NETGEAR ®

CM400 High Speed Cable Modem
User Manual

Support

Thank you for selecting NETGEAR products.

After installing your device, locate the serial number on the label of your product and use it to register your product at *https://my.netgear.com*. You must register your product before you can use NETGEAR telephone support. NETGEAR recommends registering your product through the NETGEAR website.

For product updates and web support, visit *http://support.netgear.com*.

Phone (US & Canada only): 1-888-NETGEAR.

Phone (Other Countries): Check the list of phone numbers at *http://support.netgear.com/general/contact/default.aspx*.

Compliance

For regulatory compliance information, visit *http://www.netgear.com/about/regulatory*.

See the regulatory compliance document before connecting the power supply.

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Hardware and Internet Setup

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The NETGEAR CM400 High Speed Cable Modem provides a connection to high-speed cable Internet with speeds up to 340 Mbps.[1] The cable modem is certified by all major cable Internet providers. A Gigabit Ethernet port provides fast access and downloads. The cable modem supports IPv4 and IPv6 address assignment by cable Internet providers.

This chapter covers the following topics:

- *Unpack Your Cable Modem*
- *Front Panel*
- *Back Panel*
- *Product Label*
- *Attach the Feet*
- *Cable Your Cable Modem*
- *Contact Your Cable Internet Provider and Activate Your Internet Service*

Note: For more information about the topics covered in this manual, visit the support website at *http://support.netgear.com*.

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1. Maximum rate is derived from DOCSIS 3.0 specifications and actual throughput varies depending on your Internet subscription with your provider.

Unpack Your Cable Modem

Your package contains the following items.

Cable modem

Attachable feet

Ethernet cable

Power adapter

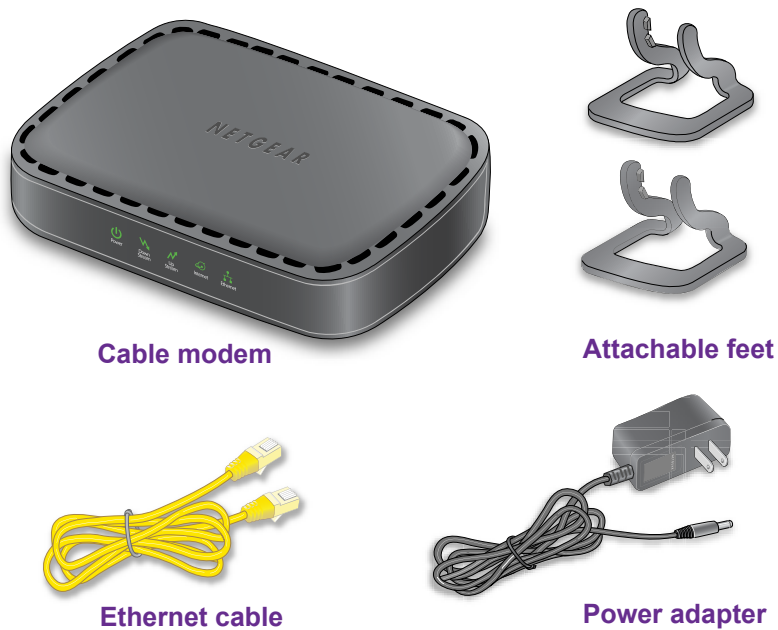**Figure 1. Package contents**

Front Panel

The cable modem provides status LEDs on the front.

Power LED

Downstream LED

Upstream LED

Internet LED

Ethernet LED
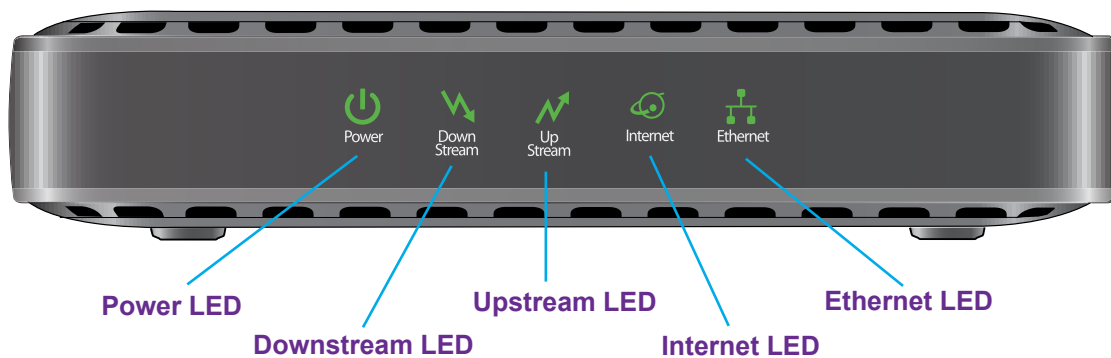
Figure 2. Cable modem front view

You can use the LEDs to verify status and connections. The following table lists and describes each LED on the front panel of the cable modem.

Table 1. LED descriptions

LED	Description
Power	• **Green**. Power is supplied to the cable modem. • **Off**. No power is supplied to the cable modem.
Downstream	• **Solid amber**. One downstream channel is locked. • **Solid green**. Two or more downstream channels are locked. • **Blinking green**. The cable modem is scanning for a downstream channel. • **Off**. No downstream channel is locked.
Upstream	• **Solid amber**. One upstream channel is locked. • **Solid green**. Two or more upstream channels are locked. • **Blinking amber**. The cable modem is scanning for an upstream channel. • **Off**. No upstream channel is locked.
Internet	• **Solid green**. The cable modem is online. • **Blinking green**. The cable modem is synchronizing with the cable provider's cable modem termination system (CMTS). • **Off**. The cable modem is offline.
Ethernet	• **Green**. A powered-on device is connected to the Ethernet port at 1000 Mbps. • **Amber**. A powered-on device is connected to the Ethernet port at 10/100 Mbps. • **Blinking green or amber.** The Ethernet port is processing traffic. • **Off**. No device is connected to the Ethernet port.

Back Panel

The back panel provides the connections and button shown the following figure.
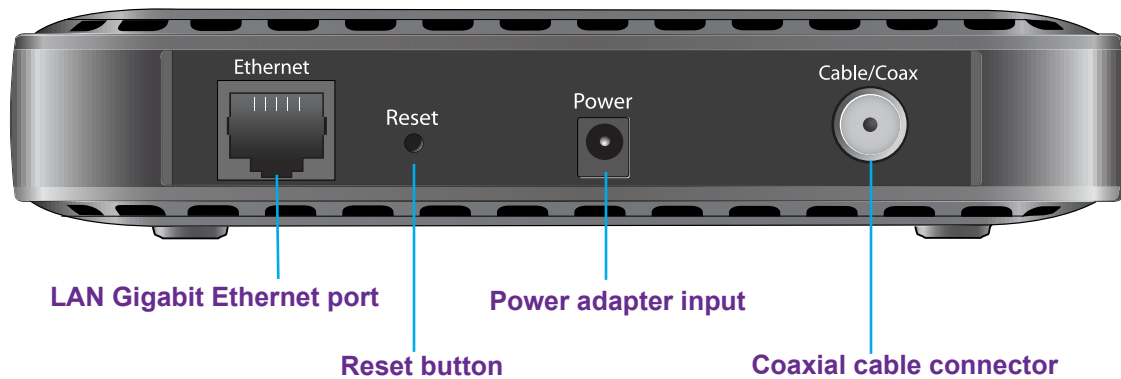
Figure 3. Cable modem back panel

Product Label

The product label on the bottom of the cable modem displays the serial number and MAC address of the cable modem and login information, including the default IP address, default user name, and default password.
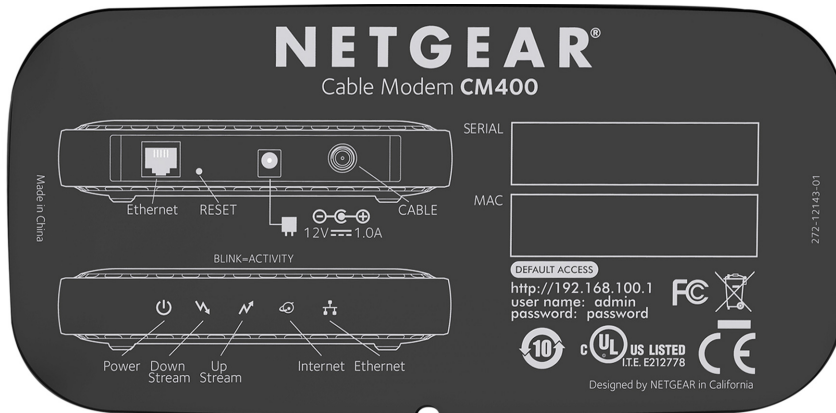
Figure 4. Product label

Attach the Feet

The cable modem functions well in either a horizontal or vertical position.

If you prefer to place the cable modem in the upright (vertical) position, attach the feet that come with the cable modem.

➢ **To attach the feet:**

1. Hold the cable modem in the upright position with the left side of the cable modem pointing down.
2. Snap the feet onto the cable modem.

Figure 5. Attaching the feet

Cable Your Cable Modem

The cable modem provides a connection between your cable Internet provider's network and your computer, router, or WiFi router.
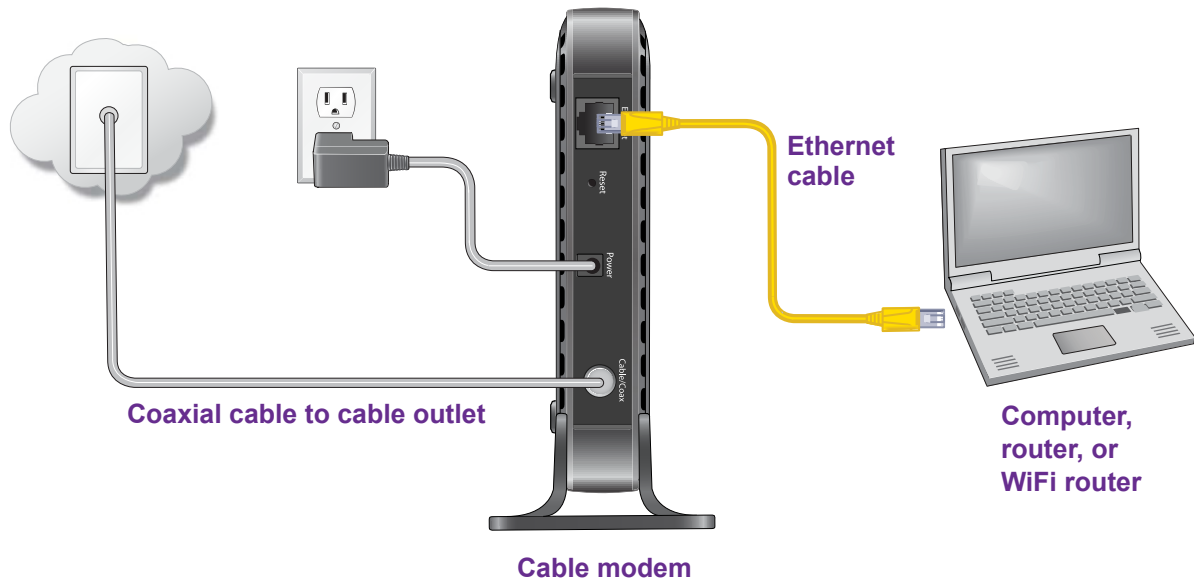

Figure 6. Cabling the cable modem

➢ **To cable your cable modem:**

1. Connect a coaxial cable.

   Use the coaxial cable that your cable company provides to connect the cable port on the cable modem to a cable wall outlet or a line splitter.

   Note: If Charter is your cable Internet provider, Charter recommends connecting your cable modem directly to a cable wall outlet. If you must use a splitter, use a splitter that is rated at 3.5 dBmv.

   Note: If Comcast XFINITY is your cable Internet provider, Comcast XFINITY recommends connecting your cable modem directly to a cable wall outlet.

2. Connect the power adapter provided in the package to the cable modem and plug the power adapter into an electrical outlet.

   The Power LED ⏻ lights green.

3. Turn off the computer, router, or WiFi router to which you intend to connect the cable modem.

4. Use the Ethernet cable provided in the package to connect the Gigabit Ethernet port on the cable modem to an Ethernet port on a computer, router, or WiFi router.

5. Turn on the computer, router, or WiFi router.

6. Wait for the cable modem to come online.

   It takes at least 15 minutes for the cable modem to come online on the network. During this time, the Downstream LED and Upstream LED might blink.

   After the cable modem registers with your cable Internet service provider, the Internet LED lights green. Even though an Internet connection is established, Internet service is available only after you set it up with your cable Internet provider.

   For information about how to set up your Internet service, see *Contact Your Cable Internet Provider and Activate Your Internet Service* on page 9.

Contact Your Cable Internet Provider and Activate Your Internet Service

You must contact your Internet provider and tell them that you are using a new cable modem.

Note: If Comcast XFINITY is your cable Internet provider, you do not need to call. Just launch a web browser. You are redirected to the XFINITY self-activation page on which you can enter your XFINITY credentials.

➢ **To activate your Internet connection:**

1. Contact your cable Internet provider and inform them that you are installing a new cable modem that you bought from a retail store.

   Provide your cable Internet provider with the cable modem's model number, which is CM400.

   Note: The cable modem is certified by all major cable Internet providers.

   You can also visit your cable Internet provider's website and follow the onscreen instructions to set up your Internet service.

Cable Internet Provider	Contact Information
Bright House Networks	1-866-898-9101 *support.brighthouse.com*
Cablevision	*cablevision.com* *optimum.com/contactus.jsp* **Note:** When you attempt to contact Cablevision online, you are directed to the Optimum web page. Optimum is a brand name of Cablevision.

Cable Internet Provider	Contact Information
Charter	1-888-438-2427 *install.charter.com*
Comcast	1-800-COMCAST (1-800-266-2278) *comcast.com/activate/*
Cox	1-877-891-2899 *cox.com/residential/home.cox*
Optimum	*play.optimum.net* *optimum.net/support/phone-list* **Note:** Optimum is a brand name of Cablevision.
Time Warner Cable	1-800-892-2253 *timewarnercable.com*

Note: The contact information listed might change. You can also find the contact number in your monthly Internet service billing statement.

2. When asked, provide the cable modem's serial number and MAC address, which are on the product label (see *Product Label* on page 7).

3. Wait for your cable Internet provider to confirm that your cable modem is active.

4. If you do not get an Internet connection with the cable modem, ask your cable Internet provider to look for your cable modem online, and do one of the following depending on what your cable Internet provider tells you about your cable modem:

   • If the cable modem is not visible, your cable Internet provider can give you instructions to verify why the cable modem does not connect with your high-speed Internet service.

   • If the cable modem is visible to your cable Internet provider, reboot the computer, laptop, router, or WiFi router that is connected to the cable modem. Try checking your online status again.

Manage and Monitor

2

After you set up the cable modem, you do not need to log in to the cable modem for normal operation. However, you *can* log in to the cable modem to change some very limited settings and monitor the cable modem. In the unlikely situation that you experience problems with the cable connection and cannot get an Internet connection, technical support might ask you to log in to the router.

This chapter contains the following sections:

- *Log In to the Cable Modem*
- *Specify the Cable Connection Starting Frequency*
- *View Cable Modem Initialization*
- *View Cable Modem Status*
- *View and CLear Event Logs*
- *Change the admin Password*
- *Reboot the Cable Modem*
- *Reset the Cable Modem to Factory Default Settings*

Log In to the Cable Modem

After you set up the cable modem, you do not need to log in to the cable modem for normal operation.

To log in to the cable modem, you must use a web browser such as Microsoft Internet Explorer 5.0 or later, Firefox Mozilla 2.0 or later, Safari 1.4 or later, or Google Chrome 11.0 or later.

➢ **To log in to the cable modem:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.

   A login screen displays.

3. Enter the cable modem user name and password.

   The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

   The BASIC Home screen displays.

Specify the Cable Connection Starting Frequency

The starting frequency for the cable connection is automatically generated. For most Internet connections, you do not need to specify this information. If you need to enter a starting frequency, contact your Internet provider.

➢ **To change the starting frequency:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.

   A login screen displays.

3. Enter the cable modem user name and password.

   The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

   The BASIC Home screen displays.

4. Select **Cable Connection**.

   The Cable Connection screen displays.

5. In the **Starting Frequency** field, type a number.
6. Click the **Apply** button.

   Your change takes effect.

View Cable Modem Initialization

You can track the initialization procedure of the cable modem and get details about the downstream and upstream cable channel. The time is displayed after the cable modem is initialized.

The cable modem automatically goes through the following steps in the provisioning process:

1. Scans and locks the downstream frequency and then ranges the upstream channels.
2. Obtains a WAN IP address for the cable modem.
3. Connects to the Internet.

➢ **To view the status of the cable modem initialization:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.
2. Type **http://192.168.100.1**.

   A login screen displays.

3. Enter the cable modem user name and password.

The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

The BASIC Home screen displays.

4. Select **Cable Connection**.

The Cable Connection screen displays.

The Startup Procedure section displays the initialization progress.

The Downstream Bonded Channels section displays the status of each channel.

5. To see the Upstream Bonded Channels section and system time, scroll down.

View Cable Modem Status

You can view some basic information about the cable modem.

➢ **To view cable modem status:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.

A login screen displays.

3. Enter the cable modem user name and password.

The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

The BASIC Home screen displays.

4. Select **ADVANCED**.

The Cable Information pane displays.
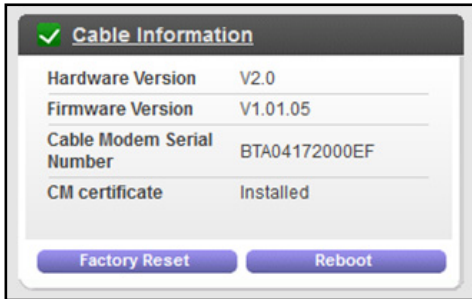
The Cable Information pane displays the following:

- **Hardware Version.** The version of the cable modem model.
- **Firmware Version**. The version of the cable modem firmware.
- **Cable Modem Serial Number**. The serial number of the cable modem.
- **CM Certificate**. The status of the cable modem certificate. If Not installed displays as the status, contact your cable Internet provider.

For information about using the **Reboot** button, see *Reboot the Cable Modem* on page 17.

For information about using the **Factory Reset** button, see *Reset the Cable Modem to Factory Default Settings* on page 18.

View and CLear Event Logs

Event logs capture important cable modem events.

➢ **To view and clear the event logs:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.

A login screen displays.

3. Enter the cable modem user name and password.

The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

The BASIC Home screen displays.

4. Select **ADVANCED > Administration > Event Log**.

The Event Log screen displays.

The Event Log screen shows the following information:

- **Time**. The time the event log entry was recorded.
- **Priority**. The severity for the event log entry.
- **Description**. A description of the event log entry.

5. To refresh the log screen, click the **Refresh** button.
6. To clear the log entries, click the **Clear Log** button.

Change the admin Password

You can change the default password that is used to log in to the cable modem with the user name admin.

➢ **To change the password for the user name admin:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.

A login screen displays.

3. Enter the cable modem user name and password.

The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

The BASIC Home screen displays.

4. Select **ADVANCED > Administration > Set Password**.

The Set Password screen displays.

Set Password

Apply ▶   ✕ Cancel

Old Password

Set Password

Repeat New Password

5. Type the old password.

6. Type the new password in the **Set Password** field.

7. Type the new password in the **Repeat New Password** field.

8. Click the **Apply** button.

   Your change takes effect.

Reboot the Cable Modem

Rebooting the cable modem disconnects all computers from the cable modem's local area network (LAN). After the cable modem is finished booting and reestablishes a connection with the cable provider's network, the devices reconnect to the cable modem's LAN.

➢ **To reboot the cable modem:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.
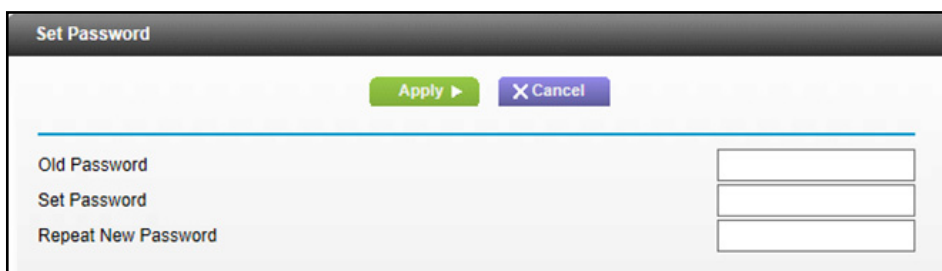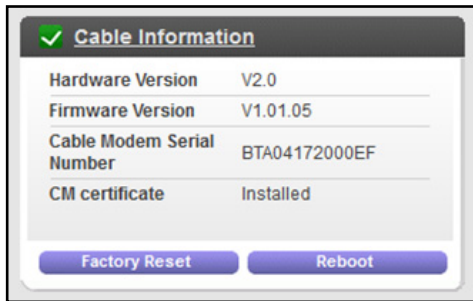
   A login screen displays.

3. Enter the cable modem user name and password.

   The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

   The BASIC Home screen displays.

4. Select **ADVANCED**.

   The Cable Information pane displays.

5. In the Cable Information pane, click the **Reboot** button.

   A confirmation message displays.

6. Click the **OK** button.

   The cable modem reboots.

Reset the Cable Modem to Factory Default Settings

To reset the cable modem to factory default settings, you can use either the **Reset** button on the back panel of the cable modem or the **Factory Reset** software button. However, if you changed the default password to access the cable modem and lost the password, you must use the **Reset** button on the back panel.

After you reset the cable modem to factory default settings, the user name is admin, the password is password. The LAN IP address is always 192.168.100.1. You cannot change this LAN IP address.

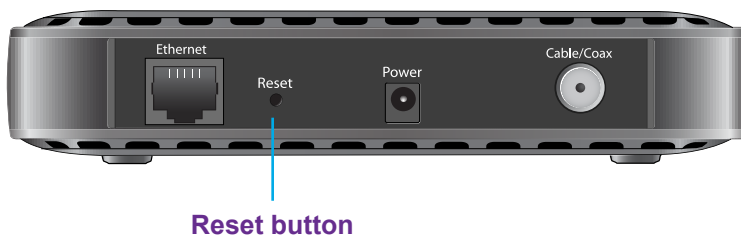## Use the Reset Button on the Back Panel

 CAUTION:

This process erases all settings that you configured in the cable modem.

➢ **To reset the cable modem to factory default settings:**

1. On the back of the cable modem, locate the **Reset** button.

Reset button

2. Using a straightened paper clip, press and hold the **Reset** button until the Upstream and Downstream LEDs light amber.

3. Release the **Reset** button.

   The configuration is reset to factory default settings. When the reset is complete, the cable modem reboots. This process takes about one minute.

   ⚠️ **WARNING:**

   To avoid the risk of corrupting the firmware, do not interrupt the reset. For example, if you are connected to the web management interface, do not close the browser, click a link, or load a new page. Do not turn off the cable modem.

Use the Factory Reset Software Button

⚠️ **CAUTION:**

This process erases all settings that you configured in the cable modem.

➢ **To erase the settings:**

1. Launch a web browser from a computer that is attached over an Ethernet cable to the cable modem or from a computer that is connected to a WiFi router that is attached over an Ethernet cable to the cable modem.

2. Type **http://192.168.100.1**.

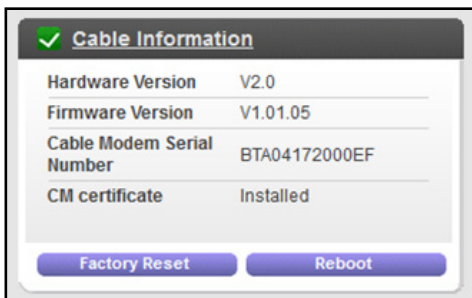   A login screen displays.

3. Enter the cable modem user name and password.

   The user name is **admin**. The default password is **password**. The user name and password are case-sensitive.

   The BASIC Home screen displays.

4. Select **ADVANCED**.

   The Cable Information pane displays.

✓ Cable Information	
Hardware Version	V2.0
Firmware Version	V1.01.05
Cable Modem Serial Number	BTA04172000EF
CM certificate	Installed
Factory Reset	Reboot

5. In the Cable Information pane, click the **Factory Reset** button.

   A confirmation message displays.

6. Click the **OK** button.

The configuration is reset to factory default settings. When the reset is complete, the cable modem reboots. This process takes about one minute.

> ⚠️ **WARNING:**
>
> **To avoid the risk of corrupting the firmware, do not interrupt the reset. For example, do not close the browser, click a link, or load a new page. Do not turn off the cable modem.**

Troubleshooting

3

This chapter provides information about troubleshooting your cable modem.

The chapter includes the following sections:

- *Use LEDs to Troubleshoot*
- *Cannot Log In to the Cable Modem*
- *Troubleshoot the Cable Internet Connection*

Note: NETGEAR provides helpful articles and documentation at *support.netgear.com*.

Use LEDs to Troubleshoot

The following table provides help when you are using the LEDs for troubleshooting.

Table 2. Troubleshooting with LEDs

LED Behavior	Action
All LEDs are off when the cable modem is plugged in.	Make sure that the power cord is properly connected to your cable modem and that the power supply adapter is properly connected to a functioning power outlet. Check that you are using the 12 VDC power adapter from NETGEAR for this product. If the error persists, a hardware problem occurred. Contact technical support.
All LEDs stay on.	• Clear the configuration of the cable modem to its factory defaults. This operation sets the IP address of the cable modem to 192.168.100.1. • If the error persists, a hardware problem occurred. Contact technical support.
Ethernet LED is off for a port with an Ethernet connection.	• Make sure that the Ethernet cable connections are secure at the cable modem and at the computer, router, or WiFi router. • Make sure that power is turned on to the connected hub or computer. • Be sure that you are using the correct cable.
Internet LED is off and the cable modem is connected to the cable wall jack.	• Make sure that the coaxial cable connections are secure at the cable modem and at the wall jack. • Make sure that your cable Internet provider provisioned your cable Internet service. Your provider can verify that the signal quality is good enough for cable modem service. • Remove any excessive splitters that you installed on your cable line. Run a "home run" back to the point where the cable enters your home.

Cannot Log In to the Cable Modem

If you cannot access the cable modem from computer that is connected to the cable modem or to a router that is connected the cable modem, check the following:

• If your computer is connected to the cable modem with an Ethernet cable, check the connection.

• Make sure that your computer's IP address is on the same subnet as the cable modem.The IP address of your computer must be in the range of 192.168.100.2 to 192.168.100.254.

• Make sure Java, JavaScript, or ActiveX is enabled in your browser. If you are using Internet Explorer, click the **Refresh** button to make sure that the Java applet is loaded.

• Try quitting the browser and launching it again.

• Make sure that you are using the correct login information. The cable modem user name **admin** is lowercase (Caps Lock is off). The default password is **password**.

If the cable modem does not save changes you made, do the following:

- When entering configuration settings, be sure to click the **Apply** button before moving to another screen, or your changes are lost.

- Click the **Refresh** or **Reload** button in the web browser. The changes occurred, but the web browser might be caching the old configuration.

Troubleshoot the Cable Internet Connection

If your cable modem cannot access the Internet but the Internet LED [icon] lights green, register the cable MAC address or device MAC address of your cable modem with your cable Internet provider (see *Contact Your Cable Internet Provider and Activate Your Internet Service* on page 9).

Technical Specifications

A

The following table lists the technical specifications for the cable modem.

Table 3. Technical specifications

Feature	Specification
Power adapter	• Input: 110–120V, 47–60 Hz • Output: 12 VDC, 1A
Physical specifications	• Dimensions: 5.8 x 3.8 x 1.8 in. (147 x 96 x 30 mm) • Weight: 0.44 lb (0.19 kg)
Environmental	• Operating temperature: 32° to 104°F (0° to 40°C) • Operating humidity: 90% maximum relative humidity, noncondensing
Interface	• Local: 10/100/1000 RJ-45 Gigabit Ethernet port • Internet: Coaxial cable connector DOCSIS 3.0: Backward compatible with DOCSIS 2.0
Memory	• 128 MB Flash • 128 MB RAM
Certifications	CableLabs certified for U.S. cable Internet services