

NETGEAR®

Installation Guide

Connect with Innovation™

ProSafe 3x3 Dual Radio, Dual Band Wireless-N Access Point WNDAP660

Package Contents

Unpack the box and verify the contents:

- ProSafe 3x3 Dual Radio, Dual Band Wireless-N Access Point WNDAP660
- Straight through Category 5 Ethernet cable
- Power adapter and cord (12V, 1.5A)
- Ceiling mount kit
- Installation Guide
- *Resource CD*, which includes link to the *Reference Manual*

Set Up the Access Point

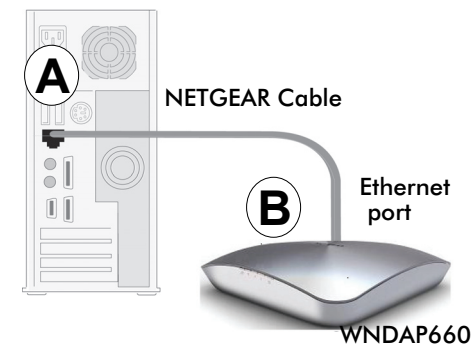
Follow these instructions to set up your wireless access point. Before proceeding with the WNDAP660 installation, familiarize yourself with the contents of the *Resource CD*. See the *Reference Manual* for instructions on advanced configuration options.

Tip: Before mounting the access point in a high location, first set up and test the unit to verify wireless network connectivity.

1. Connect the wireless access point to your computer.
 - a. Prepare a PC with an Ethernet adapter. If this PC is already part of your network, record its TCP/IP configuration settings. Configure the PC with a static IP address of 192.168.0.210 and 255.255.255.0 as the subnet mask.
 - b. Connect an Ethernet cable from the access point to the PC (point **A** in the illustration).

Note: To comply with FCC/IC RF Exposure Limits set forth for an uncontrolled environment, the product must be installed and operated with a minimum separation distance (between nearby person(s) and radiating antenna) which is 23cm minimum.

- c. Securely insert the other end of the cable into an access point Ethernet port (point **B** in the illustration).



- d. Connect the power adapter to the access point. Verify the following:

The Power LED blinks when the access point is first turned on. After a few seconds it should stay on (steady green). If after 30 seconds the Power LED is off or is still blinking, check the connections and check to see if the power outlet is controlled by a wall switch that is turned off.

The ACTIVE LED blinks when there is network traffic.

The LAN1 and LAN2 LEDs indicate LAN speed for each LAN port; green for 1000 Mbps, amber for 100Mbps, and no light for 10Mbps.

2.4 GHz (WLAN). This LED indicates 2.4 GHz traffic.

5 GHz (WLAN). This LED indicates 5 GHz traffic.

2. Configure LAN and wireless access

- a. From your PC, configure the access point Ethernet port for LAN access. Connect to the access point by opening your browser and entering **http://192.168.0.100** in the address field.



- b. A login window displays. When prompted, enter **admin** for the user name and **password** for the password, both in lower case letters.



The access point user interface displays.

- c. Select **Configuration > System > Basic > General** from the menu. Fill in the **Access Point Name** field and select your **Country/Region** of operation from the drop-down list.

- d. Select **Configuration > IP > IP Settings** from the menu and configure the IP settings for your network.
- e. If you use DHCP, reserve an IP address (based on the access point's MAC address) on the DHCP server. You can then use that address to log in to the access point.
- f. Select **Configuration > Wireless > Basic > Wireless Settings** and select the **Turn Radio On** setting.
- g. Select **Configuration > Security > Profile Settings** and configure security profiles for your network.

See the online help or the *Reference Manual* for full instructions.

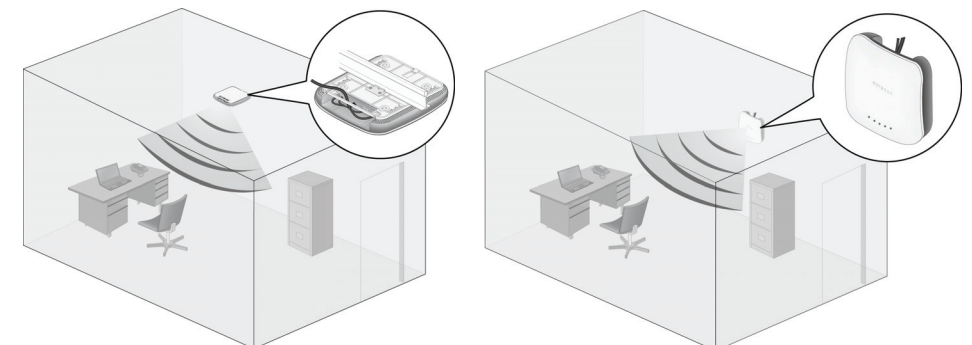
3. Test wireless connectivity.

Using a PC with a wireless adapter, verify that you can establish a wireless connection to the access point.

Now that you have finished the setup, you are ready to deploy the access point in your network. If needed, you can reconfigure the PC you used in step 1 back to its original TCP/IP settings.

Deploy the Access Point

1. Disconnect the access point and position it where you will deploy it. The best location is elevated such as wall or ceiling mounted, at the center of your wireless coverage area, and within line of sight of all mobile devices.



Ceiling Mount

Wall Mount

Note: DO NOT place the AP in a false ceiling space facing up.

2. Connect an Ethernet cable from your access point to a LAN port on your router, switch, or hub.
3. Connect the power adapter to the wireless access point and plug the power adapter into a power outlet. The Power and LAN LEDs should go on.

Tip: The access point supports Power over Ethernet (PoE). If you have a switch that provides PoE, you do not need to use the power adapter to power the access point. This can be especially convenient when the access point is installed in a high location far from a power outlet.

Verify Wireless Connectivity

Using a computer with an 802.11b/g/n wireless adapter, verify connectivity by using a browser to connect to the Internet, or check for file and printer access on your network.

Note: If you cannot connect, see *Troubleshooting Tips* in this guide or the *Reference Manual*.

If You Use an External Antenna

To use an external 2.4 GHz antenna:

1. Mount the accessory antenna(s).
2. Attach the antenna(s) to the connector(s) on the access point rear panel.
3. Log into the access point and configure it to use the external antenna. The access point cannot use the internal and external 2.4GHz antennas at the same time.

Troubleshooting Tips

No LEDs are lit on the access point.

The wireless access point has no power.

- Make sure the power cord is connected to the wireless access point and plugged in to a working power outlet or power strip.

- Make sure you are using the correct NETGEAR power adapter supplied with your wireless access point.
- If using PoE, ensure that the PoE switch is providing power to the access point.

The LINK/ACT LED is not on.

There is a hardware connection problem.

- Make sure the cable connectors are securely plugged in to the access point and to the network device (hub, switch, or router).
- Make sure the connected device is turned on. If the Ethernet link is a 10 Mbps link, then the 10/100/1000 light is off, but the Link/Act light blinks if traffic is present.

The WLAN LEDs are off.

The wireless connection is not working.

- If a Wireless LAN activity LED stays off, disconnect the power adapter from its power source and then plug it in again.
- Log in to the access point and verify that the radio is turned on.
- Contact NETGEAR if the Wireless LAN LED remains off.

I cannot configure the access point from a browser.

Check these items:

- The access point is correctly installed, it is powered on, and LAN connections are OK. Check that the LAN LED is on to verify that the Ethernet connection is OK.
- If you are using the Net BIOS name of the access point to connect, ensure that your PC and the access point are on the same network segment or that there is a WINS server on your network.
- If your PC uses a fixed (static) IP address, ensure that it is using an IP address in the range of the access point. The access point default IP address is 192.168.0.100 and the default subnet mask is 255.255.255.0. The access point default setting is for a static IP address. If the network where you are connecting it is using DHCP, configure it accordingly. See the *Reference Manual* for details.

I cannot access the Internet or the LAN with a wireless capable computer.

There is a configuration problem. Check these items:

- You might not have restarted the computer with the wireless adapter to have TCP/IP changes take effect. Restart the computer.
- The computer with the wireless adapter might not have the correct TCP/IP settings to communicate with the network. Restart the computer and check that TCP/IP is set up correctly for that network. The usual setting for Windows on the Network Properties is set to "Obtain an IP address automatically."
- The wireless access point's default values might not work with your network. Check the wireless access point default configuration against the configuration of other devices in your network.
- For full instructions on changing the default values of the wireless access point, see the *Reference Manual*.

Statement of Conditions

In the interest of improving internal design, operational function, and/or operability, NETGEAR reserves the right to make changes to the product described in this document without notice. NETGEAR does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Technical 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 <http://www.netgear.com/register>. Registration is required before you can use our telephone support service. Registration via our web site is strongly recommended.

Go to <http://kbserver.netgear.com> for product updates and Web support. For Warranty and Regional Customer Support information, see the *Resource CD* that came with your product.

For complete DoC please visit the NETGEAR EU Declarations of Conformity website at: http://kb.netgear.com/app/answers/detail/a_id/11621/



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Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. 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.

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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 23cm between the radiator & your body.

Industry Canada statement

This device complies with RSS-210 of the Industry Canada Rules. 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.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 23cm between the radiator & your body.

Declaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 23 cm de distance entre la source de rayonnement et votre corps.

DETACHABLE ANTENNA USAGE

This device has been designed to operate with a Dipole antenna having a maximum gain of 5dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. 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 necessary for successful communication.

This radio transmitter (IC: 4054A-12200203 / Model: WNDAP660) has been approved by Industry Canada to operate with the antenna type, maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this user's manual, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de Dipole antenna avec 5dBi. Une antenne à gain plus élevé est strictement interdite par les règlements d'Industrie Canada. L'impédance d'antenne requise est de 50 ohms.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio (IC: 4054A-12200203 / Model: WNDAP660) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.