Select the camera type that you are using from the drop down menu. Or if you are using an IP server select from the same menu. (You can then select the camera input from the advance menu).

Input the IP address of the IP Camera

Frame Tab

Dimensions - Quality of the picture. The higher quality you choose the more space it will take

Color Mode - Color or black and white

Brightness, Contrast, etc... Change the appearance of your video quality.
Setup Arecont Network IP Cameras

There are two ways of setting up an Arecont IP camera to work with NVRSoft:
One-way is to let the software find the cameras automatically.
Another is to manually input all of the camera's IP information.

When Arecont cameras are setup manually NVRSoft provide the following configuration windows for fine tuning your Arecont cameras according to your preferences.

End of IP Camera Setup
**CCTV Camera Configuration**

To setup a CCTV or Direct Show compatible camera we will use the Camera Setup Wizard. Right click on your server name located on the left side of the NVRSoft window. Choose tasks Camera Setup Wizard. 2nd Screen- “Camera Choice” Select the camera, which we will be configuring. Click Next.

3rd Screen- 
**Device Title**
Feel free to name your camera anything you find helpful and then choose properties.
Properties- Tab Explanations

**Format Tab**
You will see this tab only if you have the **Provideo** Frame Grabber

Frame Resolution- The default settings are recommended, but you have the option to choose your format (NTSC, Pal, etc) and your resolution size. Please note the larger resolution size you choose the slower your frame rate may become. Also, high image quality requires more hard drive space.

**Frame Tab**
Available only if you have the **Comart** Frame Grabber

Dimensions- Here you can change your image resolution. Note: The larger the resolution size you choose the slower your frame rate may become. Also, the larger the image quality the more space it requires.

Color Mode- Here you can choose to turn your color cameras into Black and White. This is chosen sometimes to save storage space.

Image Adjustment- You can change these settings here, or you can change them from your “Toggle Video Amplification Pane” at a later time see page 20

Defer changes until Apply- If checked this would ignore the changes you made until “Apply” or “OK” have been hit.

**HiCap & XECAP Tab**
Available only if you have the **Comart** Frame Grabber

Frame Rate - Here you can choose to increase or decrease your frame rate. Note: If you are working from a frame grabber you are limited to the total frames allowed by your frame grabber.

Video System- choose your format NTSC, Pal, etc.
PTZ Camera Properties

PTZ Control: NVRSsoft can interface RS-232, RS-422 and RS-485. When the RS Control is selected, the Properties button becomes available, for you to set-up your PTZ camera.

PTZ Protocols-Communication Settings

Here you Choose the communication protocol supported by the PTZ camera your installing.

PTZ Cameras often have DIP switches, or configuration software that can be set to different ID’s in order to be able to control multiple PTZ cameras on the same RS Controller.

Choose which communication Port the RS control is connected to it.
Click on this icon on the main toolbar to get the PTZ control pane.

- Zoom IN
- Zoom OUT

Manual and Auto Adjustments for Focus and Iris

Save Presets, and Tours for PTZ Cameras

Presets and Tours can be configured from the PTZ control window.

Manage PTZ tours camera by camera by selecting the presets of your choice and time between them.
Digital PAN-Tilt-Zoom on live view

Right-Click on any camera to Activate the Digital Pan-Tilt and zoom function.

Then by activating the PTZ control pane live streaming video can be digitally enhance.

Digital PAN-Tilt-Zoom on Playback
To Activate the Digital Pan-Tilt and zoom function on already recorded video just activating the PTZ control pane from the archive window.

Click Next

Video Compression
Enable Server Side Compression- Compresses video according to the compression you choose. NVRSoft continuously integrates compressions so feel free to check here every so often.

Enable Video Transfer Properties:
Enable time lapse broadcast on your remote connection only if needed.

Enable this feature remotely if want to see video on motion only. This is very helpful because frame rate is distributed to the cameras that have motion only.

Adjust data controlled broadcast if needed.

**Enable Video transfer recompression**, can be very useful for remote connections only. The NVRSoft server can record up 3 mega pixel images, but remotely using this feature a user can receive more framerate with less image quality without changing the server properties.

**Image Quality**

Properties- Here you adjust the quality. The higher you go the better your image quality will be for that camera, however, it will give you slower frame rates and takes more storage space. (If you make changes hit ok)

Click Next

5th Screen-
Motion Analysis-
Use Motion- This box should be checked if you are interested in using Motion Detection. We recommend you use motion detection for it will save you an abundance of well-needed storage space. Choose Properties

Properties- Tab Explanations

**Sensitivity Tab-**
The sensitivity should be adjusted to a point where motion is only seen by people and not by blinking lights, reflections, or shadows, otherwise you will get “false motion” and NVRSsoft will be recording based on motion that does not exist.

**Exclusion Tab-**
If you are still getting motion from lights, trees or things moving from an air-conditioner or an open door then you can click on exclusion and block the object out from the motion detection grid. You simply click on the grid boxes around the object that you would like to exclude, to remove them from being seen by the motion detection engine in NVRSsoft.

**Format Tab-** This controls the internal motion detection analysis properties.

**Analysis resolution-** controls precision of the detection process, the more resolution blocks is selected, the better precision is, and however, the greater CPU consumption is needed.

**Smoothing-** feature averages preliminary detection result so that neighboring area is included into motion area as well. Smoothing, however, slightly decreases motion detection sensitivity.

**Horizontal and vertical cell number-** Defines the dimensions of the target grid, which is used as output of the motion detection algorithm. The defined cells are shown. Click ok when finished

Click Next
Here you can specify whether or not you would like motion information and video recording to be written to the hard drive. It is recommended that you write both to the hard drive, because it will make it much easier to review your recordings with motion information. Without motion being recorded to the hard drive you will not be able to search by general motion or defined motion regions (Smart Search, see Page 36).

**Advanced properties** - Allows you to setup **time-lapse** recordings, and Enable **Motion control recording**. Time lapse creates a small delay between every frame that is written to the hard drive, this will use the space you have on your hard drive more efficiently.

**Time Lapse Recording:**
Time Lapse recording properties can be accessed:
- Right click on your server
- Choose Tasks
- Camera setup Wizard
- Data recording
- Advanced properties

Time Lapse recording: The number of frames to be record camera by camera. It gives you the opportunity to use HD space more efficiently. Less important cameras can be set to record less frames than others.
Motion Control Recording:
Motion Control Recording can be accessed:
- Right click on your server
- Choose Tasks
- Camera setup Wizard
- Data recording
- Advanced properties

Enable Motion control recording to save disk space and make playback more efficient.

Enable recording when motion is not detected at selected frame rate. When Motion occurs recording frame rate goes to maximum automatically.

Click Next

7th Screen- "Action Summary"
This page of the camera setup wizard gives you a summary of all of the changes that you have made throughout the wizard. You should set up every camera that you have connected to your DVR one by one and disable the inputs that have nothing connected to them. The camera setup wizard only has to be run the first time that you install NVRSOft to setup all of your inputs or afterwards to make changes to camera names and/or motion detection, recording, etc, properties.
Click Next

8th Screen- “Wizard Complete” Congratulations, you have now setup your camera.

Video Adjustments:

Toggle Video Amplification Pane

Video adjustment can adjust every individual camera with its own settings.

End of Camera Configuration

Exclusivity Mode (Windows lock out feature):

Exclusivity Mode is to make sure that operator cannot get access to Windows operating system. On the other hand they can have access to NVRSof software only. This is to ensure uninterrupted server operation and stability eliminating the human error.

Exclusivity is a password protected function.
Chapter 5

How to Playback Video-
To playback recorder video
Right click on your server name
Choose tasks
Open archive

You can also
Right click on any camera view and
Choose open archive

Your archive pane will now open

Playback Window Structure-
Now that you are in the playback screen, the structure pane on the left lists all of the cameras that you have recordings for

To Navigate through the Video -
Double click on the camera you wish to playback (This camera will now appear with footage on the video screen)

The solid green line on the bottom represents time. The light green lines represent recorded video. The orange lines represent motion information.

Fast Forward & Rewind
You have a jog dial on the bottom of the screen, which you can drag in either direction to browse through your video in high speeds.
Another way to fast forward is to use the arrow controls on top of the screen in which you can define how many increments of time you would like to move through the video.

Playback Motion Only-
Located at the top of your Archive Pane, there are two buttons that allow you to seek video with actual motion in return saving you time.

With the camera you wish to review selected and showing in your video screen
Choose either "seek previous motion" or "seek next motion"
Smart Search-

You can also search through video not only by motion in the screen, but also by motion in a specific part of your camera screen. Through NVRSof’t playback screen, you can define a specific object in your view, or define a path, and seek through motion only in that specific region. This process is very commonly referred to as “smart search”.

Define motion of interest –

Click on the navigation menu at the top of the playback screen

Click on “Define region of motion interest”.

While having the left button continuously pressed, drag the mouse over the area you would like to see motion in (This will create a grid in that area). You can also select multiple regions.

Click on “seek to previous motion” or “seek to next motion” to search through motion in the defined area or areas.

End of Playback Video
Export Video:
To export video, you first have to select the section of recordings that you want to export to a different location (This will also prevent it from getting overwritten).
To select video
Click on Edit at the top of the playback screen
Click on Export Wizard

Choose which camera to export.
Choose compression.

Select the start and finish times of the video clip that you want to export.
The Wizard will guide to the next step for you do designate to which drive or folder to save the export video.

**Note:** To play back the NVRSoft AVI file, a codec (a small executable file) will have to be installed in order for your media player to recognize the NVRSoft video file. The codec can be downloaded from [http://www.NVRSoft.com/downloads.html](http://www.NVRSoft.com/downloads.html)

**Export Snapshots.**

Another way to export video is to save one frame at a time, like a snapshot.

First pause the video on the picture that you would like to copy,
Click on edit
Choose “save current frame as…”
Pick a location and filename for your image and
Click save.

Now you will have the image stored so that you can print, e-mail, or enhance that snapshot.

*End of Export Video*

**Layouts**
Individual Layouts can be activated by double-click on them with the mouse.

Users now can perform playback and other function by Right-click on the camera of their interest.

Create custom Layouts by grouping cameras from different DVR Servers/Locations into groups for more efficient monitoring, and better management.
For example group together all outdoor cameras from different location or all POS cameras from all registers.
Layout Sequences

When Layouts are created, they can be used for Sequencing. To create Sequences Right mouse click on Layout Sequences.

- Set time interval between layouts
- Choose given Layouts for adding them in a sequence.
- Manage priority or remove layouts of your choice.
Chapter 6

Upgrading NVRSF software to a newer Version.

To check for upgrades and new free versions you can always visit www.NVRSF.com.

Updating the software requires all DVR services to stop before Installation (see page 17-18). During the installation of the new version you will encounter the following message:

![Setup Window]

- **Recommended**
  - To keep all current configurations of your server

- To start a new database. By doing that all previous settings and configurations will be erased and a new database will be created.

After the above step you can continue with the installation. See Chapter 2
Enter Notes Here-

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Additional References:
For Your Records

Dealer Name:

Dealer Address:

Date Of Purchase:

Purchase Location:

Software Activation Key:

Dates Software Last Upgraded:

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