Pace

INSTALLATION GUIDE

HomePortal Intelligent Gateway

5111NV

Contents

Introduction

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The Home Portal® 5111NV Intelligent Gateway is an advanced networking device that can be installed by you or your service provider. This all-in-one device includes the modem, router, wireless access point, firewall, and voice gateway.

The 5111NV supports ADSL, ADSL2, and ADSL2+ technology. It has four wired Ethernet ports, 802.11b/g/n wireless networking, and voice capabilities.
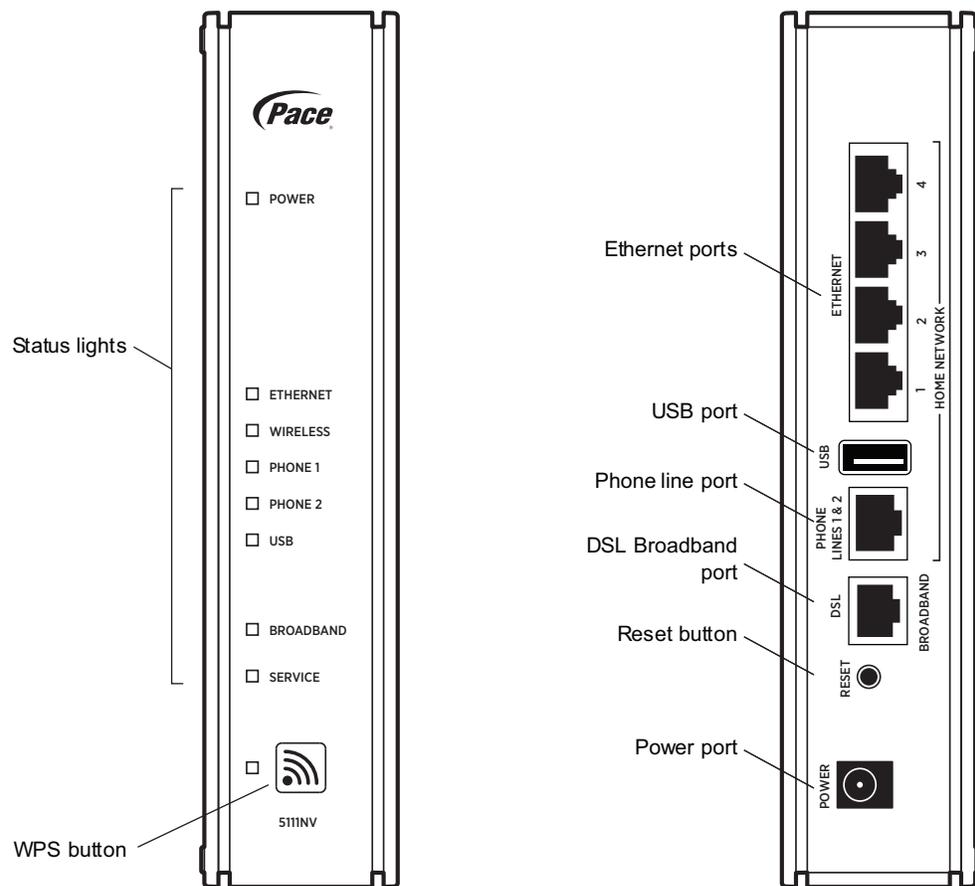
Use WPS (Wi-Fi Protected Setup) to simplify the process of connecting wireless devices to the network. For more information, go to the gateway configuration page at http://192.168.1.254

Gathering items for installation

To install the gateway, you will need:

- Gateway

- Power adapter

- DSL cable

- Ethernet cable (optional), to connect a computer directly to the gateway using a wired connection

- Phone cable (optional), for connecting voice telephone service

- Gateway stand (optional), for installing the gateway vertically

- DSL filter (optional), for each phone on the same line as the gateway

Finding a suitable location

Before you install the gateway, find an appropriate location for it. Set up the gateway near the main computer or any other device that will connect to it through the wired Ethernet ports.

The gateway also serves as a wireless access point, so you should consider the wireless network when choosing the location for the gateway. Consider the following when determining the location of the gateway:

- Place the gateway at least 5 ft (1.5 m) from cordless phones, microwave ovens, or other electronic devices to avoid potential interference, and at least 6 in (15 cm) from your television to avoid audio hissing or static.

- Place the gateway in an open area to minimize interference from its surroundings. Wireless signal strength is much stronger in an open area than an area with obstructions. In a single-story building, place the gateway as high and as close to each wireless device as possible.

- Keep the gateway away from large metal objects. Metal objects can reflect or obstruct signals, which can negatively impact wireless signal quality.

- Keep the gateway away from water sources like water coolers or aquariums.

Note: We recommend that you use the included stand to install the gateway vertically. This prevents things from being stacked on top of it, which can block vents and cause the gateway to overheat.

Installing the Gateway

2

Use the information in this chapter to connect the gateway to the Internet and to your home network.
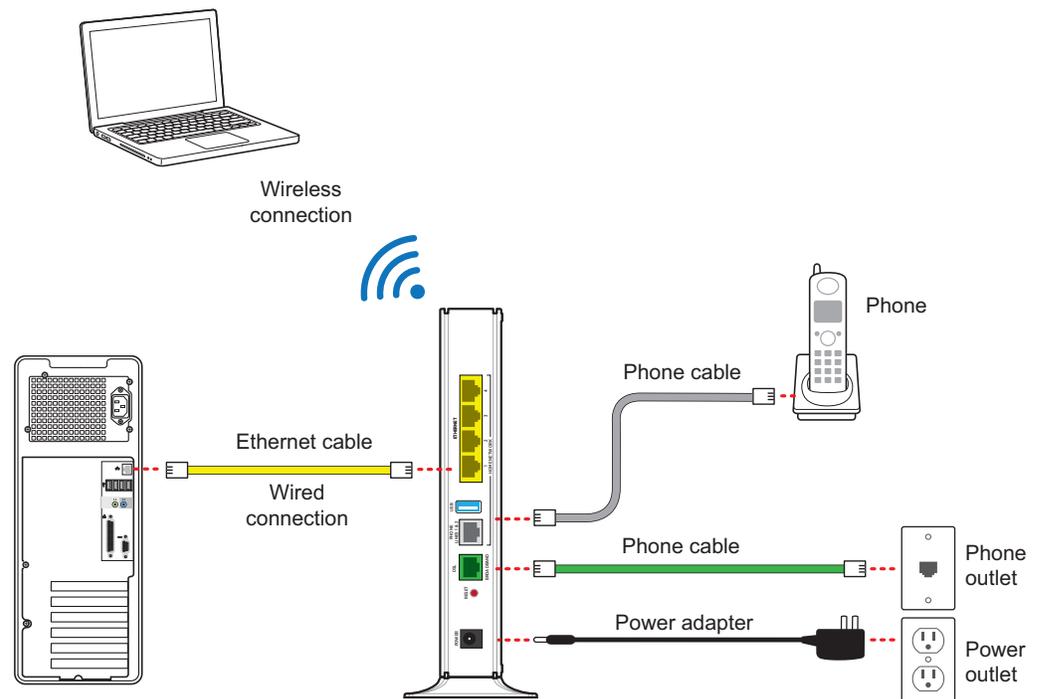
To install the gateway, see the following:

1. "Installing DSL filters" on page 7

2. "Connecting the power adapter" on page 9

3. "Connecting the gateway to the Internet" on page 9

4. "Connecting computers to the gateway" on page 9

5. "Connecting phones" on page 11

6. "Configuring the gateway" on page 11

Installing DSL filters

DSL signals are carried over the same lines as regular phone signals. Converting your regular phone line to DSL can cause high-pitched tones and static when you use the phone. To eliminate the noise, you can install DSL filters on every phone or phone device that shares the same phone number as your DSL.

You need one DSL filter for each phone device (such as a desktop phone, analog modem, FAX, or answering machine). If you have several phone devices connected to each other and are using a single phone jack, install only one DSL filter between the phone jack and the first device in the series.

Note: Do not install a DSL filter on the line that is connected to the DSL gateway.

Installing a DSL inline filter

To use a filter with most phone devices, you must install the DSL filter between the device and the phone jack.

1. Connect the cable from your device to the DSL filter.

2. Connect the cable from the DSL filter to your phone jack.
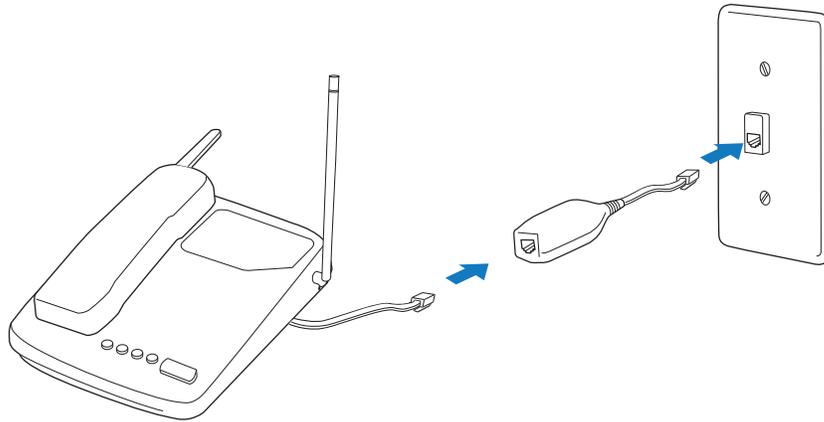
Installing a DSL wall filter

To use a DSL filter with a wall-mounted phone, install the DSL filter between the original wall plate and your wall-mounted phone.

1. Lift the phone from the wall pegs, and disconnect the phone cord from the phone jack.

2. Connect the phone cord from the back of the DSL filter into the phone jack, and mount the filter on the wall plate pegs using the keyhole slots.
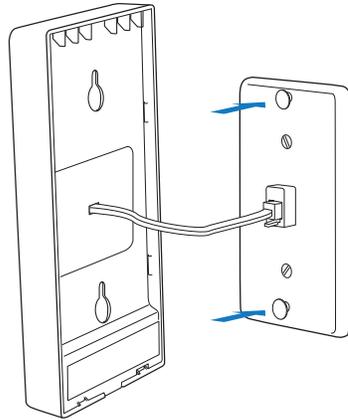
3. Connect the phone cable to the phone jack located on the front of the mounted DSL filter.

    Note: Note: If you have a DSL modem, you can connect it to the DSL port at the bottom of the filter.

4. Attach the phone to the mounting pegs on the DSL filter.

To gateway
(optional)
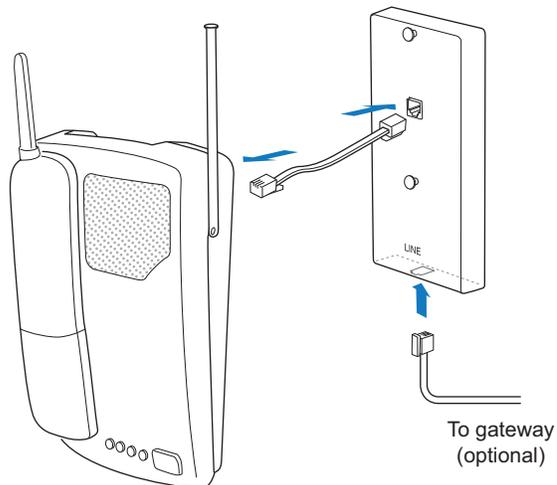
Connecting the power adapter

The power adapter supplies power to the gateway. Always use the power adapter that was packaged with the gateway because it matches the power requirements of the gateway and it complies with local requirements.

1. Connect one end of the power adapter to the POWER port on the gateway.

2. Connect the cable's other end to an electrical outlet.

After the gateway is powered on, the power light blinks green for a moment and then turns steady green.

Connecting the gateway to the Internet

Connect the gateway to the Internet using the DSL Broadband port.

1. Connect one end of the green DSL cable to the green DSL Broadband port on the gateway.

2. Connect the other end of the DSL cable to the wall jack.

After the gateway recognizes the connection, the Broadband light blinks green for a moment and then turns steady green.

Connecting computers to the gateway

You can connect your computers and devices to the gateway using a wired connection or a wireless connection. With either type of connection, you can use the first computer that you connect to the network to set up the gateway.

Connecting devices using a wired connection

The gateway has four wired Ethernet ports that you can use to connect computers or other devices.

1. Connect one end of the yellow Ethernet cable to one of the yellow Ethernet ports on the gateway.

2. Connect the other end of the cable to the Ethernet port on the computer.

You can connect up to four computers to the gateway using the wired Ethernet ports.

Note: A 6-foot yellow Ethernet cable is provided with the gateway. If you need an additional or longer cable, use a Cat 5 or Cat 5e Ethernet cable.

After the gateway recognizes the computer, the **Ethernet** light turns steady green, and blinks when the computer starts transferring data with the gateway.

Connecting devices using a wireless connection

The gateway has an integrated wireless access point that you can use to connect wireless devices to the gateway. By default, the gateway is configured with a network name (SSID) and WPA-PSK/WPA2-PSK security.

1. On the wireless device, view the available wireless networks. The specifics of how you do this depend on the device you are connecting.

    The default network name (SSID) and the encryption key (64-bit hex) is printed on the label on the side of the gateway. Mac OS X users might have to enter the "$" character at the beginning of the encryption key.
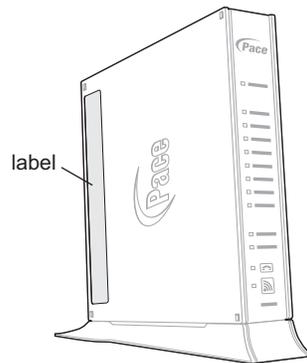
2. Select the appropriate network name and connect.

3. At the prompt, enter the encryption key.

After the gateway recognizes the wireless device, the **WIRELESS** light turns steady green, and blinks when the wireless device starts transferring data with the gateway.

You can use WPS (Wi-Fi Protected Setup) to simplify the process of connecting wireless devices to the network. For more information, go to the gateway configuration page at http://192.168.1.254

Connecting phones

The gateway includes one RJ-14 port (Phone 1 & 2) with the capacity to support 2 phone lines using a splitter or multi-jack adapter.

WARNING: Do not connect the VoIP lines to your current home telephone wiring, especially if your home has an alarm system. Ensure that you are subscribed to VoIP service before configuring VoIP on the gateway.

1. Connect one end of the phone cable to the gray Phone Lines 1 & 2 port on the gateway.

2. Do one of the following:

    *   For one phone, connect the phone cable directly to the telephone.

    *   For two phones, connect the phone cable to a splitter and then to the telephones.
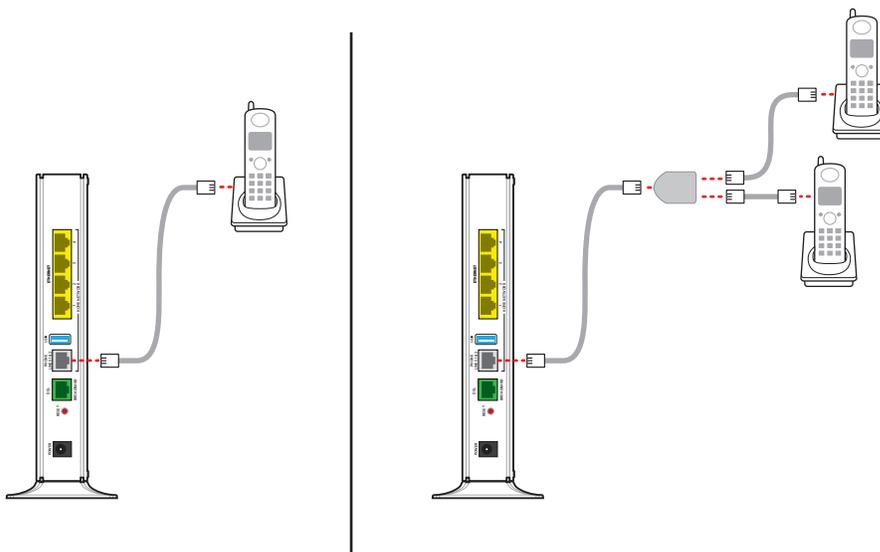
After the gateway recognizes the phones (Line 1 and Line 2), the **Phone 1** and **Phone 2** lights turn steady green and blink when the associated phone is active.

Configuring the gateway

If necessary, you can use the gateway configuration page to view or change the gateway settings.

On a computer connected to the gateway, enter the following into the address bar of a Web browser:

*   http://192.168.1.254

You can also use http://gateway.pace.net to access the gateway configuration page.

Troubleshooting 3

This chapter provides information about common gateway installation issues. If an issue has more than one potential cause, the most common cause is listed first.

Connection issues

Use the information in this section to identify and resolve issues related to connectivity.

The Power light is not on

- The power cable may be loose or disconnected. Check the power cable to ensure that the cable is securely connected. If the power cable is plugged in to a power strip or switched outlet, ensure that it is on. Ensure that you are using the power supply that came with the gateway.

- The power supply may be faulty. Verify that the light on the power supply is green.

- The AC outlet may be faulty. Try plugging the gateway in to a known good outlet.

The Power light blinks immediately after the device starts, and then turns steady green

- The Power light blinks during POST (Power on self-test). This is normal behavior.

The Power light is red

- The POST (Power on self-test) may have failed. Press the Reset button and hold it for 10 seconds to reset the gateway.

The Broadband light blinks

- The Ethernet or DSL cable may be loose or disconnected. Check the connections to ensure that the cable is securely connected.

- The DSL connection may not be established. Press the Reset button and hold it for 10 seconds to reset the gateway. If resetting the gateway does not fix the problem, contact your service provider.

The Broadband light blinks green for a long time, then turns red

- The gateway may have failed to synchronize with the service provider network. Check the connections to ensure that the cable is securely connected.

- Your Internet service may not be activated. Contact your service provider.

The Service light blinks

• Your Internet service may not be activated. Contact your service provider.

The Service light is red

• The user name and password may have been entered incorrectly. Verify the user name and password on the gateway configuration page, and try again.

• Your Internet service may not be activated. Contact your service provider.

The Ethernet light is not on

• The Ethernet cable may be loose or disconnected. Check the connections to ensure that the cable is securely connected.

The Wireless light is not on

• No devices on your home network are currently connected to the gateway over the wireless connection.

• Ensure that the wireless feature is enabled. For more information, go to the gateway configuration page at http://192.168.1.254

The Internet is not accessible but the gateway configuration page is accessible

• The Ethernet or DSL cable may be loose or disconnected. Check the connections to ensure that the cable is securely connected.

LAN issues

Use the information in this section to identify and resolve issues related to the home network.

Can't connect to the gateway through the Ethernet port

• The Ethernet cable may be loose or disconnected. Check the connections to ensure that the cable is securely connected. The **Ethernet** light blinks green when there is a working link to a device.

A wireless device cannot get an IP address

• The device may not be set up with the appropriate security type or security key. Ensure that the wireless device is using the appropriate credentials.

• The wireless device and the gateway may be using different wireless modes, such as 802.11b, 802.11g, or 802.11n. Ensure that the wireless device and the gateway are using compatible modes.

The wireless signal is weak

• The wireless device may be out of range. Ensure that the wireless device is within the range of the gateway.

I cannot set a custom encryption key on the gateway user interface

- The custom encryption key may not conform with the security mode, key length, key type, or value type. Configure the custom encryption key so that it conforms to the security mode, key length, key type, or value type.

Voice issues

Use the information in this section to identify and resolve common issues related to VoIP (Voice over Internet Protocol).

The Phone 1 and Phone 2 lights are not on

- The data cable may be loose or disconnected. Check the connections to ensure that the cable is securely connected.

- The lines or SIP server may be configured incorrectly. For more information, see the *HomePortal Intelligent Gateway User Guide.*

No dial tone

- The service may be down or not activated. Verify that the phone is in Active mode. If the issue persists, contact your service provider.

Status lights

Use the status lights on the front of the gateway to determine the current state of the gateway.

Status light	Description
Power	• *Solid green*. Power is on. • *Red*. The gateway is faulty.
Ethernet	• *Solid green*. A computer or other device is connected to an ETHERNET port. • *Flickering green*. There is activity from devices connected to an Ethernet port. The flickering of the light is synchronized to actual data traffic.
Wireless	• *Solid green*. A wireless computer or other device is connected. • *Flickering green*. There is inbound or outbound activity. The flickering of the light is synchronized to actual data traffic.
Phone 1 and 2	• *Solid green*. A phone is connected. • *Flashing green*. The associated phone is active.
USB	• *Solid green*. A device is connected to the USB port. • *Flashing green*. The USB device is active.
Broadband	• *Solid green*. The gateway is connected to the service provider network. • *Flashing green*. The gateway is attempting to establish a connection to the service provider network. • *Red*. There is no DSL signal.
Service	• *Solid green*. The gateway has obtained a WAN IP address from the service provider through the DHCP or PPP connection and the broadband connection is up. • *Fast flashing green*. The gateway is attempting to obtain an IP address. • *Slow flashing green*. The service provider network is not responding, the gateway has been configured incorrectly, or there was an authentication failure.

Regulatory Information

A

Declaration of conformity

The following sections describe regulatory compliance by region.

FCC/Industry Canada compliance

This device has been tested and certified as compliant with the regulations and guidelines set forth in the Federal Communication commission - FCC part 15, FCC part 68 and Industry Canada - ICES003 and RSS-210 Radio and telecommunication regulatory requirements.

Le présent materiel est conforme aux specifications techniques applicables d'Industrie Canada. Cet appareil numérique de la classe [*] est conforme à la norme NMB-003 du Canada.

Manufacturer: 2Wire, Inc. DBA Pace Americas
Model(s): 5111NV

Part 15 of FCC rules

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux normes CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate this equipment.

TIA 968 (Part 68 of FCC rules)/IC CS-03

This equipment complies with the Telecommunication Industry Association TIA-968 (FCC part 68) and Industry Canada CS-03 Telecommunication requirements. On the product is a label that contains, among other information, the IC and FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information may be provided to the telephone company.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the device not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0)

L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum RENs for the calling area.

This product cannot be used on telephone-company-provided coin service. Connection to Party Line Service is subject to state tariffs.

An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make

the necessary modifications to maintain uninterrupted service. If trouble is experienced with this equipment, please contact Pace Americas, or your local Pace Americas distributor or service center in the U.S.A. for repair and/or warrant information. If the trouble is causing harm to the telephone network, the telephone company may request you to remove this equipment from the network until the problem is resolved. No repairs can be done by a customer on this equipment. It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

MPE/SAR/RF exposure information

This device was verified for RF exposure and found to comply with Council Recommendation 1999/519/EC and FCC OET-65 RF exposure requirements. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

WARNING: While this device is in operation, a separation distance of at least 20 cm (8 inches) must be maintained between the radiating antenna inside the EUT and the bodies of all persons exposed to the transmitter in order to meet the FCC RF exposure guidelines. Making changes to the antenna or the device is not permitted. Doing so may result in the installed system exceeding RF exposure requirements. This device must not be co-located or operated in conjunction with any other antenna or radio transmitter.

Safety information

The following sections describe the safety guidelines for this product.

AC adapter

This product is intended to be supplied with a listed Pace Direct Plug-In AC/DC power adapter marked Class 2 or LPS and rated 12V 3A for all 5111NV-xxx models.

The AC/DC power adapter supplied with this product is designed to ensure your personal safety and to be compatible with this equipment. Use only the power adapter that was provided with the gateway.

Please follow these guidelines:

- Do not use the adapter in a high moisture environment. Never touch the adapter when your hands or feet are wet.

- Allow adequate ventilation around the adapter. Avoid locations with restricted airflow.

- Connect the adapter to a proper power source. The voltage and grounding requirements are found on the product case and/or packaging.

- Do not use the adapter if the cord becomes damaged.

- Do not attempt to service the adapter. There are no serviceable parts inside. Replace the unit if it is damaged or exposed to excess moisture.

Telecommunication cord

Caution: To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord.

Internal Telephone ports (VoIP)

Telecommunication equipment connected to this port (e.g., via "Phone Lines 1 & 2" port) should be UL Listed and the connections shall be made in accordance with Article 800 of the NEC.

Repairs

Do not, under any circumstances, attempt any service, adjustments, or repairs on this equipment. Instead, contact your local Pace Americas distributor or service provider for assistance. Failure to comply may void the product warranty.

Location - electrical considerations

CAUTION: Due to risk of electrical shock or damage, do not use this product near water, including a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool. Also, avoid using this product during electrical storms. Avoid locations near electrical appliances or other devices that cause excessive voltage fluctuations or emit electrical noise (for example, air conditioners, neon signs, high-frequency or magnetic security devices, or electric motors).

Location - environmental considerations

Do not plug the AC/DC power adapter into an outdoor outlet or operate the residential gateway outdoors. It is not waterproof or dustproof, and is for indoor use only. Any damage to the unit from exposure to rain or dust may void your warranty.

Do not use the residential gateway where there is high heat, dust, humidity, moisture, or caustic chemicals or oils. Keep the gateway away from direct sunlight and anything that radiates heat, such as a stove or a motor.