

4. Remote Viewing

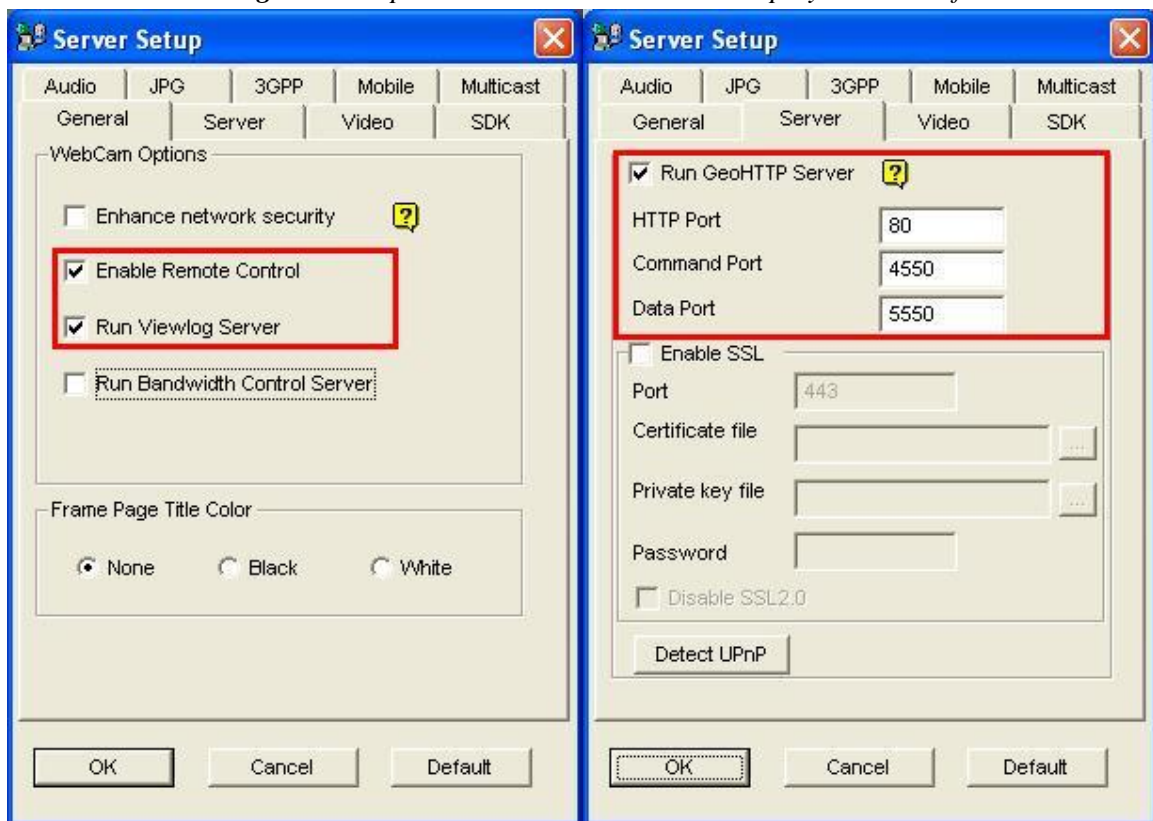
4.1 Webcam Server Setup

✓ Configure this section on GV-DVR 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 remote users to start/stop system monitor

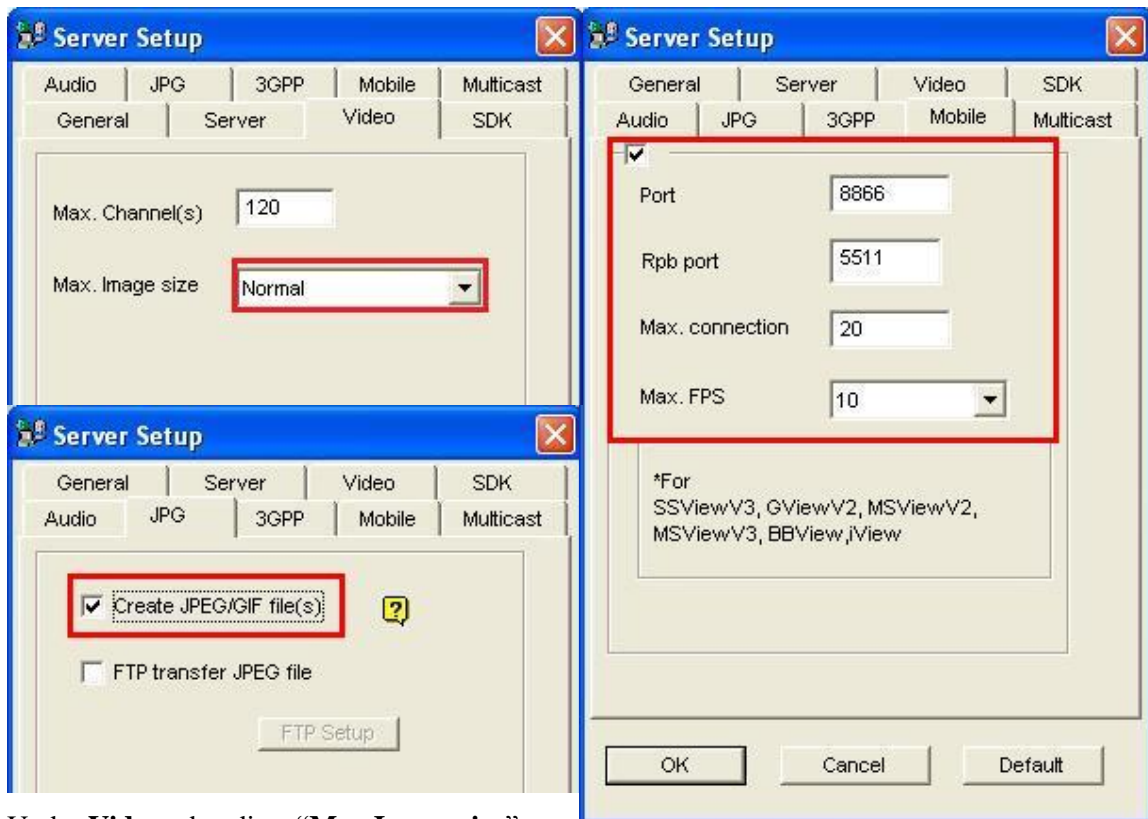
✓ “*Run Viewlog server*” option will allow remote users to playback video files



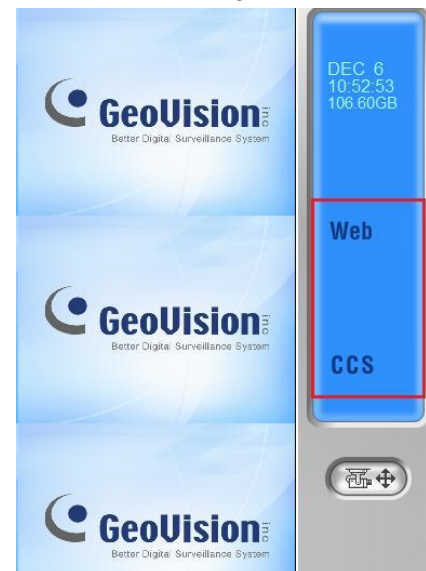
4. Under **Server** tab, check “**Run GeoHTTP Server**” and note the port numbers used for HTTP, Command, and Data. (By default the ports are 80, 4550, and 5550 respectively)

✓ *The default connection ports indicated above may be changed according to user’s preference in case the port numbers listed were already used by other applications.*

✓ *If multiple DVRs exist under the same network, it is also necessary to differentiate different DVRs by assigning different connection ports.*



5. Under **Video** tab, adjust “**Max Image size**” from the drop-down list in which DVR broadcasts.
 - ✓ The default image size is set as “**Normal**” (320x240). Adjust to “**Middle**” (640x480), “**Large**” (720x480), or “**Actual Size**” (megapixel as determined by IP camera) according to user needs and bandwidth allowance.
6. Under **Mobile** tab, enable mobile phone connection to this DVR/NVR. (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)**” option will allow remote users to view this system remotely via iPhone, Blackberry, and Mac
8. Click “**OK**” to exit Server Setup.
 - ✓ At this moment, it is possible to connect via LAN.
 - ✓ To connect on the same system (DVR 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 in Internet Explorer. (Refer to the following section for instructions to locate LAN IP)
 - ✓ For detailed instruction, refer to p.358 of v8.4 User Manual

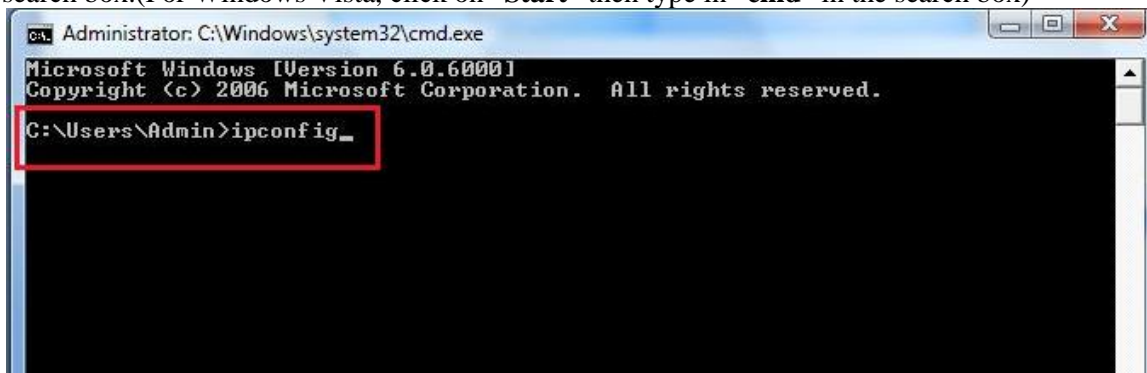


4.2 Network Port Configuration

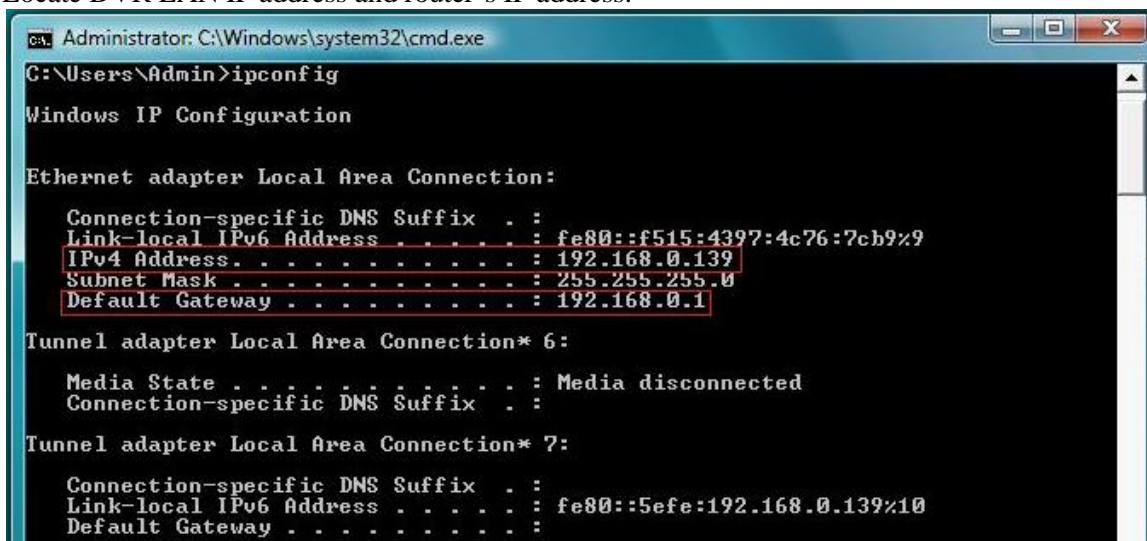
- ✓ Configure this section on GV-DVR System or any PC under the same network.

4.2.1 LAN IP Address

9. On GV-DVR System (Windows XP) desktop, click on “Start”, “Run”, then type in “cmd” in the search box.(For Windows Vista, click on “Start” then type in “cmd” in the search box)



10. In the command prompt window, type in “ipconfig”.
11. Locate DVR LAN IP address and router’s IP address.



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

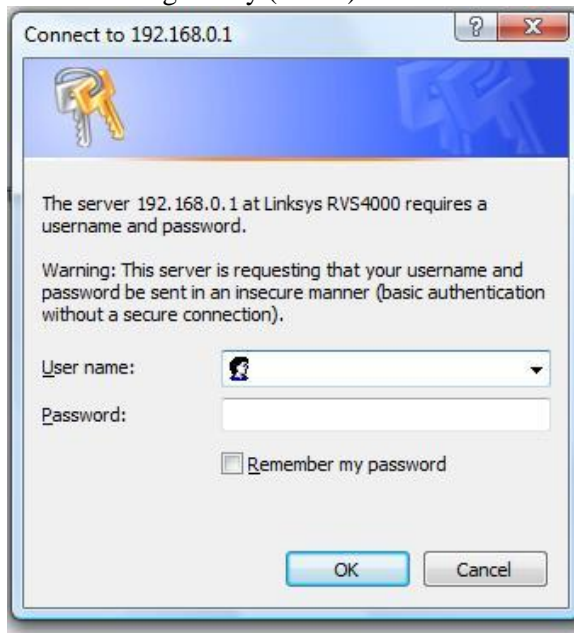
4.2.2 WAN IP Address

12. 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

13. Enter default gateway (router)'s IP address in Internet Explorer. (As found in previous step)



14. 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.
15. 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 (step 9 from 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:

 http://www.actiontec.com/ support/index.php	 http://www.netgear.com/Support.aspx	 http://support.dlink.com/
 http://www.linksys.com/s upport	 http://www.westell.com/tec hnical-support/technical- support.html	 http://support.2wire.com/
 877-722-3755	 888-321-2375	 800-567-6789

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

Common Ports	
FTP	21
SSH	22
Telnet	23
SMTP	25
Web	80
Pop 3	110
IMAP	143
Other Applications	
Remote Desktop	3389
PC Anywhere	5631

17. Underneath the displayed WAN IP address, input one of the ports which has been opened in step 13, click on “**Check**”.

- ✓ If you see the message “**Error**: I could not see your service”, then this specific port has not been opened or configured correctly. Verify step 13 again. (Port 80 is being used in the example below)

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

- ✓ If you see the message “**Success**: I can see your server”, then this specific port has been opened and configured correctly. (Port 80 is being 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

18. Repeat Step 15 for each of the port opened to ensure all ports are properly opened and forwarded.

- ✓ At this moment, it is possible to connect via WAN.

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:

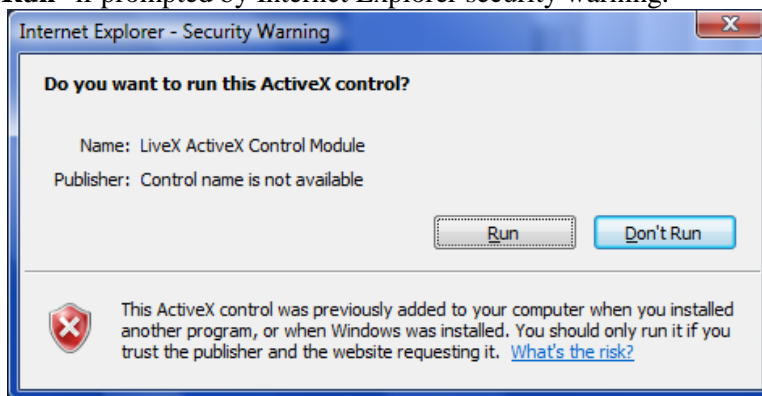
- ✓ Download from GV-DVR system remotely via Internet Explorer.
- ✓ Install from GeoVision installation disk.
- ✓ Download from <http://www.usavisionsys.com/download>.

Download from GV-DVR 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**".



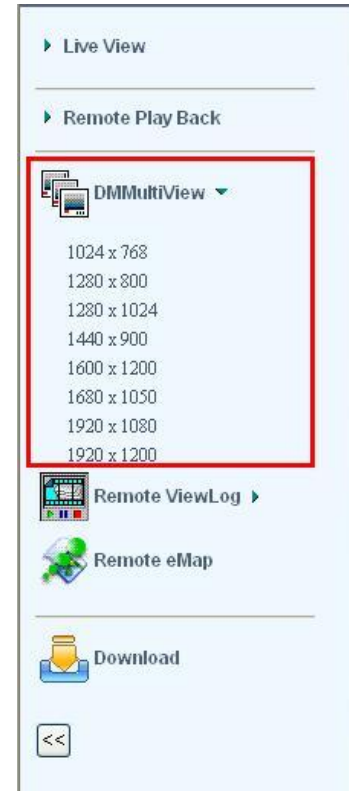
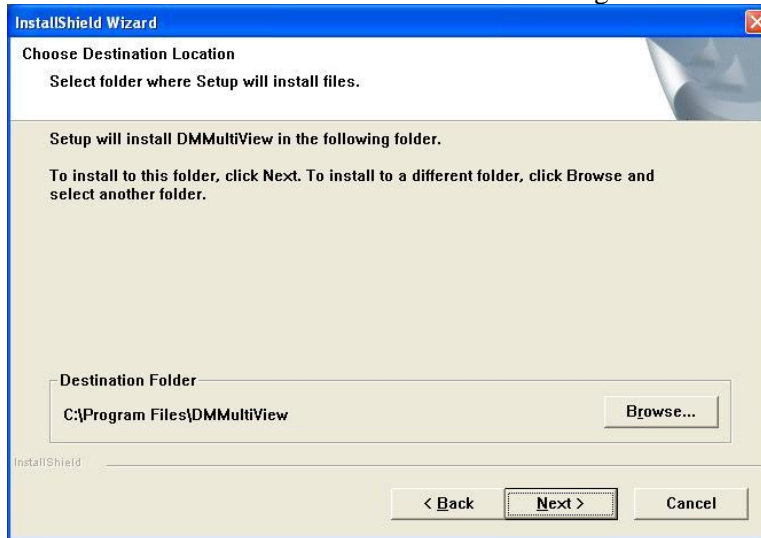
6. Refresh webpage. (Login may be required).
7. Select "**Run**" if prompted by Internet Explorer security warning.



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 desktop supports such resolution*

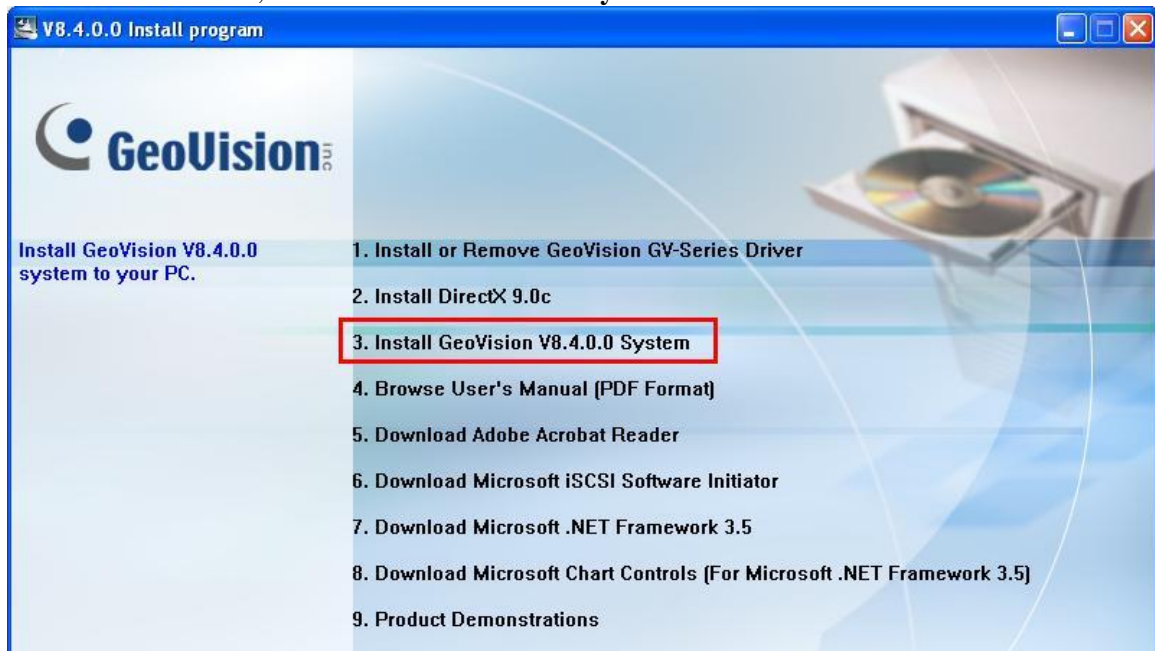
10. Follow on-screen instruction to finish installing Multiview.



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**”.



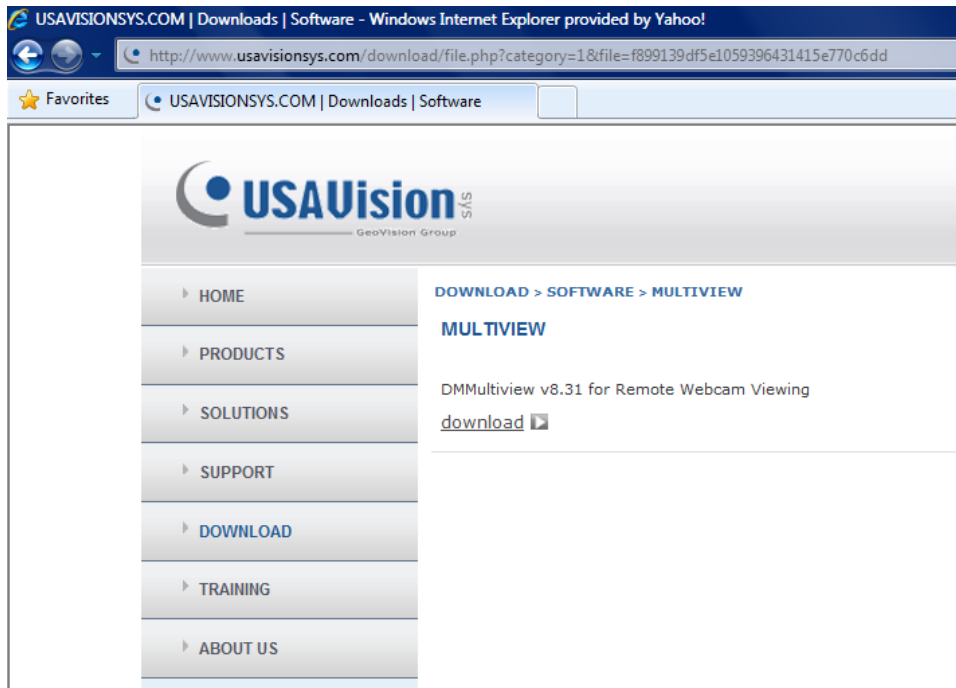
3. Select “GeoVision Multi View”.



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**”.
3. Click on “**Multiview**”.
4. Click on “**Download**”.



5. After download, extract the zip file then run **Setup.exe** to begin setup.
6. Follow on-screen instruction to finish installing Multiview.
7. Proceed to Section 4.3.2 Run Multiview.

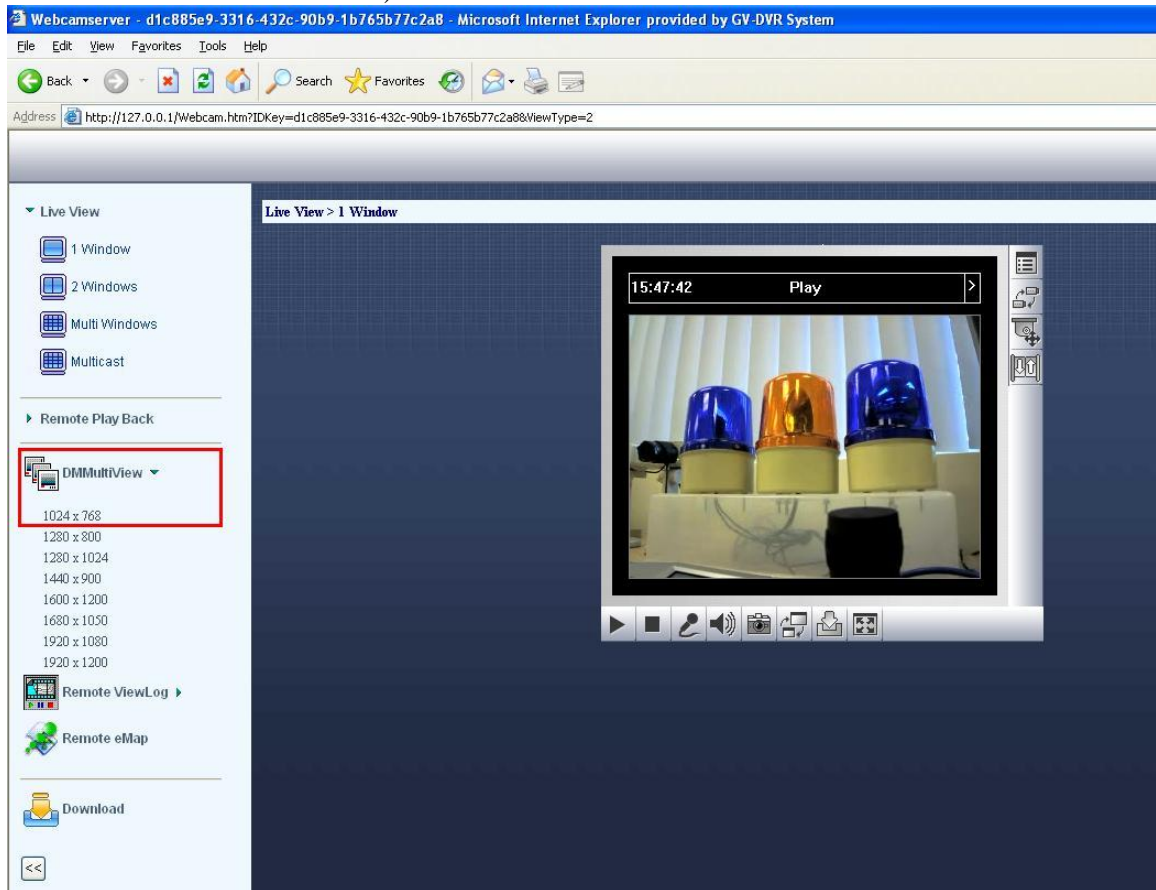
4.3.2 Run Multiview

Multiview can be executed from one of the following locations:

- a. Access via Internet Explorer.
- b. Access via Start, All Programs, DMMultiview.

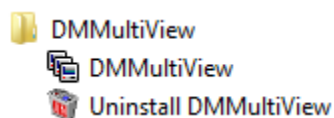
Access from Internet Explorer

1. Under Live View window in Internet Explorer, select “**DMMultiview**”.
2. Select “**1024x768**”. (If a different resolution has been selected in step 9 from section 4.3.1, select that resolution instead)



Access from Internet Explorer

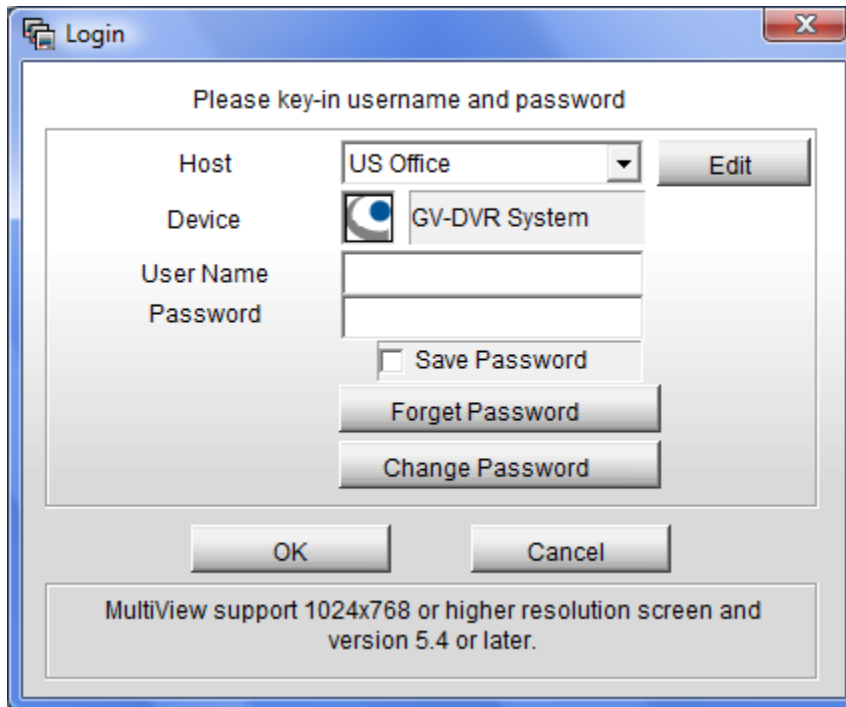
1. On Windows desktop, click on “**Start**”.
2. Click on “**All Programs**”, select “**DMMultiView**”.
3. Click on “**DMMultiView**”.



4.4 Multiview

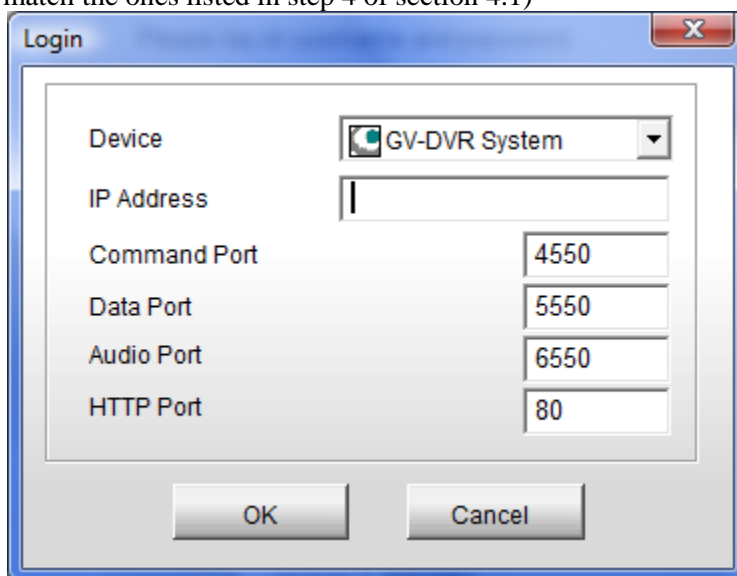
4.4.1 Connect to DVR

1. Enter **User Name** and **Password** to connect to Host DVR listed above.



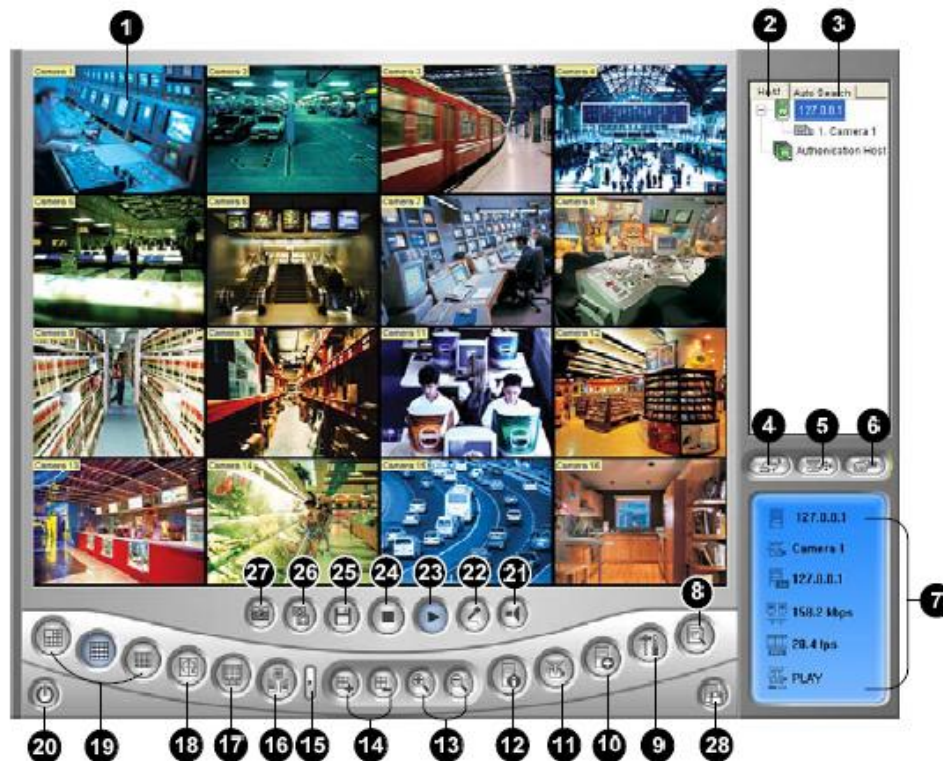
The Login dialog box has a title bar with a close button (X). The main area contains the text "Please key-in username and password". Below this, there are fields for "Host" (a dropdown menu showing "US Office" with an "Edit" button next to it), "Device" (a dropdown menu showing "GV-DVR System" with a camera icon), "User Name" (a text input field), and "Password" (a text input field). There are also checkboxes for "Save Password", buttons for "Forget Password" and "Change Password", and "OK" and "Cancel" buttons at the bottom. A footer note states: "MultiView support 1024x768 or higher resolution screen and version 5.4 or later."

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)



The Edit Host IP address and port information dialog box has a title bar with a close button (X). It contains fields for "Device" (a dropdown menu showing "GV-DVR System" with a camera icon), "IP Address" (a text input field), "Command Port" (a text input field with "4550"), "Data Port" (a text input field with "5550"), "Audio Port" (a text input field with "6550"), and "HTTP Port" (a text input field with "80"). There are "OK" and "Cancel" buttons at the bottom.

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



The controls in the Multi View:

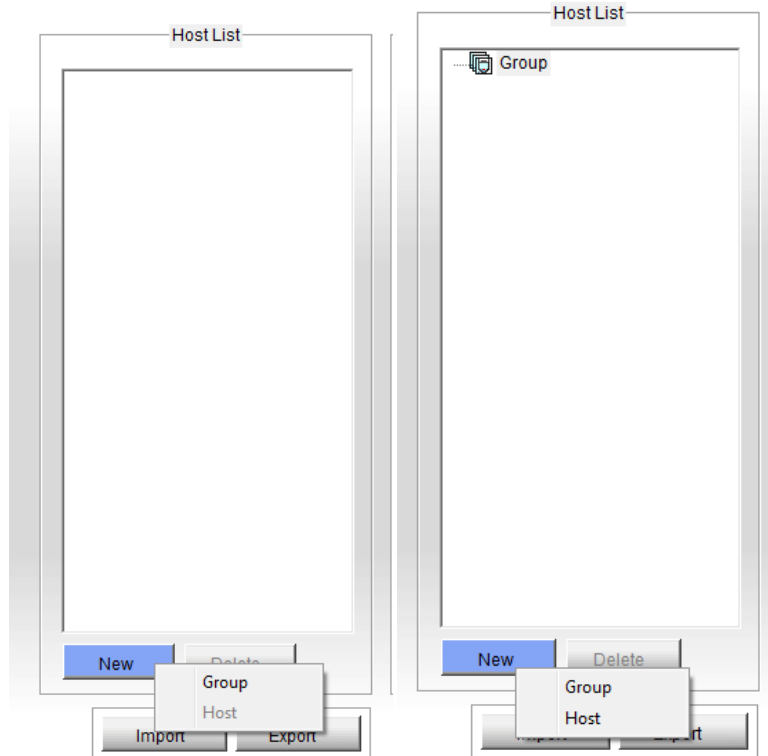
No.	Name	Description
1	Monitoring Window	Displays live video. Right-clicking on live video allows you to instantly access some useful functions. Selecting Resolution displays a resolution indicator at the bottom right corner of the video.
2	Host List	Displays the connected GV-Systems and their available cameras. See <i>Host List</i> topic later.
3	Auto Search	Displays all hosts on the same LAN. See <i>Host List</i> topic later.
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 <i>PTZ Control</i> , and <i>Visual PTZ Control Panel</i> topics later.
6	I/O Control	Displays the I/O control panel. See <i>I/O Control</i> topic later.
7	Channel Status	Indicates the general information of the selected channel. See <i>Channel Status Information</i> topic later.

8	ViewLog	Plays back recorded files of the remote GV-System by using the video player ViewLog. See <i>Remote ViewLog</i> topic later.
9	Configure	Accesses system settings of the Multi View. See <i>System Configuration</i> topic later..
10	Edit Host	Adds, deletes or modifies a host. See <i>Adding a Host</i> topic later.
11	Camera Status	Displays the camera status of the connected GV-System. See <i>Camera Status Display</i> topic later.
12	Host Information	Displays the general information of the connected GV-System. See <i>Host Information</i> topic later.
13	Zoom in and out	Zooms in or out the selected channel.
14	Add/Remove Channel	Adds or deletes the channels for video polling. Click the Add or Remove Channel 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.
17	Full Screen	Switches to a full screen view. The maximum video resolution set on the GV-System will be applied. See <i>[Video], WebCam Server Settings</i> earlier in this chapter.
18	Video Polling	Rotates through the selected channels. See <i>Video Polling</i> topic later.
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 <i>Video Recording</i> topic later.
26	Quality	Adjusts video quality with two options: Geo H264 and Geo MPEG4 . For hardware-compressed and megapixel quality, see <i>Hardware-Compressed and Megapixel Stream</i> topic later.
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 <i>Combing Multiple Hosts into a Single Host</i> topic later.

4.4.2 Single Host

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

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 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 DVRs into host list.
8. Click on “**OK**”.

- ✓ For detailed instruction, refer to p.399 of v8.4 User Manual

The image shows a 'Host Informations' form. At the top, there is a checkbox for 'Host Protection'. Below it is a text field for 'Host Name' with the value 'New Host'. The form is divided into two sections. The top section contains fields for 'Device' (a dropdown menu showing 'GV-DVR System'), 'IP Address', 'User Name', and 'Password'. The bottom section contains fields for 'Command Port' (4550), 'Data Port' (5550), 'Audio Port' (6550), and 'HTTP Port' (80). At the bottom right, there are two buttons: 'Change Password' and 'Save'.

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.

The image shows two overlapping windows from a software interface. The 'Host Information' window is in the background, and the 'Camera Setting' window is in the foreground.

Host Information Window:

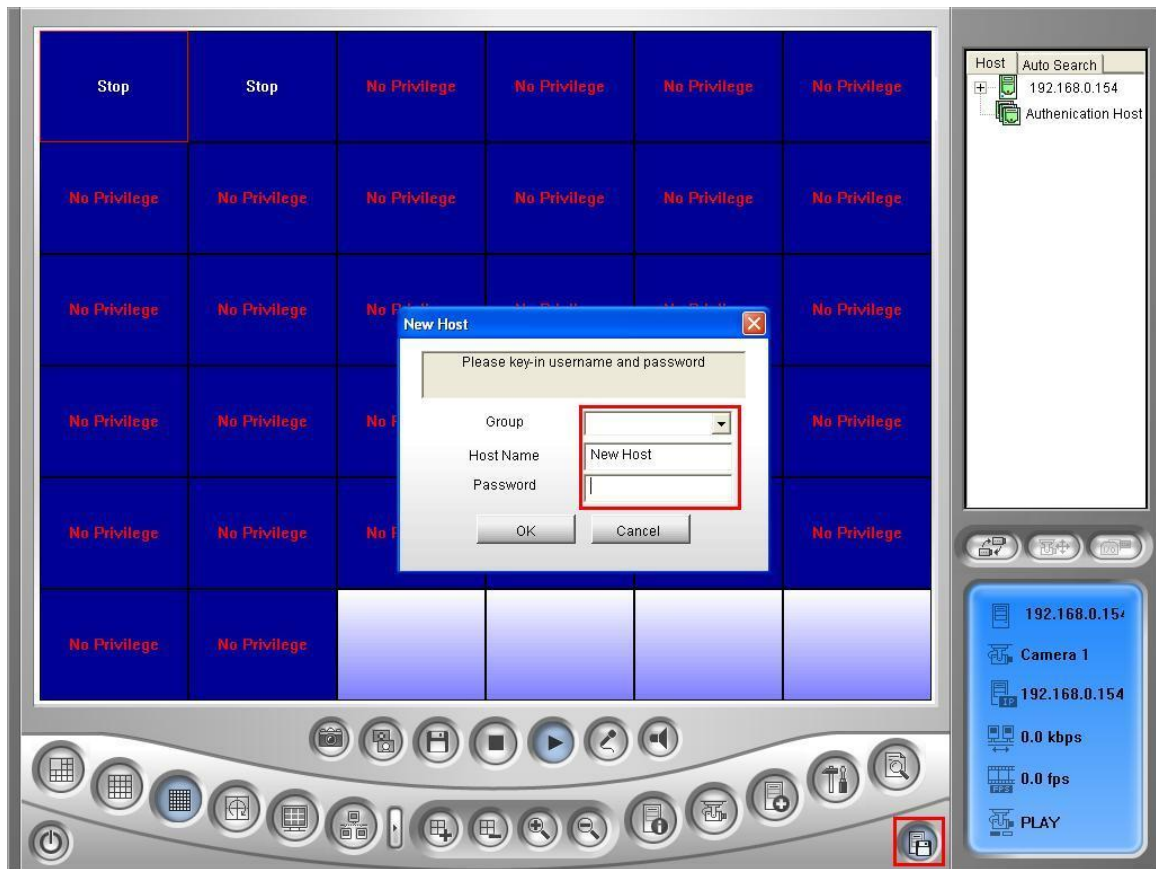
- Host Protection: ☐
- Single Host: ☐ Multiple Host: ☒ (highlighted with a red box)
- Host Name: New Host
- Password: [Empty field]
- A table with 16 rows and 2 columns. Each row has a number (1-16) and an 'Edit' button. Each button has a small icon with a red 'X' over it.
- Save button at the bottom right.

Camera Setting Window:

- Device: GV-DVR System (dropdown menu)
- IP Address: [Empty field]
- User Name: [Empty field]
- Password: [Empty field]
- Camera No.: 1 (dropdown menu)
- Command Port: 4550
- Data Port: 5550
- Audio Port: 6550
- Buttons: OK, Delete, Cancel

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 to be played for this channel.
 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.400 of v8.4 User Manual

Alternatively, Multiple Host can also be saved directly from Multiview if user wishes to save the current viewing 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**.