Initial IP Camera & 2GIG NVR Software Setup

Before accessing 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 a network, all settings can also be accessed through the NVRs browser interface. Using this quick-start document to begin initial setup. Complete documentation is available on the supplied CD and at www.2gig.com. Also refer to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various on-screen 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. Internet Protocol (IP) addresses are dynamic, with the DDNS provider. The IP Camera updates the DDNS server every 12 hours so that the Domain name will always point to the current IP address. Therefore, for long term system stability, static camera and NVR IP addresses are recommended. For additional information on Port Forwarding, visit: www.portforward.com

ENABLE 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 and available for the network.

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

Configure IP Camera Settings

Each camera will detect the setup type before it will need to access its browser interface. A IP search tool application is included on the CD (also available for download at www.2gig.com). This 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 CAT5 cable (Cat 5 or Cat 6).
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, connect the LAN router network, navigate to the IPSearch.exe file and launch the application.
2. Click START SEARCH.

NOTE: If a system is using a POE search, ensure the IPSearch tool is set up correctly.
3. Wait while the tool searches for 2GIG cameras on the network. The camera discovered will be listed.
4. If the IP Camera is not discovered, click on the “ActiveSearch” button.
5. Verify the IP and End IP Port numbers match your router scan settings. You may need to log into the router to verify these settings.
6. After network range is verified, click on “Add” to add the IP Address Range. The list will actually search for.
7. Click ADD.
8. The IP cameras should be discovered.

Set Static 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 correctly (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, the camera can be set to a fixed IP address before clicking APPLY.
4. Reset Steps 1 & 2 for any additional cameras.
5. Use the Network Workaround (on the back side of this sheet) to write down all camera IP addresses.

Connecting to a Camera

devices connect 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 address bar, enter the camera IP address and press ENTER (DNS, 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).
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 location in this tab). Use the Network Workaround to write down the camera's location for the IP address stated. (Flash plugin is required for video. Active Plugin is optional in MS Windows).
6. Changes to the camera's setup can be made using the CONFIGURATION tab.

Optional Dynamic Domain Name Server Server (DDNS) Setup

Dynamic Domain Name Server (DNS) domains allow a user to connect to their camera using a domain name instead of a hard to remember IP address. The IP Camera supports two DDNS providers: DynDNS and NO-IP. (DDNS account is needed for DynDNS to work).
1. Select NETWORK SERVICE DNSS.
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 wifi (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 Camera System

To communicate on the network, IP cameras use “ports” associated with an IP address. Router Port Forwarding is required to allow traffic on a specific port from an IP address to connect to the LAN router. This allows remote mobile devices running the 2GIG Video app and Internet browser to access cameras through the Wide Area Network (WAN) IP Camera Ports.

- The default camera Control Port number is 30001. Each camera in the installation needs to be set up to a unique Control Port number.
- To access the DDNS camera HTTP port number is 80, and for security, it should always be changed. Each camera that will be installed must be configured with the DDNS camera HTTP port number. The DDNS camera HTTP port number is 80 in the camera's DDNS camera HTTP port number.
- Use the following steps to assign unique port numbers to additional cameras. Use the Network Workaround 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 cameras 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, etc.).
5. Enter a new RTSP PORT number for the camera (use 8081, 8082, 8083, etc.).
6. Enter a new RTP PORT number for the camera (use 8010, 8011, 8012, etc.).
7. Click APPLY. A 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 a different browser interface, 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, connect to the LAN router network, launch a Web browser (IE, Chrome, etc.).
2. In the router's LAN router address, enter the router's IP address and press ENTER (DNS, etc.).
3. TO CHANGE the camera (RTSP) port number and IP address.
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 camera'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's menus. Use the Network Workaround to write down the router's WAN IP address.
6. Navigate to the router's Port Forwarding Setup.
7. Enable Port Forwarding the router.
8. Configure Port Forwarding.

Control Port

1. As a new IP camera, 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) then click APPLY.

HTTP Port

1. As a new IP camera, 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) then click APPLY.

RTSP Port

1. The camera connection will now use wireless Wi-Fi.
2. Disconnect the camera network cable from the router.
3. On the access point list displayed, click on the router's wireless network adapter.
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 camera'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's menus. Use the Network Workaround to write down the router's WAN IP address.
6. Navigate to the router's Port Forwarding Setup.
7. Enable Port Forwarding the router.
8. Configure Port Forwarding.

Browser Access with Port Forwarding

To access a camera remotely from a browser, use the camera'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 78.42.34.123 and Port #81:
https://78.42.34.123:81

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 system's configuration menu.
1. 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, manual Wi-Fi Configuration is required.

Connecting Wi-Fi Wireless

On the back side of this sheet, write down the router's LAN IP address.

1. Press the WPS button on camera for the back of the camera for five seconds.
2. The camera's NETWORK LED will light solid green.
3. Press the WPS button on the router.
4. On the WPS connection, the network will be 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, then turn the DHCP switch ON.
4. On the access point list displayed, click on the router's Wi-Fi password (NEP) and click CONNECT.
5. 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.
7. The camera connection will now use wireless Wi-Fi.

Setup 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.
Initial IP Camera: 2GIG NVR Software Setup

Before operating the camera, it must be set up 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's configuration should be possible in a browser interface that can be used to adjust 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 www.2gig.com web site. Also refer to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various systems available for setup.

Internet Protocol (IP) Address Overview

An IP address identifies a specific device on a network. Each IP address on a network must be unique.

Dynamic Versus 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 address, the camera's IP address can be set to a “static” value. A static IP address will remain the same regardless of power sources 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 to monitor a camera or NVR system. The LAN will not reboot new values to set to allow external access to the camera through the IP address used. The Wireless Network called the WAN, the Wide Area Network is the Internet Service Provider link to the Internet. The WAN 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.

Setting Ports on IP Cameras

To communicate on the network, IP cameras use “ports” associated with an IP address. Router Port Forwarding rules are used to forward a request from the Internet to an IP address and Port on the LAN. This allows remote viewing of IP cameras without running the 2GIG Video app and Internet browsers to access the cameras through the installation’s WAN IP address.

Camera Ports

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.

Camera Control Port number is 30001. Each camera in the installation needs to be set to a unique Control Port number.

1. With the camera connected to the Web browser, click the CONFIGURATION tab.
2. In the navigation pane on the left, select DEVICES, then select PORTS.
3. The four port numbers for the cameras are shown.
4. Enter a new CONTROL PORT number for the camera (use 30002, 30003, 30004, etc.).
5. Enter a new HTTP PORT number for the camera (use 81, 82, 83, etc.).
6. 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.

7. Enter a new RTMP Address 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.

8. Click APPLY. A restart confirmation window will appear; click OK.

9. A success window will appear; click OK.

NOTE: Before clicking APPLY, run a camera check from the NVR's browser interface.

Camera IP Address

to determine a camera's current IP address, connect the camera to the LAN router and use the IP search tool. Provided on the installation CD included with the camera in the Tools/IPSearch folder (also available for download at www.nortekcontrol.com). For assistance with locating the IP address of cameras that are not on the local network, a DHCP scan tool is available at www.portforward.com.

Camera Ports

A camera's IP address can be used to access the camera's browser interface for setup and viewing the camera locally, and for setting up the router for remote access.

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

Wide Area Network (WAN) IP Address

A Wide Area Network IP address is a unique address on the Internet. This is beneficial when connecting to your IP Camera when outside of your network. The IP Camera supports two browser interface.

To determine a camera's current IP address, connect the camera to the LAN router and use the IP search tool. Provided on the installation CD included with the camera in the Tools/IPSearch folder (also available for download at www.nortekcontrol.com). For assistance with locating the IP address of cameras that are not on the local network, a DHCP scan tool is available at www.portforward.com.

NOTE: Before clicking APPLY, run a camera check from the NVR's browser interface.

Setting Ports on IP Cameras

To communicate on the network, IP cameras use “ports” associated with an IP address. Router Port Forwarding rules are used to forward a request from the Internet to an IP address and Port on the LAN. This allows remote viewing of IP cameras without running the 2GIG Video app and Internet browsers to access the cameras through the installation’s WAN IP address.

Camera Ports

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.

Camera Control Port number is 30001. Each camera in the installation needs to be set to a unique Control Port number.

1. With the camera connected to the Web browser, click the CONFIGURATION tab.
2. In the navigation pane on the left, select DEVICES, then select PORTS.
3. The four port numbers for the cameras are shown.
4. Enter a new CONTROL PORT number for the camera (use 30002, 30003, 30004, etc.).
5. Enter a new HTTP PORT number for the camera (use 81, 82, 83, etc.).
6. Enter a new RTSP PORT number for the camera (use 555, 556, 557, ...). The RTSP port only needs to be changed if streaming by 3rd party VMS software is used.
7. Enter a new RTMP Address for the camera (use 8081, 8082, 8083, etc.). The RTMP port only needs to be changed if streaming audio, video, and data to a browser using Flash technology.
8. Click APPLY. A restart confirmation window will appear; click OK.
9. A success window will appear; click OK.

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 options will vary between routers, but they perform the same basic 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 (default is 192.168.1.1) 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 admin / admin) then click LOGIN.
5. While logged on to the router, note the make of the router's WAN IP address. It will be used for remote access to the camera.
6. 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.
7. Navigate to the router's Port Forwarding setting.
8. 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

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

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 76.42.134.231 and Port #81:

http://76.42.134.231:81

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.

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 domain name 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: 2GIG.COM and NOIP.COM. 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 NETWORKNAME 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).

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 instead of using either Wi-Fi Protected Setup (WPS) single-button association or manually through the camera's configuration.

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).
Before operating the camera, it is needed to be setup and configured to work with the system. Depending on the installation, the cameras 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 disk drive with other cameras. If 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 or in a different device that the IP Camera will 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. It is recommended to set cameras in an NVR (i.e., the camera IP address is used to access the camera's browser interface to setup and viewing the camera locally, and for setting up the system for remote camera access). In camera installations with NVR, the NVR's IP address is used to access the camera's browser interface.

Dynamic Versus 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. Instead of an assigned dynamic IP address, the camera’s IP address can be set to a "Static" IP address (i.e., a static IP address will remain the same regardless of any other IP addresses that are assigned by the router or the network). The advantage of a static IP address is that if the camera IP address changes, the IP address will remain the same regardless of whether it was assigned by the router or the network. The camera’s IP address can be changed using the IP search tool.

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

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

Each camera connected to the LAN router will need to be assigned its own IP address. A static IP address is recommended to set cameras in the LAN router and use the IP search tool.

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 via 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 tool and launch the application.
2. Click START SEARCH.

NOTE: If a system warning about IPSearch accessing the network occurs, allow IPSearch access to the network.
3. Wait while the tool searches for 2GIG cameras on the network. The cameras discovered will be listed.
4. In the list, click on the IP Camera to display its static IP address.
5. Verify the IP and End Point IP addresses values match your router LAN settings.
6. After network range is verified, click on "Add to" and add the IP Address range, that the tool will actively search for.
7. Click DONE.
8. The IP of the Camera should be discovered.

Set Camera IP Addresses

It is recommended to set each camera’s 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 camera, the end user must contact their ISP before clicking MODIFY.
4. Repeat Steps 1-3 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

1. Devices connected to the same network as the camera can use a Web Browser to access the camera’s browser interface.
2. On a device connected to the LAN router, launch a Web browser (IE, Chrome, Safari, etc.).
3. In the browser’s address bar, enter the camera’s IP address and press ENTER (i.e., 192.168.0.11). 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).
5. The camera browser interface will open to 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 selection.

Optional Dynamic Domain Name Server (DNS) Setup

Dynamic Domain Name Server (DNS) allows you to connect to the camera using defined domain name instead of the DDNS provider. The IP Camera updates the DDNS server every 12 hours so that the Domain name will always point to the 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 DDNS provider.

NOTE: With the DDNS provider. The IP Camera updates the DDNS server every 12 hours so that the Domain name will always point to the

1. Select NETWORK SERVICE, DNS.
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 DOBMAIN 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.
NOTE: Dynamic Domain Name Server (DDNS) allows you to connect to the IP Camera using defined domain name which is registered with your DDNS provider.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

The advantage of assigning static IP addresses to the cameras (and the NVR) is when using a remote device app to monitor the camera, the app will be able to connect regardless of any other dynamic IP addresses that are assigned by the router or NVR. The same regardless of any other dynamic IP addresses that are assigned by the router or NVR.

Setting Static Camera IP Addresses

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Starting Stand-Alone IP Camera Installations (No NVR)

Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Starting Stand-Alone IP Camera Installations (No NVR)

Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Starting Stand-Alone IP Camera Installations (No NVR)

Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Starting Stand-Alone IP Camera Installations (No NVR)

Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Starting Stand-Alone IP Camera Installations (No NVR)

Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.

Starting Stand-Alone IP Camera Installations (No NVR)

Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

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Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

To use DDNS, you need to set it up in the router's DDNS configuration. Port Forwarding, visit: www.portforward.com

Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

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Each camera connected to the LAN router will need to be accessed remotely through that router. An IP search tool, which is a browser interface that can be used to access DDNS providers, is included in the installation.

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Using DDNS, a user enters their DDNS provider name, the DDNS server's domain name, port number, and password before clicking MODIFY.

Determine IP Camera Address

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

To use the IP search tool, navigate to the 2GIG Camera Operation Manual and 2GIG NVR Operation Manual for complete details on the various settings available for the system.
In camera installations with an NVR, the NVR’s current IP address will be needed to access the NVRs browser interface and to set the LAN router NVR 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.

To communicate on the network, the NVR uses “ports” associated with an IP address. Router Port Forwarding redirects the NVR to forward packets to the IP address of the remote NVR. The NVR can also auto discover 2GIG IP cameras connected directly to the ports on the NVR. The NVR can also auto discover 2GIG IP cameras connected directly to the ports on the NVR.

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The NVR browser interface should display.

To verify an NVR’s current IP address, connect to the NVR with a Web browser.

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

As a new Port Forwarding item, enter a NVR’s Forward Port number and IP address.

As a new Port Forwarding item, enter a NVR’s RTMP Port number and IP address.

Enable Port Forwarding in the router.

Forward Port

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

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As a new Port Forwarding item, enter a NVR’s Forward Port number and IP address.
**NOTE:** Repeat Steps 1-6 for any additional NVRs in the installation.

5. To communicate on the network, NVRs use "ports" associated with an IP address. Router Port Forwarding redirects network traffic.

2. To determine the NVR IP address, use the IPSearch tool or log onto the NVR locally with a VGA display connected to a different static address. Check with the system administrator.

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

Set the LAN router Port Forwarding values.

4. Navigate to the NVR's Port Forwarding setting.

5. Enable Port Forwarding in the router.

6. Enter the NVR's static IP address to verify the connection.

7. Click **APPLY** or **(depends on router)** to save the settings.

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

2. Enter the NVR's static IP address and press **ENTER** or **DONE**.

3. The login screen of the NVR's browser interface should display.

4. Enter the login name and password.

5. The NVR browser interface will open to the Live Video tab.

Adding IP Cameras to the NVR

2. Log onto the NVR and select the **Quick Setup** tab.

3. In the Camera Setup area, click **SEARCH CAMERAS**.

4. Click **SCAN**. The four port numbers for the NVR are shown.

5. The four port numbers for the NVR are shown.

**NOTE:** The NVR's default Control Port number is 30001. Each NVR in the installation needs to be set to a unique Control Port number.

**TIP:** The NVR's static IP address will be shown below the NVR's Control Port number.

**TIP:** The NVR's static IP address will be shown below the NVR's Control Port number.

To access the NVR remotely from a browser, use the router's WAN IP address with the NVR's 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:

https://76.42.34.123:81

2. After a few seconds, the login screen of the NVR's browser interface should display.

3. Enter the User Name and Password.

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 DDNS service supports two DDNS protocols: 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 ACCOUNT username and password.

4. Click **APPLY**.

5. Enter the ACCOUNT password (the password with the DDNS provider).

6. Click **APPLY**.

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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

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**OPTIMUS 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 'Find IP' button to log into the NVR locally with a USB display connected to the NVR. To verify an NVR's current IP address, connect to the NVR with a Web browser.

1. Ensure 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 on.

3. Ensure 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**.

7. The login screen of the NVR browser interface should display.

**NOTE:** Typically the LAN router will be the 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.

8. Enter the User Name and Password (default is admin / admin) and click **LOGIN**.

**NOTE:** A success window will appear, click **APPLY** or **(depends on router)** to save the settings.

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.

**Adding IP Cameras to the NVR**

The NVR will auto detect 2GIG IP cameras connected directly to the ports on the NVR. The NVR can also connect to other 2GIG 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 CAMERAS**.

3. Click **SCAN**. The bound cameras are listed, click **OK**.

4. Select the camera to manage, click **OK** to move the camera to the managed list, then click **OK**.

5. 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.

**WAN IP Address**

1. The default NVR Control Port number is 30001. Each NVR in the installation needs to be set to a unique Control Port number.

2. 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.

3. Click **APPLY** or **(depends on router)** to save the settings.

4. Enter the NVR's static IP address and press **ENTER** or **DONE**.

5. The NVR's static IP address will be shown below the NVR's Control Port number.

6. Enter the NVR's static IP address and press **ENTER** or **DONE**.

7. The NVR's static IP address will be shown below the NVR's Control Port number.

8. Enter the NVR's static IP address and press **ENTER** or **DONE**.

9. Enter the NVR's static IP address and press **ENTER** or **DONE**.

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

4. Enter a new RTMP Port number for the NVR (use 36001, 36002, 36003, etc.) to ensure the same HTTP port number is not used for any stand-alone camera in the installation)

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

7. The Forward Port is required to access the NVR from a mobile app or an outside browser.

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

**TIP:** Use the Network WorkSheet to write down each NVR's new port numbers.

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**NETWORK WORKSHEET**

**INSTALLATION NAME:**

**STAND-ALONE CAMERAS**

<table>
<thead>
<tr>
<th>Camera 1</th>
<th>Camera 2</th>
<th>Camera 3</th>
<th>Camera 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP ADDRESS</td>
<td>CONTROL PORT</td>
<td>HTTP PORT</td>
<td>RTSP PORT</td>
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**NVRs**

| NVR 1 | |
|--------| |
| IP ADDRESS | CONTROL PORT | HTTP PORT | RTSP PORT | FORWARD PORT | LOCATION |
|          |              |           |           |            |          |

**LAN ROUTER**

<table>
<thead>
<tr>
<th>LAN Router</th>
<th>LAN IP ADDRESS</th>
<th>WAN IP ADDRESS</th>
<th>USER NAME</th>
<th>PASSWORD</th>
<th>Wi-Fi</th>
<th>WEPI</th>
<th>LOCATION</th>
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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 connected directly 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 IP address tool that is on the NVR locally with a USB 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).
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 bound cameras are listed, click >.
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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.

WAN IP Address

The default NVR Control Port number is 30001. Each NVR in the installation needs to be set up as 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 up as a unique HTTP Port number if it will be accessed remotely from a browser.

As a new Port Forwarding item, enter the NVR's Control Port number and IP address. Enable Port Forwarding in the router.

- 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 DDNS 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 ACCOUNT name with the DDNS provider.
4. Enter the PASSWORD (the password with the DDNS provider).
5. Click APPLY.

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### NETWORK WORKSHEET

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**1005150 2GIG**