

# Installation

## NETGEAR Outdoor High Power Wireless N Access Point WND930



### Package Contents

Unpack the box and verify the contents:

- Outdoor High Power Wireless N Access Point
- Wall mounting bracket
- Four bracket screws
- Two pole mount clamps
- Three weatherproof cable glands



### Set Up the Access Point

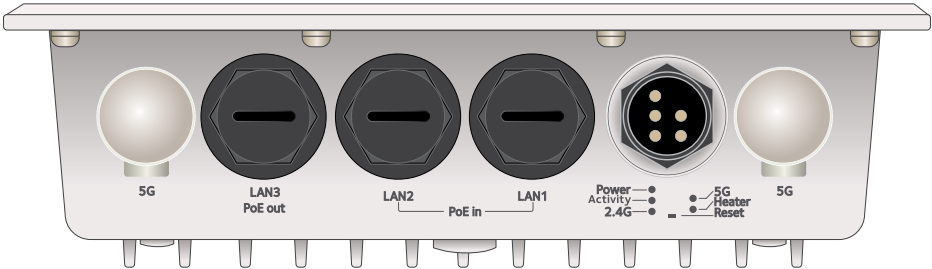
Before mounting the access point in a high location, first set up and test the unit to verify wireless network connectivity.

**Note:** The access point has a DHCP client enabled by default. If a DHCP server exists in your network, the access point obtains an IP address from the DHCP server. If a DHCP server is not detected in your network after 30 seconds, the access point sets its IP address to a static IP address of 192.168.0.100.

➤ **To cable your access point:**

1. Using an Ethernet cable, connect a power sourcing equipment (PSE) to a PoE port on the access point.

**Note:** You must supply either AT power to at least one LAN port or AF power to two LAN ports to power the access point. You must supply AT power to both LAN ports to receive PoE power out.



2. If a DHCP server is not connected to your network, configure a computer with a static IP address of 192.168.0.210 and a subnet mask of 255.255.255.0.
3. Connect an Ethernet cable from a LAN port on the access point to a LAN port on the PC.
4. Check the LEDs to verify that the access point is set up correctly.

Operation temperature : -20°C to +60°C  
Operation voltage: Input: 44-57Vdc, 0.45A (per each PoE In)  
Output: 51Vdc, 15.4W

| LED           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power LED     | <ul style="list-style-type: none"><li>•<b>Off</b>. Power is off.</li><li>•<b>Solid green</b>. Power is on.</li><li>•<b>Amber, then blinking green</b>. A self-test is running or software is being loaded. During startup, the LED is first steady amber, then goes off, and then blinks green before turning steady green after about 45 seconds. If after one minute the LED remains amber or continues to blink green, it indicates a system fault.</li></ul> |
| Activity LED  | <ul style="list-style-type: none"><li>•<b>Off</b>. There is no network traffic through the access point.</li><li>•<b>Blinking green</b>. There is network traffic through the access point.</li></ul>                                                                                                                                                                                                                                                            |
| 2.4G WLAN LED | <ul style="list-style-type: none"><li>•<b>Off</b>. The wireless interface is off.</li><li>•<b>Solid green</b>. The wireless interface is on.</li><li>•<b>Blinking green</b>. Wireless activity is detected on the 2.4G band.</li></ul>                                                                                                                                                                                                                           |
| 5G WLAN LED   | <ul style="list-style-type: none"><li>•<b>Off</b>. The wireless interface is off.</li><li>•<b>Solid green</b>. The wireless interface is on.</li><li>•<b>Blinking green</b>. Wireless activity is detected on the 5G band.</li></ul>                                                                                                                                                                                                                             |
| Heater LED    | <ul style="list-style-type: none"><li>•<b>Off</b>. Heater is off.</li><li>•<b>Solid green</b>. Heater is on.</li></ul>                                                                                                                                                                                                                                                                                                                                           |
| LAN port LEDs | <ul style="list-style-type: none"><li>•<b>Off</b>. No link is detected.</li><li>•<b>Solid green</b>. Link is detected.</li><li>•<b>Solid amber</b>. 10/100/1000 speed connection is detected.</li><li>•<b>Blinking amber</b>. 10/100/1000 speed activity is detected.</li></ul>                                                                                                                                                                                  |

➤ **To configure your access point for your network:**

1. Connect to the access point by opening your browser and entering the access point's IP address  
If a DHCP server is not installed in your network, the default IP address is **192.168.0.100**.  
A login window displays.
2. Enter **admin** for the user name and **password** for the password, both in lower case letters.  
The access point user interface displays.
3. Select **Configuration > System > Basic > General** from the menu.

4. Complete the **Access Point Name** field and select your Country/Region of operation from the drop-down list.
5. Select **Configuration > IP > IP Settings** from the menu and configure the IP settings for your network.

**Note:** 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.

6. Select **Configuration > Wireless > Basic > Wireless Settings** and configure the wireless settings for your network.
7. Select **Configuration > Security > Profile Settings** and configure security profiles for your network.

For more information about wireless settings, see the reference manual.

For more information about security profile settings, see the reference manual.

## Deploy the Access Point

The best location for your access point 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.

### ➤ To deploy your access point:

1. Disconnect your access point and position it where you will deploy it.
2. Connect an ethernet cable from your access point to a LAN port on your router, switch or hub.
3. Connect a power sourcing equipment (PSE) to one of the PoE ports on the access point.

If your router switch or hub supplies PoE, skip this step.

**Note:** You must supply either AT power to at least one LAN port or AF power to two LAN ports to power the access point. You must supply AT power to both LAN ports to receive PoE power out.

4. Using a wireless device, verify connectivity by using a browser to connect to the Internet.

## Optional External Antennas

The WND930 supports optional external antennas.

### ➤ To install optional external 2G or 5G antennas:

1. Attach the 2G or 5G antennas to the corresponding connectors on the side panels of the access point.
2. Log into the access point and configure it to use the external antennas.

## Troubleshooting Tips

This section provides some tips for correcting simple problems that you might encounter. For more troubleshooting information, see the troubleshooting chapter in the reference manual.

| Problem                                               | Cause                                  | Possible Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No LEDs are lit on the access point.                  | The access point has no power.         | <ul style="list-style-type: none"><li>• Make sure that a power source equipment (PSE) is connected via Ethernet to at least one PoE port.</li><li>• Make sure that the power source equipment (PSE) is powered on.</li></ul>                                                                                                                                                                                                                                     |
| The LAN LED is off.                                   | A hardware connection problem exists.  | <ul style="list-style-type: none"><li>• Make sure that the cable connectors are securely plugged into the access point and to the network switch. Make sure that the network switch is turned on.</li></ul>                                                                                                                                                                                                                                                      |
| The Wireless LED is off.                              | The wireless connection does not work. | <ul style="list-style-type: none"><li>• Make sure the powered device is providing sufficient power to the access point.</li><li>• Log in to the access point and verify that the radio or radios are turned on.</li><li>• Contact NETGEAR if the Wireless LED remains off.</li></ul>                                                                                                                                                                             |
| You cannot configure the access point from a browser. | Multiple possible causes.              | <ul style="list-style-type: none"><li>• Make sure that the access point is correctly installed, it is powered on, and that the LAN LED is lit.</li><li>• Make sure that your computer is using an IP address in the same range as the access point. The access point default IP address is 192.168.0.100, and the default subnet mask is 255.255.255.0.</li><li>• Quit the browser, clear the cache, delete the cookies, and launch the browser again.</li></ul> |

| Problem                                                           | Cause                           | Possible Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| You cannot access the Internet or the LAN from a wireless device. | A configuration problem exists. | <ul style="list-style-type: none"><li>• Make sure that the SSID and wireless security settings of the wireless device are the same as those of the access point.</li><li>• The wireless device might not have the correct TCP/IP settings to communicate with the network. Restart the wireless device and check that TCP/IP is set up correctly for that network.</li><li>• The access point default values might not work with your network. Check the access point default configuration against the configuration of other devices in your network. For information about changing the default values of the access point, see the reference manual.</li></ul> |

## 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>.

NETGEAR recommends that you use only the official NETGEAR support resources.

For the current EU Declaration of Conformity, visit [http://support.netgear.com/app/answers/detail/a\\_id/11621/](http://support.netgear.com/app/answers/detail/a_id/11621/).

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

See the regulatory compliance document before connecting the power supply.



### **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.

For operation within 5.15 ~ 5.25GHz / 5.47 ~5.725GHz frequency range, it is restricted to indoor environment. The band from 5600-5650MHz will be disabled by the software during the manufacturing and cannot be changed by the end user. 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 26cm between the radiator & your body.

### **Professional installation instruction**

#### **1. Installation personal**

This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

#### **2. Installation location**

The product shall be installed at a location where the radiating antenna can be kept 26 from nearby person in normal operation condition to meet regulatory RF exposure requirement.

#### **3. External antenna**

Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/IC limit and is prohibited.

#### **4. Installation procedure**

Please refer to user's manual for the detail.

#### **5. Warning**

Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

#### **1. Installation**

Ce produit est destine a un usage specifique et doit etre installe par un personnel qualifie maitrisant les radiofrequences et les regles s'y rapportant. L'installation et les reglages ne doivent pas etre modifies par l'utilisateur final.

#### **2. Emplacement d'installation**

En usage normal, afin de respecter les exigences reglementaires concernant l'exposition aux radiofrequences, ce produit doit etre installe de facon a respecter

une distance de 26 cm entre l'antenne émettrice et les personnes.

3. Antenn externe.

Utiliser uniquement les antennes approuvées par le fabricant. L'utilisation d'autres antennes peut conduire à un niveau de rayonnement essentiel ou non essentiel dépassant les niveaux limites définis par FCC/IC, ce qui est interdit.

4. Procédure d'installation

Consulter le manuel d'utilisation.

5. Avertissement

Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne dépasse pas les limites en vigueur. La violation de cette règle peut conduire à de sérieuses pénalités fédérales.

**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.

**Caution :**

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and

(iii) the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

(iv) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

**Avertissement:**

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(i) les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5 250-5 350 MHz et 5 470-5 725 MHz doit se conformer à la limite de p.i.r.e.;

(iii) le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5 725-5 825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

(iv) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

**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 26cm between the radiator & your body.

**Déclaration 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 26 cm de distance entre la source de rayonnement et votre corps.

This device has been designed to operate with an antenna having a maximum gain of [7] dB. 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-14200281 / Model: WND930) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, 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 dB [7]. 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-14200281 / Model: WND930) 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.

Approved antenna(s) list

| <b>Antenna<br/>Gain(dBi)</b> | <b>Frequency range(MHz to MHz)</b> | <b>Antenna Type</b> | <b>Connecter<br/>Type</b> |
|------------------------------|------------------------------------|---------------------|---------------------------|
| <b>5</b>                     | <b>2.4~2.4835GHz</b>               | <b>Dipole</b>       | <b>N type(M)</b>          |
| <b>5</b>                     | <b>2.4~2.4835GHz</b>               | <b>Dipole</b>       | <b>N type(M)</b>          |
| <b>7</b>                     | <b>5.150~5.850GHz</b>              | <b>Dipole</b>       | <b>N type(M)</b>          |
| <b>7</b>                     | <b>5.150~5.850GHz</b>              | <b>Dipole</b>       | <b>N type(M)</b>          |