

Initial IP Camera & 2GIG NVR Software Setup

Before operating the camera, it will need to be setup and configured to work with the system. Depending on the installation, the camera may be used as a “stand-alone” device recording on its internal memory card, or be used with a 2GIG Network Video Recorder (NVR) for recording on the NVR hard drive with other cameras.

The camera contains a built-in browser interface that can be used to adjust all available camera settings. When the camera is used in an NVR installation, several camera settings can also be accessed through the NVR’s browser interface.

Use this quick-start document to begin initial setup. Complete documentation is available on the supplied CD and on the nortekcontrol.com Web site. Also refer to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Internet Protocol (IP) Address Overview

An IP address identifies a specific camera or NVR on a network. Each IP address on a network must be unique.

In stand-alone camera installations (no NVR), **the camera’s IP address** is used to access the camera’s browser interface for setup and viewing **the camera** locally, and for setting up the router for remote camera access.

In camera installations with an NVR, **the NVR’s IP address** is used to access **the NVR’s** browser interface.

Dynamic Verses Static IP Addresses

A camera’s IP address can be “dynamic” and automatically assigned by the router or NVR through Dynamic Host Configuration Protocol (DHCP).

If a camera is connected to the router directly, or through Wi-Fi, the router will automatically assign the next available LAN IP address to each device connected to it. Cameras directly connected to the NVR have their IP addresses managed by the NVR’s internal router.

Instead of an assigned dynamic IP address, the camera’s IP address can be set to a “static” value. A static IP address will remain the same regardless of any other dynamic IP addresses that are assigned by the router or NVR.

The advantage of assigning static IP addresses to the cameras (and the NVR) is when using a remote device app to monitor a camera or NVR system. The LAN router will need Port Forwarding values set to allow external access to the camera or NVR through the Wide Area Network (called the WAN, the installations Internet Service Provider link to the Internet). If the camera or NVR IP addresses are dynamic, the Port Forwarding values in the LAN router might change over time, requiring re-configuration. Therefore, for long term system stability, static camera and NVR IP addresses are recommended. For additional information on Port Forwarding, visit: www.portforward.com

✓ NOTE: When setting static IP addresses for cameras or NVR, it is recommended to use the same IP numbers assigned by the LAN router DHCP since they were already determined valid and available for the network by the router.

OPTION 1 Stand-Alone IP Camera Installations (No NVR)

Each camera’s current IP address will be needed to access its browser interface. A IP search tool application is provided on the installation CD included with the camera in the Tools/IPSearch folder (also available for download on www.nortekcontrol.com). The tool will search for and identify all 2GIG cameras connected to the LAN.

Camera IP Address

To determine a camera’s current IP address, connect the camera to the LAN router and use the IP search tool.

✓ NOTE: If the camera is a Wi-Fi model, and is intended to be permanently installed with a wireless Wi-Fi connection, the Wi-Fi connection can be setup later.

Direct Wired Camera Connection

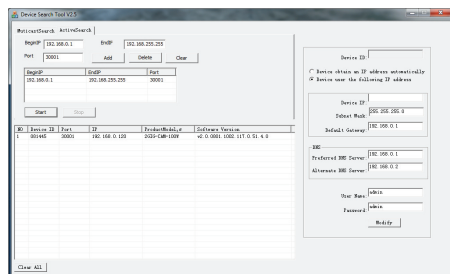
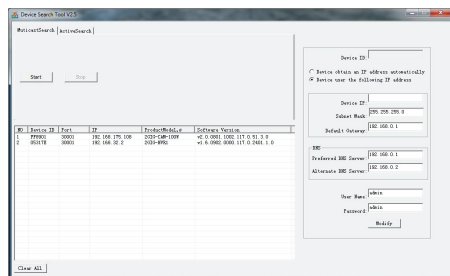
1. Verify that the camera is connected to one of the LAN router ports with a Cat-5 cable (Cat-5e or Cat-6 OK).
2. Verify that the camera is powered (either through a POE adapter or from a separate power supply).

Find Current IP Address with Search Tool

1. On a PC connected to the LAN router network, navigate to the IPSearch.exe file and launch the application.
2. Click **START SEARCH**.

✓ NOTE: If a system warning about IPSearch accessing the network occurs, allow IPSearch the access.

3. Wait while the tool searches for 2GIG cameras on the network. The cameras discovered will be listed.
4. If the IP Camera is not discovered, click on the “ActiveSearch” tab.
5. Verify the BeginIP and EndIP IP Address values match your router LAN settings. You may need to login to the router to verify the LAN IP address range.
6. After network range is verified, click on “Add” to add the IP Address range. that the tool will actively search for.
7. Click “Start”



8. The IP Camera should be discovered.

Setting Static Camera IP Addresses

It is recommended to set each camera IP address to a static address that will not change over time due to the LAN router's automatic DHCP addressing.

1. Select the camera on the search tool's list.
2. Be sure the User Name and Password are set correct (**default is admin / admin**).
3. Click **MODIFY** to change the camera's dynamic IP address to a static IP address.

✓ **NOTE:** If the network administrator requires using certain IP addresses for the cameras, enter the new address into **DEVICE IP** before clicking **MODIFY**.

4. Repeat Steps 1 & 2 for any additional cameras.
5. Use the Network Worksheet (on the back side of this sheet) to write down all the cameras IP addresses.

Connecting to a Camera

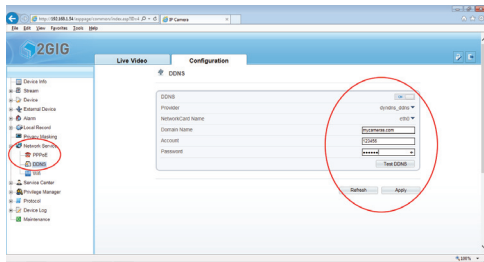
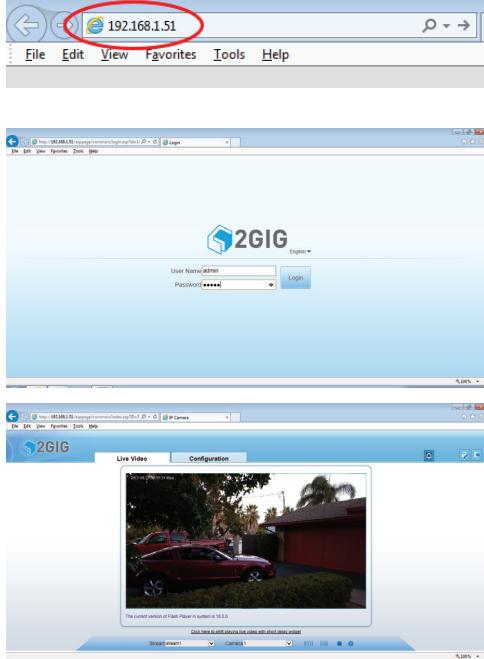
A device **connected to the same network as the camera** can use a Web Browser to access the camera's browser interface.

1. On a device **connected to the LAN router network**, launch a Web browser (IE, Chrome, Safari, etc.).
2. In the browser's address bar, enter the **camera's IP** address and press **ENTER** (or **DONE**, etc.).
3. After a few seconds, the login screen of the camera browser interface should display.
4. Enter the User Name and Password (**default is admin / admin**) then click **LOGIN**.
5. The camera browser interface will open to the **LIVE VIDEO** tab. If the camera is installed, look at the live video to determine the camera's location in the installation. Use the Network Worksheet to write down the camera's location for the IP address selected. (**Flash plug-in is required for video, Active X plug-in is optional for MS IE**).
6. Changes to the camera setup can be made using the **CONFIGURATION** tab.

Optional Dynamic Domain Name Server (DDNS) Setup

Dynamic Domain Name Server (DDNS) allows you to connect to the IP Camera using defined domain name which is registered with the DDNS provider. The IP Camera updates the DDNS server every 12 hours so that the Domain name will always point to the IP Camera. This is beneficial when connecting to your IP Camera when outside of your network. The IP Camera supports two DDNS providers: DynDNS and NO-IP. (A DDNS account is needed for DDNS to work).

1. Select **NETWORK SERVICE, DDNS**.
2. Choose the Provider in the **PROVIDER** pop-up menu
3. Select the **NETWORKCARD NAME** to specify how you are connected to the IP Camera: eth0 (hardwired) or wlan (Wi-Fi).
4. Enter the **DOMAIN NAME** registered with the DDNS provider.
5. Enter the **ACCOUNT** (the user name with the DDNS provider).
6. Enter the **PASSWORD** (the password with the DDNS provider).
7. Click **APPLY**.



Setting Ports on IP Cameras

To communicate on the network, IP cameras use “ports” associated with an IP address. Router Port Forwarding redirects a request from the Internet to an IP address and Port on the LAN. This allows remote mobile devices running the 2GIG Video app and Internet browsers to access the cameras through the installation’s **WAN IP address**.

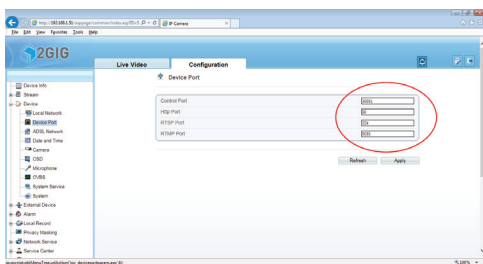
Camera Ports

- The default camera Control Port number is 30001. Each camera in the installation needs to be set to a unique Control Port number.
- The default camera HTTP Port number is 80, and for security, it should always be changed. Each camera in the installation needs to be set to a unique HTTP Port number.

Use the following steps to assign unique port numbers to additional cameras. Use the Network Worksheet to write down each camera’s new port numbers.

1. With the camera connected to the Web browser, click the **CONFIGURATION** tab.

2. In the navigation pane on the left side, select **DEVICE**, then **DEVICE PORT**. The four port numbers for the camera are shown.



3. Enter a new **CONTROL PORT** number for the camera (use 30002, 30003, 30004, etc.).

4. Enter a new **HTTP PORT** number for the camera (use 81, 82, 83, etc.).

5. Enter a new **RTSP PORT** number for the camera (use 555, 556, 557, etc.).

✓ **NOTE:** The RTSP port only needs to be changed if streaming by 3rd party VMS software is used.

6. Enter a new **RTMP PORT** number for the camera (use 8081, 8082, 8083, etc.).

✓ **NOTE:** The RTMP port only needs to be changed if streaming audio, video, and data to a browser using Flash technology.

7. Click **APPLY**. A restart confirmation window will appear, click **OK**.

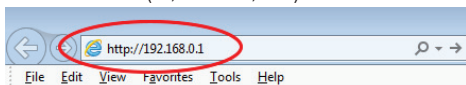
8. A success window will appear, click **OK**.

Router Port Forwarding for Cameras

Port Forwarding is set in the LAN router’s browser interface. Each manufacturer’s router has different browser interfaces, although the options are similar across brands. The option names will vary between routers, but they perform basically the same function. Port Forwarding is called Virtual Com Ports or Virtual Server on some routers.

1. On a PC **connected to the LAN router network**, launch a Web browser (IE, Chrome, etc.).

2. In the browser’s address bar, enter the **router’s LAN IP address** and press **ENTER** (or **DONE**, etc.).



✓ **NOTE:** Typically the LAN router will be first IP address (i.e. 192.168.0.1) in the LAN, but it may have been set to a different static address. Check with the system administrator.

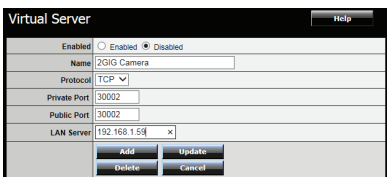
3. The login screen of the router browser interface should display.

4. Enter the User Name and Password (**default is typically admin / admin**, check with the system administrator if it has been changed.) then click **LOGIN**.

5. While logged on to the router, make note of the router’s **WAN IP address**. It will be used for remote access to the system. The WAN IP address will be listed on one of the router menus. Use the Network Worksheet to write down the router’s WAN IP address.

6. Navigate to the router’s Port Forwarding setting.

7. Enable Port Forwarding in the router.

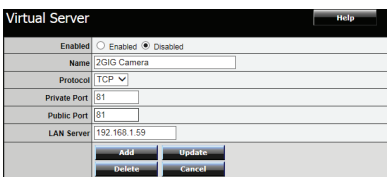


Control Port

1. As a new Port Forwarding item, enter a camera’s Control Port number and IP address.

2. Enable the Port Forwarding for the item (if required).

3. Click **ADD** or **APPLY** (depends on router)



HTTP Port

1. As a new Port Forwarding item, enter a camera’s HTTP Port number and IP address.

2. Enable the Port Forwarding for the item (if required).

3. Click **ADD** or **APPLY** (depends on router)

RTSP Port

✓ **NOTE:** The RTSP port only needs to be forwarded for streaming by 3rd party VMS software.

1. As a new Port Forwarding item, enter a camera’s RTSP Port number and IP address.

2. Enable the Port Forwarding for the item (if required).

3. Click **ADD** or **APPLY** (depends on router)

RTMP Port

✓ **NOTE:** The RTMP port only needs to be forwarded for streaming audio, video, and data to a browser using Flash technology.

1. As a new Port Forwarding item, enter a camera's RTMP Port number and IP address.
2. Enable the Port Forwarding for the item (if required).
3. Click **ADD** or **APPLY** (depends on router)

Browser Access with Port Forwarding

To access a camera remotely from a browser, use the router's WAN IP address with the camera's HTTP port number.

1. On an Internet browser, enter the WAN IP Address, a colon, then the camera's HTTP port number.

Example with WAN IP address 76.42.34.123 and Port #81:

http://76.42.34.123:81

2. After a few seconds, the login screen of the camera browser interface should display.
3. Enter the User Name and Password (**default is admin / admin**) then click **LOGIN**.
4. The camera browser interface will open to the Live Video tab.

Wi-Fi Wireless Camera Connection (Wi-Fi Model Only)

Instead of a direct connection, a wireless Wi-Fi connection between the camera and the LAN router can be made using either Wi-Fi Protected Setup (WPS) single-button association or manually through the camera's configuration.

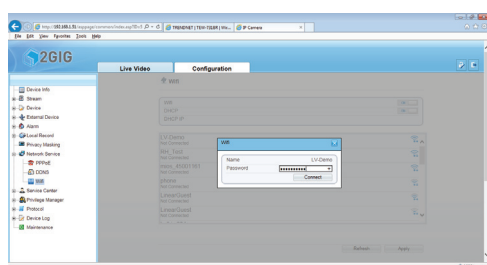
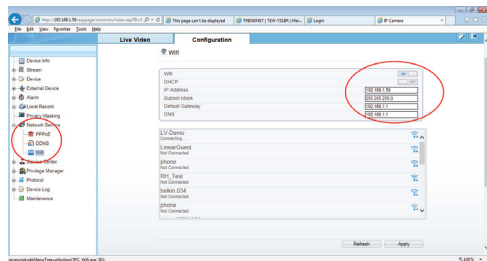
✓ **NOTE:** To use the WPS method, the router must support WPS and it must be enabled in the router. If the router does not support WPS, use manual Wi-Fi configuration.

Connecting Wi-Fi with WPS

1. Press the WPS button on the back of the camera for five seconds.
2. The camera's NET LED will light solid green.
3. Press the WPS button on the router.
4. Once a WPS connection has been established between the camera and LAN router, the NET LED will flicker green indicating network traffic.

Connecting Wi-Fi Manually

1. With the camera network cable connected to the router, log onto the camera with a Web browser, click the **CONFIGURATION** tab.
2. In the navigation pane on the left side, select **NETWORK SERVICE**, then **Wi-Fi**.
3. Turn the **Wi-Fi** switch ON, turn the **DHCP** switch ON.
4. On the access point list displayed, click on the router's name. Enter the router's Wi-Fi password (WEP) and click **CONNECT**.
5. A Wi-Fi connection confirmation window will appear and the Wi-Fi router name on the list will show connected.
6. Disconnect the camera network cable from the router. The camera connection will now use wireless Wi-Fi.



Setting a Static Camera IP Address

After Wi-Fi setup, to make the camera's IP address static, log onto the camera and turn the **DHCP** switch OFF and click **APPLY**.

OPTION 2 IP Camera Installations with 2GIG NVR

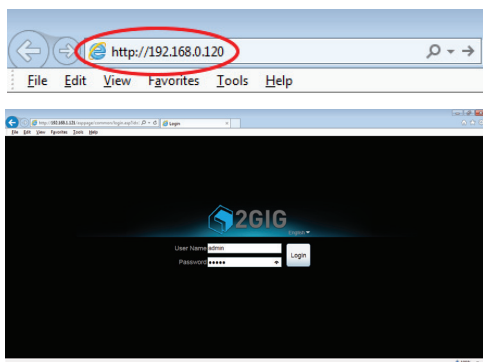
In camera installations with an NVR, the NVR's current IP address will be needed to access the NVR's browser interface and to set the LAN router Port Forwarding values.

IP addresses for cameras directly connected to the NVR are managed by the NVR's internal router. The NVR can also communicate with other cameras on the same local area network (LAN) as the NVR.

NVR IP Address

To determine the NVR IP address, use the IPSearch tool or log onto the NVR locally with a VGA display connected to the NVR. To verify an NVR's current IP address, connect to the NVR with a Web browser.

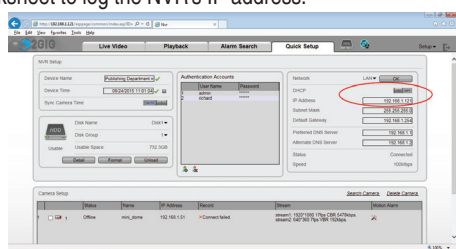
1. Verify that the NVR is connected to a LAN router port with a Cat-5 cable (Cat-5e or Cat-6 OK).
2. Verify that the NVR is powered.
3. Verify that one or more cameras are connected to the NVR's POE ports.
4. The NVR's LAN LED should flicker green indicating network traffic.
5. On a device connected to the LAN router network, launch a Web browser (IE, Chrome, Safari, etc.).
6. In the browser's address bar, enter the NVR's LAN IP address and press ENTER (or DONE, etc.).
7. The login screen of the NVR browser interface should display. Enter the User Name and Password (default is admin / admin) click LOGIN.
8. The NVR browser interface should display.



Setting Static NVR Address

It is recommended to set each NVR IP address to a static address that will not change over time due to the LAN router's automatic DHCP addressing. Use the Network Worksheet to log the NVR's IP address.

1. With the NVR connected to the Web browser, select the QUICK SETUP tab.
2. Click on the DHCP slider switch to change it from ON to OFF.
3. The NVR's static IP address will be shown below the DHCP slider switch.
4. Click OK. A confirmation window will appear.
5. After the NVR restarts, login again with the NVR's new static IP address to verify the connection.



Repeat Steps 1-6 for any additional NVRs in the installation.

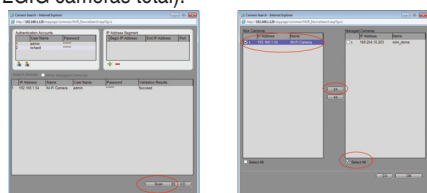
✓ **NOTE:** If the network administrator requires using specific or a range of specific IP addresses for the cameras, use these steps to set the required IP address for each NVR.

Adding IP Cameras to the NVR

The NVR will auto discover 2GIG IP cameras connected directly to the ports on the NVR. The NVR can also connect to other 2GIG IP cameras on the network (up to four 2GIG cameras total).

1. Log onto the NVR and select the QUICK SETUP tab.
2. In the Camera Setup area, click SEARCH CAMERA.
3. Click SCAN, the found cameras are listed, click >.
4. Select the camera(s) to manage, click >> to move the camera(s) to the managed list, then click OK.

The new camera(s) will show on the Camera Setup list.



Setting Router Port Forwarding for NVRs

To communicate on the network, NVRs use "ports" associated with an IP address. Router Port Forwarding redirects a request from the Internet to an IP address and Port on the LAN. This allows remote mobile devices running the 2GIG NVR app and Internet browsers to access the NVR through the installation's WAN IP address.

NVR Ports

- The default NVR Control Port number is 30001. Each NVR in the installation needs to be set to a unique Control Port number.
- The default NVR HTTP Port number is 80. The port number should be changed (and should not be the same port number used for any stand-alone camera in the installation). Each NVR in the installation needs to be set to a unique HTTP Port number if it will be accessed remotely from a browser.

Use the following steps to assign port numbers to NVRs:

1. With the NVR connected to the Web browser, click SETUP, then NVR SETUP.
2. In the navigation pane on the left side, select DEVICE PORT. The four port numbers for the NVR are shown.
3. Enter a new HTTP PORT number for the NVR (use 81, 82, 83, etc. be sure the same HTTP port number is not used for any stand-alone camera in the installation).

Use the following steps to assign port numbers to NVRs in the installation:

4. Enter a new CONTROL PORT number for the NVR (use 30002, 30003, 30004, etc. be sure the same control port number is not used for any stand-alone camera in the installation).
5. Enter a new RTMP PORT number for the NVR (use 8081, 8082, 8083, etc. be sure the same RTMP port number is not used for any stand-alone camera in the installation).

✓ **NOTE:** The RTMP port only needs to be changed if streaming audio, video, and data to a browser using Flash technology.

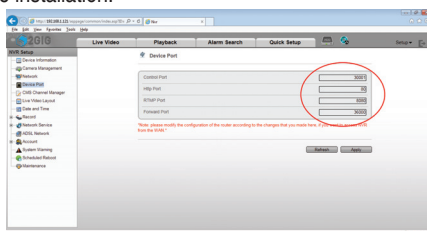
6. Enter a new FORWARD PORT number for the NVR (use 36001, 36002, 36003, etc.).

✓ **NOTE:** The Forward Port is required to access the NVR from a mobile app or an outside browser.

7. Click APPLY. A restart confirmation window will appear, click OK.

8. A success window will appear, click OK.

Use the Network Worksheet to write down each NVR's new port numbers.



NETWORK WORKSHEET

INSTALLATION NAME:

STAND-ALONE CAMERAS

	IP ADDRESS	CONTROL PORT	HTTP PORT	RTSP PORT	RTMP PORT	LOCATION
Camera 1	. . .					
Camera 2	. . .					
Camera 3	. . .					
Camera 4	. . .					

NVRS

	IP ADDRESS	CONTROL PORT	HTTP PORT	RTMP PORT	FORWARD PORT	LOCATION
NVR 1	. . .					

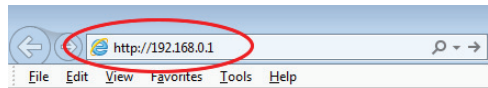
LAN ROUTER

	LAN IP ADDRESS	WAN IP ADDRESS	USER NAME	PASSWORD	Wi-Fi WEP	LOCATION
LAN Router				

Router Port Forwarding

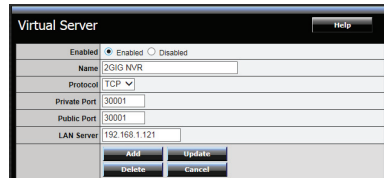
Port Forwarding is set in the LAN router's browser interface. Each manufacturer's router has different browser interfaces, although the options are similar across brands. The option names will vary between routers, but they perform basically the same function. Port Forwarding is called Virtual Com Ports or Virtual Server on some routers.

1. On a PC **connected to the LAN router network**, launch a Web browser (IE, Chrome, etc.).
 2. In the browser's address bar, enter the **router's LAN IP** address and press **ENTER** (or **DONE**, etc.).
- ✓ **NOTE:** Typically the LAN router will be first IP address (i.e. 192.168.0.1) in the LAN, but it may have been set to a different static address. Check with the system administrator.
3. The login screen of the router browser interface should display.
 4. Enter the User Name and Password (**default is typically admin / admin**, check with the system administrator if it has been changed.) then click **LOGIN**.
 5. While logged on to the router, make note is the router's WAN IP address. It will be used for remote access to the system. The WAN IP address will be listed on one of the router menus. Use the Network Worksheet to write down the WAN IP address.
 6. Navigate to the router's Port Forwarding setting.
 7. Enable Port Forwarding in the router.



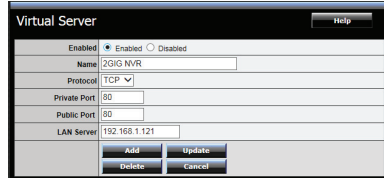
Control Port

1. As a new Port Forwarding item, enter the NVR's Control Port number and IP address.
2. Enable the Port Forwarding for the item (if required).
3. Click **ADD** or **APPLY** (depends on router)



HTTP Port

1. As a new Port Forwarding item, enter a NVR's HTTP Port number and IP address.
2. Enable the Port Forwarding for the item (if required).
3. Click **ADD** or **APPLY** (depends on router)



RTMP Port

✓ **NOTE:** The RTMP port only needs to be forwarded for streaming audio, video, and data to a browser using Flash technology.

1. As a new Port Forwarding item, enter a NVR's RTMP Port number and IP address.
2. Enable the Port Forwarding for the item (if required).
3. Click **ADD** or **APPLY** (depends on router)

Forward Port

1. As a new Port Forwarding item, enter a NVR's Forward Port number and IP address.
2. Enable the Port Forwarding for the item (if required).
3. Click **ADD** or **APPLY** (depends on router)

Browser Access with Port Forwarding

To access an NVR remotely from a browser, use the router's WAN IP address with the NVRs HTTP port number.

1. On an Internet browser, enter the WAN IP address, a colon, then the NVR's HTTP port number.

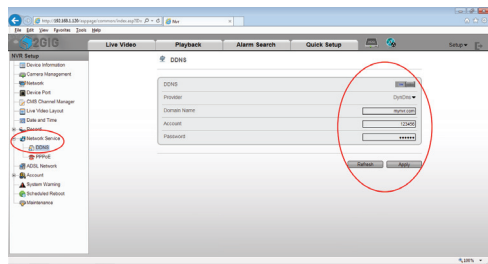
Example with WAN IP address 76.42.34.123 and Port #81:
http://76.42.34.123:81

2. After a few seconds, the login screen of the NVR browser interface should display.
3. Enter the User Name and Password (**default is admin / admin**) then click **LOGIN**.
4. The NVR browser interface will open to the Live Video tab.

Optional Dynamic Domain Name Server (DDNS) Setup

Dynamic Domain Name Server (DDNS) allows you to connect to the NVR using defined domain name which is registered with the DDNS provider. The NVR updates the DDNS server every 12 hours so that the Domain name will always point to the NVR. This is beneficial when connecting to your NVR when outside of your network. The NVR supports two DDNS providers: DynDNS and NO-IP. (A DDNS account is needed for DDNS to work).

1. Select **NETWORK SERVICE, DDNS**.
2. Choose the Provider in the **PROVIDER** pop-up menu
3. Enter the **DOMAIN NAME** registered with the DDNS provider.
4. Enter the **ACCOUNT** (the user name with the DDNS provider).
5. Enter the **PASSWORD** (the password with the DDNS provider).
6. Click **APPLY**.



Nortek Security & Control LLC

1950 Camino Vida Roble, Suite 150
Carlsbad, CA 92008-6517 USA



For technical support in the USA and Canada:

855-2GIG-TECH (855-244-4832)

Email: 2gigtechsupport@nortek.com

Visit www.nortekcontrol.com for technical support hours of operation

For technical support outside of the USA and Canada:

Contact your regional distributor

Visit dealer.2gig.com for a list of distributors in your region

