Introduction

To

GeoVision Digital Surveillance System

Technical Handbook
Part I

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System Barcode _____

(Located on the back of the GeoVision DVR unit)

Contact Information

Type of Contact	Phone	Email	Note
Sales Support	949-583-1519	sales@usavisionsys.com	
Technical Support	949-583-1519	support@usavisionsys.com	Please have your GV-DVR System barcode ready
Online Chat Support		www.usavisionsys.com	Click on "Live Help" button on the webpage to initiate session
Online FAQ		www.usavisionsys.com/support	
RMA	949-583-1519	rma@usavisionsys.com	

Service Contact Information

Distributor/ Vendor	Phone	Email	Note

Service Technician	Phone	Email	Note

Quick Links

Downloads	
V8.5 User Manual	GV-IP Device User Manual
V8.5 Installation Guide	GV-IP Device Firmware Download
V8.5 New Features Guide	GV-Mobile Application Download for Android
V8.5 Central Monitoring Solution User Manual	GV-Mobile Application Download for iPhone/iPad

Version History

Release No.	Date	Author	Revision Description
Rev. 1.0	7/04/08	Ed Chiu	Training Document
Rev. 2.0	7/14/09	Frank Chang	Training Document
Rev. 2.1	9/28/09	Frank Chang	Training Document edited
Rev. 3.0	11/5/10	Frank Chang	Training Document edited for v8.4 release
Rev. 4.0	11/8/11	Frank Chang	Training Document edited for v8.5 release

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1. General Information

1.1 Purpose

The purpose of the training document is to provide introductory technical training for GeoVision V8.5 surveillance software as well as video playback, remote viewing, and useful utility applications.

1.2 Scope

The scope of the training document covers the basic operations of Multicam main system, video playback via Viewlog, and remote viewing via Multiview.

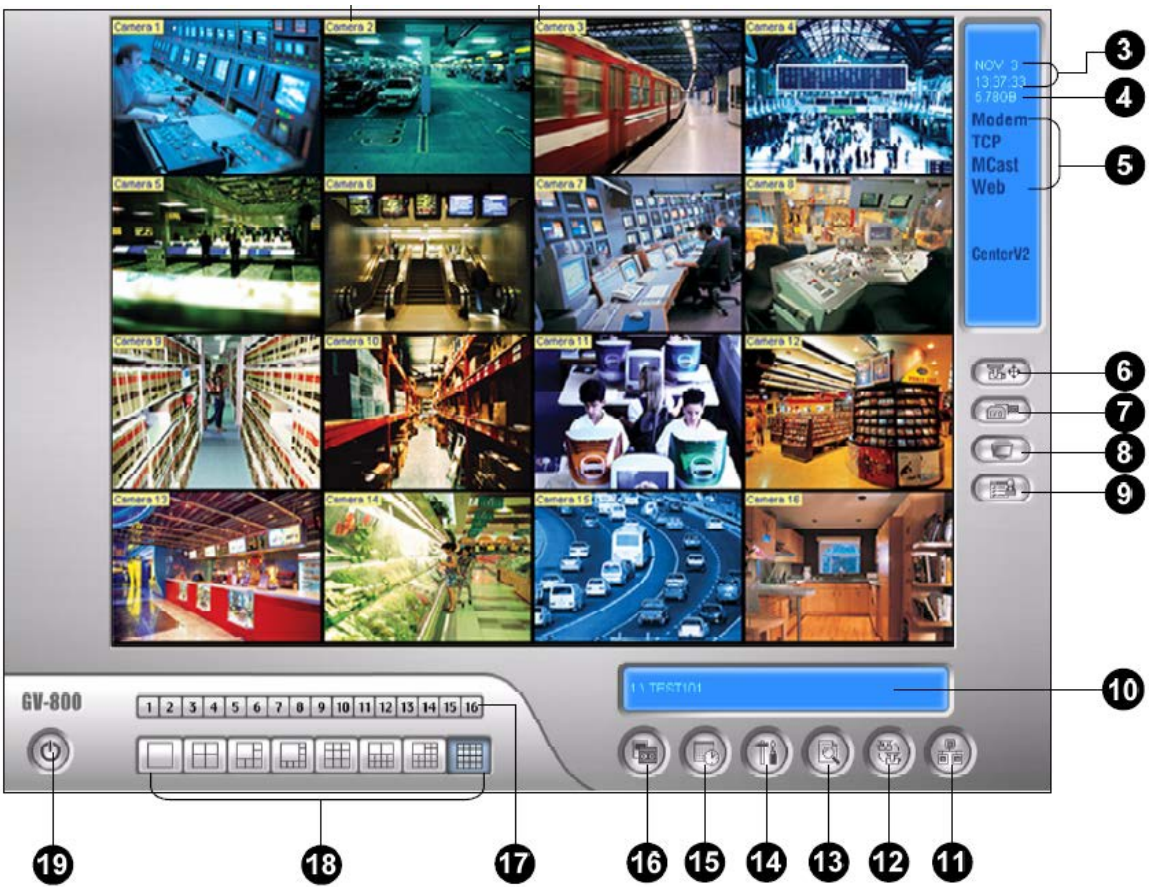
1.3 Naming and Definitions

AView v1.1	Android Phone/Tablet Viewer for Android v1.6 or later
iView v2.1.2	iPhone/iPad Viewer for iOS 4.3 or later
Eye v1.0	iPhone/iPad Viewer for iOS 4.3 or later (For GV-IP Devices)
Remote View v1.2.1	Blackberry Viewer for Blackberry OS v5.0 and v6.0
GView	Microsoft PDA Viewer for Windows Mobile 6/6.1
MSView	Microsoft Smart Phone Viewer for Windows Mobile 6/6.1
MultiCam	Main system software (Local)
MultiView	Remote live viewing software
POS Text Sender	Application for Windows-based POS systems
SSView	Symbian Phone Viewer
Remote ViewLog	Remote video playback software
ViewLog	Video playback software (Local)

1.4 Acronyms and Abbreviations

DDNS	Dynamic Domain Name Service
DHCP	Dynamic Host Configuration Protocol
DVR	Digital Video Recorder
FPS	Frames Per Second (image per second)
GV	GeoVision
IP	Internet Protocol
ISP	Internet Service Provider
LAN	Local Area Network
NVR	Network Video Recorder
POS	Point of Sale
PTZ	Pan Tilt Zoom
WAN	Wide Area Network

2. Main System



The controls in the main screen:

No.	Name	Description
1	Camera Number	Indicates the camera number matching the port number in the GV video capture card.
2	Camera Name	Indicates the given camera name.
3	Date/Time	Displays the current date and time.
4	Storage Space	Indicates the remaining disk space.
5	Connection	Indicates the connection status of remote applications.
6	PTZ Control	Displays the PTZ control panel.
7	I/O Control	Displays the I/O control panel.
8	TV-Out	Displays the TV Quad control panel.
9	User-Defined	Accesses other applications.
10	Location Name	Indicates the GV-System's name, usually named by its geographical location.

11	Network	Enables the connection to remote applications.
12	Camera Scan	Rotates through the screen divisions.
13	ViewLog	Brings up these options: Video/Audio Log, System Log, Search POS Data, POS Live View, Live Object Index, Search Object Index and E-Map.
14	Configure	Accesses System settings.
15	Schedule	Set up recording schedule.
16	Monitor	Starts monitoring.
17	Camera Select	Select the desired camera number for main division view.
18	Screen Division	Select screen divisions.
19	Exit	Brings up these options: Login/Change User, Logout, Minimize, Restart Multicam and Exit.

2.1 IP Camera Install

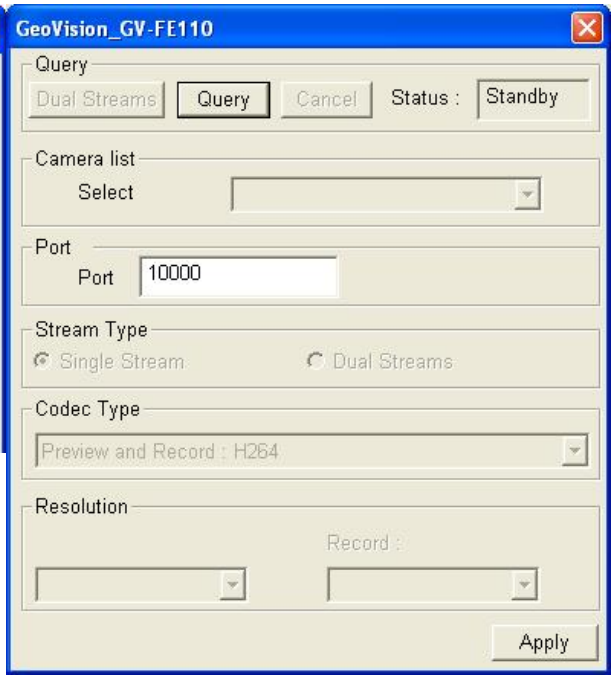
2.1.1 IP Device Setup

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Camera Install**", and then "**IP Camera Install**".

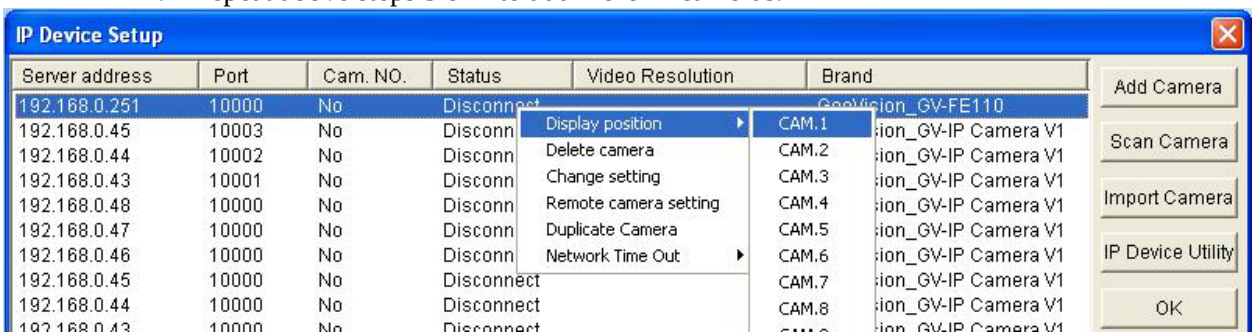
3. If IP address is available, select "**Add Camera**" to manually add the camera by entering the IP address, port, user name, password, and camera model manually.

   ✓ *GeoVision IP Device's default user name and password is* ***admin/admin***

4. Otherwise, select "**Scan Camera**" and "**Start Scan**".
   a. In the search result, double-click on the desired IP Camera and enter the "**User name**" and "**Password**" of the IP Camera.
   b. Select "**Query**".
   c. After the codec and resolution appears, click on "**Apply**".



d. Click on "**Close**" to exit Scan Camera window.
e. Right-click on the IP Camera in the IP Device Setup window.
f. Select "**Display position**" then map the camera to desired camera position.
g. When the status of the connection changed to "Connected", click on "**OK**".
h. Repeat above steps 3 or 4 to add more IP cameras.

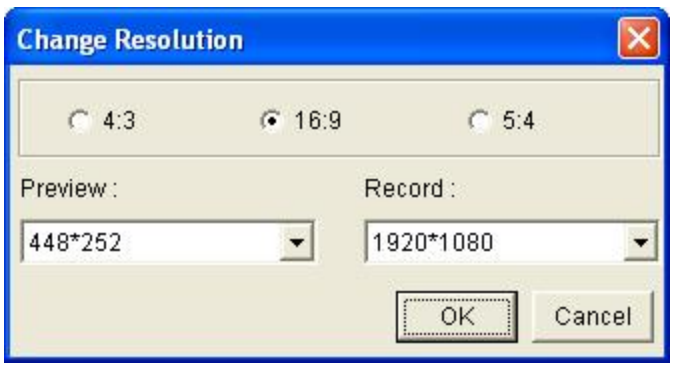


5. If any of the IP cameras added is a PTZ, proceed to step 8 in section 2.3.2 to enable PTZ control for the camera.

✓ For detailed instruction, refer to p.112 of v8.5 User Manual

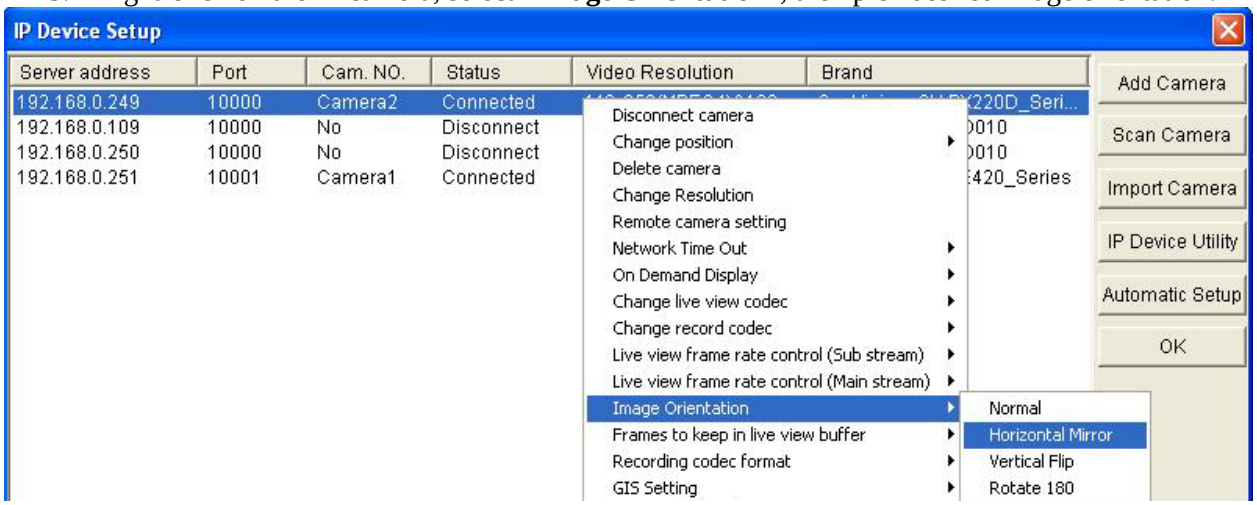
2.1.2 Image Resolution

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Camera Install**", and then "**IP Camera Install**".
3. Right-click on the IP camera, select "**Disconnect camera**" to stop camera stream.
4. After camera status shows *Disconnect*, right-click on the IP camera again to select "**Change Resolution**".
5. Select desired Preview and Record resolutions from the drop-down box.
6. Click "**OK**".
7. Reconnect the camera.



2.1.3 Image Orientation

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Camera Install**", and then "**IP Camera Install**".
3. Right-click on the IP camera, select "**Image Orientation**", then pick desired image orientation.



4. Click "**OK**" to exit IP Device Setup.

✓ For detailed instruction, refer to p.118 of v8.5 User Manual

2.1.4 Recording Codec

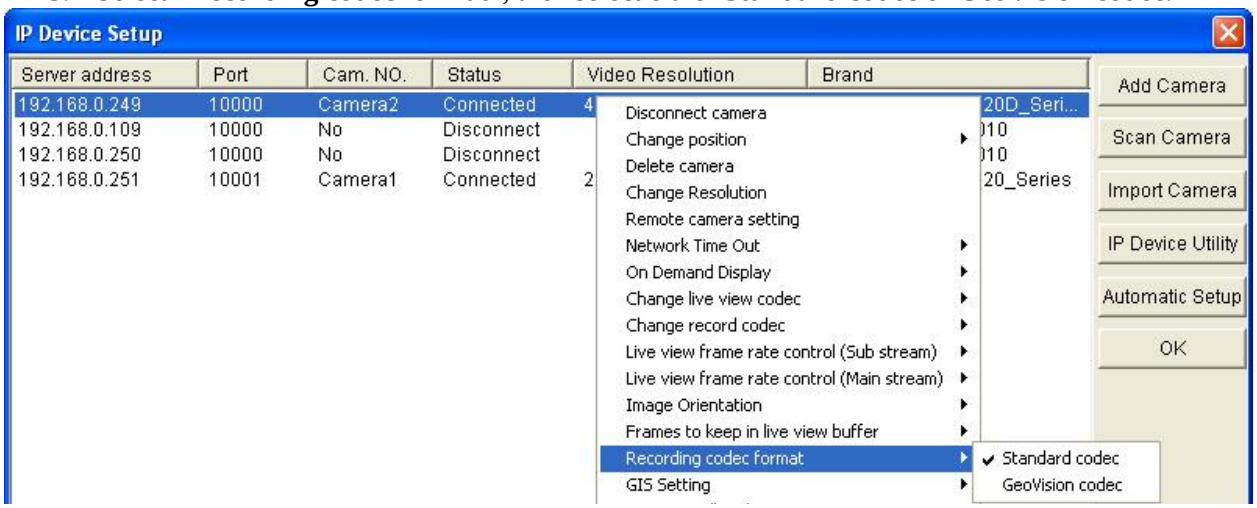
1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Camera Install**", and then "**IP Camera Install**".
3. Right-click on the IP camera, select "**Change record codec**", then select either **JPEG** or **H.264** codec.

✓ *H.264 offers higher compression rate; thus, lower bandwidth consumption and smaller video file size. JPEG, on the other hand, allows frame rate control options. (Refer to section 2.1.6)*

✓ For detailed instruction, refer to p.117 of v8.5 User Manual

2.1.5 Codec Format

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Camera Install**", and then "**IP Camera Install**".
3. Select "**Recording codec format**", then select either **Standard codec** or **GeoVision codec**.



- ✓ *Standard codec allows video clips to be played on any PC without requiring GeoVision codec. However, privacy mask, text overlay, digital watermark, or any video effect involving flashing alarm box will not be included in the video recording.*

- ✓ For detailed instruction, refer to p.117 of v8.5 User Manual

2.1.6 Recording Frame Rate Control

- ✓ By default, Multicam will record maximum frame rate received from IP Device. However, the following settings can be applied to cut down frame rates in order to preserve storage space.

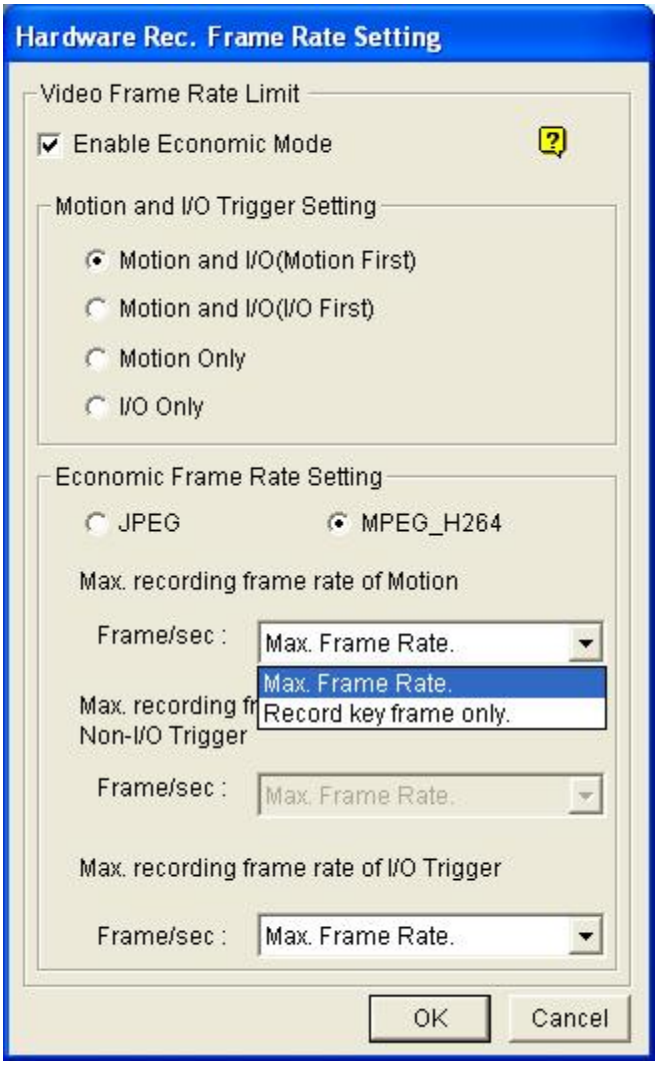
1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", then "**Camera Configure**".
3. Click on to bring up Frame Rate Setting window.

4. Check "**Enable Economic Mode**".
5. Under Economic Frame Rate Setting, select either **JPEG** or **MPEG_H264**.

✓ Codec type should correspond to recording codec selected for each camera in section 2.1.4

6. If **JPEG** is selected, under Max. recording frame rate of motion, select **desired FPS** to be recorded with each motion triggered recording.
7. If **MPEG_H.264** is selected, under Max. recording frame rate of motion, select **Record key frame only**.
8. Click "**OK**".
9. Click "**OK**" again to exit camera configure.

✓ For detailed instruction, refer to p.125 of v8.5 User Manual

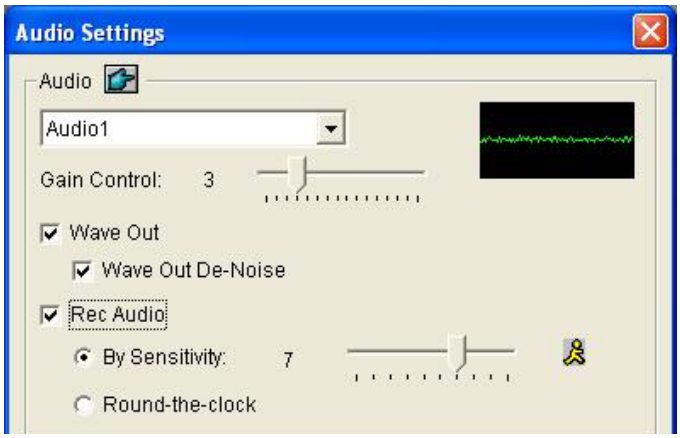


2.1.7 Audio Setup

1. In Multicam, click on "**Configure**" icon.
2. Select "**A/V Setting**" then "**Audio Settings**".
3. To enable audio output, check "**Wave Out**".
4. To enable audio recording, check "**Rec Audio**".
   a. Select audio recording trigger method with either "**By Sensitivity**" or "**Round-the-clock**".
   b. When record by sensitivity, adjust the audio detection sensitivity level.
   c. Adjust Gain Control to increase or decrease audio volume.
5. Click "**OK**".

✓ *High gain may result in increased noise and decreased audio quality.*

✓ For detailed instruction, refer to p.38 of v8.5 User Manual



2.1.8 Supported IP Device Brands List

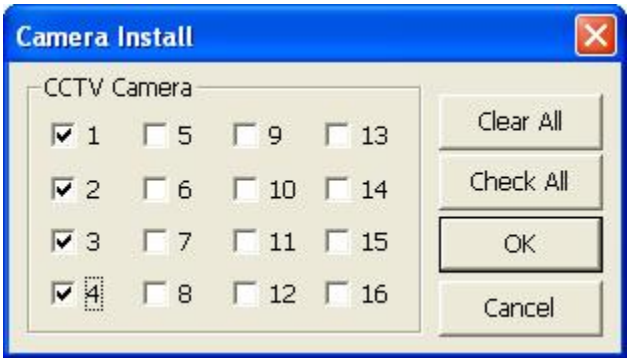
GeoVision v8.5 software supports the following IP device brands.
To view a specific list of IP device models supported associated with each brand, visit GeoVision's website at http://www.geovision.com.tw/english/4_21.asp

GeoVision
ACTi
Arecont Vision
AXIS
Bosch
Canon
CNB
D-Link
Etrovision
Hikvision
HUNT
IQinVision
JVC
MOBOTIX
Panasonic
Pelco
Samsung
Sanyo
SONY
UDP
Verint
VIVOTEK

2.2 Analog Camera Install

2.2.1 Camera Setup

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Camera Install**", and then "**Camera Install**".
3. Select cameras to be enabled then click "**OK**".



✓ For detailed instruction, refer to p.8 of v8.5 User Manual

2.2.2 Image Resolution

1. In Multicam, click on "**Configure**" icon.
2. Select "**A/V Setting**","**Video Source**".

3. Select desired resolution from the drop-down list for analog camera input.

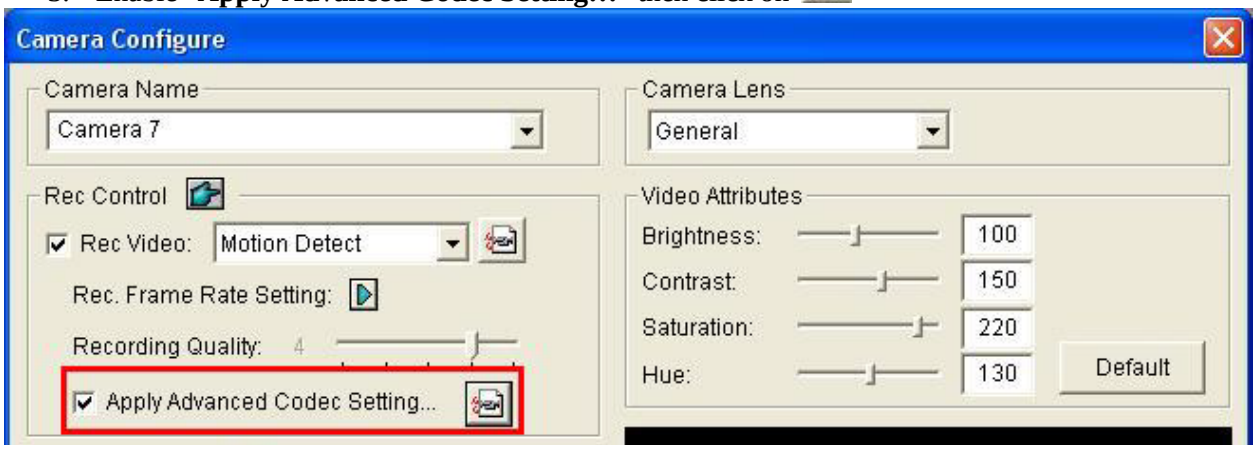
✓ *The video resolution above applies to analog cameras only.*

2.2.3 Recording Codec

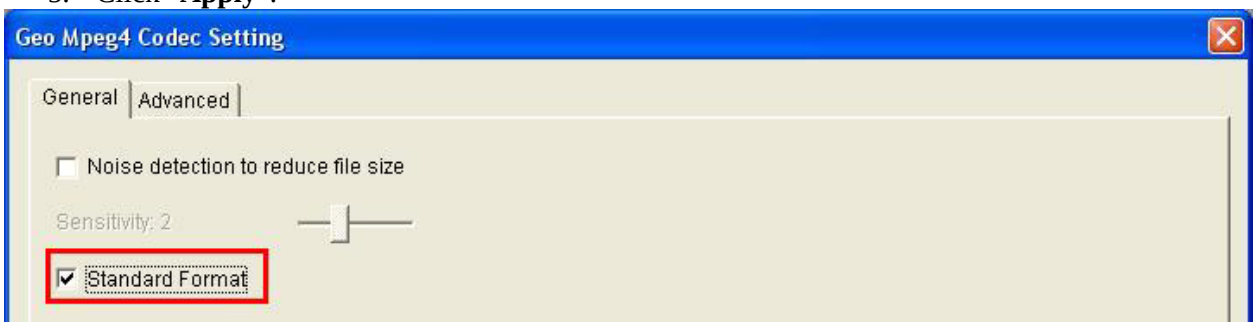
1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", and then "**Camera Configure**".
3. Under Rec Control, click on the first icon to select between **Geo MPEG4** or **Geo H.264** codec.

2.2.4 Codec Format

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", and then "**Camera Configure**".
3. Enable "**Apply Advanced Codec Setting…**" then click on



4. Under General tab, check "**Standard Format**".
5. Click "**Apply**".



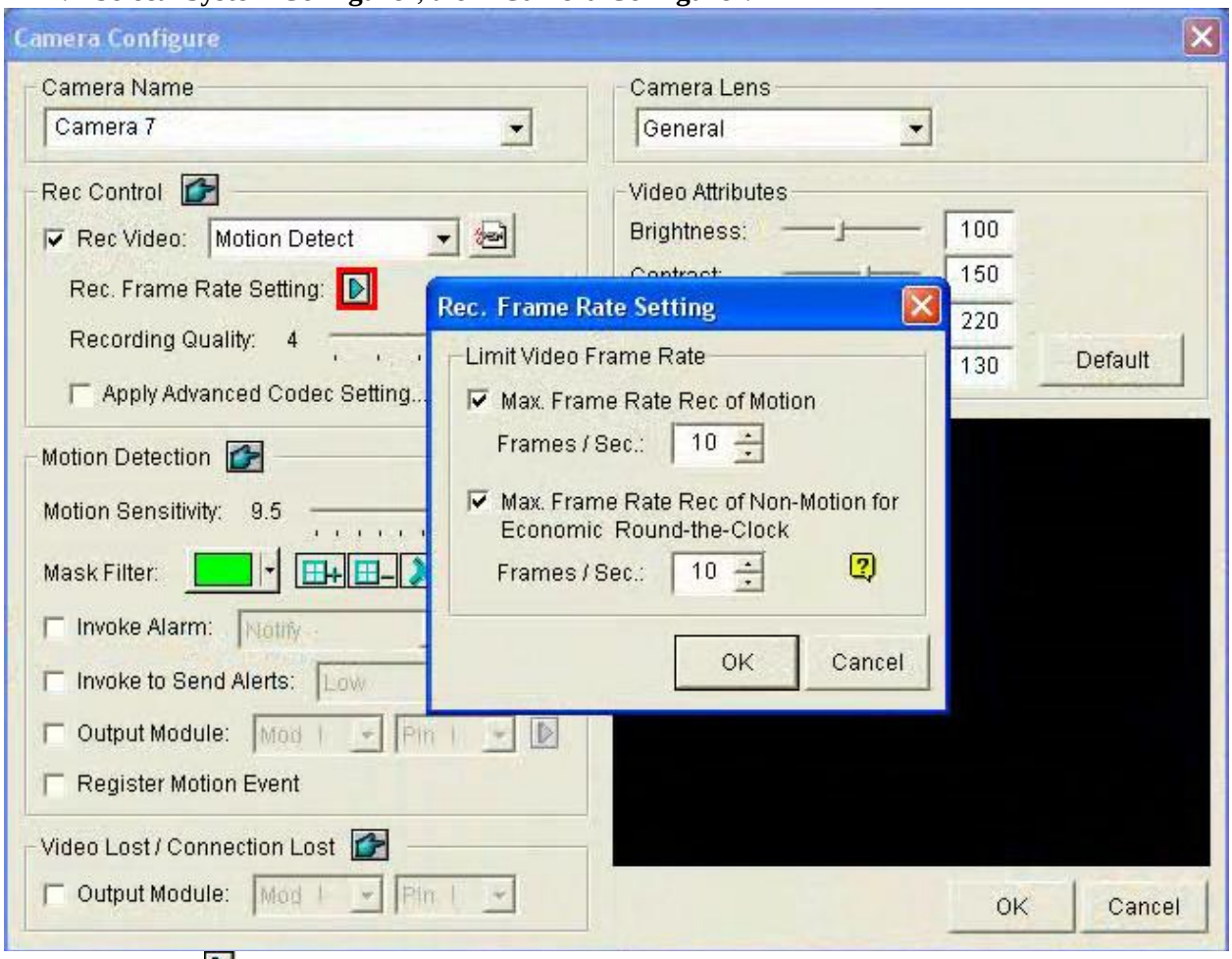
- ✓ *Standard codec allows video clips to be played on any PC without requiring GeoVision codec. However, privacy mask, text overlay, digital watermark, or any video effect involving flashing alarm box will not be included in the video recording.*

✓ For detailed instruction, refer to p.18 of v8.5 User Manual

2.2.5 Recording Frame Rate Control

- ✓ By default, Multicam will record maximum frame rate allowed base on the GeoVision video capture card. However, the following settings can be applied to cut down frame rates in order to preserve storage space.

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", then "**Camera Configure**".



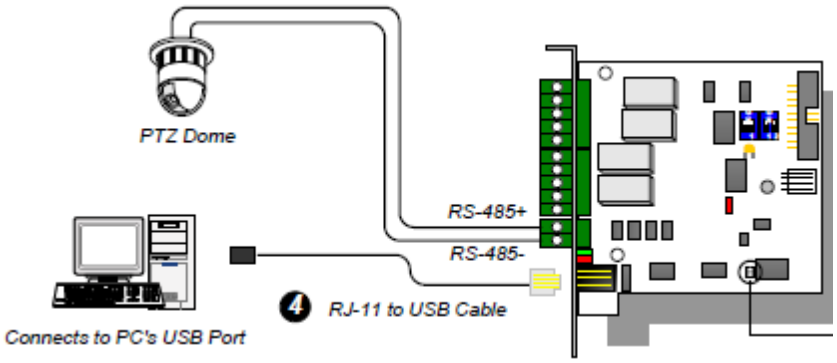
3. Click on ▶ next to Rec. Frame Rate Setting.
4. To lower frame rate for motion recording, check "**Max. Frame Rate Rec of Motion**" then adjust the desired frame rate.
5. To lower frame rate for no motion segments in round-the-clock recording, check "**Max. Frame Rate Rec of Non-Motion for Economic Round-the-Clock**" then adjust the desired frame.
6. Click "**OK**" to save settings.
7. Click "**OK**" to exit Camera Configure.

- ✓ For detailed instruction, refer to p.125 of v8.5 User Manual

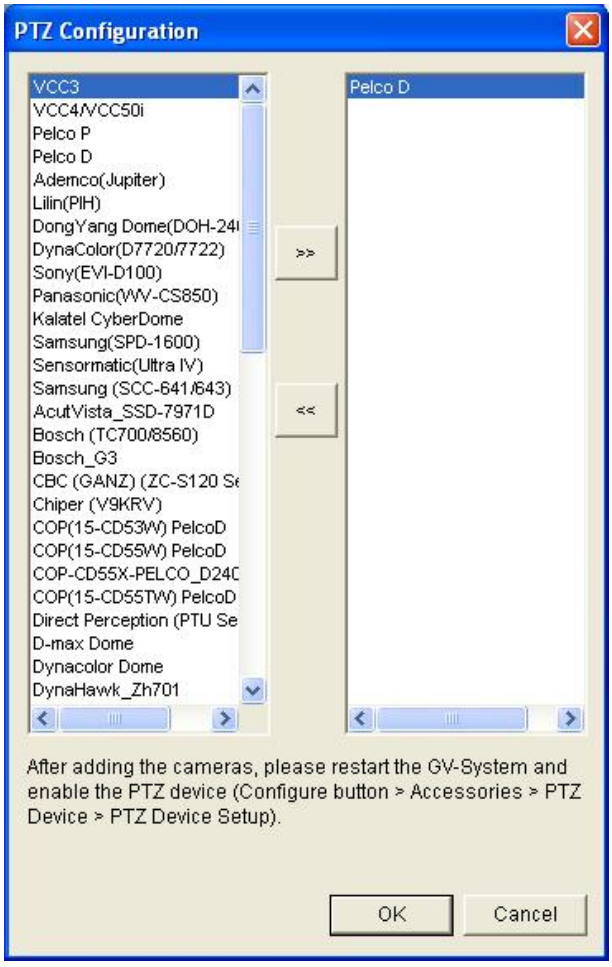
2.3 Analog PTZ Setup

2.3.1 Hardware Connection

1. Analog PTZ setup requires RS485 +/- connection from the PTZ camera to a GV-COM Box, GV-Net Card, or GV-Net I/O Card. For GV-DVR system, GV-Net I/O Card can be found in the back of the unit.



2. From GV-COM Box, GV-Net Card, or GV-Net I/O Card, it is necessary to connect a RJ45 to RS232 cable or a RJ45 to USB cable to establish a connection to the DVR.
3. If RJ45 to USB cable is used, check under Device Manager for the correct COM port created.
    a. To access Device Manager, right-click on **My Computer**, select **Manage**, then select **Device Manager**.
    b. If RJ45 to RS232 cable is used, COM 1 is the default COM port.

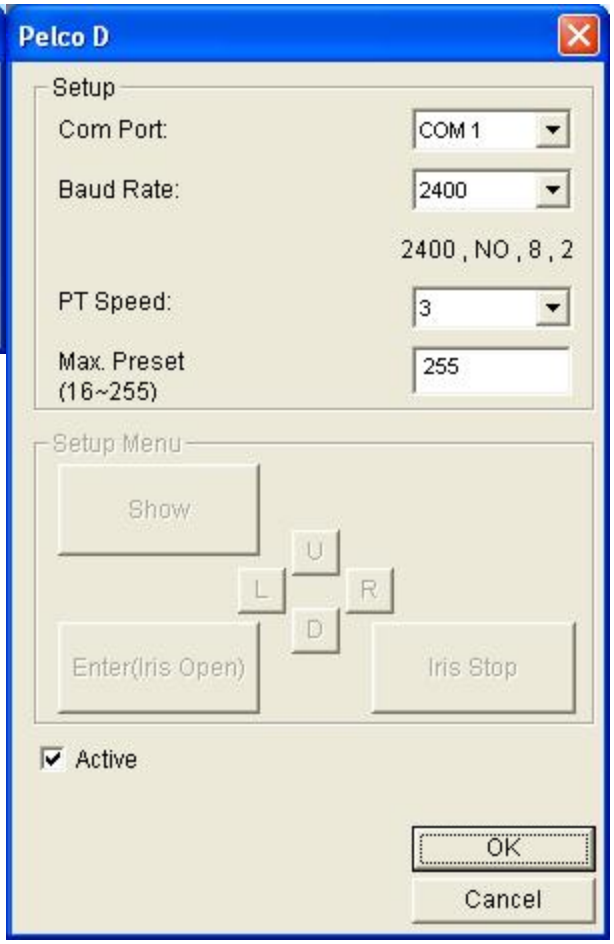


2.3.2 Multicam Setup

1. In Multicam, click on the "**Configure**" icon.
2. Select "**Accessories**", "**PTZ Device**", "**Add/ Remove PTZ**".
3. Select the appropriate PTZ protocol from the list on the left then click on ">>" to enable the PTZ protocol.
4. Click "**OK**".
5. Restart Multicam by Last Settings.

    ✓ *To verify PTZ protocol, refer to PTZ manufacturer user manual, technical document, or check with PTZ manufacturer directly. You may also find tested PTZ models in the next section.*

6. Click on the "**Configure**" icon.
7. Select "**Accessories**", "**PTZ Device**", "**PTZ Device Setup**".
8. Place a checkmark by "**PTZ Device Setup**". Then select corresponding PTZ protocol in the drop-down list.



9. Click on "**PTZ Setup**" button above.
10. Check "**Active**".
11. Select "**COM Port**" for which the PTZ camera is connected through (refer to 2.2.1 step 3), and then select "**Baud Rate**" that matches the PTZ baud rate.
12. Click "**OK**".

    ✓ *To verify PTZ baud rate, refer to PTZ manufacturer user manual for options. It is typically setup via dipswitches on the PTZ camera.*

13. Repeat above steps to add multiple PTZs using different protocols and COM ports.

    ✓ *For multiple PTZ cameras (with the same protocol) connected via the same COM port, it is necessary to assign a different ID (address) to each PTZ camera. In general, ID for each camera can be set via dipswitches on the PTZ camera.*

14. At this stage, a PTZ button should appear on the right side of Multicam. Click on the button to bring up PTZ control panel to control PTZ via Multicam.

    ✓ *To control a different PTZ, select the address of the PTZ from the drop-down list corresponding to the desired PTZ.*

    ✓ *If PTZ camera cannot be controlled, verify your hardware connection first. Then, verify that the protocol, COM port, and baud rate settings for your PTZ cameras are correct.*

2.3.3 Camera Mapping

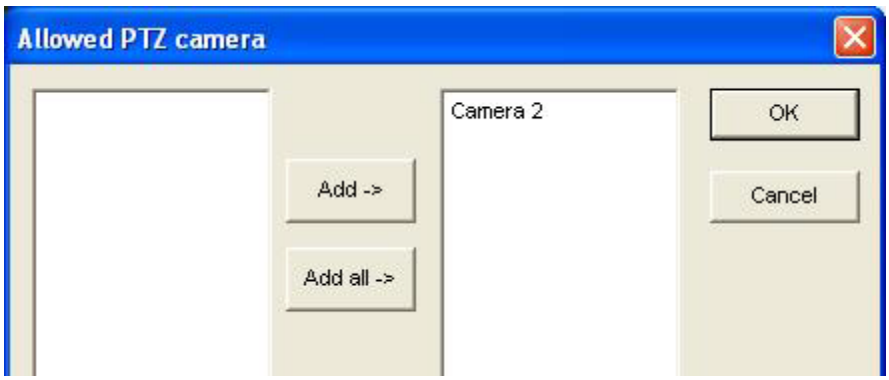
For DVR systems with more than one PTZ cameras, PTZ camera mapping will allocate each PTZ to its respective channel base on the physical address assigned.

1. In Multicam, click on the "**Configure**" icon.
2. Select "**Accessories**", "**PTZ Device**", "**Camera Mapping PTZ Dome**".

3. Under Camera Mapping Setup window, select the camera number with PTZ camera, then select corresponding "**Device**" and "**Address**" for the PTZ camera from the drop-down list.
4. Repeat step 3 for each PTZ camera on the system.
5. Click "**OK**".

2.3.4 Webcam Control

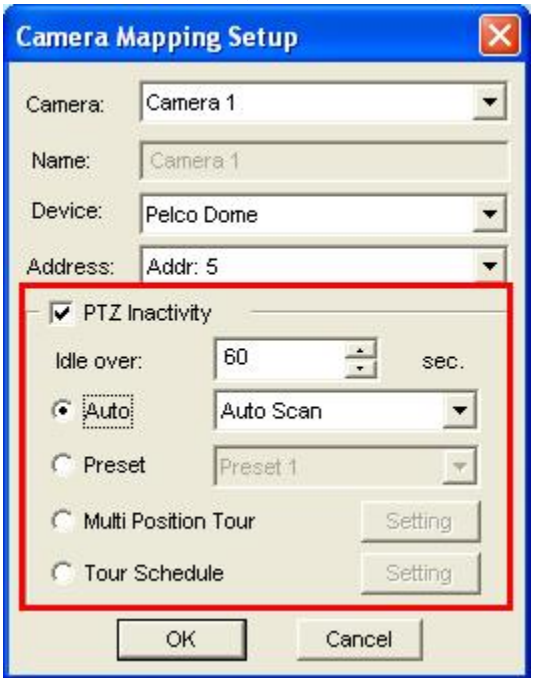
1. In Multicam, click on the "**Network**" icon.
2. Select "**Webcam Server**" to bring up Server Setup window.
3. Select "**Video**" tab, then click on "**Allowed PTZ camera**".
4. Select individual camera to add or click on "**Add all**".
5. Click "**OK**".
6. Click "**OK**" again to exit Server Setup.



✓ For detailed instruction, refer to p.86 of v8.5 User Manual

2.3.5 Idle Protection

1. In Multicam, click on the "**Configure**" icon.
2. Select "**Accessories**", "**PTZ Device**", "**Camera Mapping PTZ Dome**".



1. Select the Camera to apply idle protection.
2. Check "**PTZ Inactivity**".
3. Select the time period before idle protection activates.
4. Select the desired function when idle protection starts by checking "**Auto**", "**Preset**", "**Multi Position Tour**", or "**Tour Schedule**".
    a. "**Auto**" allows the PTZ camera to Auto Scan, Frame Scan, or Random Scan.
    b. "**Preset**" will move the PTZ camera to a preset position.
    c. "**Multi Position Tour**" allows the PTZ camera to dwell over a series of preset points with the ability to set dwell time for each location.
    d. "**Tour Schedule**" allows customized schedule for PTZ inactivity.
5. Click "**OK**".
6. Click "**OK**" again to finish setup.

✓ For detailed instruction, refer to p.87 of v8.5 User Manual

2.3.6 Compatible PTZ Camera List

PTZ Protocol and Model
AcutVista SSD-7971D
Ademco (Jupiter)
Bosch G3
Bosch (TC700 / 8560)
Canon VCC3
Canon VCC4 / VCC5i
CBC GANZ (ZC-S120 Series)
Chiper (CPT-V9KRV)
COP(15-CD53W) Pelco D
COP(15-CD55TW) Pelco D
COP(15-CD55W) Pelco D
COP(CD55X) Pelco D
Direct Perception (PTU Series)
D-max Dome
DongYang Dome (DOH-240)
DynaColor (D-7720 / 7722)
DynaColor Dome
Dynacolor DynaHawk-ZH701
ELBEX (Matrix / 1000)
Elmo PTC-200C
Elmo PTC-400C
Elmo PTC-1000
EverFocus (EPTZ 1000 / 500)
Eyeview T-Power (T2-SA27)
GKB (SPD-221)
HiSharp Pelco D
HiSharp Pelco P
JEC Dome
JVC (TK-S576B / S655 / C686E)
Kalatel CyberDome

Kampro Technology (K-ZC23)
KenKo (DMP23-H1)
LG (LPT-OS553HQ)
Lilin PIH
Lilin PIH-7625
Lilin PIH-820
MESSOA SDS600 Series
MESSOA D-700 Series
Minking Dome
Mintron (54G2AHN/P)
NanWang (NVD 2300PNT)
NanWang V4.1 (NVD 2300PNT)
Panasonic WV-CS850
Panasonic WV-CW960
Pelco Dome
Pelco (Spectra III)
Pelco Spetra Mini Dome (SD4-WO)
Pishion 22X
PTZ in I/O
RX214D
SAE (DR-E588)
Samsung (SCC-641 / 643)
Samsung SPD-1600
Samsung SPD-3300
Sensormatic (Ultra IV)
Sony (EVI-D100)
StorVision PTZ
TOA (CC551)
VDI CT-58SPD
VIDO.AT Dome
YAAN Dome
360 Vision (ViD-18COP04) Pelco P

- ✓ *For PTZ cameras not listed above, users may try using generic protocols such as Pelco D or Pelco P. However, please be aware that generic protocols may or may not be able to perform full functions in OEM PTZ cameras. Thus, users may observe loss of certain advanced features (such as OSD menu and auto-touring etc), if available.*

2.3.7 Compatible Object Tracking PTZ Camera List

Dual-Camera Tracking (Object Tracking and Zooming)

Brand / Model
AcutVista SSD-7971D
Dynacolor DynaHawk Zh701
GeoVision IP Speed Dome
Messoa SDS600 Series
Messoa D-700 Series
Pelco Spectra III
Sensormatic Ultra IV
VIDO. AT Dome

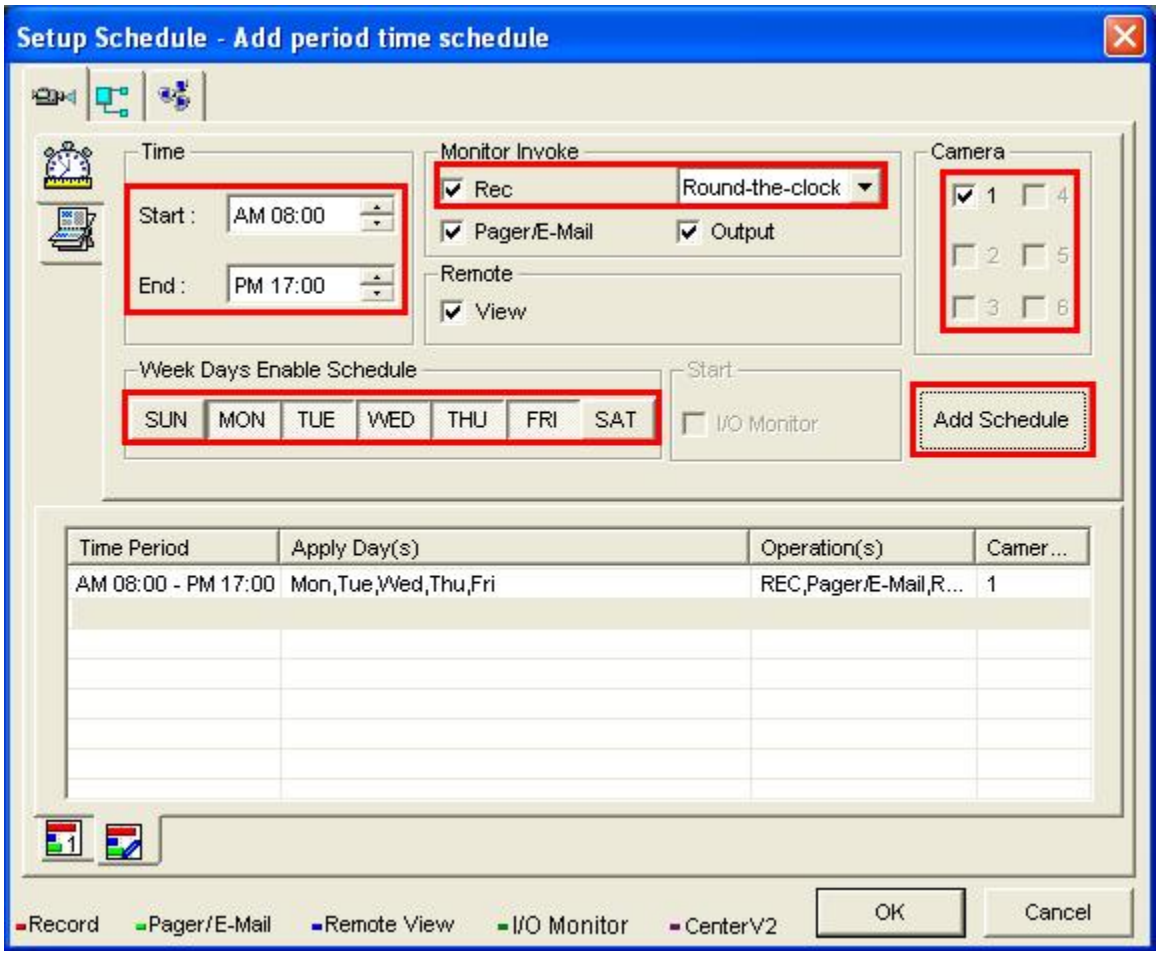
Advanced Single Camera Tracking

Brand / Model
AcutVista SSD-7971D
COP(15-CD55W) Pelco D
GeoVision IP Speed Dome
Lilin (PIH-7625)
Messoa D-700 Series
Pelco Spectra III
VIDO.AT Dome

2.4 Scheduled Events

2.4.1 Schedule Recording

1. In Multicam, click on "**Schedule**" icon.
2. Select "**Schedule Edit**".

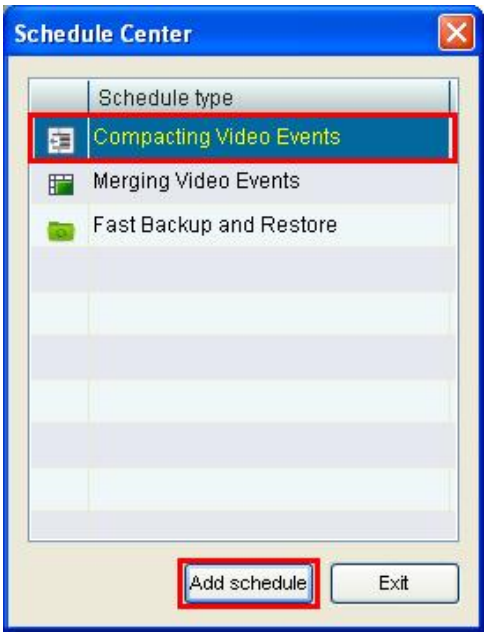


3. To setup basic recording schedule:
    a. Select schedule time period.
    b. To record video during this time, check "**Rec**" and select either "**Motion Detect**" or "**Round-the-clock**" recording.
    c. Check the camera(s) on the right to be applied under the schedule.
    d. Select days of the week in which schedule will be applied.
    e. Select "**Add Schedule**" to apply schedule settings.
    f. Highlight any existing schedule and press "**Delete**" key on keyboard to remove schedule.
4. Click "**OK**".
5. Click on "**Schedule**" icon in Multicam then select "**Schedule Start**" to start recording by schedule.

✓ For detailed instruction, refer to p.64 of v8.5 User Manual

2.4.2 Compact Video

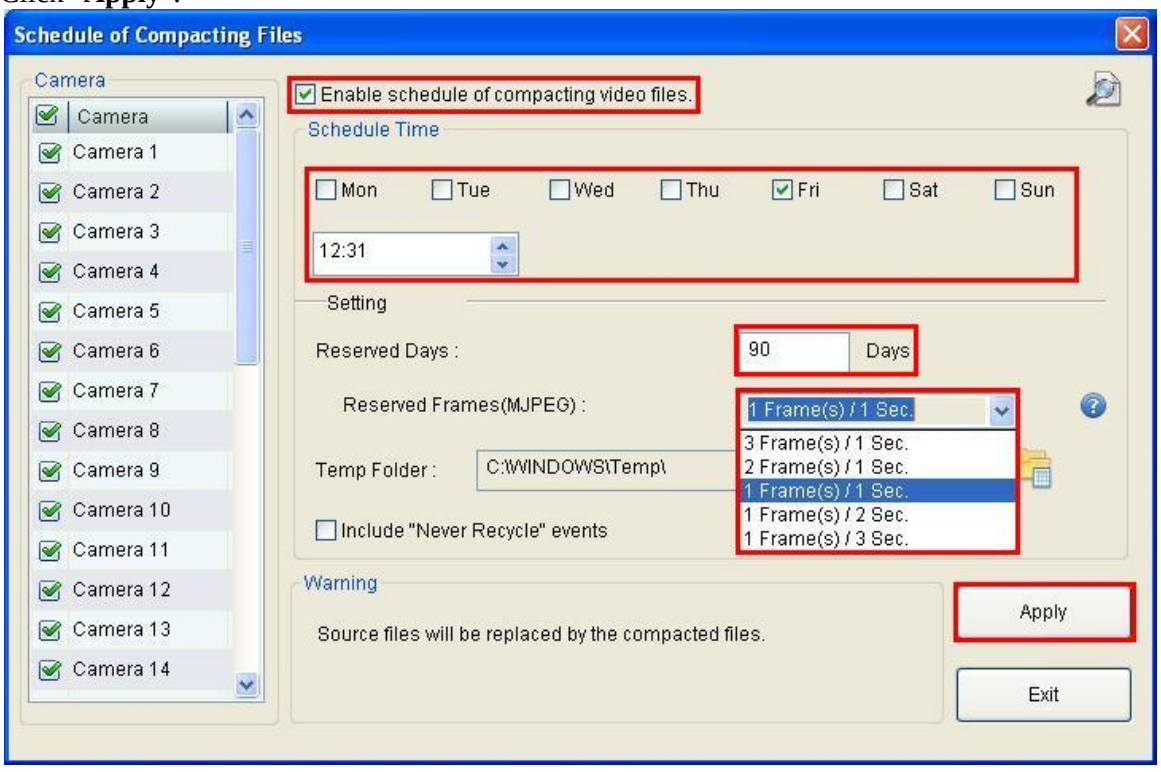
Compact Video allows DVR to compact archived video clips by reducing frame rate on a daily schedule. Utilizing Compact DVR will reduce the size of archived video files while increasing the storage days on the DVR.



1. In Multicam, click on "**Schedule**" icon.
2. Select "**Schedule Center**".
3. Select "**Compact Video Events**".
4. Click "**Add schedule**".
5. Select the cameras on the left to apply Compact Video.
6. Check "**Enable schedule of compact video files**".
7. Under Schedule Time, select the day(s) of the week and time in which Compact Video will take place.
8. Select Reserved Days (default 90).

✓ *Reserved days indicate the time period in which original video will be kept before compacted.*

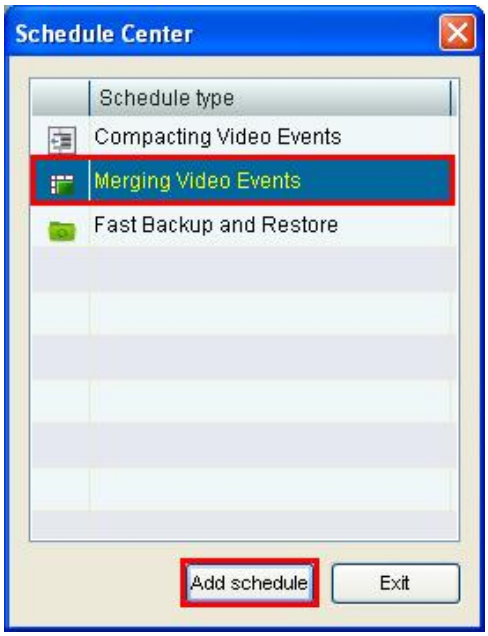
9. Select Reserved Frames (default 1 FPS).
10. Click "**Apply**".



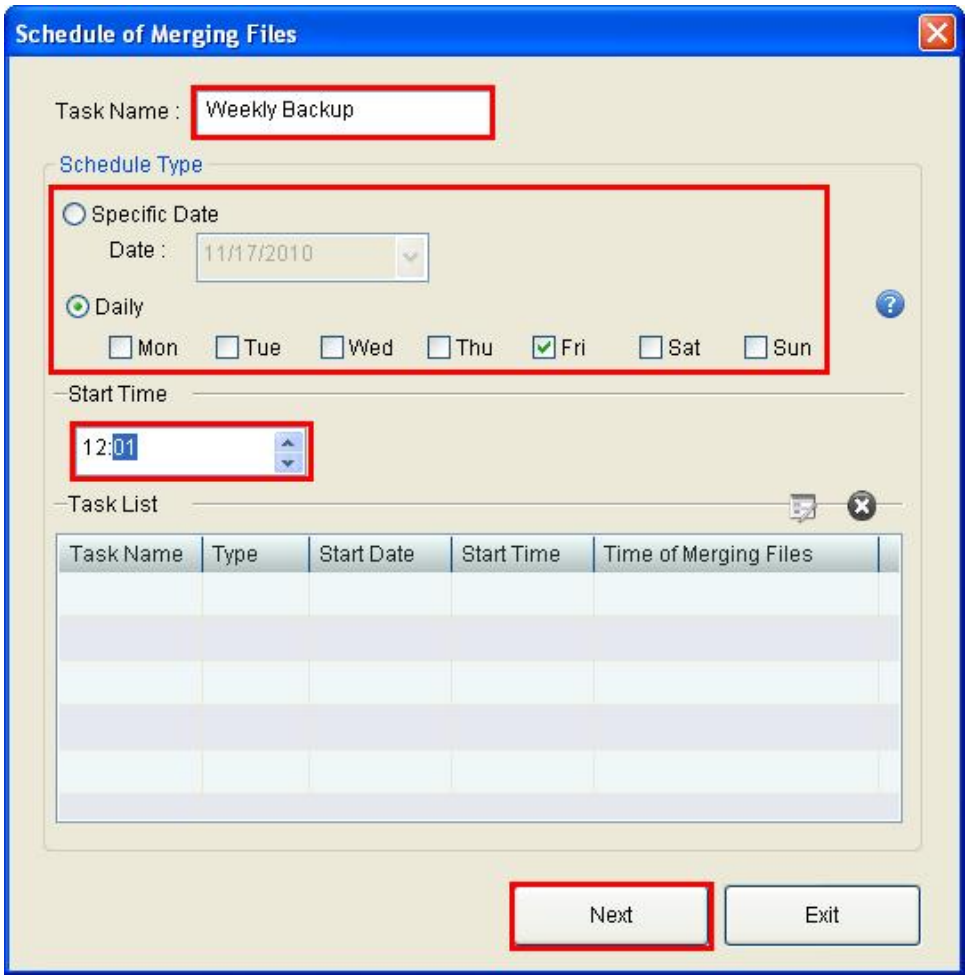
✓ For detailed instruction, refer to p.69 of v8.5 User Manual

2.4.3 Merging Video

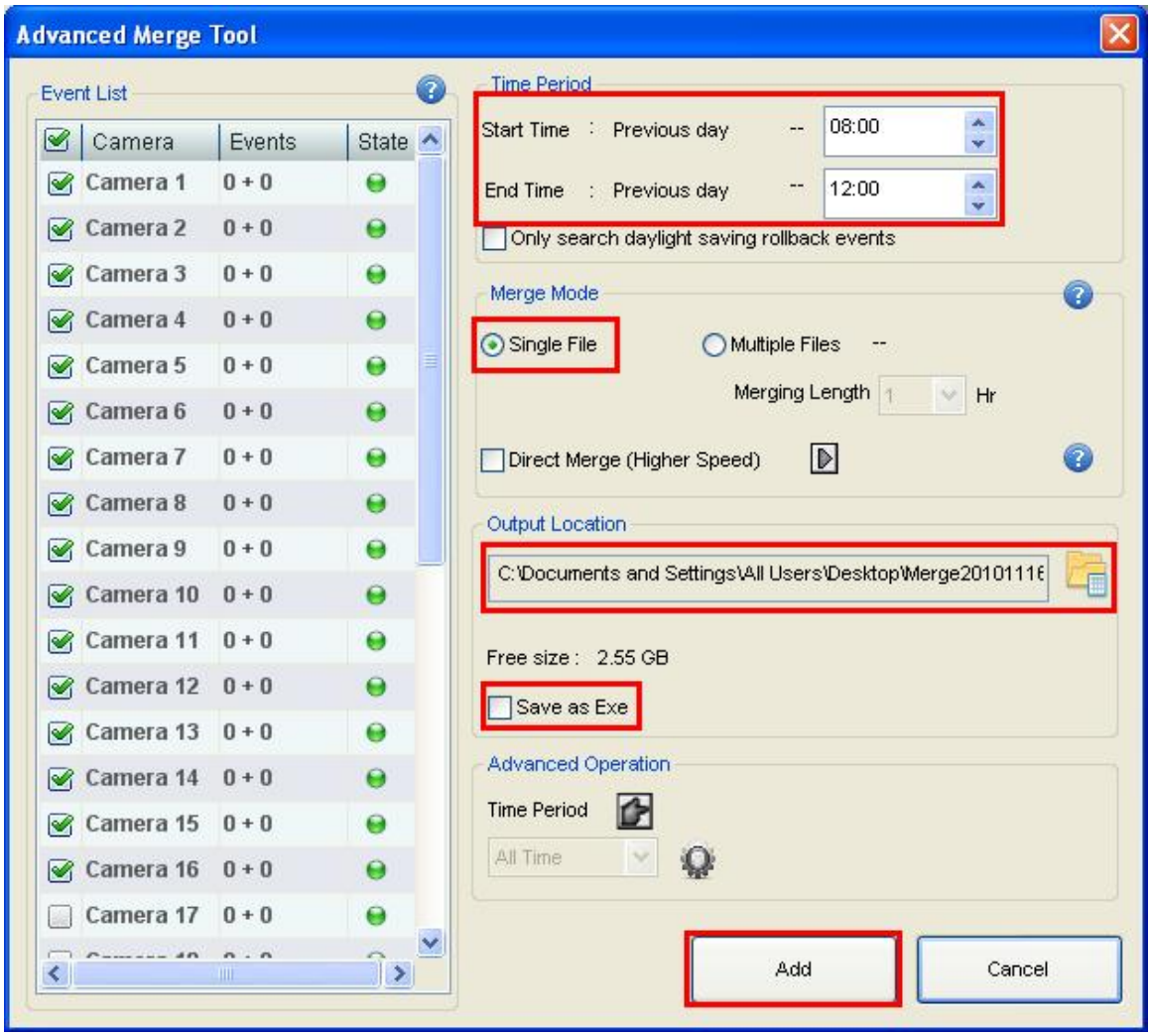
Merging Video allows DVR to automatically merge predefined video on a certain day or on a daily basis to a specific location on the hard drive. It can also be used for backup or review.



1. In Multicam, click on the "**Schedule**" icon.
2. Select "**Schedule Center**".
3. Select "**Merging Video Events**".
4. Click "**Add schedule**".
5. Name the merging schedule.
6. Under Schedule Type, select a specific date or pick the days of the week to perform merging.
7. Enter Start Time in which merging file will begin.
8. Click "**Next**".



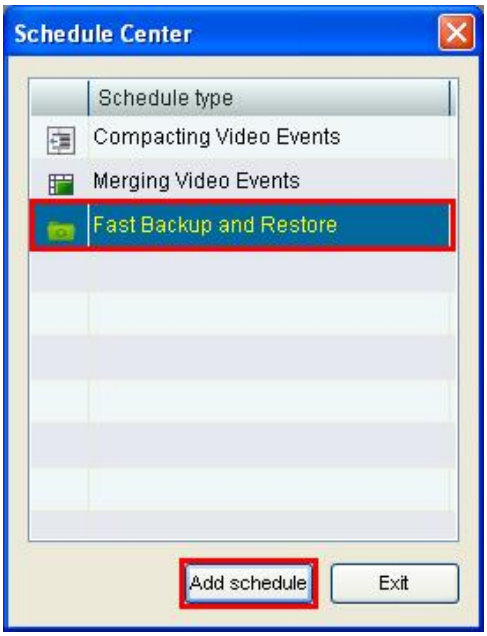
9. Click "**Next**".
10. Select the cameras on the left to apply Merging Video.
11. Designate the time period of the previous day in which files will be merged.
12. Select **Single File** or **Multiple Files** to create one or multiple clips from the time period selected.
13. Select the "**Output Location**" in which the merged file will be stored.
14. Select "**Save as Exe**" to save the merged file with GeoVision video codec in .exe format.
15. Click "**Add**" to add the schedule.



✓ For detailed instruction, refer to p.73 of v8.5 User Manual

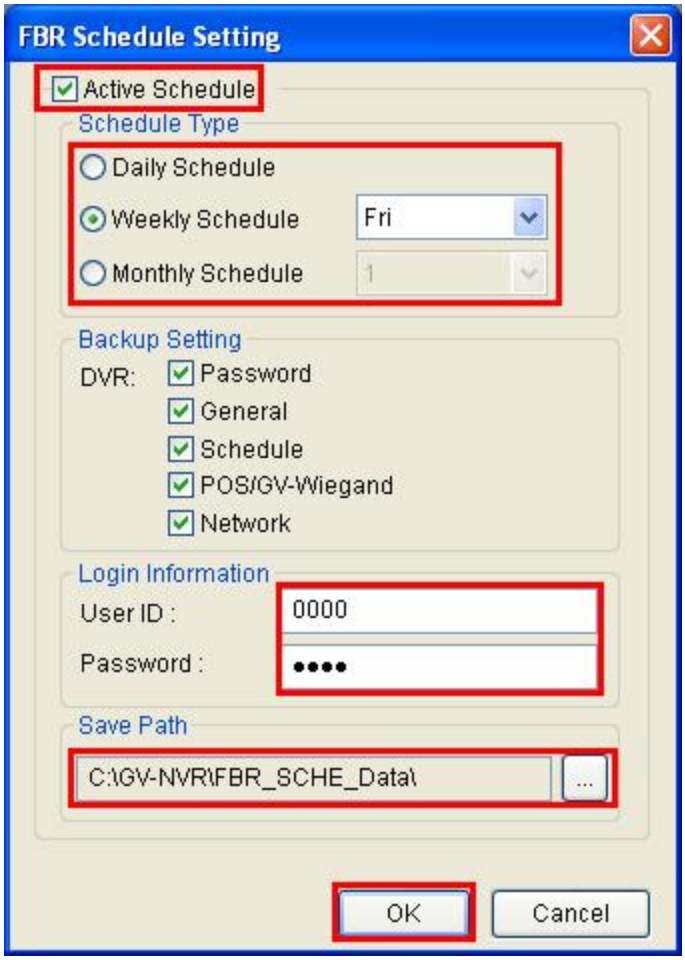
2.4.4 Fast Backup and Restore

Fast Backup and Restore can be performed automatically by daily, weekly, or monthly schedule. Backing up system settings regularly via scheduled FBR creates restore points if software errors do occur in the future.



- ✓ *Refer to Section 5.5 Fast Backup and Restore for features and manual setup*

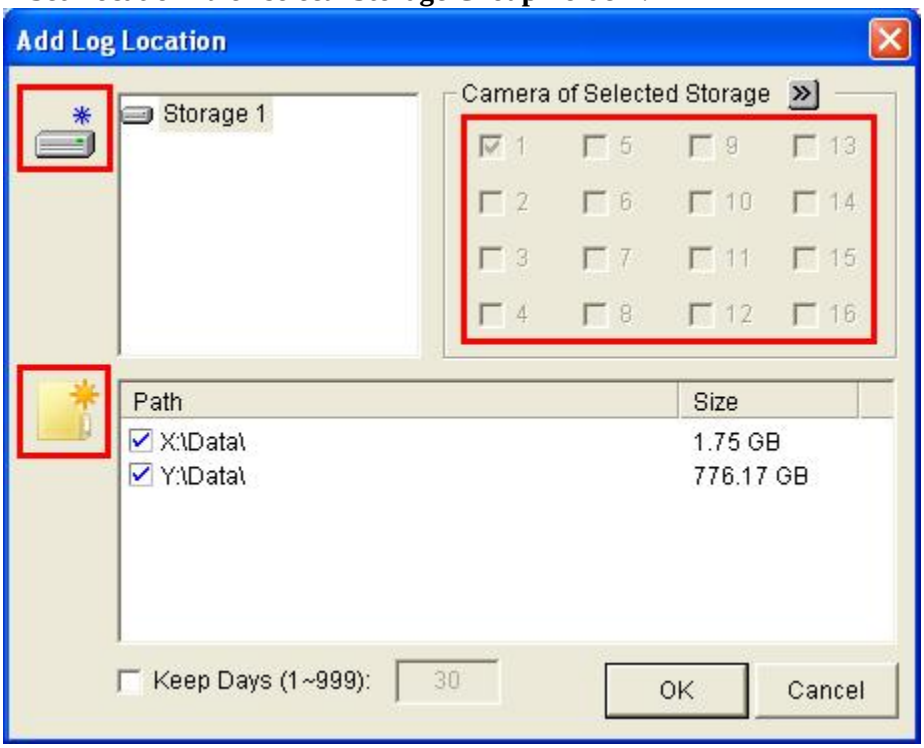
1. In Multicam, click on "**Schedule**" icon.
2. Select "**Schedule Center**".
3. Select "**Fast Backup and Restore**".
4. Click "**Add schedule**".
5. Check "**Active Schedule**".
6. Select Daily, Weekly, or Monthly schedule to perform Fast Backup and Restore.
7. Enter DVR's **ID** and **Password**.
8. Under Save Path, select the storage patch in which FBR files will be saved into.
9. Click "**OK**".



- ✓ For detailed instruction, refer to p.76 of v8.5 User Manual

2.5 Video Storage Location

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**" then "**General Setting**".
3. Click on "**Set Location**" then select "**Storage Group Folder**".



4. To add new storage partition:
   a. Click on button, a new storage should appear.
   b. To assign cameras to this storage, check the camera numbers on the right.
   c. Click on button. In the Select Path window, select a folder located in the desired hard drive. (If this is a new hard drive, create a new folder first in this hard drive through My Computer prior to this step).
   d. Repeat steps **a** to **d** to add more storage partitions.
5. To remove extra storages, select the storage then click on "**Remove Storage**" button.
6. To remove extra paths, select the path then click on "**Remove Path**" button.
7. Click "**OK**".
8. Click "**OK**" again to finish setup.

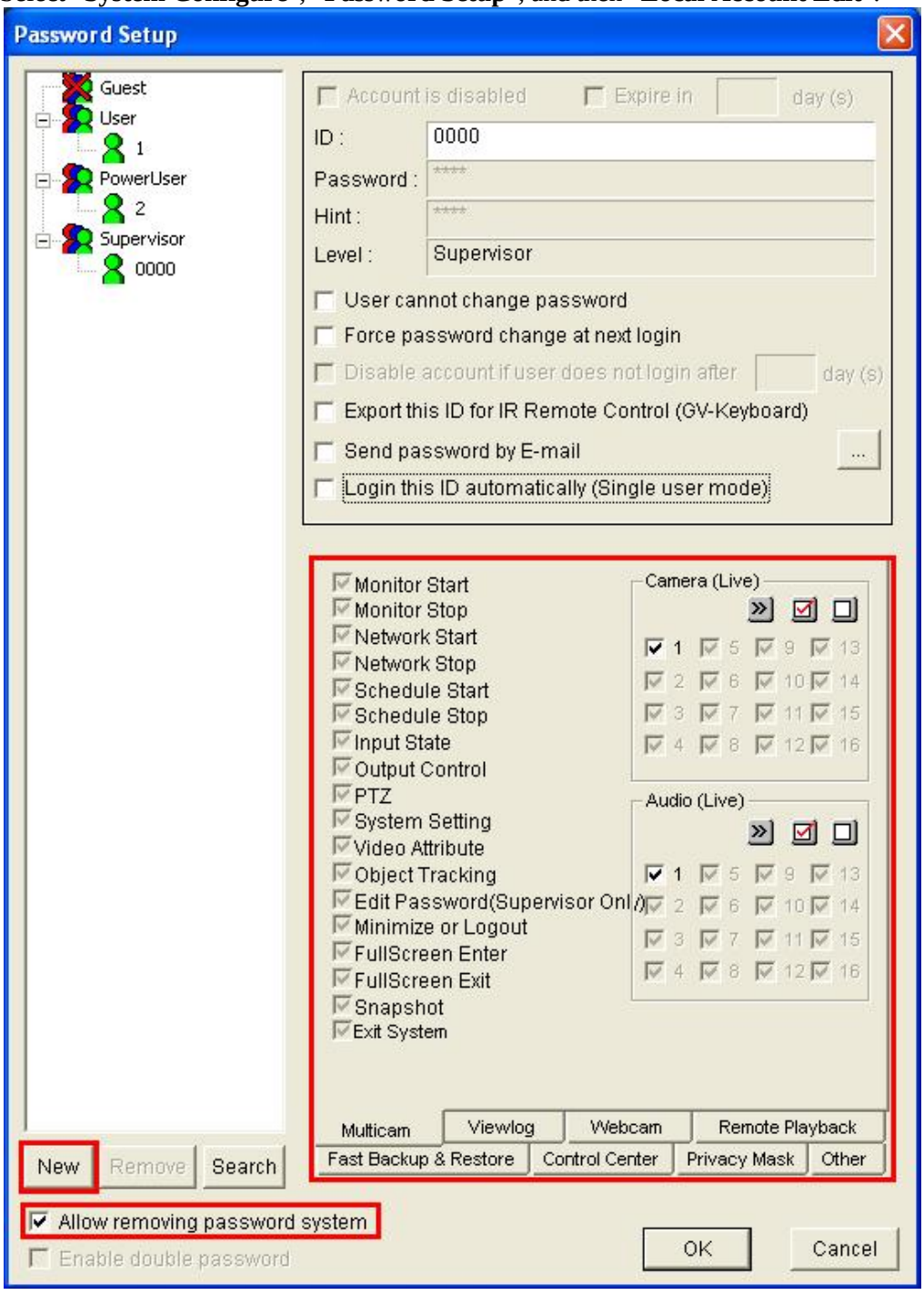
✓ For detailed instruction, refer to p.15 of v8.5 User Manual

2.6 Account and Password

2.6.1 Password Setup

✓ Default user name and password for GV-DVR/NVR System is 0000 and 0000

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", "**Password Setup**", and then "**Local Account Edit**".



3. To create a new account:
    a. Click on "**New**" button, type in user name, password, password confirmation, then designate the privilege level of the account (User, Power User, or Supervisor).
    b. Click "**OK**" to create the account.
    c. Customize account privilege for each application on the right.
    d. Check "**Allow removing password system**" to enable password removal utility.

✓ For detailed instruction, refer to p.46 of v8.5 User Manual

✓ *Please note that "Allow removing password system" option is critical if system admin may forget or unable to retrieve any of the Supervisor account password in the future. With this option checked, user can run password removal utility to remove password database. If not, user may only remove password database by reinstalling Windows OS or performing system recovery on GV-DVR/NVR Systems.*

2.6.2 Startup Auto Login

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", then "**Startup**".
3. Check "**Startup Auto Login**" option to allow Multicam to automatically login with user-defined account when system starts up.
4. Click on .

5. Enter ID and Password for auto login.
6. Click "**OK**"

✓ For detailed instruction, refer to p.54 of v8.5 User Manual

2.7 Automated System Process

2.7.1 System Idle Protection

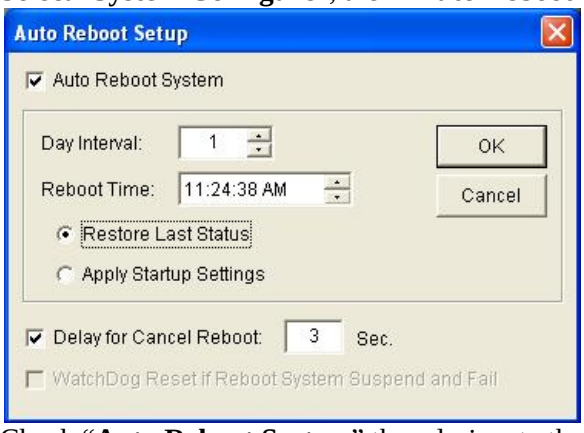
1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**" -> "**System Idle Protection Setting**".

3. Adjust the time period before System Idle Protection activates.
4. Check "**Auto Logout or Switch to Startup Login User**" to allow system to log back in using Startup Auto Login account. (Refer to section 2.6.2)
5. Check "**Auto Monitoring**" to allow system to start recording automatically.
6. Check "**Auto Network Services**" to allow network services to start automatically.
7. Click "**OK**".

✓ For detailed instruction, refer to p.55 of v8.5 User Manual

2.7.2 Auto Reboot Setup

1. In Multicam, click on "**Configure**" icon.
2. Select "**System Configure**", then "**Auto Reboot Setup**".



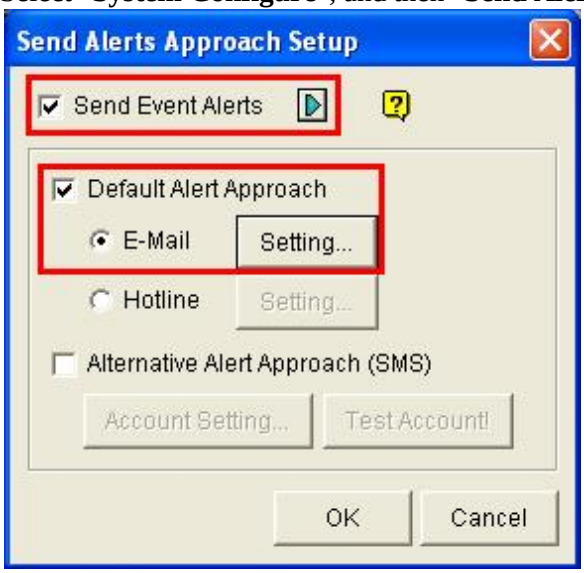
3. Check "**Auto Reboot System**" then designate the reboot frequency, time, and status after reboot.
4. Click "**OK**".

✓ For detailed instruction, refer to p.29 of v8.5 User Manual

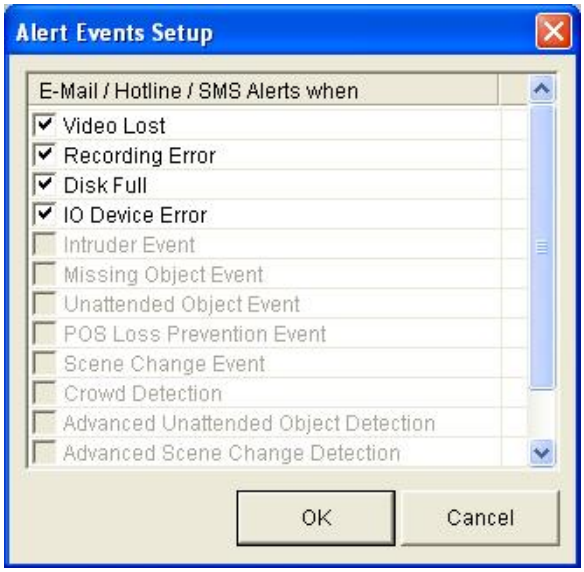
2.8 E-Mail Notification

2.8.1 E-mail Account Setup

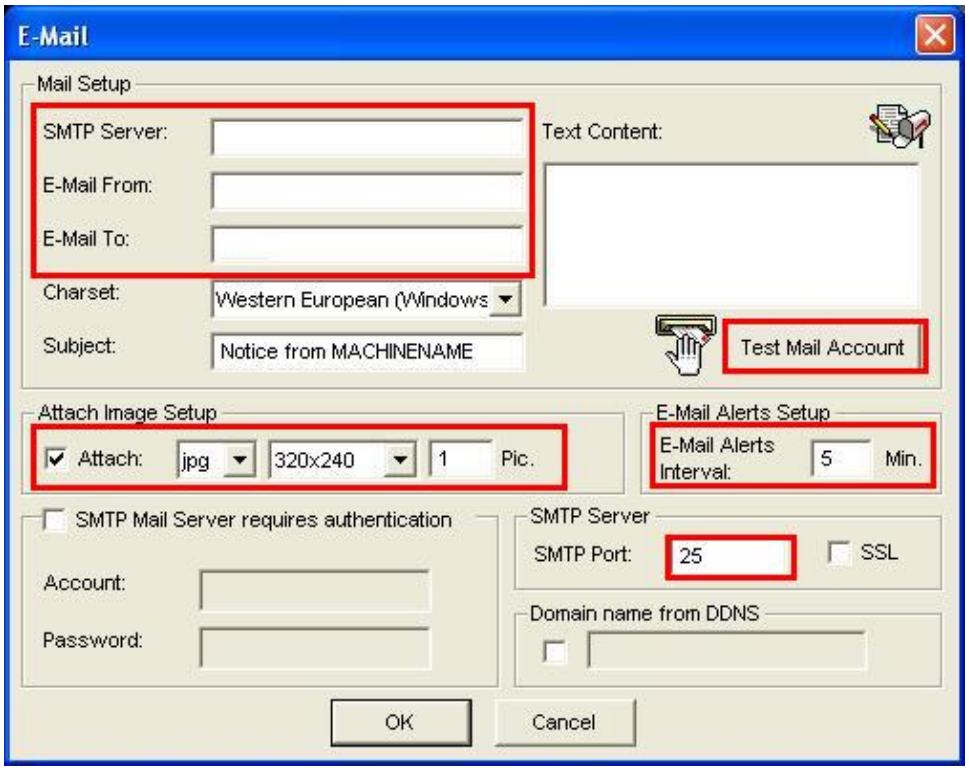
1. In Multicam, click on the "**Configure**" icon.
2. Select "**System Configure**", and then "**Send Alerts Approach Setup**".



3. Check "**Send Event Alerts**".
4. Click on .



5. Select the events in which the system will send out e-mail alerts for. (If the options are grayed out, that means such event has not been configured yet).
6. Click "**OK**".
7. Check "**Default Alert Approach**".
8. Select E-mail and click on "**Setting…**" button.



9. Enter SMTP server corresponding to your e-mail server.
10. Enter e-mail address in which alerts will be sent from in"**E-Mail From**"
11. Enter e-mail address of alert recipients in "**E-Mail To**". (For multiple recipients, add a comma between each e-mail address)
12. Edit e-mail alert subject line.
13. Enter customized e-mail contents in "**Text Content**".
14. Check "**Attached**" to include up to 6 snapshots in the e-mail alert.
15. Select "**E-Mail Alerts Interval**" to prevent repetitive e-mail alerts within defined time interval.
16. Change SMTP port if necessary.

✓ *Default SMTP port is 25, which is common for most SMTP servers. However, webmail providers such as Yahoo and Hotmail generally use different SMTP ports. Check with e-mail provider for specific SMTP port number.*

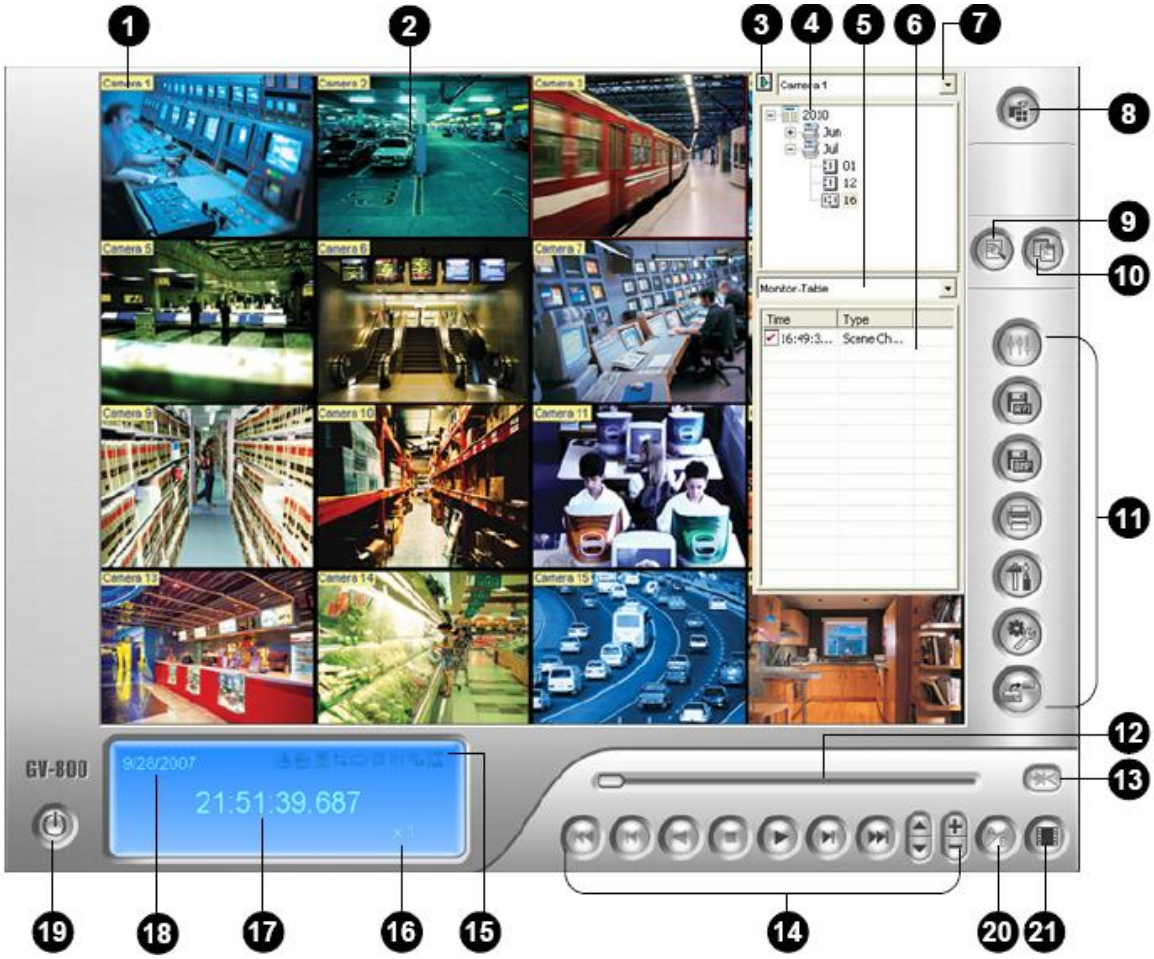
17. Click on "**Test Mail Account**" button to send out test e-mail to verify server setup.
18. Click "**OK**".

✓ For detailed instruction, refer to p.80 of v8.5 User Manual

3. Video Playback

To view recorded video, follow the steps below:

1. In Multicam, click on the "**Viewlog**" icon.
2. Select "**Video/Audio Log**".
3. Alternatively, in Multicam, click on "**F10**" on the keyboard.



The controls in the ViewLog window:

No.	Name	Description
1	Camera Name	Indicates the given camera name.
2	Camera View	Displays the playback video.
3	Arrow Switch	Switches between List Mode and Line Mode. Sets up MDB filter.
4	Date Tree	Displays date folders.
5	Display Option	Specifies the event type to display in List Mode or Line Mode.
6	Video Event List	Displays video events within a certain date folder.
7	Camera Select	Sets a desired camera for display.

8	View Mode	Sets screen divisions: Single View, Panorama View, Quad View or Multi View. Single View also includes these options: Standard, Thumbnail, Mega Pixel (PIP), Mega Pixel (PAP), Geo Fisheye and IMV1 Panomorph.
9	Advanced	Accesses basic search, advanced search and bookmark. Reloads video event list.
10	Normal	Displays or closes the Timeline or Video Event List..
11	Function Panel	Provides various settings for ViewLog.
12	Slider	Moves the slider to rewind or forward the video during playback.
13	Audio Playback	Enables audio playback.
14	Playback Panel	Contains typical playback control buttons.
15	Function Icons	A highlighted icon indicates an enabled function. From left to right are the defogging function, stabilizer function, reconnection to Remote ViewLog, A to B Mode, auto playing of next events, the contrast and brightness function, the light enhancement and equalization function, the sharpness and smoothness function and the grayscale function.
16	Playback Speed	Indicates the playback speed. x1 represents normal playback speed.
17	Time Display	Indicates the time of the playback video.
18	Date Display	Indicates the date of the playback video.
19	Exit	Closes or minimizes the ViewLog window.
20	A to B Mode	Plays repeatedly the set frames A to B.
21	Frame by Frame / Real Time / Just Key Frame	Plays back video frame by frame, on real time or with just key frames.

3.1 Multiple Channels Playback

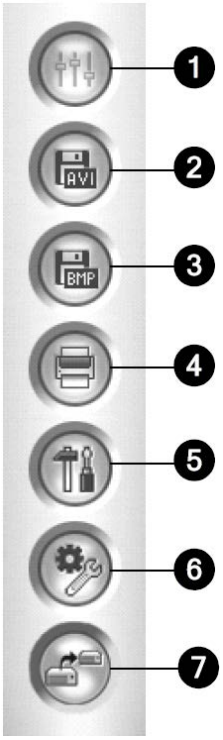
Instead of playing back one channel via Single View, Viewlog also gives you the option to playback 4 channels via Quad View, or up to 16 channels via Multi View. To switch from Single View to Quad View or Multi View, click on **button 8** as shown above.

To customize channels in Quad View and Multiview:

1. To customize Quad View pages, click on "**Settings**" button, then under "**Quad View**" tab, select the desired Quad View page number then drag and drop cameras into the page from the camera list on the right.
2. To customize Multi View pages, click on "**Settings**" button, then under "**Multi View**" tab, select the desired Multi View page number then drag and drop cameras into the page from the camera list on the right.

✓ For detailed instruction, refer to p.240 of v8.5 User Manual

3.2 Backup Video Files



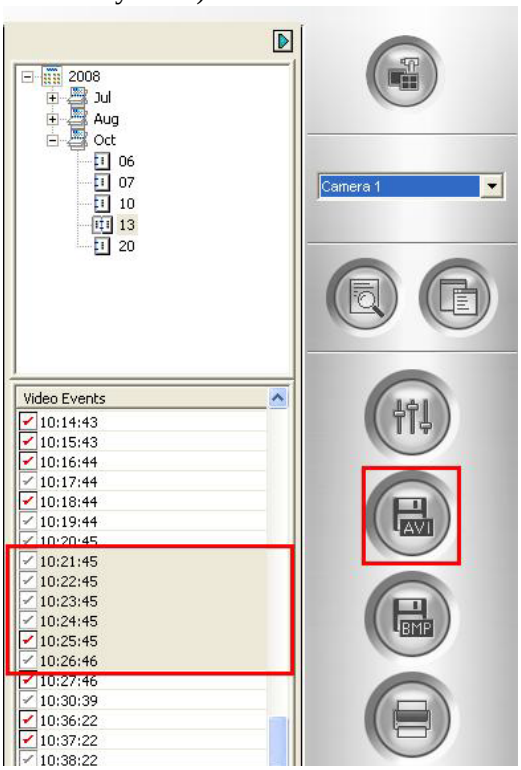
The controls in the Function Panel:

No.	Name	Description
1	Effects	Adds effects to the images. The effect options include: Contrast/Brightness, Light Enhancement, Equalization, Sharpen, Smooth, Grayscale, Undo to Prev. Action, Undo All Effects, Copy Image to Clipboard, Sample, and Advanced Video Analysis.
2	Save As AVI	Save a video file as avi or exe format. See *Merging and Exporting Video* later in this chapter.
3	Save As Image	Save a video image as bmp, jpg, gif, png, or tif format. See *Saving Images* later in this chapter.
4	Print	Specifies various settings for printing.
5	Setting	Accesses system settings of ViewLog. See *Advanced Settings* later in this chapter.
6	Tools	Brings up these options: Object Search, Advanced Log Browser, Delete, Remote ViewLog Service, Remote Storage System, Address Book, Display GIS Window, Select Map API, and Tool Kit. See *Object Search, Advanced Log Browser, Remote ViewLog Service* later in this chapter.
7	Backup	Backs up video files. See *Chapter 5 Backup, Deletion and Repair*.
Note: When an AVP dongle is used, you can enable the Stabilizer or Defog functions to up to 4 camera recorded images by selecting **Effects** and then **Advanced Video Analysis.**		

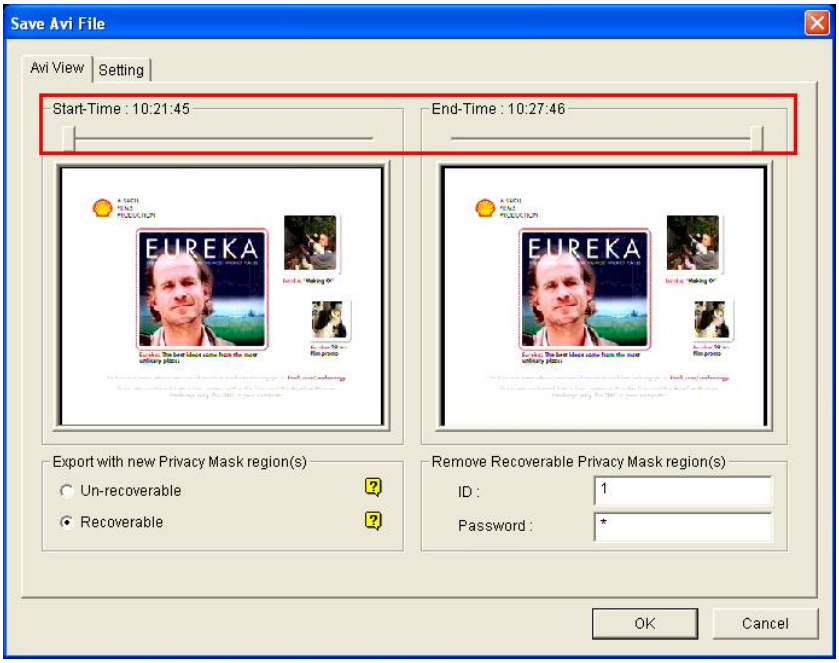
3.2.1 Save as AVI

To backup one video clip or merge a few video clips together, **Save As AVI** is the fastest method to extract video.

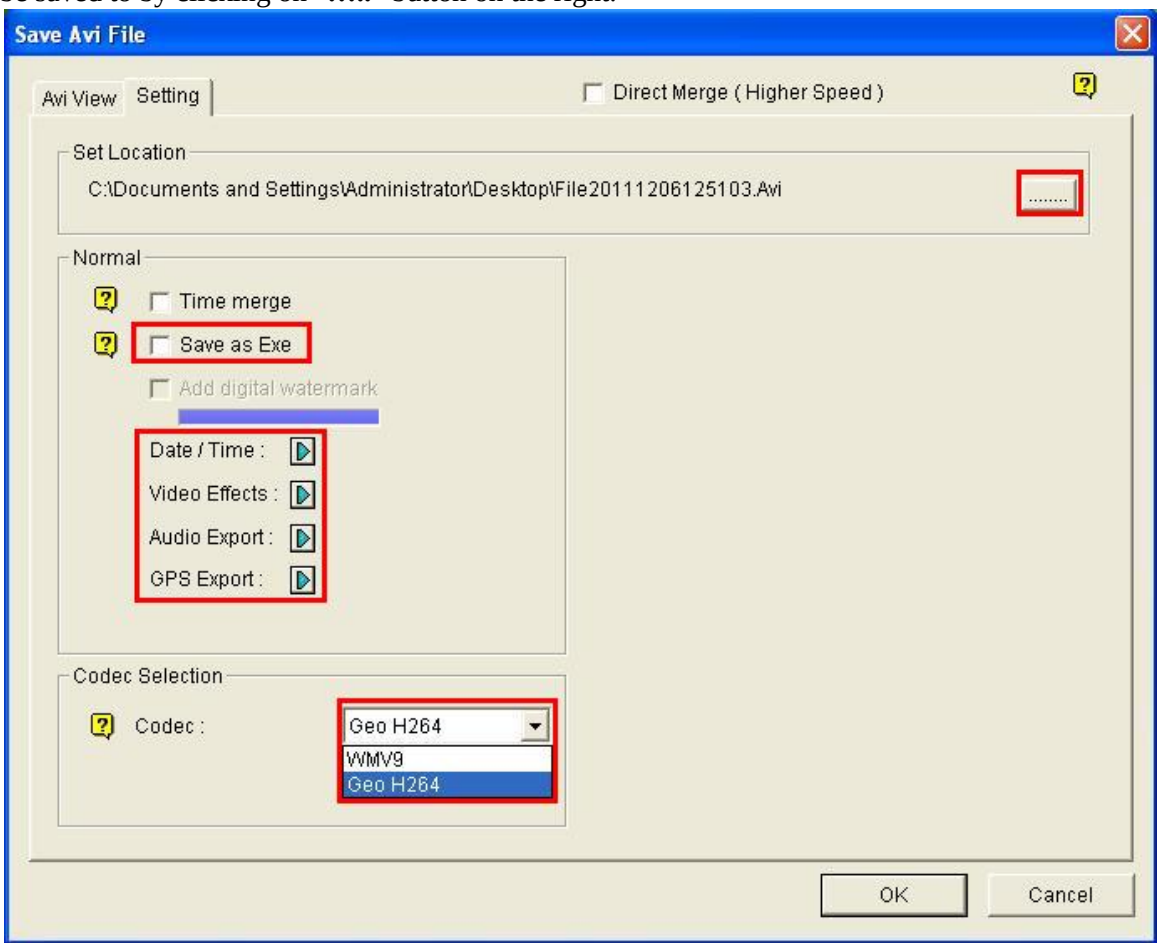
1. In Viewlog, highlight desired video event (or select multiple events by clicking on the events while holding down CTRL on the keyboard).



2. Click on "**Save as AVI**" icon.
3. Select the desired **Start** and **End time** if you prefer to extract only a segment of the video file(s) selected.



4. Under "**Setting**" tab, select the location on your system where you would like the video file(s) to be saved to by clicking on "**…..**" button on the right.



5. To save as an executable file:
    a. Check on "**Save as exe**" option
    b. Click "**OK**" to save the desired video file(s) into above destination.

✓ *"Save as exe" option allows Viewlog to extract .avi file with GeoVision codec attached.*

6. Select the parameters to be exported along with the .avi file.
7. To save as an avi only:
    c. Select "**Geo H264**" in the drop-down list to use GeoVision codec.
    d. Select "**WMV9**" in the drop-down list to export video without GeoVision codec.

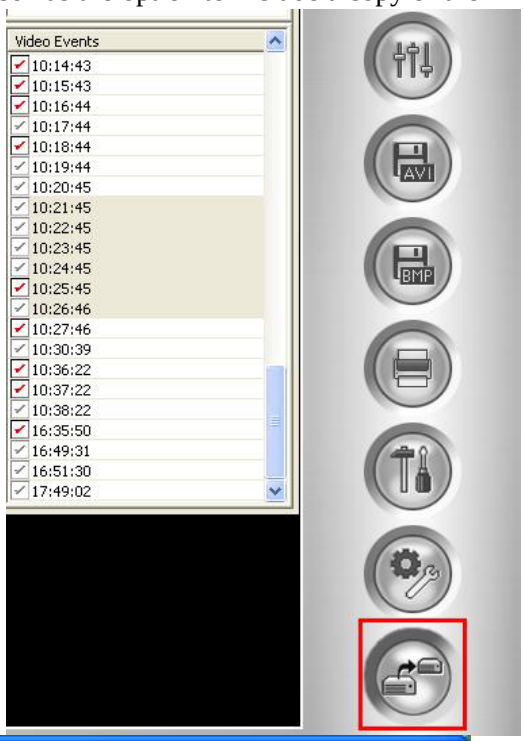
✓ *If the exported video were intended to be reviewed by a third-party, such as police or court, it is recommended to extract the video using generic WMV9 codec*

✓ *.avi clips exported with GeoVision codec cannot be played back on a PC without GeoVision codec installed. GeoVision video codec can be installed separately from the GeoVision Main System DVD or it can be downloaded from* ***http://www.usavisionsys.com/download***

✓ For detailed instruction, refer to p.226 of v8.5 User Manual

3.2.2 Burn to CD/DVD/BD

Backup option allows user to backup a large quantity of video files to a portable hard drive, network drive, or burn on a CD/DVD/BD. User also has the option to include a copy of the Viewlog software along with the video files.



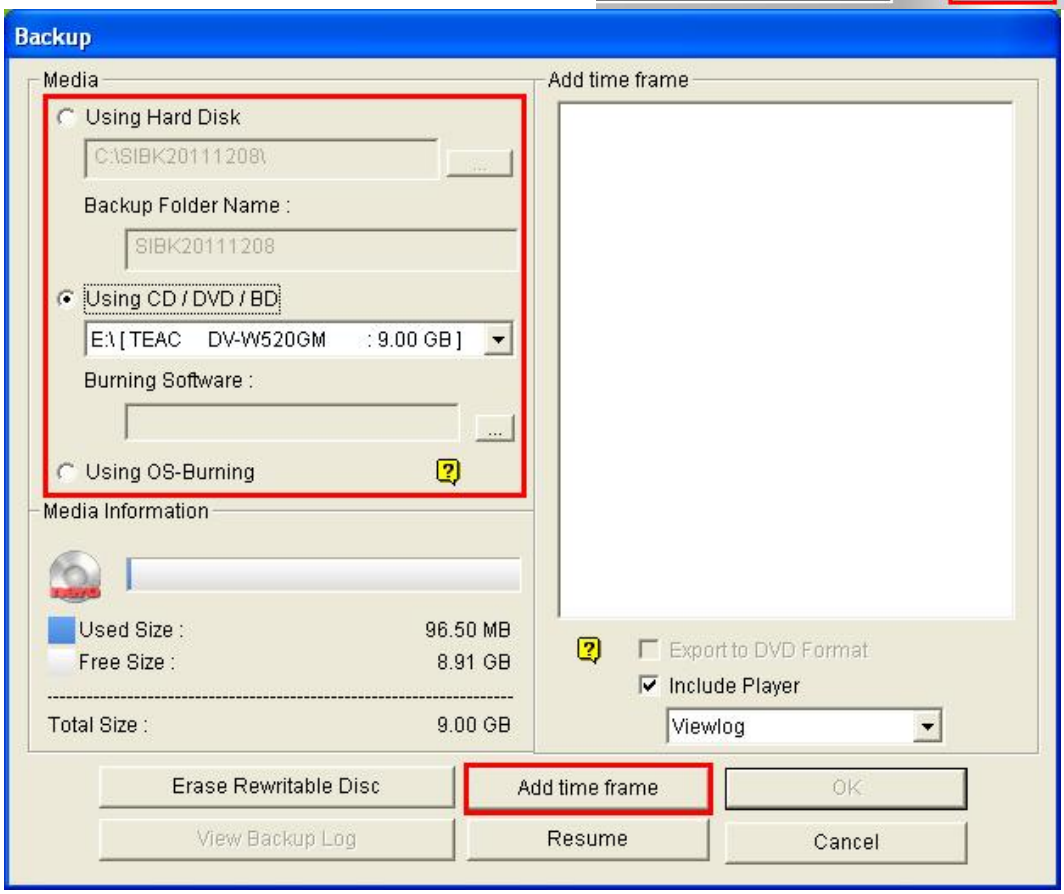
1. In Viewlog, Click on the "**Backup**" icon.
2. In the Backup window, select backup method through either "**Using Hard Disk**", "**Using CD/DVD/BD**", or "**Using OS-Burning**".

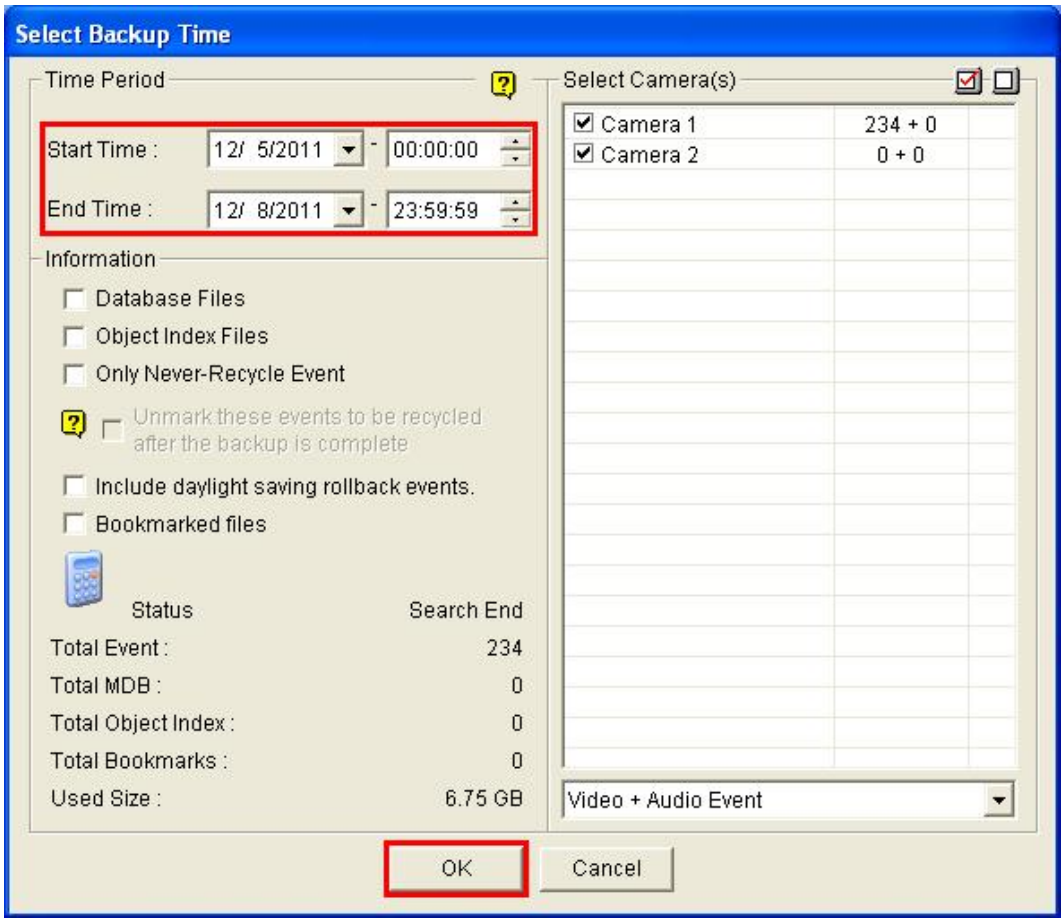
✓ "**Using Hard Disk**" allows video clips to be copied to a portable drive or a network drive.

✓ "**Using CD/DVD/BD**" allows video to be burned onto CD/DVD/BD directly via third-party burning software such as Nero (may require separate download).

✓ "**Using OS-Burning**" allows video to be burned onto CD in Windows XP/Vista, or onto CD/DVD in Windows 7

3. Select "**Add time frame**".





4. Select desired time period by assigning **Start Time** and **End Time**. The corresponding video and audio events within that time period will be displayed in the box on the right.
5. Check the desired cameras for backup then click"**OK**".
6. Click "**OK**" to start backup process.

✓ For detailed instruction, refer to p.275 of v8.5 User Manual

4. Remote Viewing

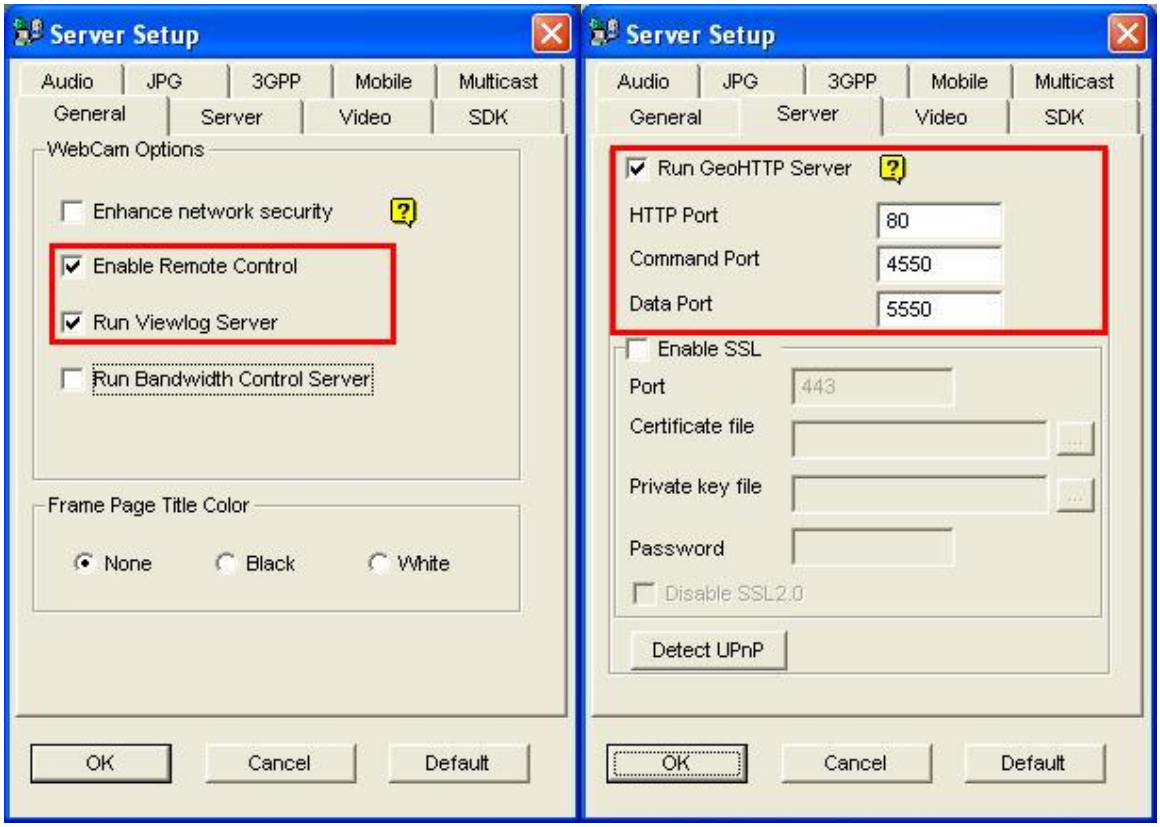
4.1 Webcam Server Setup

✓ Configure this section on GV-DVR/NVR System.

1. In Multicam, click on the "**Network**" icon.
2. Select "**Webcam Server**".
3. Under **General** tab, check "**Enable Remote Control**" and "**Run Viewlog Server**".

✓ "**Enable Remote Control**" option will allow users to start/stop system monitor remotely

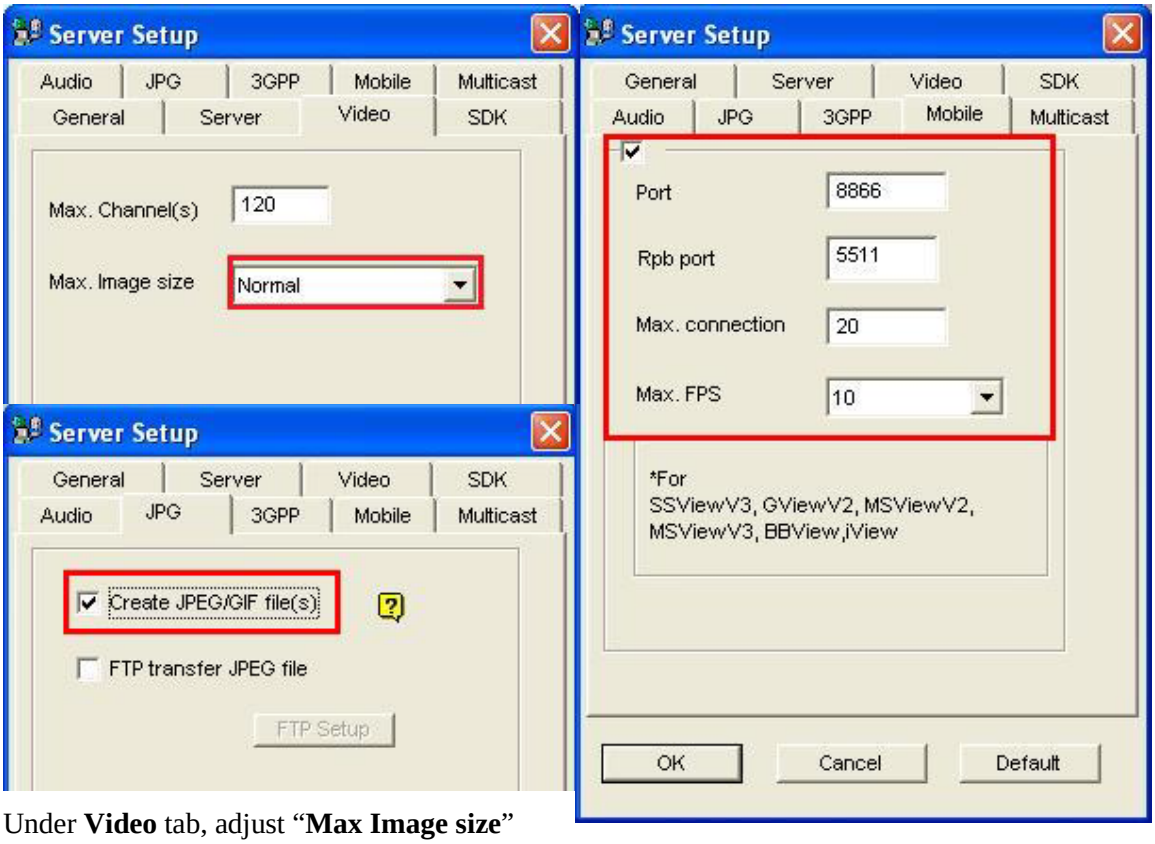
✓ "**Run Viewlog Server**" option will allow users to playback video files remotely



4. Under **Server** tab, check "**Run GeoHTTP Server**" and note the port numbers used for HTTP, Command, and Data. (By default the ports are **80**, **4550**, and **5550** respectively)

✓ *The default connection ports indicated above may be changed according to user's preference in case the port numbers listed are not available.*

✓ *If multiple DVRs/NVRs exist under the same network, it is necessary to differentiate each DVR/NVR by assigning different ports to each system.*



5. Under **Video** tab, adjust "**Max Image size**" from the drop-down list according to user needs and bandwidth allowance.

✓ The default image size is "**Normal**" (**320x240**). Adjust to "**Middle**" (**640x480**), "**Large**" (**704x480**), or "**Actual Size**" (**max resolution offered by IP camera**)

6. Under **Mobile** tab, enable mobile phone connection. (Default mobile ports are **8866** for live view and **5511** for playback)

7. Under **JPEG** tab, check "**Create JPEG/GIF file(s)**".

✓ "**Create JPEG/GIF file(s)**" will allow users to view this system remotely via iPhone/iPad, Blackberry, and Mac

8. Click "**OK**" to exit Server Setup and start service.

✓ At this moment, DVR/NVR is ready to accept remote connections using LAN IP address

✓ To test connection, (DVR/NVR connects to itself), access through http://127.0.0.1 in Internet Explorer.

✓ To connect from a different PC under the same LAN, access through LAN IP of the DVR/NVR in Internet Explorer. (Refer to the following section for instructions on how to locate LAN IP)

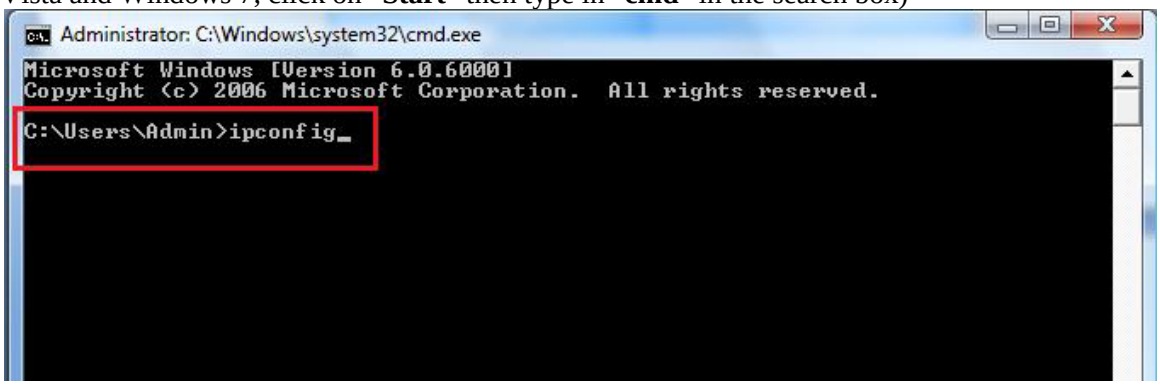
✓ For detailed instruction, refer to p.355 of v8.5 User Manual

4.2 Network Port Configuration

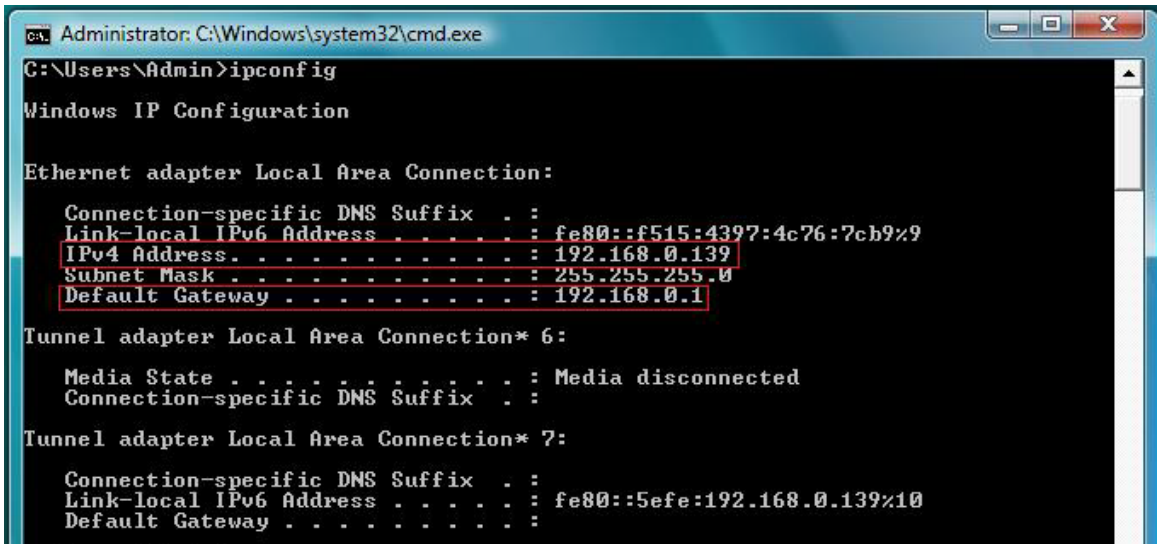
✓ Configure this section on GV-DVR/NVR System or any PC under the same network.

4.2.1 LAN IP Address

1. For Windows XP, click on "**Start**", "**Run**", then type in "**cmd**" in the search box.(For Windows Vista and Windows 7, click on "**Start**" then type in "**cmd**" in the search box)



2. In the command prompt window, type in "**ipconfig**".
3. Locate DVR LAN IP address and router's IP address.



✓ In the example above, DVR LAN IP address is **192.168.0.139** and default gateway (router) address is **192.168.0.1**

4.2.2 WAN IP Address

1. There are several websites that will display WAN IP address of the DVR system. For example, in Internet Explorer, go to www.whatismyip.com.

✓ *WAN IP address is necessary for remote connection from a different network*

4.2.3 Port Forwarding

1. Enter default gateway (router)'s IP address in Internet Explorer. (Step 3, Section 4.2.1)

2. When router log in page pops up, enter the **User name** and **Password** for the router.

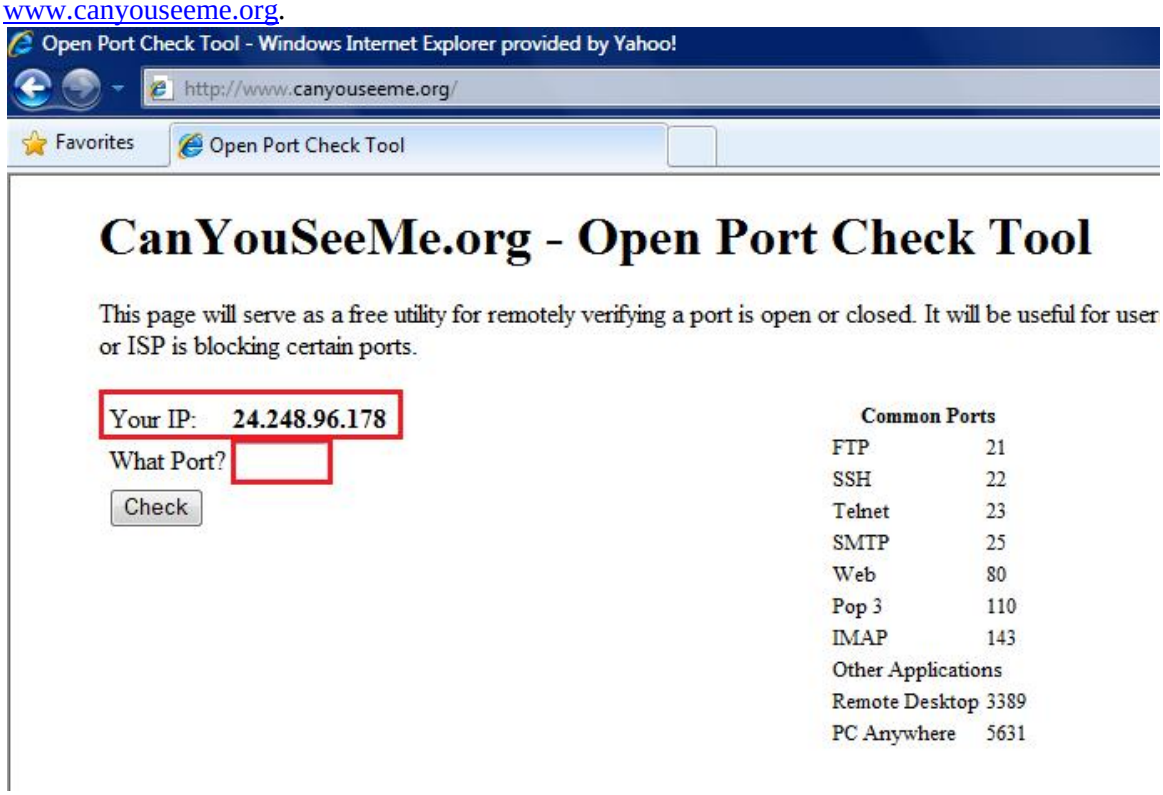
✓ *Please note that user name and password of the router is not related to the ID and password used by GeoVision DVR system. Check with network administrator or refer to router's user manual for its user name and password.*

3. Follow router manufacturer's instruction on port forwarding for HTTP, Command, Data, Mobile, and RPB ports (Section 4.1) to DVR's LAN IP address (Section 4.2.1).

✓ *Please note that port configuration for different router brands and models will vary. Refer to router manufacturer's website or manual for proper procedures. A list of common support websites and numbers can be found below:*

Actiontec http://www.actiontec.com/support/index.php	NETGEAR Connect with Innovation http://www.netgear.com/Support.aspx	D-Link Building Networks For People http://support.dlink.com/
LINKSYS A Division of Cisco Systems, Inc. http://www.linksys.com/support	WESTELL http://www.westell.com/technical-support/technical-support.html	2WIRE http: //support.2wire.com/
at&t 877-722-3755	BELLSOUTH 888-321-2375	verizon 800-567-6789

4. After finish port forwarding, it is necessary to verify port status. In Internet Explorer, go to www.canyouseeme.org.



5. Input a port number that has been opened in step 3, click on "**Check**".
6. If you see the following message: (Port 80 is used in the example below)

Error: I could **not** see your service on **24.248.96.178** on port (**80**)
Reason: Connection timed out

Then this specific port has not been opened or configured correctly. Verify step 3 again.

7. If you see the following message: (Port 80 is used in the example below)

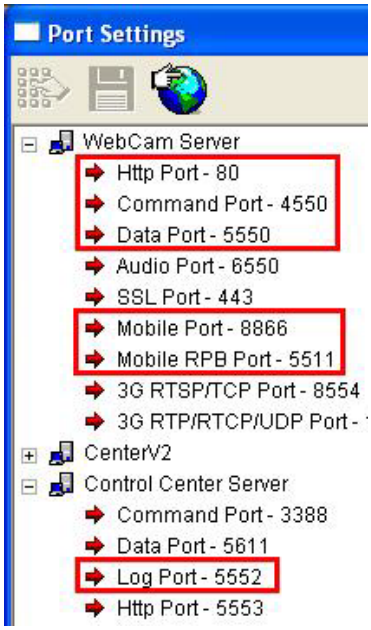
Success: I can see your service on **24.248.96.178** on port (**80**)
Your ISP is not blocking port 80

Then this specific port has been opened and configured correctly.

8. Repeat Step 5 for each of the port opened to ensure all ports are properly opened and forwarded.

✓ A list of default port numbers required for Webcam access is shown on the right

✓ At this moment, DVR/NVR is ready to accept remote connections using WAN IP address



4.3 Multiview Setup

✓ Configure this section on remote PC.

4.3.1 Install Multiview

Multiview can be obtained from one of the following locations:

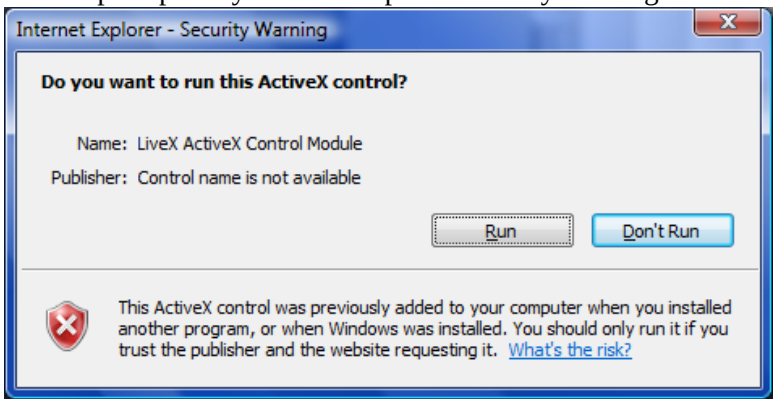
- ✓ Download from GV-DVR/NVR system remotely via Internet Explorer.
- ✓ Install from GeoVision installation disk.
- ✓ Download from http://www.usavisionsys.com/download.

Download from GV-DVR/NVR System

1. Under Internet Explorer, type in DVR's IP address as found in section 4.2.2. (If connecting within the same network, use LAN IP address as found in 4.2.1.)
2. Type in ID and Password of the DVR system
3. Click "**Login**".

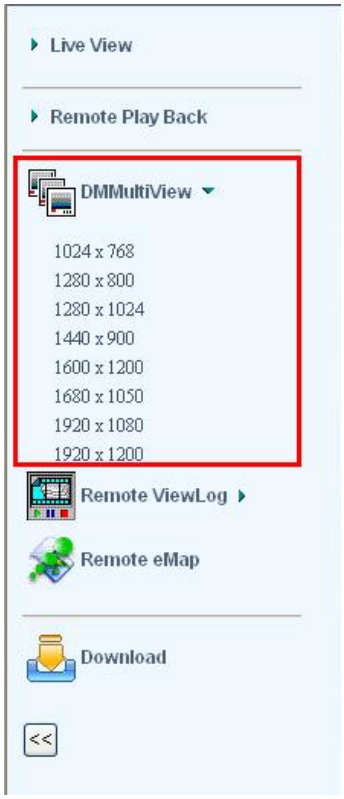
4. Install all ActiveX Control as prompted. (ActiveX Control options will appear as an orange bar on top)
5. Click on orange bar as shown below, then select "**Install**" or "**Run Add-on**".

6. Refresh webpage. (Login may be required).
7. Select "**Run**" if prompted by Internet Explorer security warning.

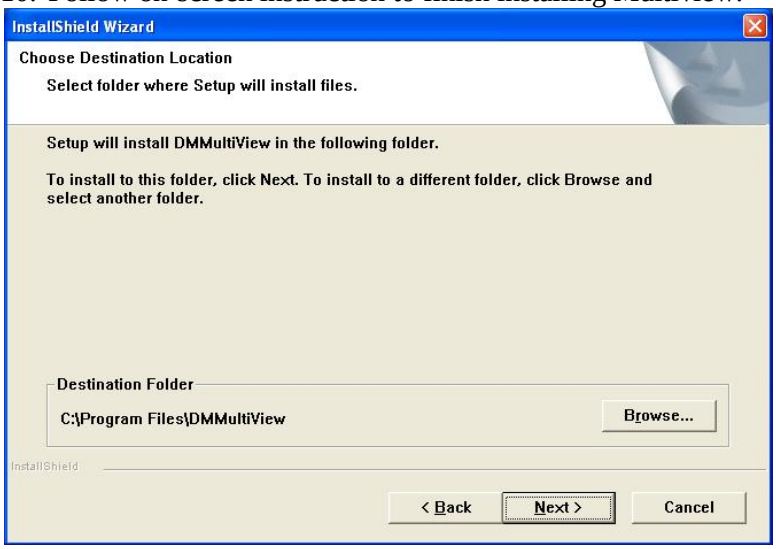


8. When one channel view appears on the webpage, click on "**DMMultiView**" from the menu list on the left.
9. Select "**1024x768**" to download Multiview.

✓ *Select higher resolution Multiview only if your Windows desktop supports such resolution*



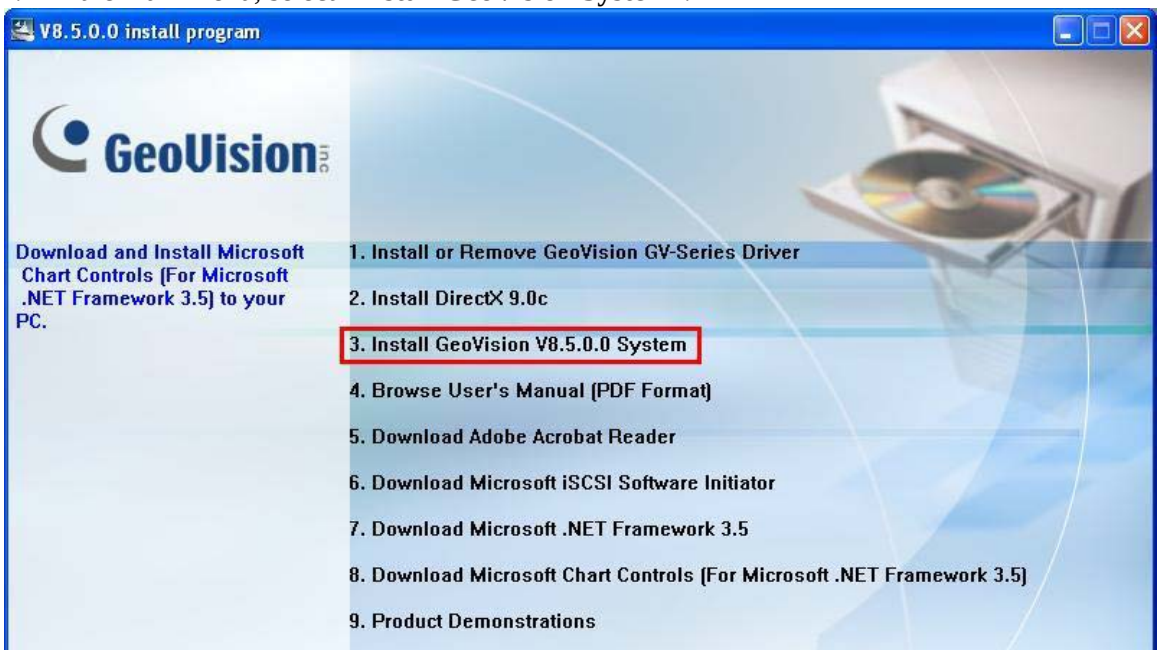
10. Follow on-screen instruction to finish installing Multiview.



11. Proceed to Section 4.3.2 Run Multiview.

Install from Disk

1. Insert GeoVision Main System Installation Disk in DVD Rom.
2. In the main menu, select "**Install GeoVision System**".



3. Select "**GeoVision Multi View**".

4. Follow on-screen instruction to finish installing Multiview.
5. Proceed to Section 4.3.2 Run Multiview.

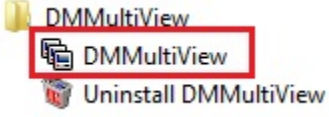
Download from Website

1. In Internet Explorer, go to http://www.usavisionsys.com/download.
2. Click on "**Software & Utility**".
3. Click on "**Multiview**".
4. Select "**MultiView.zip**" to download.

5. After download, extract the zip file then run **Setup.exe** to begin setup.
6. Follow on-screen instruction to finish installing Multiview.

4.3.2 Run Multiview

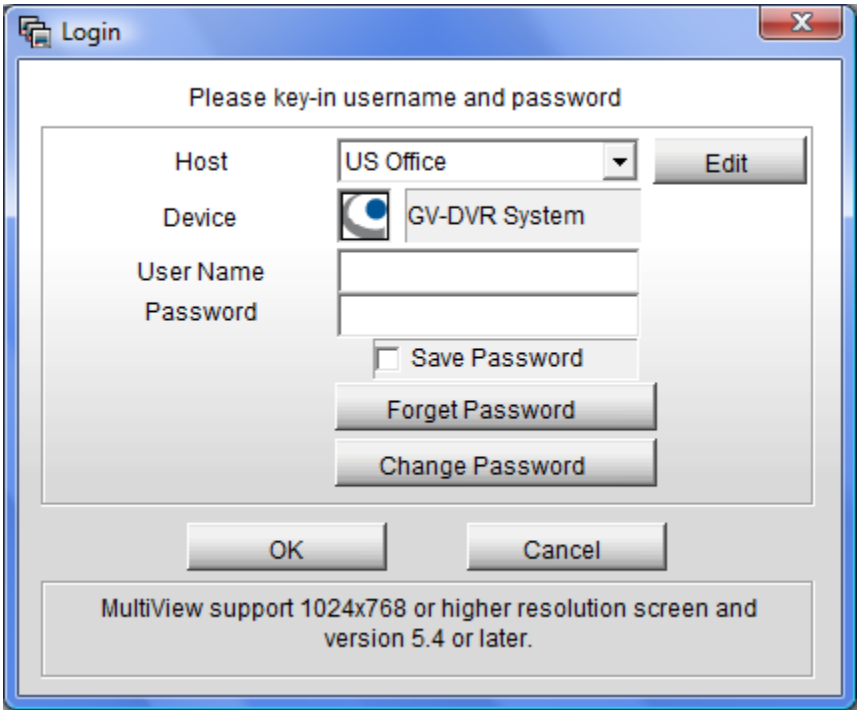
1. Execute Multiview by going to Start, All Programs, DMMultiView, DMMultiView.



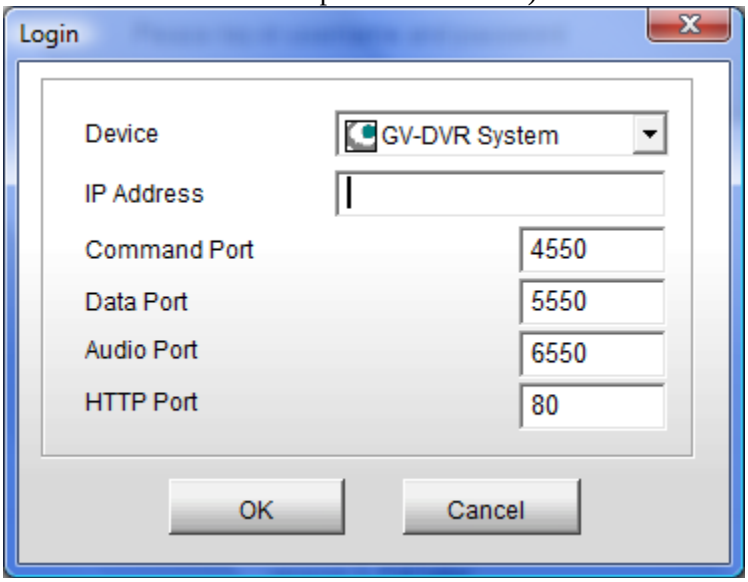
4.4 Multiview

4.4.1 Connect to DVR/NVR

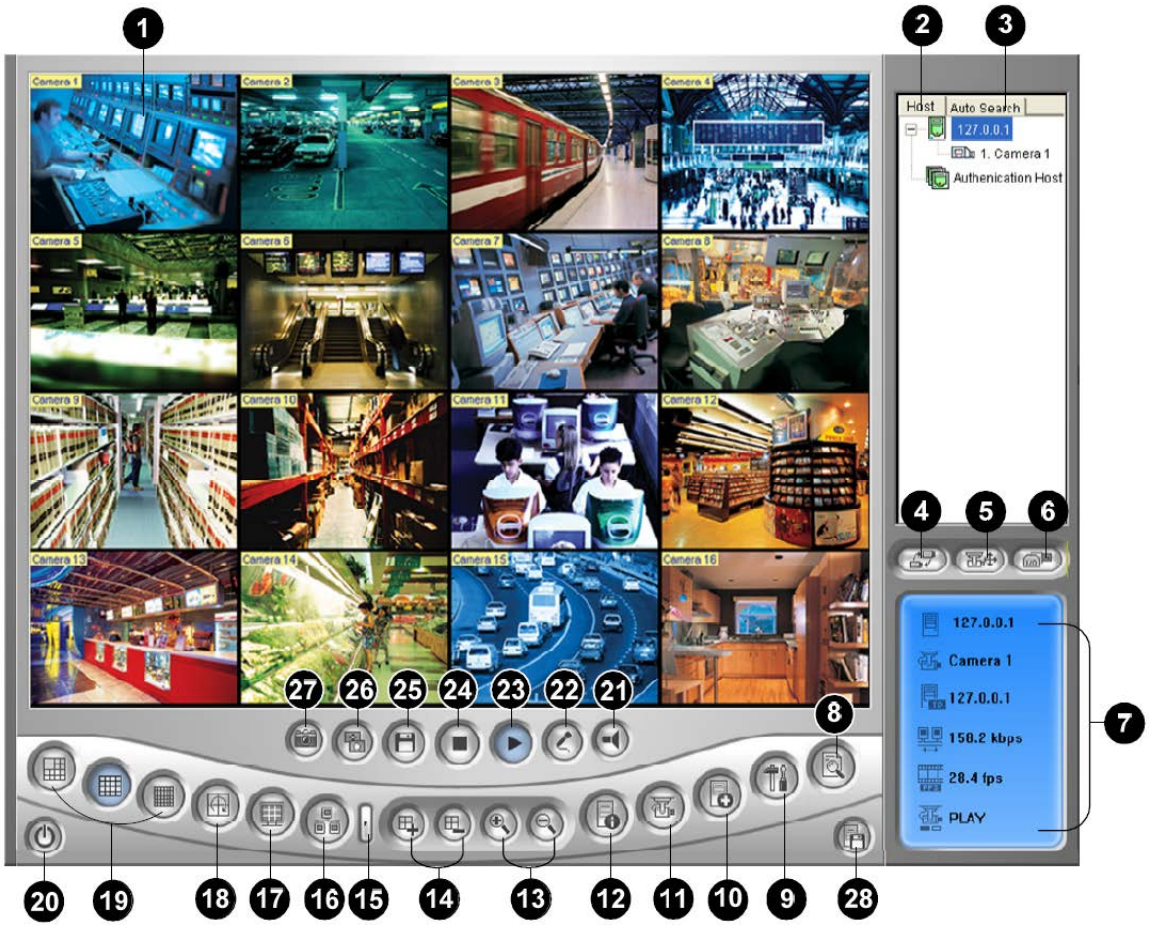
1. Enter **User Name** and **Password** to connect to Host DVR/NVR.



2. To change Host IP address and port information, select "**Edit**".
3. Enter new Host IP address and port information, then click "**OK**". (Port information should match the ones listed in Step 4 of Section 4.1)



4. Click "**OK**" in the Login window to bring up Multiview.



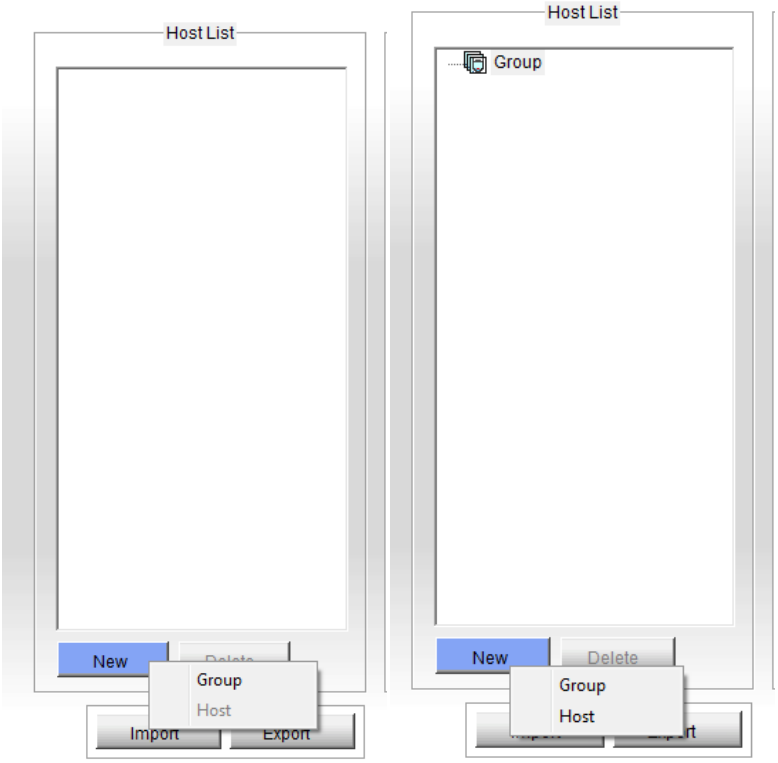
No.	Name	Description
1	Monitoring Window	Displays live video. Right-clicking on live video allows you to instantly access some useful functions. Selecting **Resolution** displays a resolution indicator at the bottom right corner of the video.
2	Host List	Displays the connected GV-Systems and their available cameras. See *Host List* later in this chapter.
3	Auto Search	Displays all hosts on the same LAN. See *Host List* later in this chapter.
4	Show Camera Menu	Select the desired camera for display. If a panorama view is created at the GV-System, it is also included in this menu.
5	PTZ Control	Displays the PTZ control panel. See *PTZ Control*, and *Visual PTZ Control Panel* later in this chapter.
6	I/O Control	Displays the I/O control panel. See *I/O Control* earlier in this chapter.
7	Channel Status	Indicates the general information of the selected channel. See *Channel Status Information* later in this chapter.
8	ViewLog	Plays back recorded files of the remote GV-System by using the video player ViewLog.

9	Configure	Accesses system settings of the Multi View. See *System Configuration* later in this chapter.
10	Edit Host	Adds, deletes or modifies a host. See *Creation of a Host* later in this chapter.
11	Camera Status	Displays the camera status of the connected GV-System. See *Camera Status* later in this chapter.
12	Host Information	Displays the general information of the connected GV-System. See *Host Information* later in this chapter.
13	Zoom in and out	Zooms in or out the selected channel.
14	Add/Remove Frame	Adds or deletes the frames for video polling. Click the **Add or Remove Frame** button and then click the desired channel to add to or remove from the video polling.
15	Next	Goes to the next page of Screen Division buttons.
16	Multicast	Accesses the Multicast function. See *Multicast and Audio Broadcast* later in this chapter.
17	Full Screen	Switches to a full screen view. The maximum video resolution set on the GV-System will be applied. See *Video Settings* in *WebCam Server Settings* earlier in this chapter.
18	Video Polling	Rotates through the selected channels. See *Camera Polling* later in this chapter.
19	Screen Division	Sets screen divisions to 4, 6, 8, 9, 10, 13, 16 or 32.
20	Exit/Minimize	Closes or minimizes the Multi View window.
21	Speaker	Enables live audio from a remote GV-System.
22	Microphone	Enables speaking to a remote GV-System.
23	Play	Establishes the connection to a GV-System.
24	Stop	Terminates the connection to a GV-System.
25	Save	Saves live video. See *Video Recording* later in this chapter.
26	Quality	Adjusts video quality with these options: **Auto Scale** (using the original resolution and quality of video sources), **Geo H264** and **Geo MPEG4**. For hardware-compressed and megapixel quality, see *Hardware-Compressed and Megapixel Stream* later in this chapter.
27	Snapshot	Takes a snapshot of the selected channel.
28	Save Camera to Multiple Host	Saves the selected cameras and creates a Multiple Host. See *Combination of Multiple Hosts into a Single Host* later in this chapter.

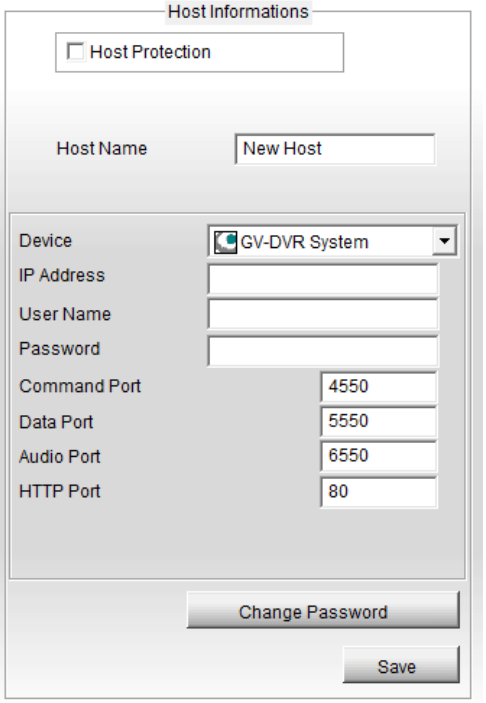
4.4.2 Single Host

Through Single Host, Multiview provides the ability to save DVR and NVR's IP address, user name, and password in an address book to allow streaming video from multiple DVRs/NVRs.

1. In Multiview, click on "**Edit Host**" button as shown above.
2. Click "**New**" button then select "**Group**" to create a new group.



3. After a group is created, click "**New**" button then select "**Host**" to create a new host.
4. Name the DVR/NVR in "**Host Name**" for identification.
5. Enter **IP Address**, **User Name**, **Password**, as well as **Ports** used for DVR.
6. Click on "**Save**".
7. Repeat steps 1 to 6 to add multiple DVR/NVRs into host list.
8. Click on "**OK**".

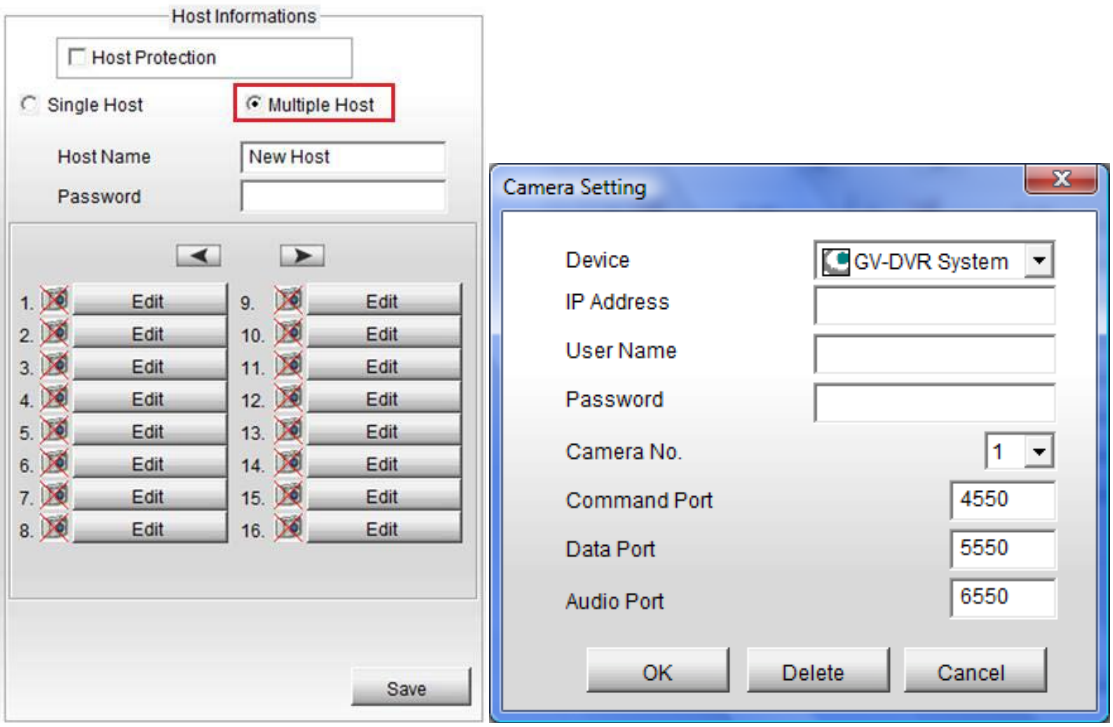


✓ For detailed instruction, refer to p.395 of v8.5 User Manual

4.4.3 Multi Host

Through Multi Host, user may customize each channel to pull up video from different DVRs directly.

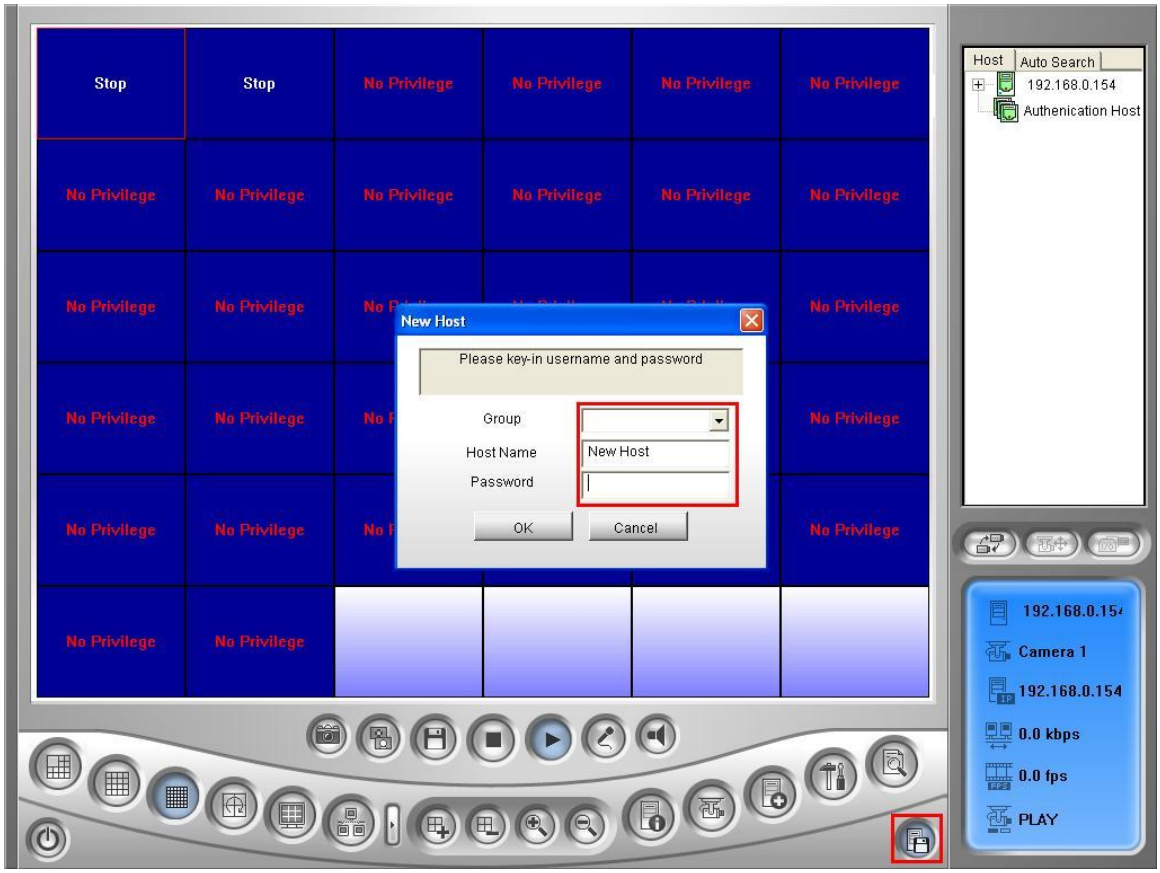
1. Follow steps 1 to 3 in section 4.4.2.
2. Select "**Multiple Host**" instead of Single Host above.



3. For each camera, click on "**Edit**".
4. Enter **IP Address**, **User Name**, **Password**, as well as **Ports** used for DVR.
5. Select **Camera No.** on the DVR/NVR.
6. Click "**OK**" to save camera information for this channel.
7. Repeat steps 1 to 6 to define Camera information for each channel.
8. Click on "**Save**".
9. Click on "**OK**".

✓ For detailed instruction, refer to p.396 of v8.5 User Manual

Alternatively, Multiple Host can also be saved directly from Multiview if user wishes to save current channel combination.



1. Under Multiview, adjust live view channel layout by drag and drop video channels from multiple DVR sources from the host list on the right.
2. When the desired live view combination has been assembled, click on **Save Host** button at the lower right hand corner of Multiview.
3. Assign a **Group**, if any, then **Host Name** and **Password** for this MultiHost configuration.
4. Click **OK**.

4.5 Mobile Phone/ PDA Viewing

- ✓ Mobile applications can be installed from GeoVision v8.5 Installation Disk or downloaded from http://www.geovision.com.tw/english/5_4.asp

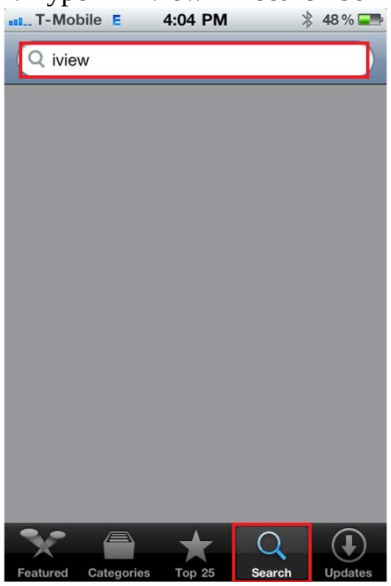
4.5.1 GV-iView Setup

GV-iView is designed to view GeoVision DVR/NVR systems on iPhone and iPod Touch. GV-iView HD is available for remote viewing on iPad. GV-iView can be downloaded via iTunes.

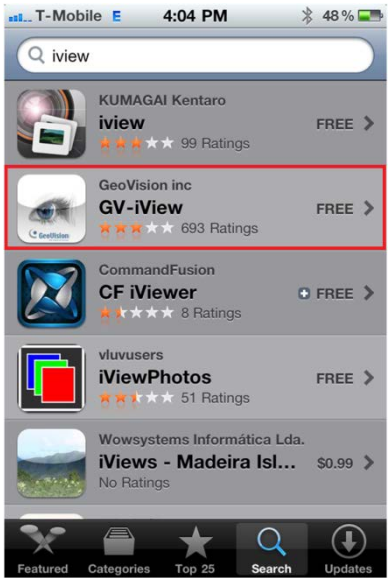
- ✓ *Before connecting to a DVR, make sure that "**Create JPEG/GIF File(s)**" option is checked under Webcam Server Setup (Section 4.1)*

1. Go to **App Store**

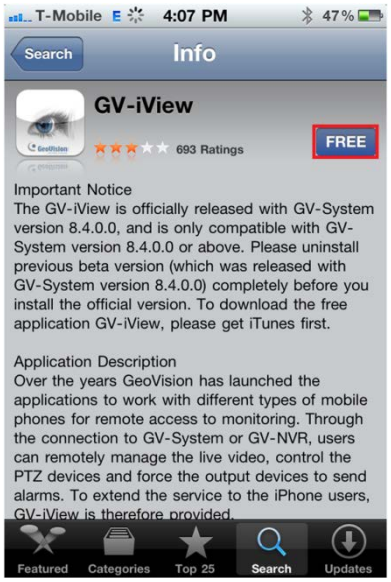
2. Type in "iview" in search box



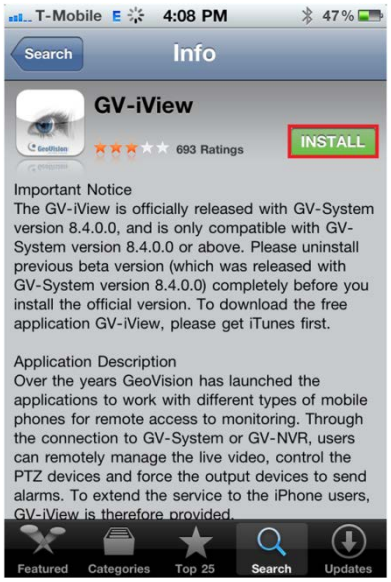
3. Select **GV-iView**



4. Click on **FREE**



5. Click on **INSTALL**



6. Enter iTunes password

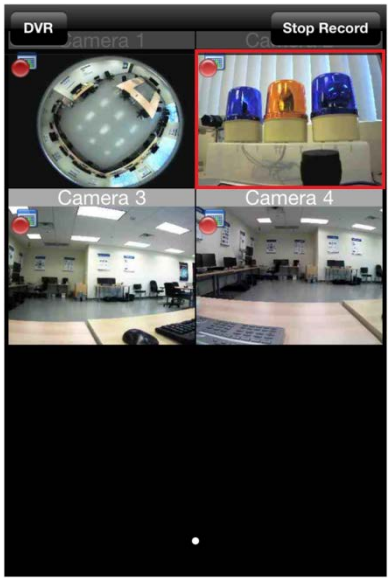
7. After download, locate and run **GV-iView**

8. Enter **IP**, **Port number**, **ID**, and **Password** for the DVR

- ✓ Default port number is **8866**

9. Double-tap on a camera to enter single view.

Scroll cameras to the left to view additional cameras



10. Click on **Arrows** button to enter I/O section

Click on left/right blue arrows to change module number

Scroll to right to change output number

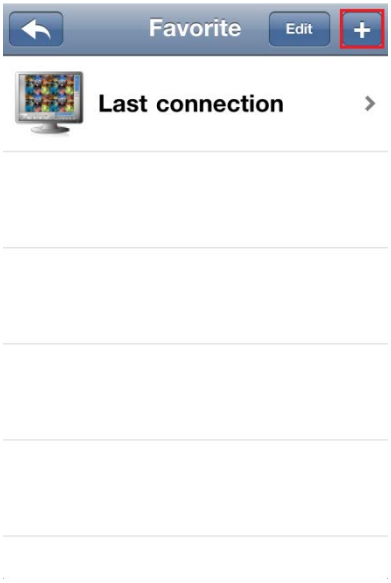
11. Click on **PTZ** button to control PTZ

Drag the image to pan and tilt

Click on the Preset button to go to certain PTZ preset

12. To add a GeoVision DVR/NVR to the address book, click on **Favorite**

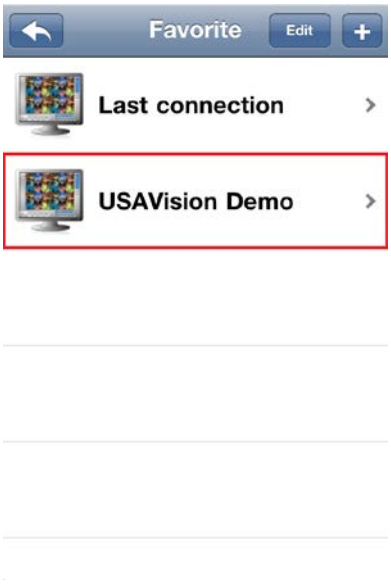
13. Click on +



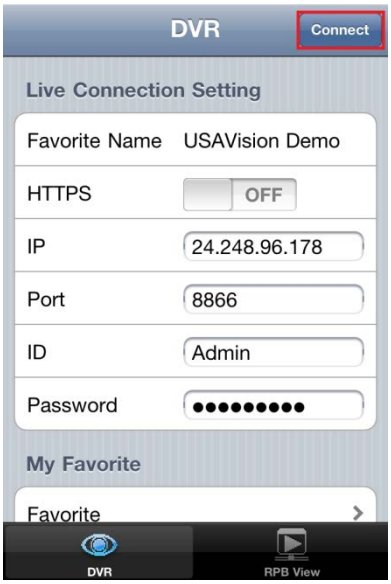
14. Enter DVR information to be saved in the address book

Click on **Save**

15. To connect to a DVR from the address book, select the DVR from Favorite list



16. Click **Connect**



4.5.3 GV-AView Setup

GV-AView is designed to view GeoVision DVR/NVR systems on Android phone and tablet. GV-AView can be downloaded via Android Market.

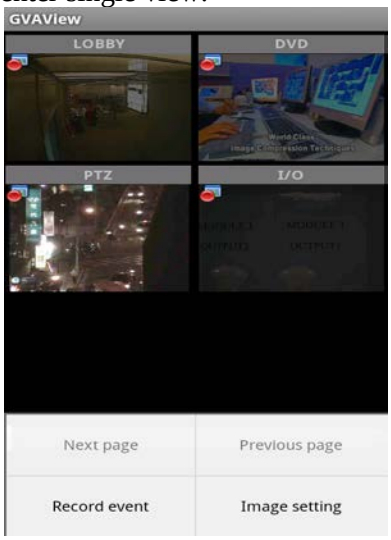
- ✓ *Before connecting to a DVR, make sure that "**Create JPEG/GIF File(s)**" option is checked under Webcam Server Setup (Section 4.1)*

1. 1. In Android Market, search and download **GV-AView**

2. To connect to GV-DVR/NVR, select **NVR/DVR View**, then enter **IP address**, **port number**, **user name**, **password**, then click on the "**eye**" button to connect

3. To connect to GV-IP camera, select **IPCam View**, then enter **IP address**, **port number**, **user name**, **password**, then click on the "**link**" button to connect

4. Double-tap on a camera to enter single view.



5. Use the control buttons below to control PTZ camera

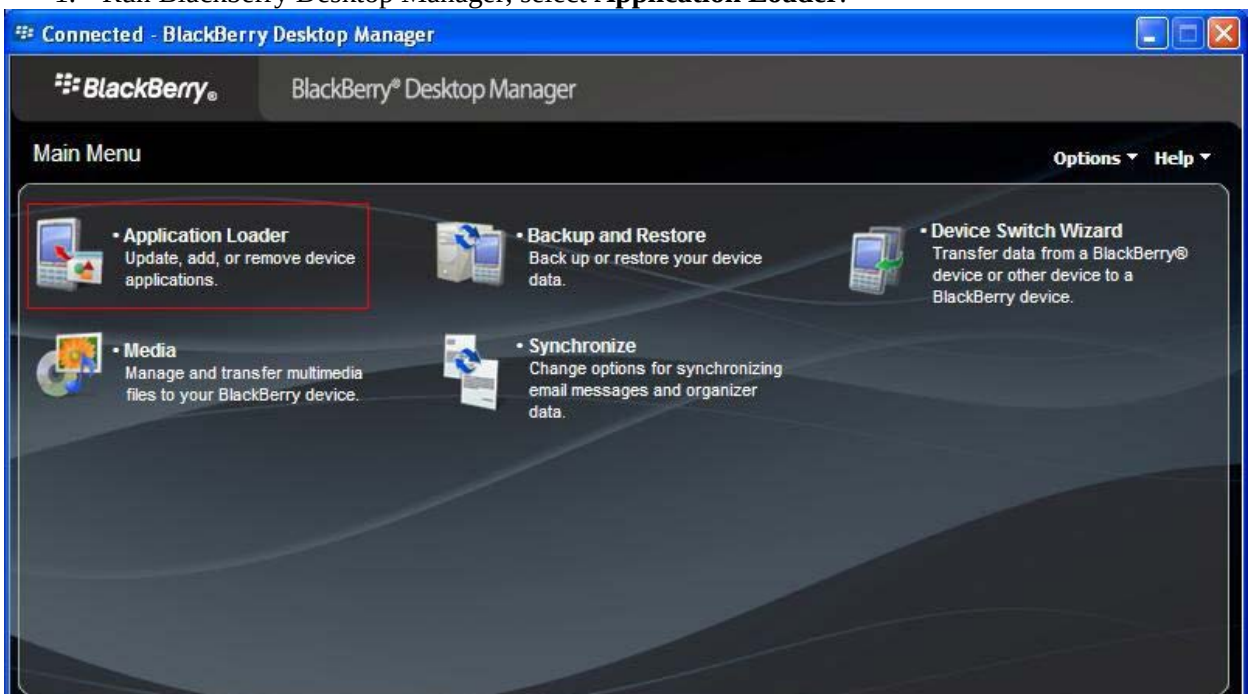
4.5.4 BBView Setup

GV-Remote View is designed to view GeoVision DVR/NVR systems on Blackberry smart phones. GV-Remote View can be downloaded from http://www.geovision.com.tw/english/5_4_bbview.asp.

- ✓ *Before connecting to a DVR, make sure that "**Create JPEG/GIF File(s)**" option is checked under Webcam Server Setup (Section 4.1)*

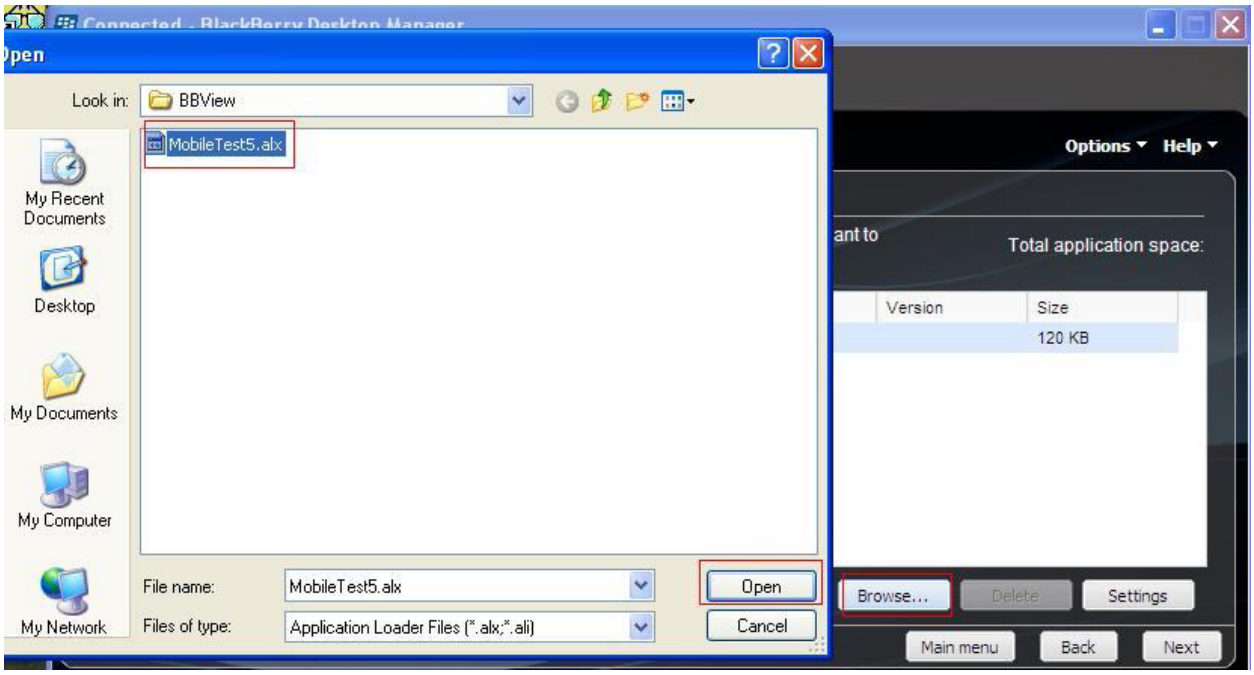
- ✓ *Blackberry Desktop Manager can be installed from the original Blackberry disk or downloaded from official Blackberry website at* http://us.blackberry.com/apps-software/

1. Run Blackberry Desktop Manager, select **Application Loader**.

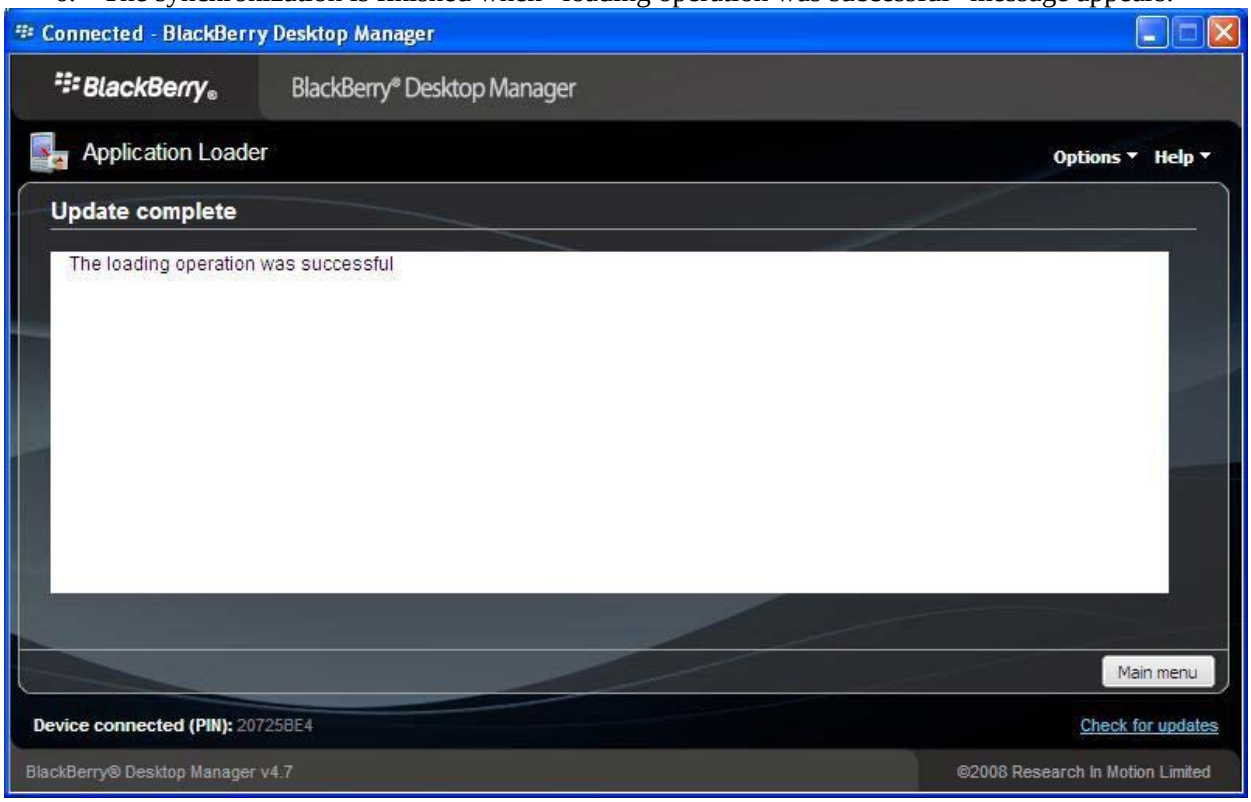


2. Under Add/Remove Applications, click **Start**.

3. Click **Browse**, select the downloaded **MobileTest5.alx**.



4. Click **Next**.
5. Click **Finish**.
6. The synchronization is finished when “loading operation was successful” message appears.



5. Useful Utilities

The following utilities are useful supplementary applications.

5.1 Keylock Utility

Keylock Utility is default on GV-DVR Systems. The purpose of Keylock Utility is to increase DVR system security by restricting user access to only certain programs in Windows. DVR administrators may edit the list of programs accessible on the DVR or simply disable Keylock mode to return to regular Windows desktop.

5.1.1 Enter Keylock Utility

To enter Keylock mode from Windows desktop, follow the steps below:

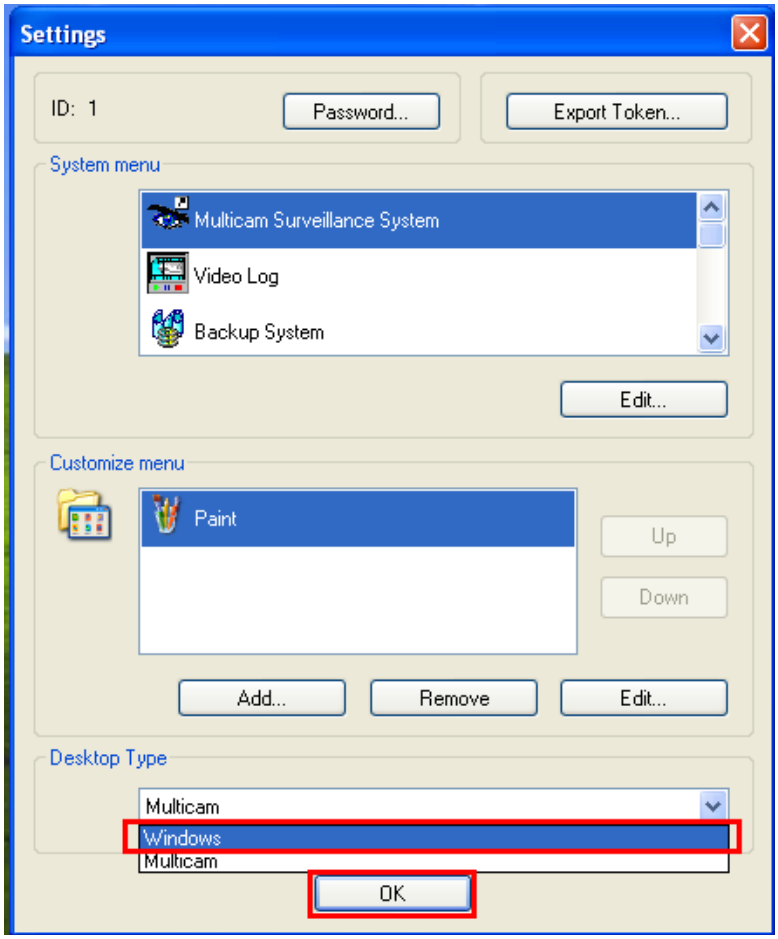
1. On Windows desktop, click on "**Start**".
2. Click on "**All Programs**".
3. Click on "**GVCombo**" folder. (Alternatively, the name of the folder may vary according to the GeoVision card model you are using. I.E. GV1480)
4. Locate and run **Key Lock Utility**.

5.1.2 Exit Keylock Utility

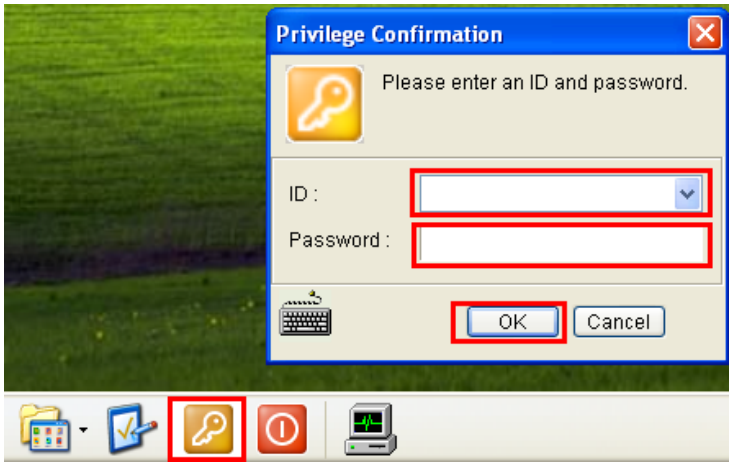
To exit Keylock mode and return to Windows desktop, follow the steps below:

1. Under Keylock mode, click on "**Settings**" button.
2. Enter DVR system **ID** and **Password**.
3. Click "**OK**".

4. In Settings window, under Desktop Type, switch from "Multicam" to "**Windows**" in the drop-down list.
5. Click "**OK**".



6. Click on "**Log off**" button.
7. Enter DVR system **ID** and **Password**.
8. Click "**OK**".



9. When DVR returns to Windows Welcome screen, click on **Administrator** account to log in.
10. Once logged in, regular Windows desktop should appear.

5.2 IP Device Utility

IP Device Utility is used to configure and update GeoVision IP devices that include GV-IP Camera, GV-Video Server, GV-Compact DVR, and GV-LPR DSP. The utility can help you perform the following configurations on GV-IP devices:

1. Assign device name.
2. Change IP address and port information.
3. Update firmware.
4. Reset.

5.2.1 Install IP Device Utility

For GV-DVR Systems, IP Device Utility is preinstalled. To locate the application, follow the steps below:

1. On Windows desktop, click on "**Start**".
2. Click on "**All Programs**".
3. Locate and run **GV-IP Device Utility** under GV folder.

Install from Disk

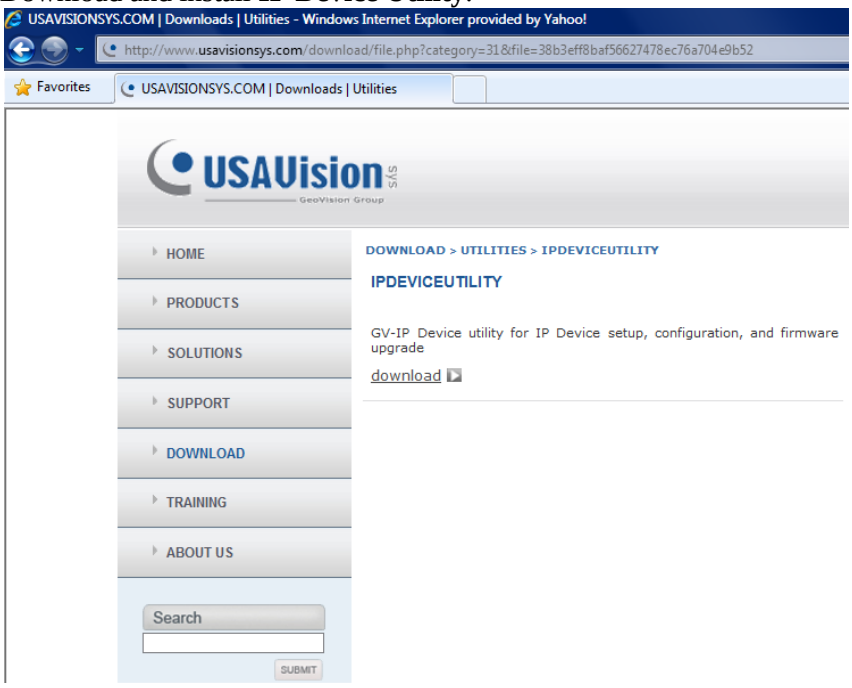
In case GV-IP Device Utility is missing, follow the steps below:

1. Insert GeoVision IP Device Disk in DVD Rom. (IP Device DVD can be found with each GV-IP Device package)
2. In the main menu, select "**Install GV-IP Device Utility**".

Download from Website

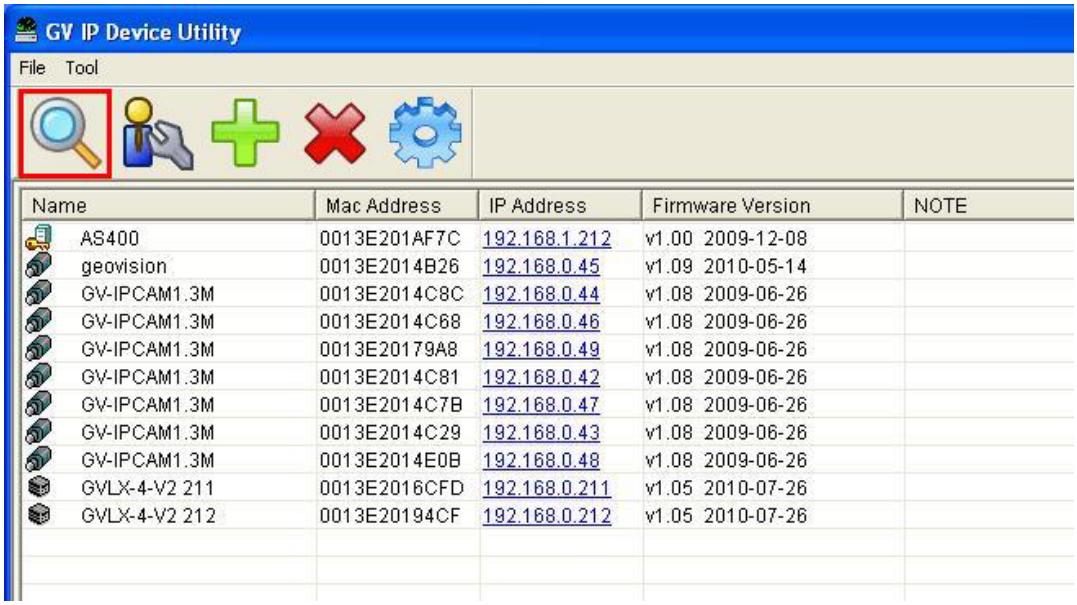
Alternatively, IP Device Utility can also be downloaded from USAVision website:

1. In Internet Explorer, go to http://www.usavisionsys.com/download.
2. Click on "**Utilities**".
3. Download and install **IP Device Utility**.

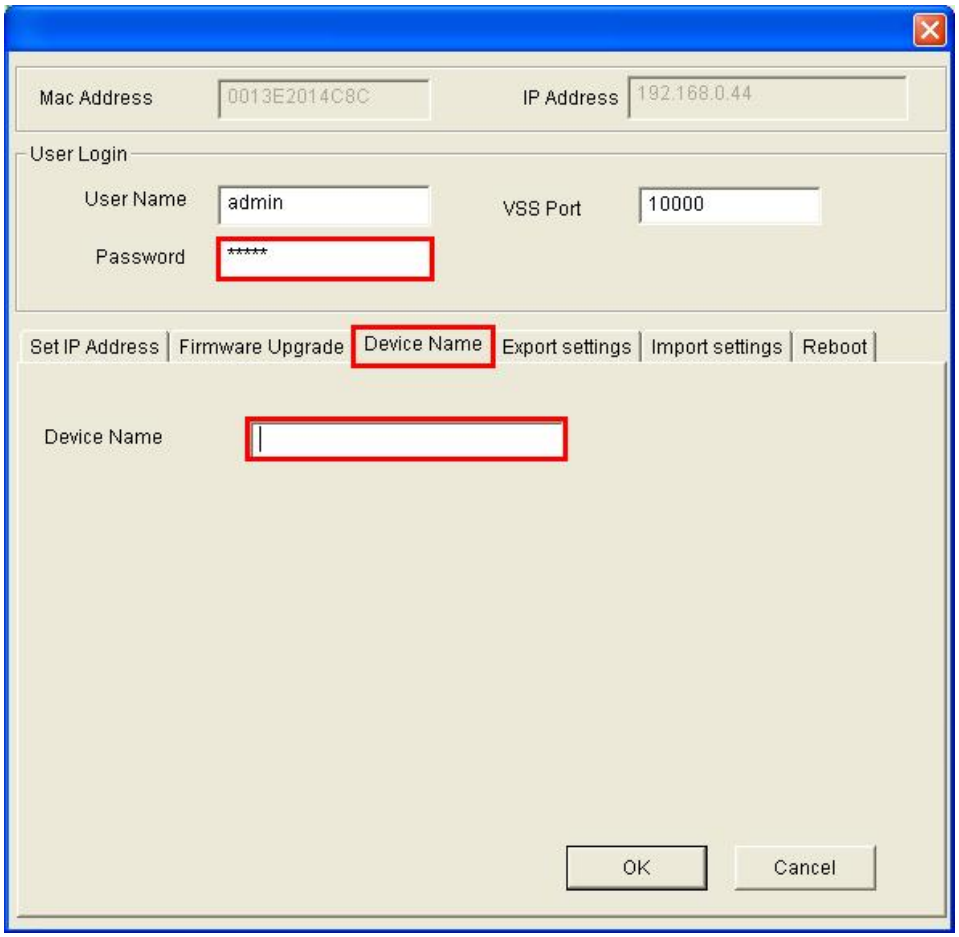


5.2.2 Assign Device Name

1. Run **GV-IP Device Utility**.
2. Click on "**Search**" to search for all GV-IP Devices under the same network.



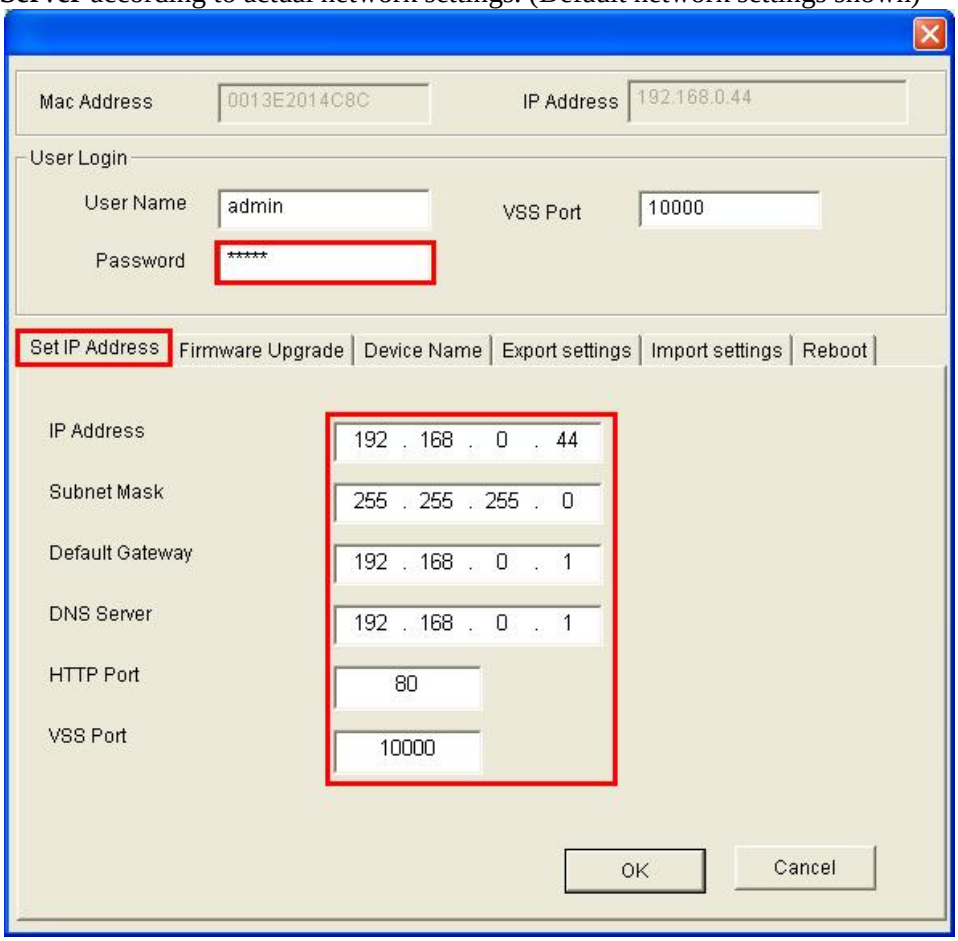
3. Double click on desired IP device.



4. Enter **Password** for the IP Device. (By default, GV-IP Device password is admin)
5. Select **Device Name** tab, then enter **Device Name**.
6. Click "**OK**".

5.2.3 Change IP Address and Port Information

7. Select **Set IP Address** tab, then input **IP Address**, **Subnet Mask**, **Default Gateway**, and **DNS Server** according to actual network settings. (Default network settings shown)

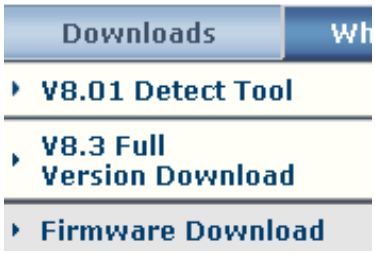


8. To use non-default ports, change the values in **HTTP** Port and **VSS** Port. (Default ports shown)
9. Click "**OK**".

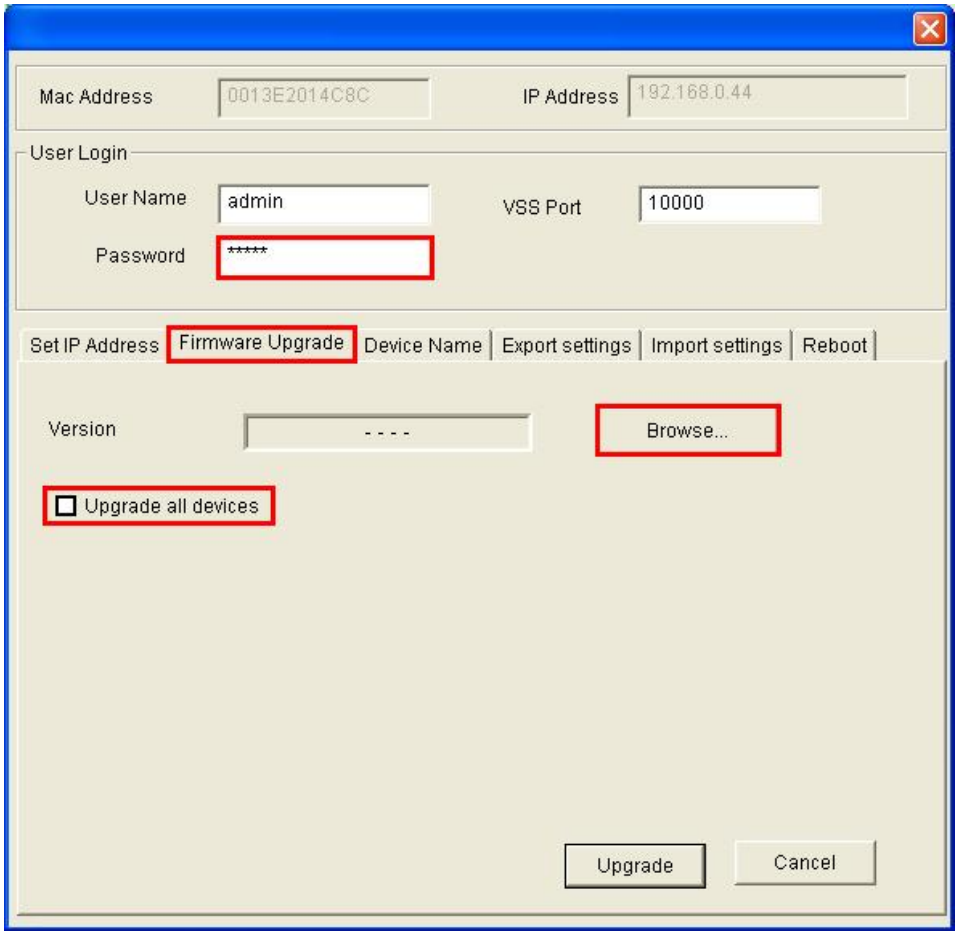
✓ *If no IP device can be found or some devices are missing from IP Device Utility search, verify the IP properties of the PC (as shown in section 4.2.1) and make sure that they match the properties of the IP Devices. (Default IP properties for GV-IP Devices are shown above)*

5.2.4 Update Firmware

10. Prior to firmware update, download newest firmware from www.geovision.com.tw.
11. Click "**Download**", select "**Firmware Download**".
12. Download applicable firmware onto PC or thumb drive on the following page.



13. In IP Device Utility, select **Firmware Upgrade** tab.

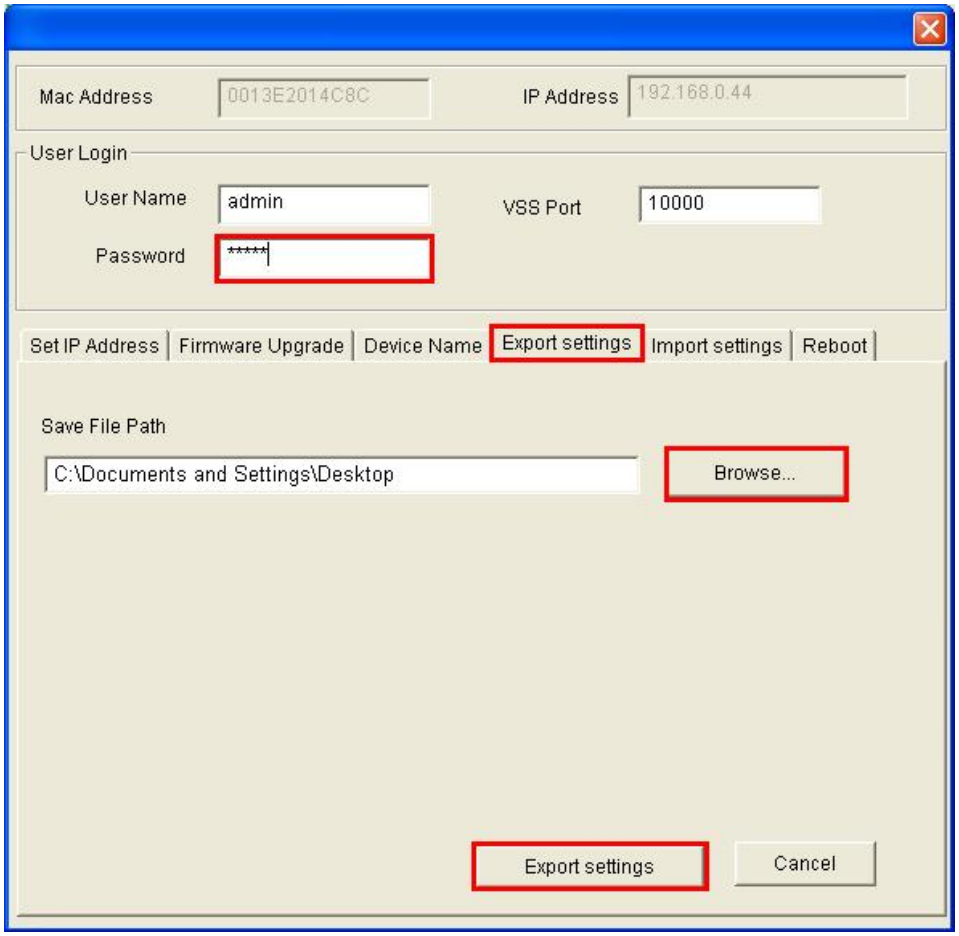


14. Click "**Browse**" and locate the firmware as downloaded in step 12. (Firmware has .img file extension)
15. If the same firmware update applies to all GV-IP Devices found via search, check "**Upgrade to all video servers**" option to apply firmware update on all GV-IP Devices found.
16. Click "**Upgrade**".

5.2.5 Export Settings

To preserve custom settings on GV-IP devices, settings can first be exported via GV-IP Device Utility. The exported settings can be applied on any GV-IP device of the same type with the same firmware.

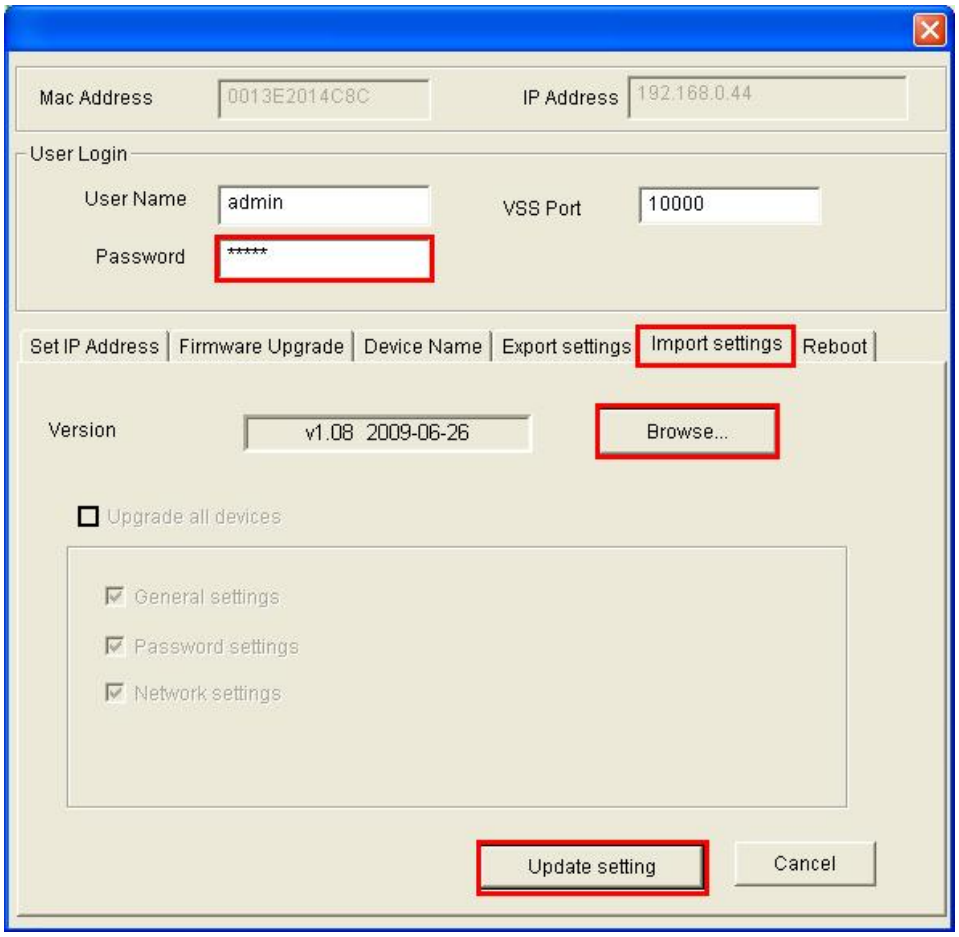
17. In IP Device Utility, select **Export settings** tab.
18. Select "**Browse**" to designate the export file destination.
19. Select "**Export settings**" to begin export.



5.2.6 Import Settings

To quickly apply custom settings on GV-IP devices, settings can be imported via GV-IP Device Utility. GV-IP device can only import settings saved from the same type of device with the same firmware.

20. In IP Device Utility, select **Import settings** tab.
21. Select "**Browse**" to locate the setting file destination. (Refer to step 18 in previous section)
22. Select "**Update settings**" to begin import.

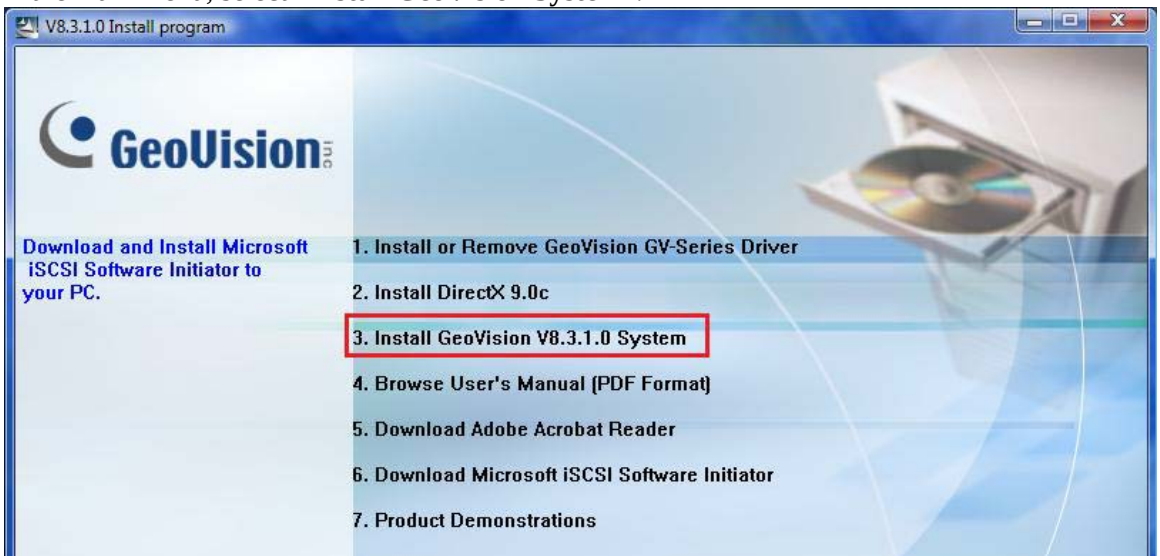


5.3 Dynamic DNS

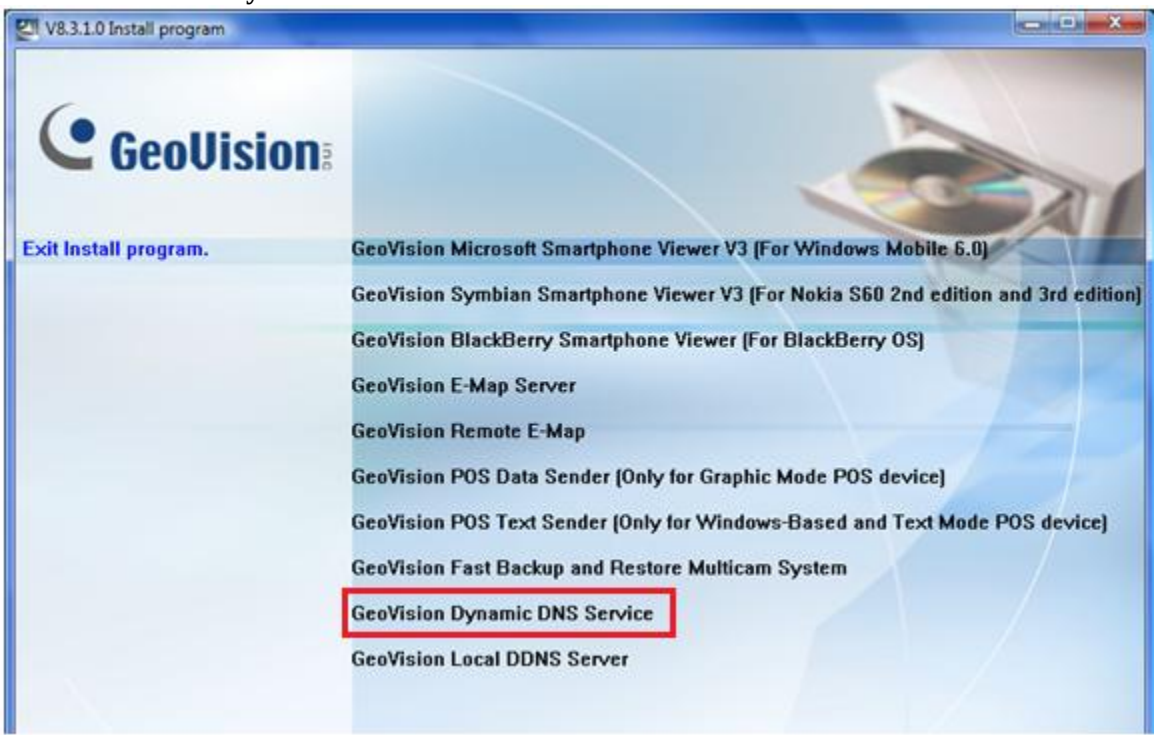
Dynamic DNS is an application that allows GeoVision users to register for a domain name that may be used as their IP address. Some users may find it useful as they do not need to memorize their constantly changing IP addresses.

5.3.1 Install Dynamic DNS

1. Insert GeoVision Main System Installation Disk in DVD Rom.
2. In the main menu, select "**Install GeoVision System**".



3. Click **Next** button to go to next page.
4. Select "**GeoVision Dynamic DNS Service**".

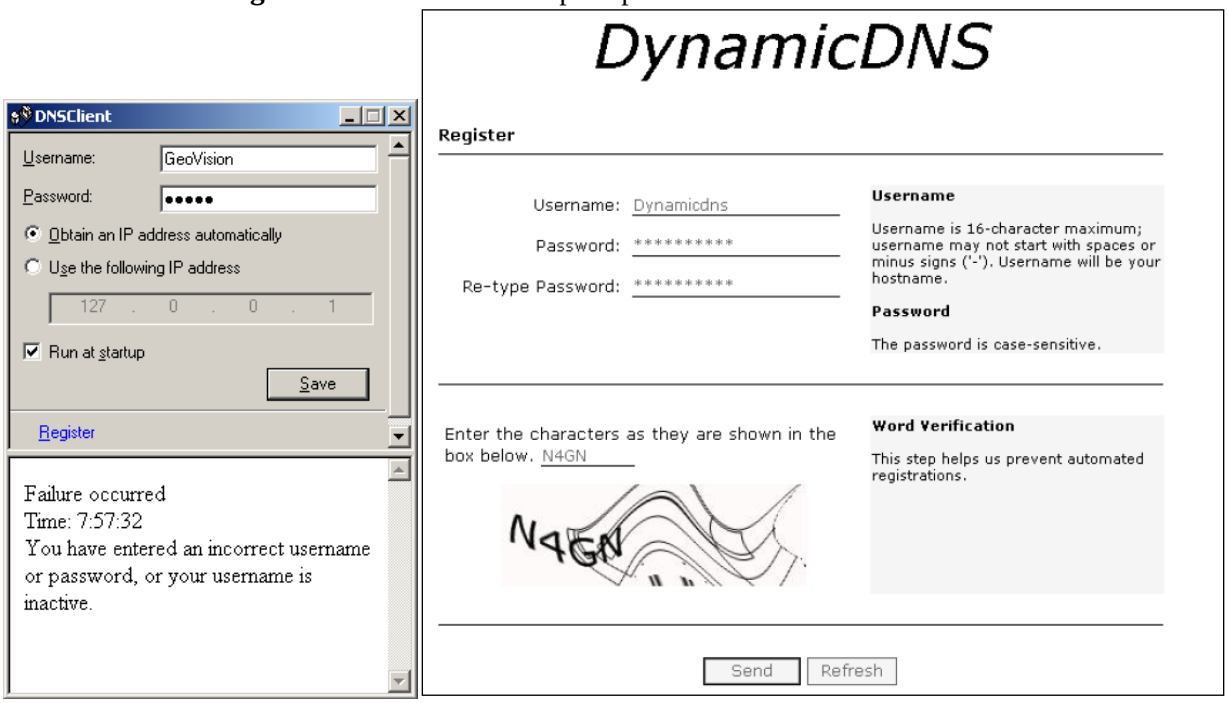


For GV-DVR Systems, Dynamic DNS is preinstalled. To locate the application, follow the steps below:

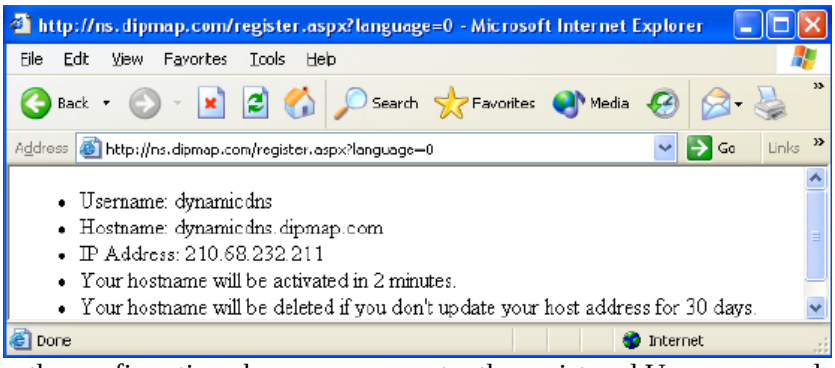
1. On Windows desktop, click on "**Start**".
2. Click on "**All Programs**".
3. Click on "**DDNS**" folder.
4. Run **Dynamic DNS Service**.

5.3.2 Register Dynamic DNS

1. Click on "**Register**" under DNS Client prompt.



2. In the Dynamic DNS window, input desired **User name**, **password**, and **retype password**. (Enter only letters and numbers, password is case sensitive)
3. Enter security word verification as shown.
4. Click "**Send**".



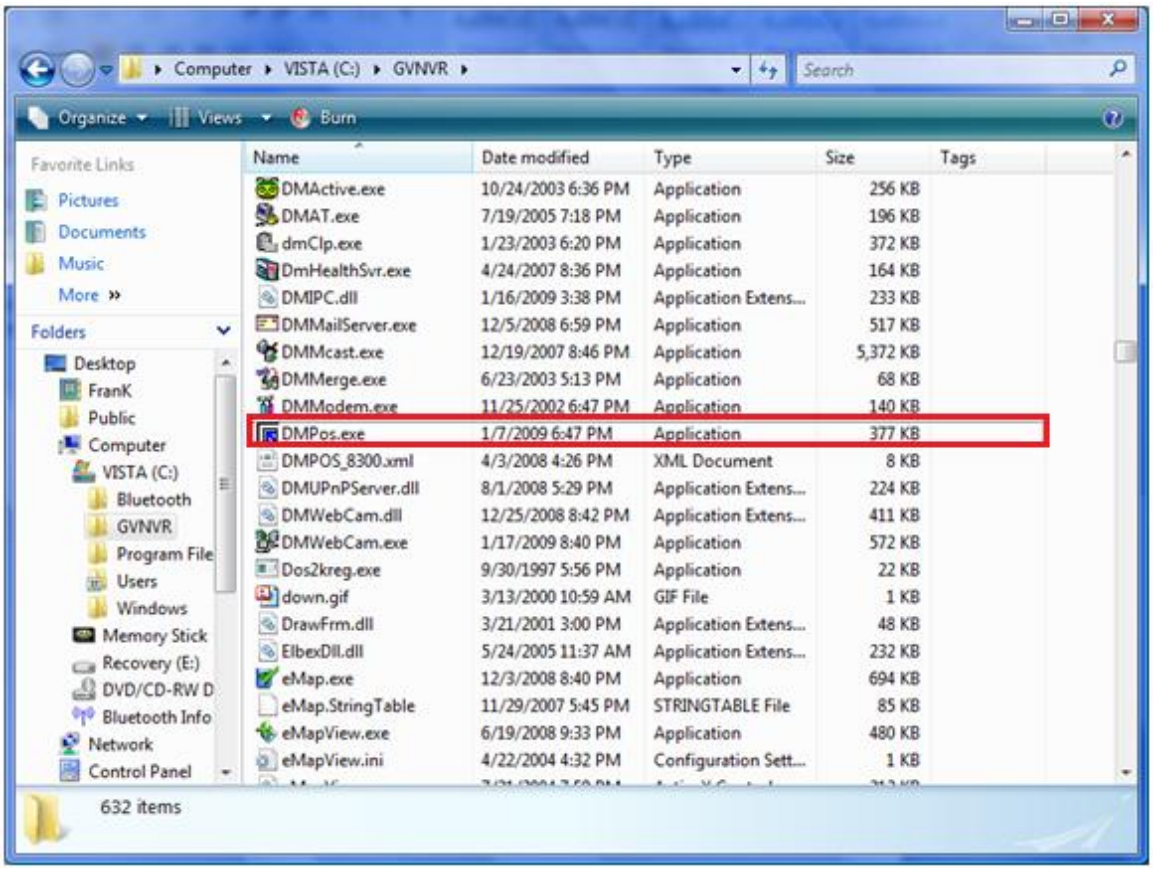
5. When the confirmation above appears, enter the registered User name and password in the DNS Client prompt above.
6. Check "**Run at startup**".
7. Click "**Save**".

5.4 DMPos

DMPos is an application that will move GeoVision software such as Multicam, Viewlog, RPB, EZViewlog, LPR, or Multiview onto a second monitor if the system is setup as a dual-monitor station.

For GV-DVR Systems, DMPos.exe is preinstalled. To locate the application, follow the steps below:

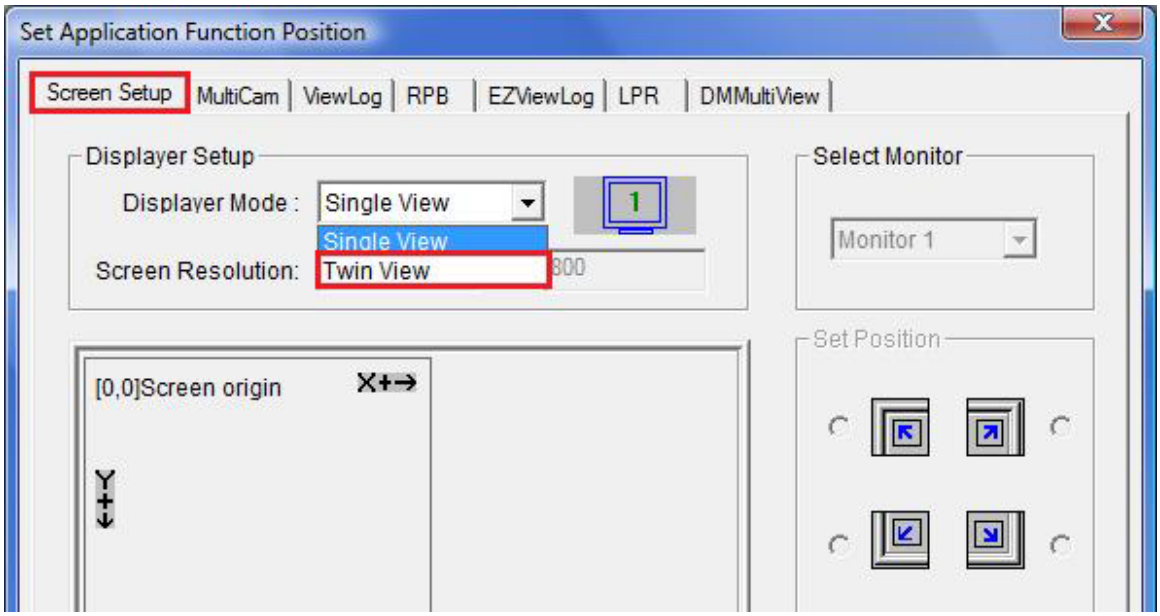
1. Close all GeoVision applications completely.
2. On Windows desktop, go to "**My Computer**".
3. Go to the hard drive where GeoVision was previously installed. (The default location is **C: drive**)
4. Click on "**GVCombo**" folder. (Alternatively, the name of the folder may vary according to the GeoVision card model you are using. I.E. GV1480)
5. Locate and Run **DMPos.exe**.



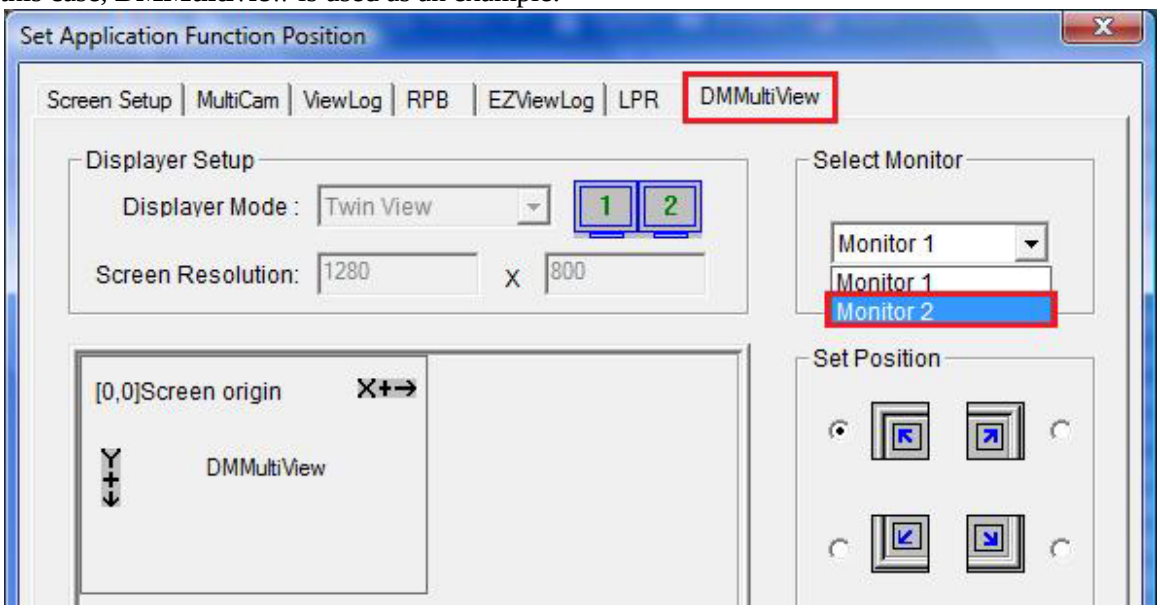
5.4.1. Run DMPos

In order to move GeoVision application onto a second monitor, follow the steps below:

1. Under **Screen Setup** tab, select "**Twin View**" in the drop-down list under Displayer Setup box.



2. Click on the desired GeoVision application tab (for which will be moved to second monitor). In this case, **DMMultiview** is used as an example.



3. Select "**Monitor 2**" from the Select Monitor drop-down box.
4. Click "**OK**".
5. Start the desired GeoVision application and it will appear on the second monitor. For this example, **DMMultiview** will appear on second monitor.

✓ *Please note that currently DMPos.exe only supports up to 2 monitor displays.*

✓ *DMPos.exe can also be used on client PC. Copy DMPos.exe and DMPOS_8300.xml in an USB drive and apply it on remote PC.*

5.5 Fast Backup and Restore

Fast Backup and Restore, or FBR, is an utility that will allow users to quickly save DVR system settings such as Password, Schedule, POS, and Network into one executable file. Then, by using that file, users can then apply the same settings on Multiple DVRs without having to reconfigure each system individually. This utility is useful to retain system settings prior to an upgrade then reapply it afterwards as well.

- ✓ *Refer to Section 2.4.4 Fast Backup and Restore to create Fast Backup and Restore automatically by schedule*

5.5.1 Install FBR

For GV-DVR Systems, Fast Backup and Restore is preinstalled. To locate the application, follow the steps below:

1. On Windows desktop, click on "**Start**".
2. Click on "**All Programs**".
3. Click on "**GVCombo**" folder. (Alternatively, the name of the folder may vary according to the GeoVision card model you are using. I.E. GV1480)
4. Locate and run **Fast Backup and Restore Main System**.

Install from Disk

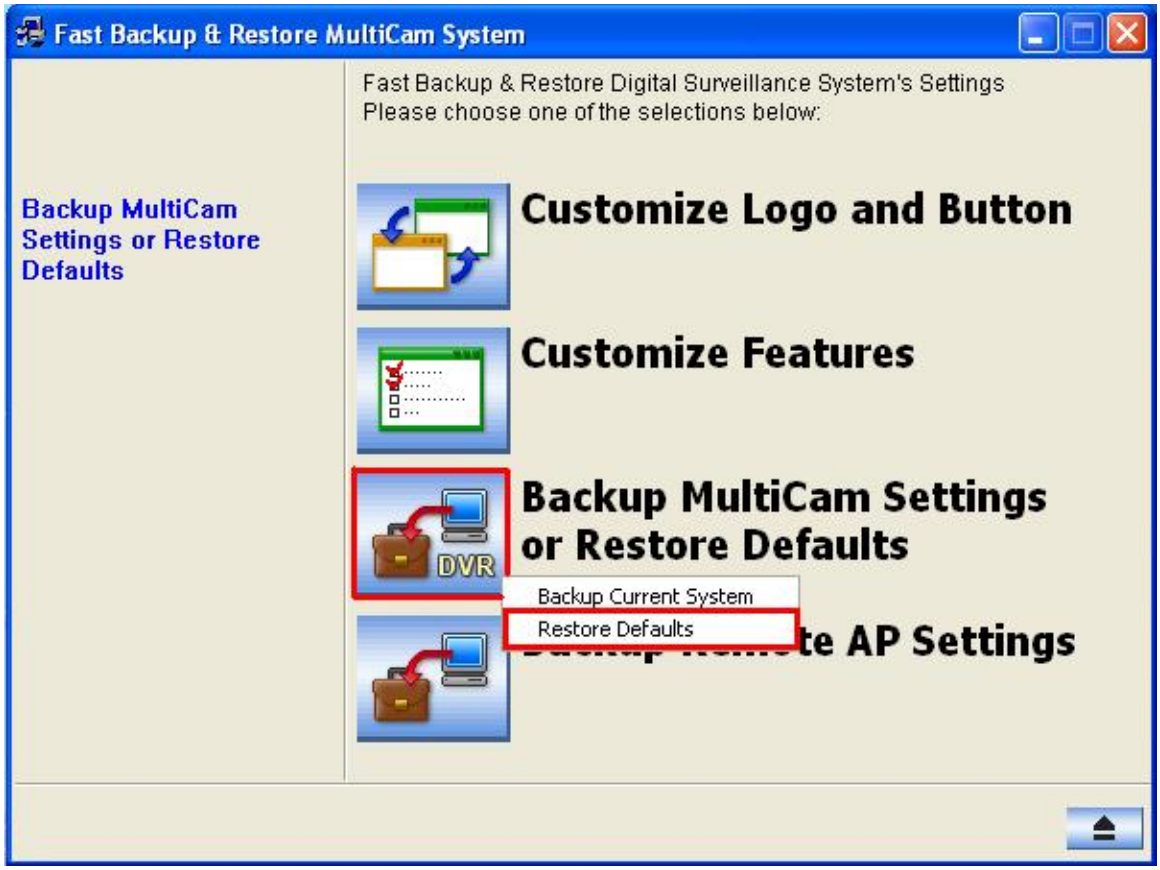
In case Fast Backup and Restore utility is missing, follow the steps below:

1. Insert GeoVision Main System Installation Disk in DVD Rom.
2. In the main menu, select "**GeoVision Main System**".
3. Click "**Next Page**".
4. Select "**GeoVision Fast Backup and Restore Multicam System**".

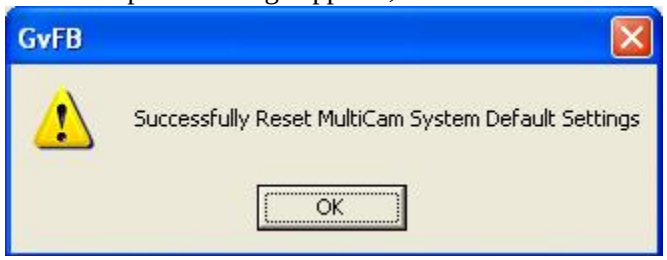
5.5.2 Restore Default Settings

1. Enter **ID** and **Password** for DVR System.

2. Select "**Backup Multicam Settings or Restore Defaults**".
3. Select "**Restore Defaults**".



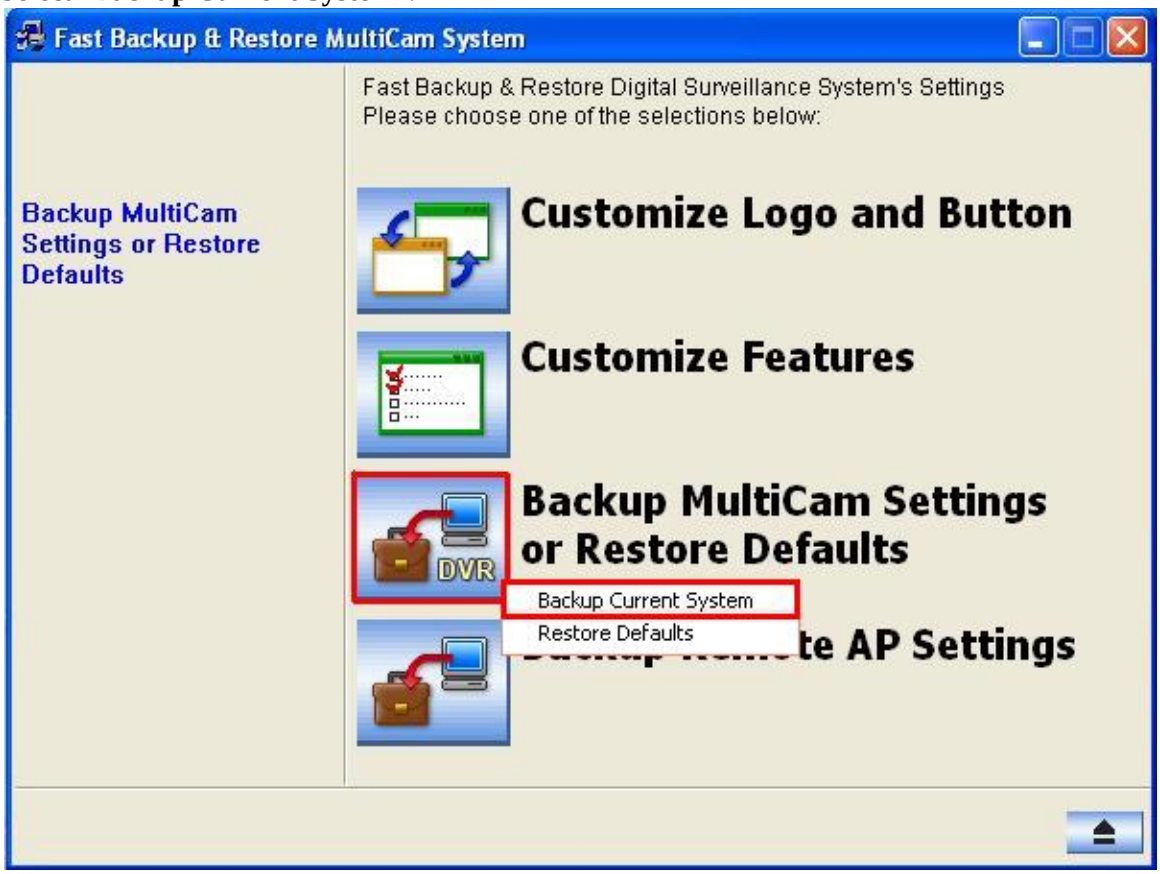
4. When complete message appears, click "**OK**".



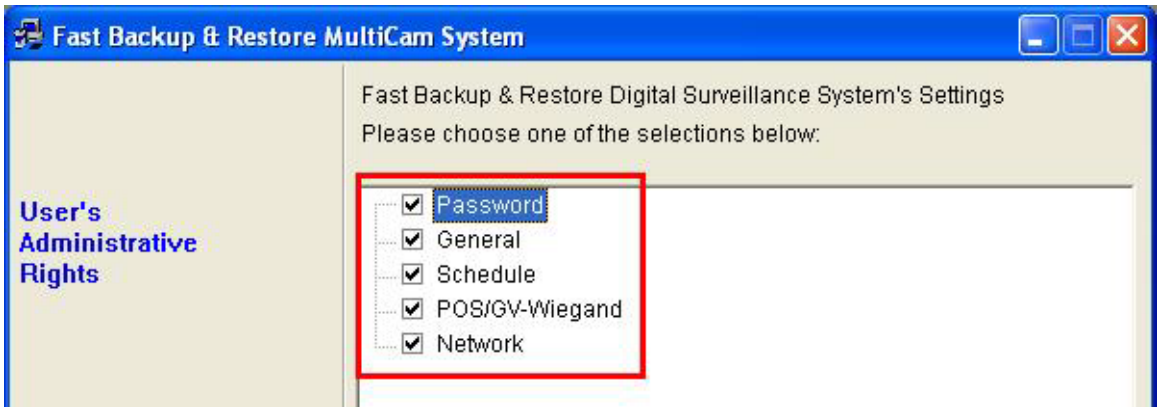
5.5.3 Backup Multicam Settings

1. Enter **ID** and **Password** for DVR System.

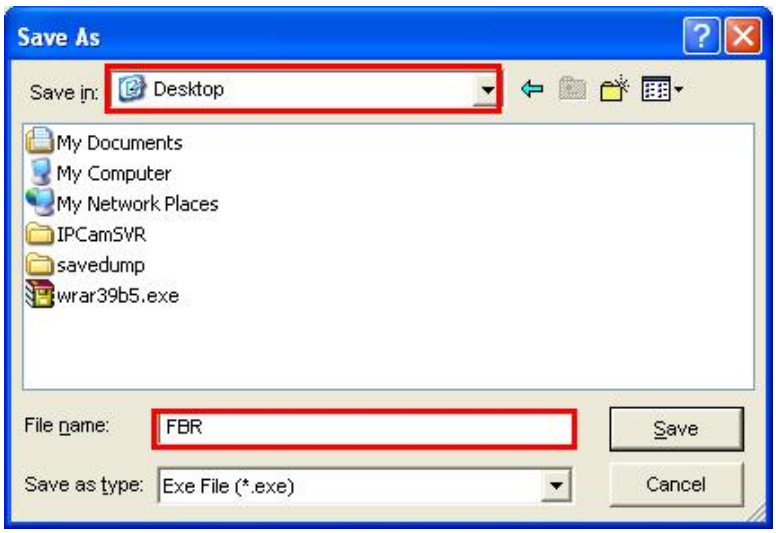
2. Select "**Backup Multicam Settings or Restore Defaults**".
3. Select "**Backup Current System**".

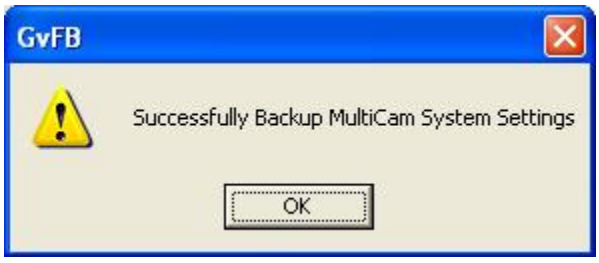


4. Check each section for settings to be saved, click "**Next**". (By default, all sections are checked)



5. Select destination for FBR file to be saved in. (If FBR will be applied on multiple DVRs, or if the DVR System will perform System Recovery, save the FBR file to an USB drive)
6. Name the FBR file.
7. Click "**Save**".
8. When complete message appears, click "**OK**".





5.5.4 Apply FBR

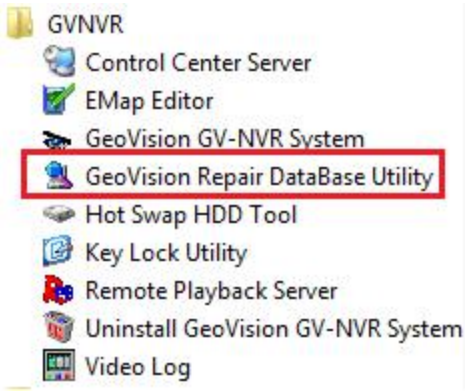
1. When the DVR system is ready to apply settings from previously saved FBR file, double-click to run the FBR file and it will apply the settings onto DVR automatically.

5.6 Database Repair Utility

Database Repair Utility is used to repair misplaced or missing video/audio files that are not identified properly by Viewlog. As long as video/audio file still exists on the hard drive and detectable by Windows OS, Database Repair Utility will restore the video/audio files back to their default paths and allow them to appear under Viewlog.

For GV-DVR Systems, Database Repair Utility is preinstalled. To locate the application, follow the steps below:

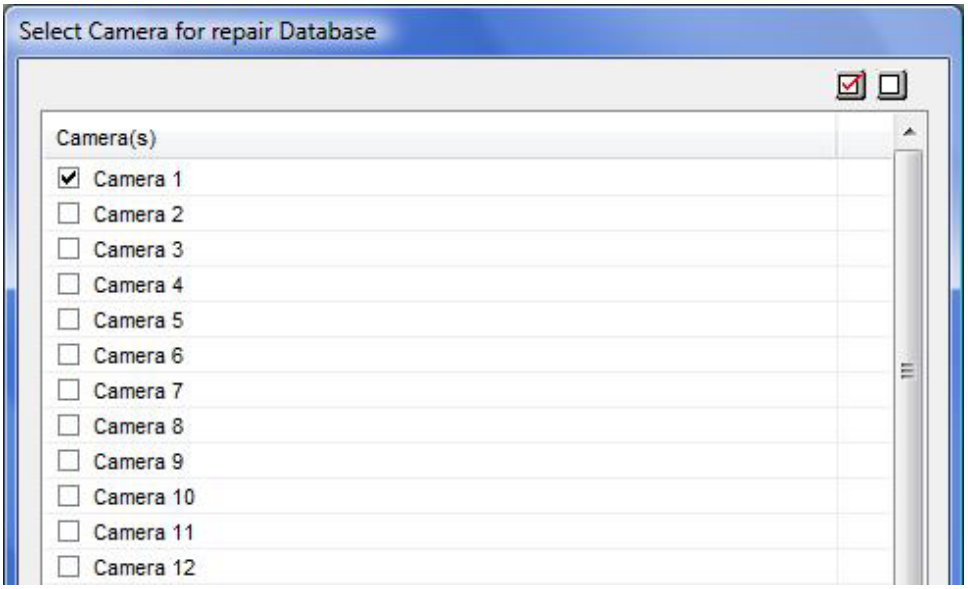
1. Close all GeoVision applications completely.
2. On Windows desktop, click on "**Start**".
3. Click on "**All Programs**".
4. Click on "**GVCombo**" folder. (Alternatively, the name of the folder may vary according to the GeoVision card model you are using. I.E. GV1480)
5. Run **GeoVision Repair Database Utility**.



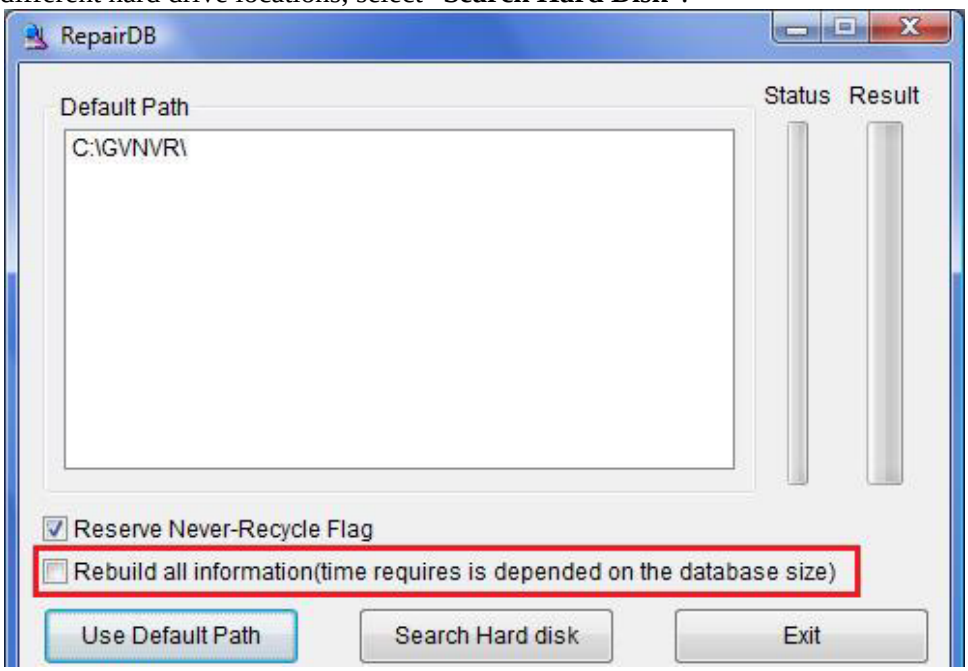
5.6.1 Run Database Repair Utility

1. Enter **ID** and **Password** for the DVR system.
2. Click "**OK**".

3. Select cameras that require database repair. (By default, all cameras are checked)
4. Click "**OK**".



5. Under Repair DB window, check on "**Rebuild all information**".
6. If your video/audio files exist only in the predefined paths (refer to section 2.5), select" **Use Default Path**" option.
7. If you are not sure where video/audio files are on the hard drive, or if the files scatter across different hard drive locations, select "**Search Hard Disk**".



✓ *Select "Use Default Path" will rebuild video/audio files listed under predefined hard drive locations only. Therefore, time required for rebuilding will be less.*

✓ *Select "Search Hard Disk" will rebuild video/audio files from all hard drive locations connected to the system. Therefore, more time will be required for rebuilding the database.*

8. When finish message comes up, click "**OK**".

9. Go under Viewlog and review updated video/audio files in the event list.

✓ *The time required to perform database repair generally depends on the number of files on the hard drives. Typically, it will take up to three hours repairing an 8 bay DVR system.*

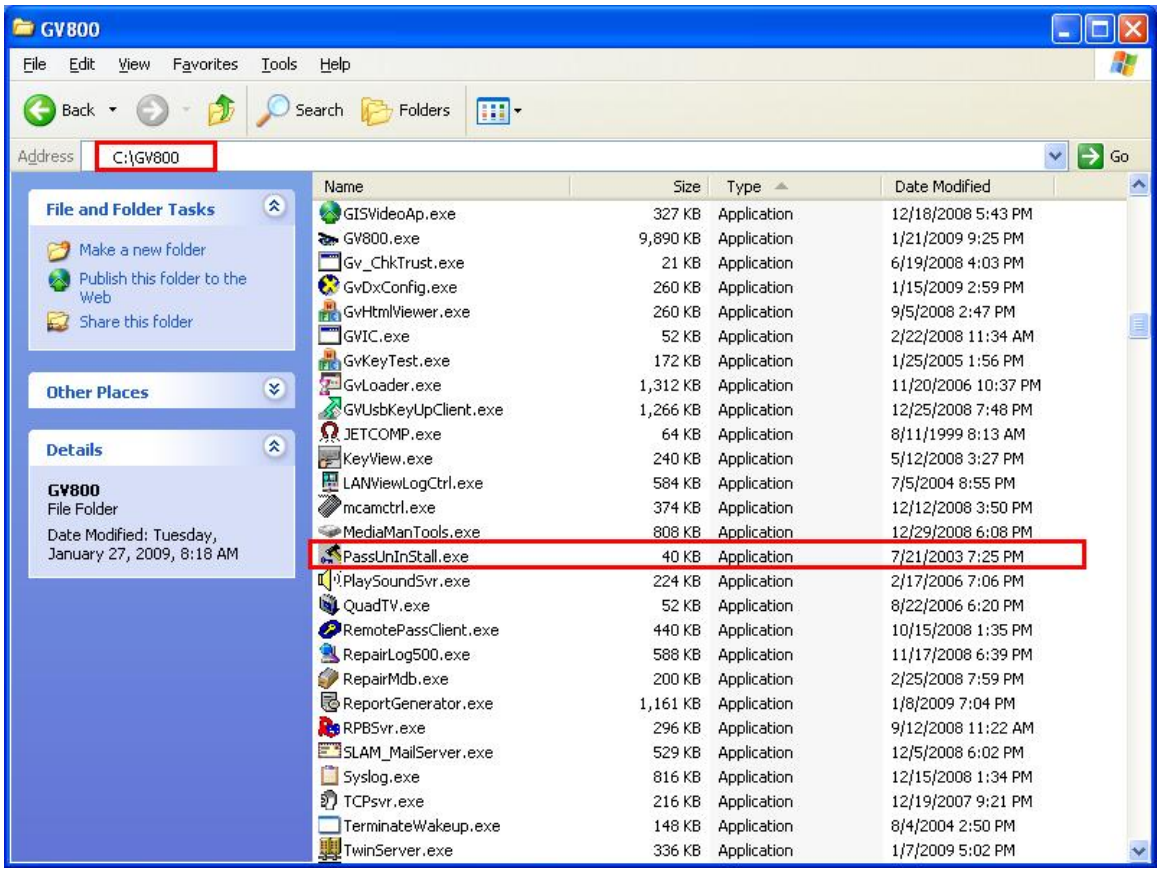
5.7 Password Removal Utility

- ✓ *Please note that removing and reinstalling GeoVision Multicam software will NOT be able to reset the password database since it is stored under Windows registry. The only options to remove password database are either through Password Removal Utility as shown in this section or reformat system hard drive and reinstall Windows OS.*

In case user forgets DVR system's Administrator ID and password, and if there is no way to retrieve any password, Password Removal Utility will help cleaning out password database from Windows registry. However, permission to allow users to run Password Removal Utility must be checked during system setup (refer to "Allow removing password system" option in section 2.6.1).

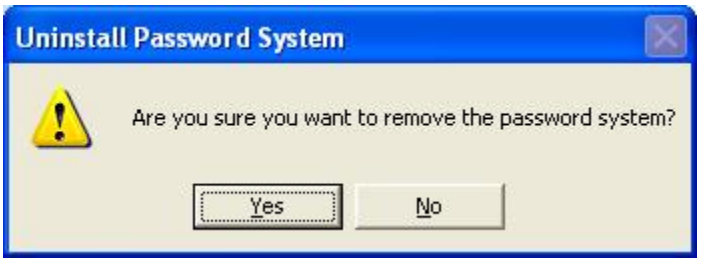
For GV-DVR Systems, Database Repair Utility is preinstalled. To locate the application, follow the steps below:

1. Close all GeoVision applications completely.
2. On Windows desktop, go to "**My Computer**".
3. Go to the hard drive where GeoVision was previously installed. (The default location is **C: drive**)
4. Click on "**GVCombo**" folder. (Alternatively, the name of the folder may vary according to the GeoVision card model you are using. I.E. GV1480)
5. Locate and Run **PassUninstall.exe**.



5.7.1 Run Password Removal Utility

1. Click "**Yes**" when prompted confirmation.



2. When finished, click "**OK**" on the password removed success window.

3. Run GeoVision Multicam software, and the prompt to create ID and password should appear.

4. Enter a new set of **ID**, **Password**, and **Password Confirmation**. It will be used as the default Administrator ID and password.
5. Check on "**Allow removing password system**" to allow Password Removal Utility to operate in case user forgets ID and password again in the future.
6. Click "**OK**".

✓ For Step 1, if "**Please close all AP of Password System**" message comes up instead, that means there is still one or more GeoVision application running.

- Make sure the login page does not appear on screen and Control Center Server does not run in the task bar.
- Alternatively, delete all items listed under Windows "**Start**", "**All Programs**", "**Startup"**, then restart DVR system and run PassUninstall.exe again.

✓ For Step 1, if "**Not enough prililege to remove the password system**" message comes up instead, that means the DVR system does not allow PassUninstall.exe to be executed.

- This message will appear when the option "Allow removing password system" was not checked during system setup (refer to section 2.6.1)
- In this case, the only way to remove the password database will be to reformat system hard drive and reinstall Windows OS. For GeoVision DVR Systems, perform system recovery using the GeoVision Recovery DVD.

6. Upgrade and Recovery

In this section, procedures to perform software upgrade and system recovery are as described below. Follow the procedures carefully when performing software upgrade or system recovery in order to prevent software errors and damages to the DVR system.

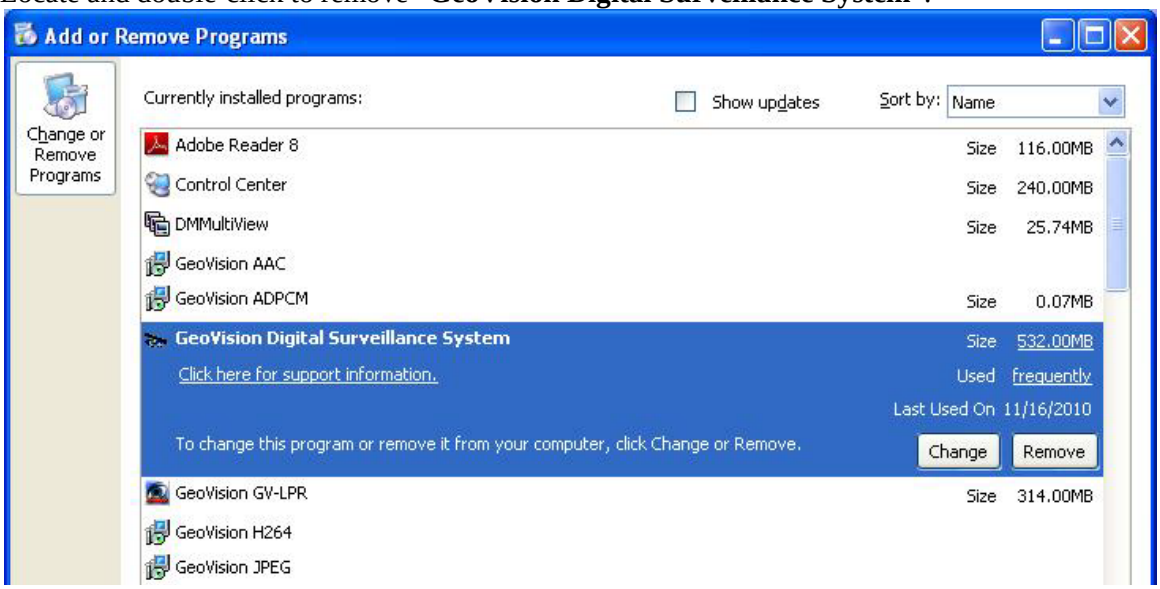
6.1 Software Upgrade

GeoVision provides free software upgrade. Keeping the GV-DVR/NVR System up-to-date will optimize system performance with maximum software capabilities. Refer to GeoVision/USAVision website or consult with GeoVision Technical Support for newest compatible software upgrade for your DVR system.

- ✓ *Prior to software upgrade, make sure complete software and driver files are on the GV-DVR System. The upgrade files may be obtained via a GeoVision Main System Installation DVD or downloaded from USAVision FTP site. To obtain software and driver download or to request a copy of installation DVD, contact GeoVision Sales/Technical Support with the GV-DVR System barcode ready.*

6.1.1 Remove Software

1. Close all GeoVision applications completely.
2. If there is any setting that requires backup, run **Fast Backup and Restore** (Section 5.5) to save current system settings.
3. On Windows desktop, click on "**Start**".
4. Click on "**Control Panel**".
5. Select "**Add/Remove Programs**".
6. Locate and double-click to remove "**GeoVision Digital Surveillance System**".



7. Click "**OK**" when process completes.
8. Delete "**GVCombo**" folder under C:/. (Alternatively, the name of the folder may vary according to the GeoVision card model you are using. I.E. GV1480)

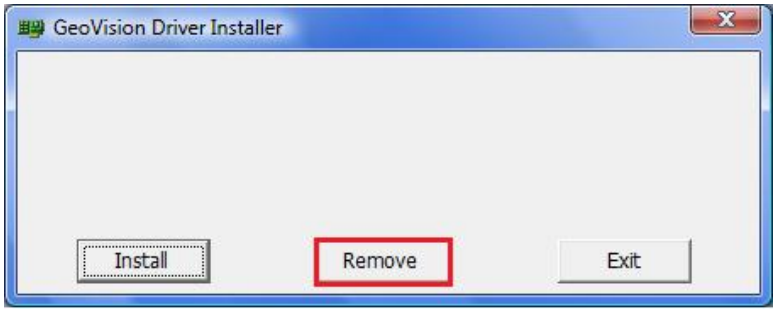
6.1.2 Remove Driver

✓ *GV-NVR users may proceed to Section 6.1.4 Software Install directly*

9. Insert GeoVision Main System Installation DVD for new software and driver into DVD Rom.
   a. If the driver file is downloaded, run **DrvInst.exe** then proceed to step 14.
10. In the main menu, select "**Install or Remove GeoVision GV-Series Driver**".

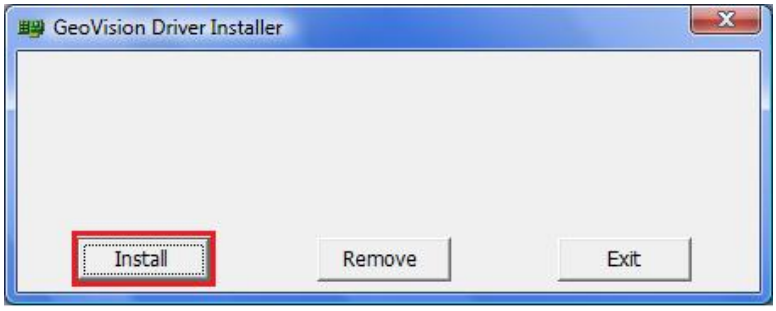
11. Select "**Install or Remove GeoVision GV-Series Card Drivers**".

12. In the Installer window, click "**Remove**".
13. In "Removed Successful" window, click "**OK**".



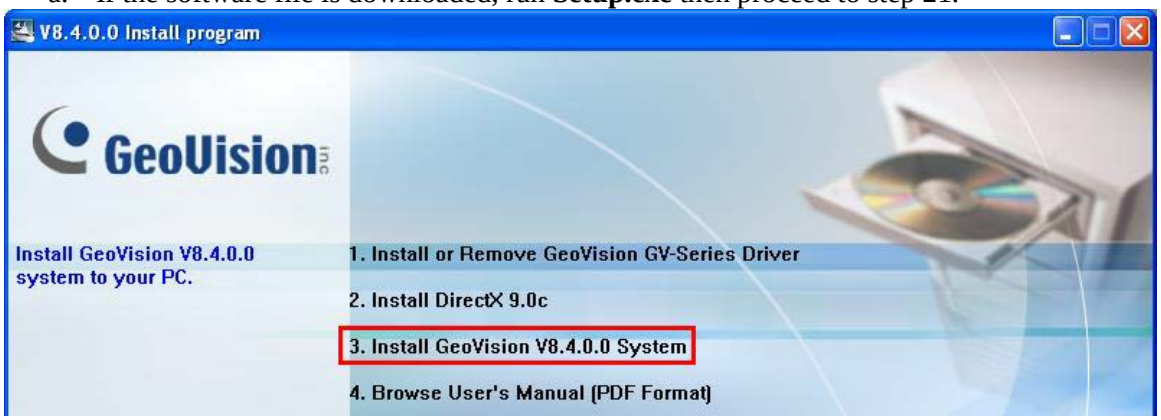
6.1.3 Install Driver

14. In the Installer window, click "**Install**".
15. In "Installed Successful" window, click "**OK**".
16. Click "**Exit**" to exit driver installer.



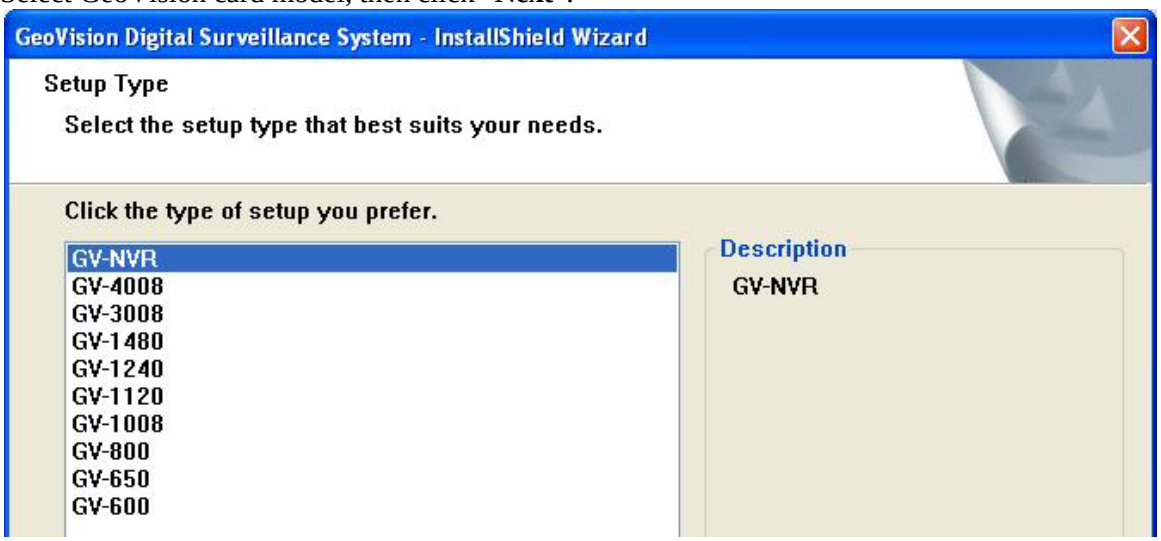
6.1.4 Install Software

17. In the main menu, select "**Install GeoVision System**".
    a. If the software file is downloaded, run **Setup.exe** then proceed to step 21.



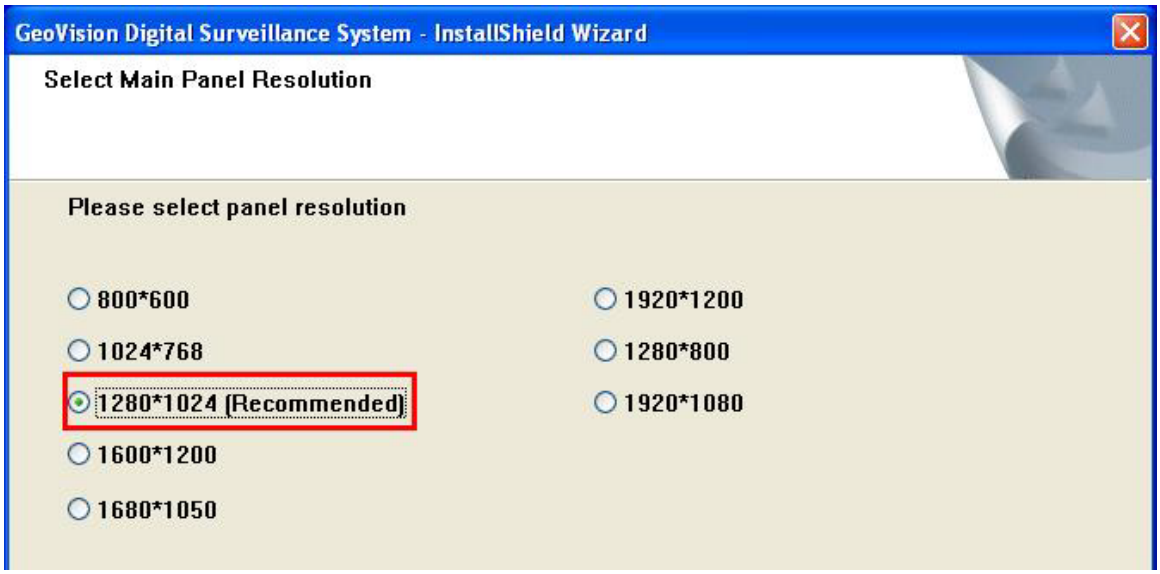
18. Select "**GeoVision Main System**".

19. Select GeoVision card model, then click "**Next**".



✓ *If GeoVision card mode used in the system is unknown, contact GeoVision Sales/Technical Support with barcode ready.*

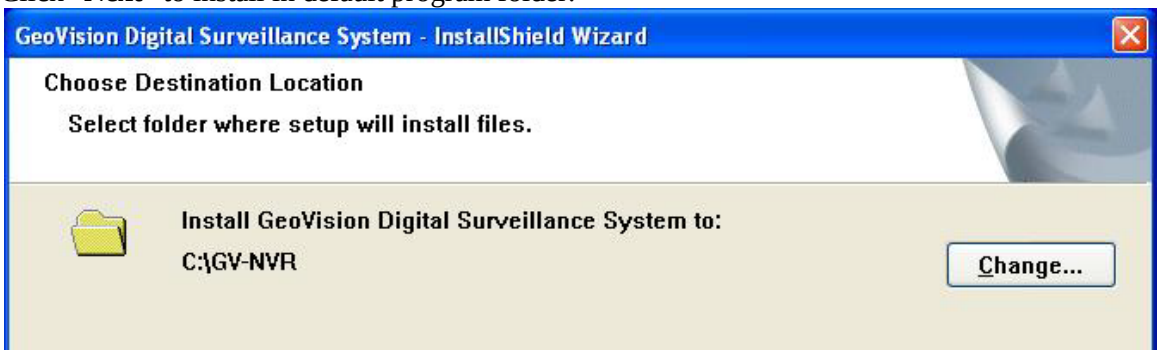
20. Select **1280*1024** (default) as resolution, then click "**Next**".



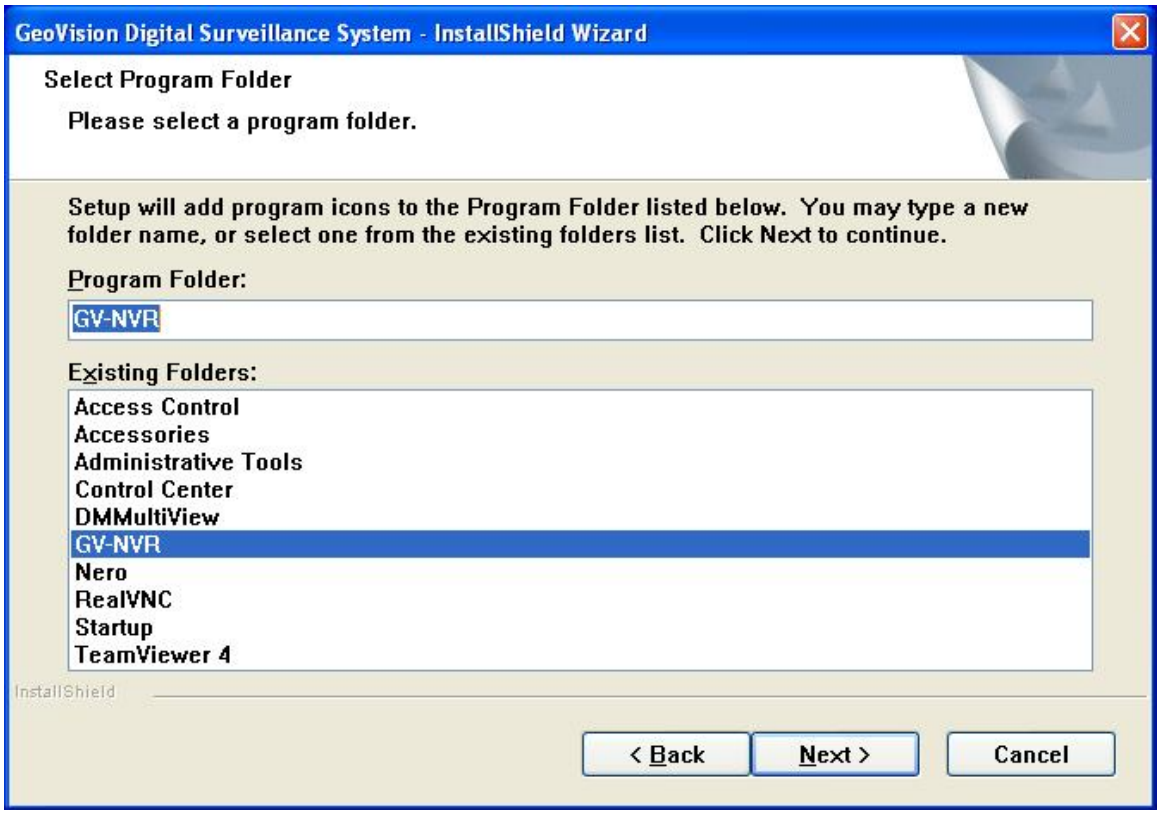
✓ *Select higher resolution only if desktop resolution allows.*

21. Check "**Add to the Startup**" to allow Multicam to run automatically when Windows starts.
22. Check "**Install the Remote Control**" if GV-Remote will be used on the system.
23. Click "**Next**".

24. Click "**Next**" to install in default program folder.



25. Click "**Next**" to create default program folder under Program Menu.



26. When installation process is finished, select "**Yes, Restart My Computer Now**" to reboot the DVR system.

27. After GV-DVR System restarts, run FBR file from generated from step 2 above to reapply the settings.

✓ *Perform Database Repair Utility (Section 5.6) to ensure all previous video recording is identified properly*

✓ For detailed instruction, refer to v8.5 Installation Guide.

6.2 System Recovery

For GeoVision DVR Systems, System Recovery is an automatic process that is used to reformat system hard drive and reinstall Windows OS, motherboard drivers, and GeoVision applications. It is necessary when the DVR system encounters irreversible damages.

✓ *Perform System Recovery only if necessary or as suggested by GeoVision Technical Support personnel. Always consult GeoVision Technical Support prior to System Recovery.*

6.2.1 Run System Recovery

When it is necessary to perform System Recovery, follow the steps below:

1. If applicable, backup any video/audio files or program files in C: drive. Since System Recovery will only affect C: drive, it will not affect recording stored in other hard drives.
2. If there is any setting that requires backup, run **Fast Backup and Restore** (Section 5.5) to save current system settings. Then save the FBR file onto an USB drive.
3. Disable and turn off the power of each hard drive bay. The power button for each hard drive bay can be found on top of or next to each hard drive slot in the front panel of each DVR system. The button usually has green or orange light depending on the status of the hard drive.
4. Insert "**GV-DVR System Recovery DVD**" in to DVD Rom.
5. Press the red "**Reset**" button located in the front panel of the DVR system.
6. After the DVR system reboots, it will try to boot from the Recovery DVD instead of loading Windows OS.
7. A prompt window will appear to confirm recovery procedure, click "**OK**" or "**Yes**" to initiate System Recovery.
8. After System Recovery, the DVR system will automatically reboot.
9. Replace any backup files from step 1 above.
10. Run FBR file from generated from step 2 above to reapply the settings.
11. Enable and power on each hard drive bay from step 3 above.
12. Verify the storage path (as shown in section 2.5) and make sure each hard drive is detected under **My Computer**.
13. Run **Database Repair Utility**. (Refer to section 5.5)

✓ *System Recovery process generally takes approximately 45 minutes to complete.*