

# User Manual

Gigabit Ethernet Router with HPNA and 802.11n / 2108-N9□  
Gigabit Ethernet Router with 802.11n / 2108-D9□



**MOTOROLA**



# Safety Information

**IMPORTANT SAFETY INSTRUCTIONS – POWER SUPPLY INSTALLATION.** Connect the power supply cord to the power jack on the Motorola Netopia® Gateway. Plug the power supply into an appropriate electrical outlet.

**CAUTION:** Depending on the power supply provided with the product, either the direct plug-in power supply blades, power supply cord plug or the appliance coupler serves as the mains power disconnect. It is important that the direct plug-in power supply, socket-outlet or appliance coupler be located so it is readily accessible.

**TELECOMMUNICATION INSTALLATION.** When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.

**PRODUCT VENTILATION.** The Motorola Netopia® Gateway is intended for use in a consumer's home. Ambient temperatures around this product should not exceed 104°F (40°C). It should not be used in locations exposed to outside heat radiation or trapping of its own heat. The product should have at least one inch of clearance on all sides except the bottom when properly installed and should not be placed inside tightly enclosed spaces unless proper ventilation is provided.

## **SAVE THESE INSTRUCTIONS**

**Motorola Part Number:** 578175-001-00 revision a

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# 1 Checklist

Thank you for selecting the Motorola Netopia® 2108-D9 or -N9 Gigabit Ethernet Gateway. This guide will help you set up and configure your network.

Check your package contents. It should contain the items shown here:



**Motorola Gateway**



**User Manual**



**Wallmounting Kit  
(2 screws + 2 anchors)**



**1 Yellow RJ-45  
Ethernet Cable**



**1 Gray RJ-45  
Ethernet Cable**



**Power  
Supply**

If you don't have everything, contact your supplier immediately.

## 2 Connections

### 1. Select a suitable place on the network to install the Wireless Gateway.

You can stand it up in its stand; lay it flat on a desktop; or mount it on a wall using the included wall mounting kit hardware (see “Wall Mounting instructions (optional)” on page 15).

### 2. Use standard Cat5 Ethernet cables to connect PCs to the LAN ports on the rear of the Wireless Gateway.

One is supplied with your Gateway (yellow cable).

### 3. Connect the DSL or Cable modem to the gray WAN port on the Wireless Gateway.

Use the cable supplied with your DSL/Cable modem. If the cable is missing, a standard Cat5 Ethernet cable can be used.

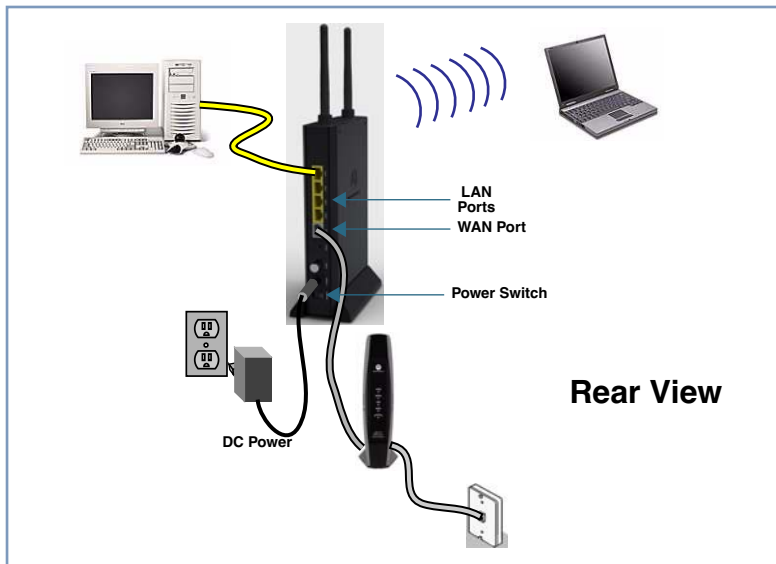
### 4. Connect the supplied power adapter to the Wireless Gateway.

Use only the power adapter provided. Using a different one may cause hardware damage. Turn the power ON with the ON/OFF Power Switch.

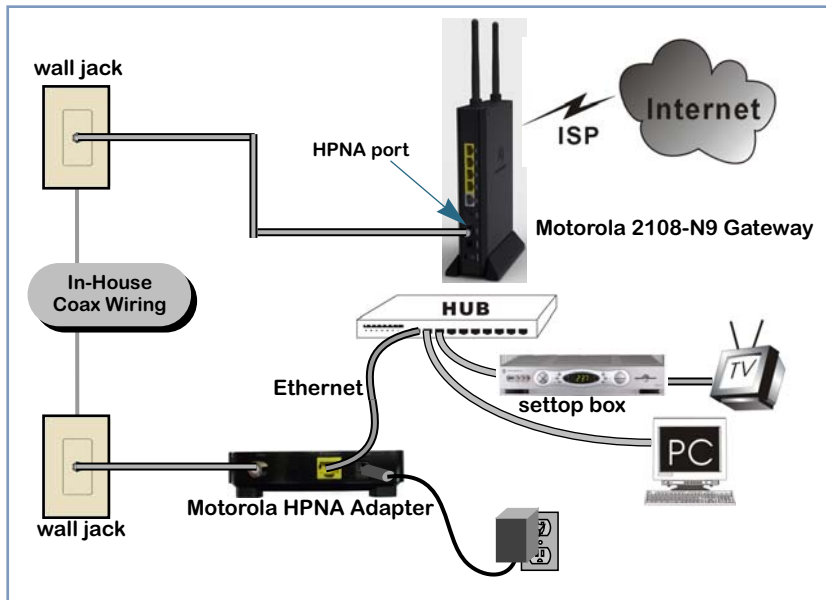
### 5. Check the LEDs:

- The Power LED should be ON.
- The LAN LED(s) that have a cable connected should be ON when the connected device is also on.
- The Wireless LED should be ON only when a wireless client is connected to this Gateway.
- **(2108-N9 HPNA model only)** The HPNA LED should be ON only when an HPNA device(s) is connected via coaxial cable.
- The WAN LED should be ON when the WAN Port is connected via Cat5 cabling.

- The Internet LED may initially be OFF. After proper configuration, it should come ON
- When all of your connections are made, your network may look like this:



The figure below shows how to connect a Motorola 2108-N9 HPNA-enabled Gateway to a home coaxial cable network using a Motorola HPNA Adaptor (purchased separately). Follow the same steps to connect any Ethernet device such as a hub or printer to a coaxial cable network.



## 6. Enable Wireless devices.

In order to use the Access Point in the Wireless Gateway, other Wireless devices must use the same SSID and Wireless Security settings as the Wireless Gateway.

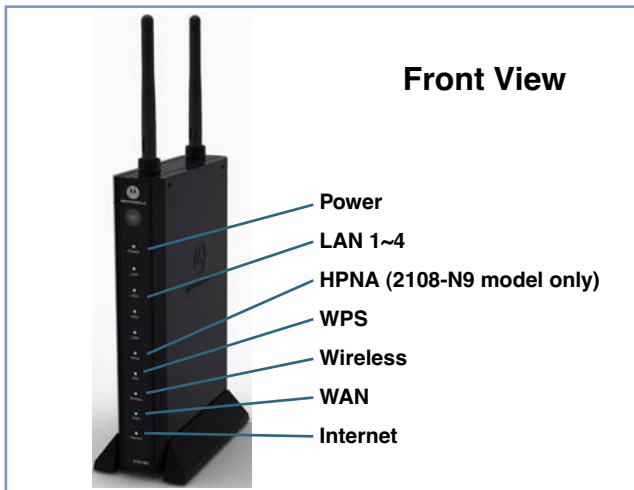
The Wireless Gateway's default settings are as follows.

<b>Setting</b>	<b>Wireless Gateway</b>
<b>SSID</b>	Default value: <i>unique to your Gateway</i> This may be changed on the Wireless screen, on the Wireless Gateway's main menu.
<b>Wireless</b>	Default Broadcast SSID: <i>Disabled</i> Default Security: <i>WEP128</i> Use the Wireless screen on the main menu to change this as required.

Ensure the Wireless Gateway and the other Wireless Stations are using the same settings.

- Use the Wireless setup screen to configure the Wireless Access Point in the Wireless Gateway.
- Configure the Wireless stations (PCs) using your normal method for configuring their Wireless interface.
- Wireless clients must also be set to use Infrastructure mode.

When all of your connections are complete, the status LEDs on the front of your Motorola Netopia® Gateway will light, in accordance with the following diagram:



### LED Definition

#### Power (Green, Red)

Off = Power Off  
Green = Power On  
Red = either power supply had become unstable or POST failed  
Blinking Red = Posting  
Blinking Green = FW upgrading



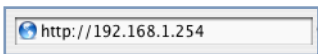
## LED Definition

<b>Internet</b>	Off = No IP connection Solid Green = IP connection exists Blinking Green = IP level traffic
<b>WAN</b>	Off = No connection Solid Green = Connection Blinking Green = traffic
<b>LAN 1~4</b>	Off = No connection Solid Green = Connection Blinking Green = traffic
<b>HPNA (2108-N9 model only)</b>	Off = No connection Solid Green = Connection Blinking Green = traffic
<b>Wireless</b>	Off = No connection Solid Green = Connection Blinking Green = traffic
<b>WPS (Green, Yellow, Red)</b>	Off = No action Solid Green = WPS Success Blinking Yellow = WPS in progress Blinking Red = WPS Error or session overlap

## 3 Device Configuration

You can access the configuration pages at any time as follows:

1. Run a Web browser, such as Firefox, Safari, or Microsoft Internet Explorer, and enter <http://192.168.1.254> in the URL Address text box.



Press Return.

2. When prompted, enter the Username and Password supplied by your ISP, if required.

Some ISPs do not require Username and Password. Refer to your ISP.

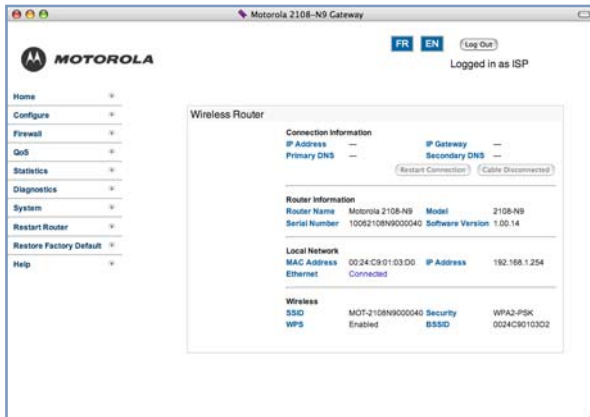
3. Refer to the data from your ISP, and the table below, to ensure your choices are correct.

Connection Type	Data Required
Dynamic IP Address (DHCP)	Usually, none.
Specified (Static) IP Address	IP Address allocated to you, and related information.
PPPoE	Login name and password.

Enter the information supplied by your Internet Service Provider.

## 4. Check your connection.

Click the HOME link at the top-left of your browser's GUI display. View this page to verify that an internet connection has been established. If the connection is not successful, check the data you entered and the cabling connected to Gateway's Ethernet ports.



The screenshot shows the Motorola 2108-N9 Gateway web interface. The browser title is "Motorola 2108-N9 Gateway". The page has a Motorola logo and navigation links for "FR", "EN", and "Log Out". The user is logged in as "ISP". A sidebar on the left contains menu items: Home, Configure, Firewall, GoS, Statistics, Diagnostics, System, Restart Router, Restore Factory Default, and Help. The main content area is titled "Wireless Router" and displays the following information:

Connection Information	
IP Address	---
Primary DNS	---
IP Gateway	---
Secondary DNS	---
[Restart Connection] [Cable Disconnected]	

Router Information	
Router Name	Motorola 2108-N9
Model	2108-N9
Serial Number	10062108N9000040
Software Version	1.00.14

Local Network	
MAC Address	00:24:C9:01:53:00
IP Address	192.168.1.254
Ethernet	Connected

Wireless	
SSID	MOT-2108N9000040
Security	WPA2-PSK
WPS	Enabled
BSSID	0024C9010302

***Congratulations!*** Your connection is up and running and you should be able to browse the Internet by typing a URL address in your browser's Address text box or by selecting any of your favorite bookmarks.

# Client Configuration

Your Gateway serves Dynamically-assigned IP addresses by default. Be sure to configure each computer connected to your Gateway to accept a Dynamically-assigned IP address, commonly referred to as DHCP.

## Microsoft Windows:

Step 1. Navigate to the *TCP/IP Properties* Control Panel.

- a. Windows 98, 2000, and ME versions follow a path like this:

**Start menu -> Settings -> Control Panel -> Network (or Network and Dial-up Connections -> Local Area Connection -> Properties) -> TCP/IP [your\_network\_card] or Internet Protocol [TCP/IP] -> Properties**



- b. Windows XP follows a path like this:

**Start menu -> Control Panel -> Network and Internet Connections -> Network Connections -> Local Area Connection -> Properties -> Internet Protocol [TCP/IP] -> Properties**



Step 2. Select Obtain an IP address automatically.

Step 3. Select Obtain DNS server address automatically, if available.

Step 4. Remove any previously configured Gateways, if available.

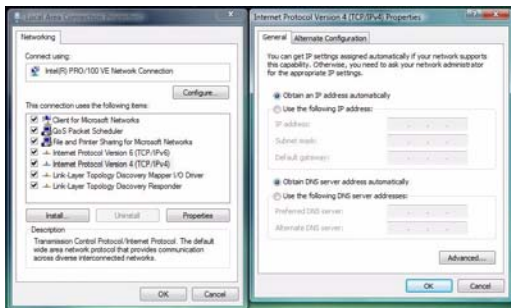
Step 5. OK the settings. Restart if prompted.

**c.** Windows Vista is set to obtain an IP address automatically by default. You may not need to configure it at all.

To check, open the **Networking** Control Panel and select **Internet Protocol Version 4 (TCP/IPv4)**. Click the **Properties** button.

The **Internet Protocol Version 4 (TCP/IPv4) Properties** window should appear as shown.

If not, select the radio buttons shown above, and click the **OK** button.



## Macintosh Mac OS 9 or Mac OS X:

Step 1. Access the TCP/IP or Network control panel.

a. Mac OS 9 follows a path like this:

**Apple Menu -> Control Panels -> TCP/IP Control Panel**



b. Mac OS X follows a path like this:

**Apple Menu -> System Preferences -> Network**

Step 2. Select Built-in Ethernet

Step 3. Select Configure Using DHCP

Step 4. Close and Save, if prompted.



## Support

Answers to many frequently asked product-related questions, as well as full product documentation with advanced configuration instructions, are also available on-line at:

<http://broadband.motorola.com/consumers/support/default.asp?supportSection=blank>

Note the serial number (**SN:**) of your Gateway. It is located on the label on the bottom of the Gateway below the model number. You will need the Gateway's serial number if you need to call for technical support.

## Wall Mounting instructions (optional)

**1. Hold a blank sheet of paper against the side of the Gateway with the mounting slots.**

**2. With a pen or pencil, mark the position of the mounting slots.**

Use this sheet of paper as a wall mounting template.

**3. Place this template on the wall in the position the Gateway will be mounted.**

It is recommended to mount the Gateway with the cable connections on the bottom.

**4. Mark the mounting holes.**

If mounting on wood, drill holes for the supplied screws.

If mounting on sheetrock, drill holes to accept the supplied sheetrock anchors.

**5. Leave screws extended about 0.15 inches from the wall.**

**6. Hang the Gateway on the screws.**

# Recycling your Motorola Equipment

When you see this symbol on a Motorola product, do not dispose of the product with residential or commercial waste.



Please do not dispose of this product with your residential or commercial waste. Some countries or regions, such as the European Union, have set up systems to collect and recycle electrical and electronic waste items. Contact your local authorities for information about practices established for your region.

If collection systems are not

available, call Motorola Customer Service for assistance. Please visit <http://www.motorola.com/recycle> for instructions on recycling.

## Recyclage pour le respect de l'environnement

Lorsque vous voyez ce symbole sur un produit Motorola, ne le jetez pas avec vos ordures ménagères ou vos rebus d'entreprise.

## Recyclage de votre équipement Motorola

Veillez ne pas jeter ce produit avec vos ordures ménagères ou vos rebus d'entreprise. Certains pays ou certaines régions comme l'Union Européenne ont mis en place des systèmes de collecte et de recyclage des produits électriques et électroniques mis au rebut. Veuillez contacter vos autorités locales pour vous informer des pratiques instaurées dans votre région. Si aucun système de collecte n'est disponible, veuillez appeler le Service clientèle de Motorola qui vous apportera son assistance.



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.



The user manual of transmitter devices equipped with detachable antennas shall contain the following information in a conspicuous location:

This device has been designed to operate with the antennas listed below,   
and having a maximum gain of [1.8] dB. Antennas not included in this list   
or having a gain greater than [1.8] dB are strictly prohibited for use with   
this device. The required antenna impedance is [50] ohms.



To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated   
power (e.i.r.p.) is not more than that permitted for successful communication.



IEEE 802.11b or 802.11g operation of this product in the Canada is   
firmware-limited to channels 1 through 11.



FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with   
any other antenna or transmitter.

2. This equipment complies with FCC RF radiation exposure limits set forth   
for an uncontrolled environment. This equipment should be installed and   
operated with a minimum distance of 20 centimeters between the radiator   
and your body.



This equipment complies with IC RF radiation exposure limits set forth for   
an uncontrolled environment. This equipment should be installed and   
operated with a minimum distance of 20 centimeters between the radiator   
and your body.

