NanoStation® AC OCO
5 GHz airMAX® ac Radio
Model: NS-5ACL
Introduction
Thank you for purchasing the Ubiquiti Networks® NanoStation® 5AC loco. This Quick Start Guide is designed to guide you through the installation and also includes warranty terms.

Package Contents

TERMS OF USE: Ubiquiti radio devices must be professionally installed. Shielded Ethernet cable and earth grounding must be used as conditions of product warranty. TOUGHCable™ is designed for outdoor installations. It is the professional installer’s responsibility to follow local country regulations, including operation within legal frequency channels, output power, and Dynamic Frequency Selection (DFS) requirements.
Installation Requirements

• Shielded Category 5 (or above) cabling with drain wire should be used for all outdoor wired Ethernet connections and should be grounded through the AC ground of the PoE. We recommend that you protect your networks from harmful outdoor environments and destructive ESD events with industrial-grade, shielded Ethernet cable from Ubiquiti Networks. For more details, visit www.ubnt.com/toughcable

• Surge protection should be used for all outdoor installations. We recommend that you use two Ethernet Surge Protectors, model ETH-SP, one near the NanoStation loco and the other at the entry point to the building. The ETH-SP will absorb power surges and safely discharge them into the ground.

*Diagram Showing Use of Ethernet Surge Protectors*
Hardware Overview

Back View

Mounting Bracket
Port View

Power LED  The Power LED will light blue when the device is connected to a power source.

Ethernet Port  10/100/1000 Ethernet port used to connect the power and should be connected to the LAN and DHCP server.

Reset Button  To reset to factory defaults, press and hold the Reset button for more than 10 seconds while the NanoStation loco is powered on.
Hardware Installation

1. Remove the port cover by pressing down on the center of the cover and sliding the cover out.

2. Connect an Ethernet cable to the **Ethernet Port**.

3. Replace the port cover.
Pole Mount

1. Position the NanoStation loco at the desired location on a pole and insert a *Zip Tie* into the slot of the *Mounting Bracket*. 
2. Align the front of the NanoStation loco toward the other end of the wireless link. Then tighten the *Zip Tie* around the pole.

3. Connect the Ethernet cable from the NanoStation loco’s *Ethernet* port to a PoE-enabled Ethernet port on a switch.

**WARNING:** The switch port must comply with the power specifications listed in the *Specifications* section of this Quick Start Guide.
Accessing airOS via Wi-Fi

Verify connectivity in the airOS® Configuration Interface. There are two methods, the UNMS™ app and Web Portal. Both are available for 15 minutes immediately after you power on the NanoStation loco. If necessary, you can power cycle the NanoStation loco to re-enable its Wi-Fi.

Proceed to the appropriate instructions:

**UNMS App**

1. Download the UNMS app from the App Store® (iOS) or Google Play™ (Android).

2. Connect your device’s Wi-Fi to the NanoStation loco SSID named: **NS-5ACL:<MAC Address>**

   **Note:** Ensure that DHCP is enabled on your Wi-Fi adapter.

3. Launch the app.

4. Tap the NanoStation loco on the **Connections** screen.
5. Tap **Connect** on the **Login** screen.

![Login screen with connect button](image)

6. Select your **Country** and tap **Done**.

![Country selection screen](image)

7. Customize your settings as needed.

![Settings screen](image)
Web Portal

1. Connect your device’s Wi-Fi to the NanoStation loco SSID named: **NS-5ACL:<MAC Address>**
   
   **Note:** Ensure that your Wi-Fi connection has DHCP enabled.

2. Launch a web browser and go to: [http://setup.ubnt.com](http://setup.ubnt.com)

3. Enter **ubnt** in the **Username** and **Password** fields. Select your **Country** and **Language**. You must agree to the **Terms of Use** to use the product. Click **Login**.

   ![NanoStation 5AC loco Login Interface](image)

   **Note:** The **Country** setting for U.S. product versions is restricted to a choice of Canada, Puerto Rico, or the U.S. to ensure compliance with FCC/IC regulations.

The airOS Configuration Interface will appear, allowing you to customize your settings as needed. For additional details on the airOS Configuration Interface, refer to the User Guide available at [www.ubnt.com/download/airmax](http://www.ubnt.com/download/airmax)
Installer Compliance Responsibility

Devices must be professionally installed and it is the professional installer’s responsibility to make sure the device is operated within local country regulatory requirements.

The *Output Power* field is provided to the professional installer to assist in meeting regulatory requirements.
## Specifications

<table>
<thead>
<tr>
<th>NS-5ACL</th>
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</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>179 x 77.5 x 59.1 mm (7.05 x 3.05 x 2.33&quot;)</td>
</tr>
<tr>
<td>Weight</td>
<td>180 g (6.35 oz)</td>
</tr>
<tr>
<td>Processor</td>
<td>MIPS 74K</td>
</tr>
<tr>
<td>Memory</td>
<td>DDR2 64 MB</td>
</tr>
<tr>
<td>Antenna Gain</td>
<td>13 dBi</td>
</tr>
<tr>
<td>Networking Interface</td>
<td>10/100/1000 Mbps Ethernet Port</td>
</tr>
<tr>
<td>Power Method</td>
<td>Passive PoE (Pairs 4, 5+; 7, 8 Return)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>24V, 0.3A Gigabit PoE Supply*</td>
</tr>
<tr>
<td>Max. Power Consumption</td>
<td>7W</td>
</tr>
<tr>
<td>Supported Voltage Range</td>
<td>24V ±10%</td>
</tr>
<tr>
<td>ESD/EMP Protection</td>
<td>±24kV Contact / Air</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40 to 70° C (-40 to 158° F)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>5 to 95% Noncondensing</td>
</tr>
<tr>
<td>Certifications</td>
<td>CE, FCC, IC</td>
</tr>
</tbody>
</table>

* Not included with the NS-5ACL.

## Operating Frequency (MHz)

<table>
<thead>
<tr>
<th></th>
<th>Worldwide</th>
<th>USA</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>U-NII-1</td>
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<tr>
<td>Worldwide</td>
<td>5150 - 5875</td>
<td>5150 - 5250</td>
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</table>

## Management Radio (MHz)

<table>
<thead>
<tr>
<th></th>
<th>Worldwide</th>
<th>USA</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2412 - 2472</td>
</tr>
</tbody>
</table>


Safety Notices

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Only use attachments/accessories specified by the manufacturer.

⚠️ **WARNING:** Do not use this product in a location that can be submerged by water.

⚠️ **WARNING:** Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated on the manufacturer’s label. Connection to a different power source than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.
2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified service technician.
Limited Warranty

UBIQUITI NETWORKS, Inc ("UBIQUITI NETWORKS") warrants that the product(s) furnished hereunder (the “Product(s)”) shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment by UBIQUITI NETWORKS under normal use and operation. UBIQUITI NETWORKS’ sole and exclusive obligation and liability under the foregoing warranty shall be for UBIQUITI NETWORKS, at its discretion, to repair or replace any Product that fails to conform to the above warranty during the above warranty period. The expense of removal and reinstallation of any Product is not included in this warranty. The warranty period of any repaired or replaced Product shall not extend beyond its original term.

Warranty Conditions

The above warranty does not apply if the Product:

(I) has been modified and/or altered, or an addition made thereto, except by Ubiquiti Networks, or Ubiquiti Networks’ authorized representatives, or as approved by Ubiquiti Networks in writing;

(II) has been painted, rebranded or physically modified in any way;

(III) has been damaged due to errors or defects in cabling;

(IV) has been subjected to misuse, abuse, negligence, abnormal physical, electromagnetic or electrical stress, including lightning strikes, or accident;

(V) has been damaged or impaired as a result of using third party firmware;

(VI) has no original Ubiquiti MAC label, or is missing any other original Ubiquiti label(s); or

(VII) has not been received by Ubiquiti within 30 days of issuance of the RMA.

In addition, the above warranty shall apply only if: the product has been properly installed and used at all times in accordance, and in all material respects, with the applicable Product documentation; all Ethernet cabling runs use CAT5 (or above), and for outdoor installations, shielded Ethernet cabling is used, and for indoor installations, indoor cabling requirements are followed.

Returns

No Products will be accepted for replacement or repair without obtaining a Return Materials Authorization (RMA) number from UBIQUITI NETWORKS during the warranty period, and the Products being received at UBIQUITI NETWORKS’ facility freight prepaid in accordance with the RMA process of UBIQUITI NETWORKS. Products returned without an RMA number will not be processed and will be returned freight collect or subject to disposal. Information on the RMA process and obtaining an RMA number can be found at: www.ubnt.com/support/warranty
Disclaimer
EXCEPT FOR ANY EXPRESS WARRANTIES PROVIDED HEREIN, UBIQUITI NETWORKS, ITS AFFILIATES, AND ITS AND THEIR THIRD PARTY DATA, SERVICE, SOFTWARE AND HARDWARE PROVIDERS HEREBY DISCLAIM AND MAKE NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, REPRESENTATIONS, GUARANTEES, OR WARRANTIES OF MERCHANTABILITY, ACCURACY, QUALITY OF SERVICE OR RESULTS, AVAILABILITY, SATISFACTORY QUALITY, LACK OF VIRUSES, QUIET ENJOYMENT, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT AND ANY WARRANTIES ARISING FROM ANY COURSE OF DEALING, USAGE OR TRADE PRACTICE IN CONNECTION WITH SUCH PRODUCTS AND SERVICES. BUYER ACKNOWLEDGES THAT NEITHER UBIQUITI NETWORKS NOR ITS THIRD PARTY PROVIDERS CONTROL BUYER’S EQUIPMENT OR THE TRANSFER OF DATA OVER COMMUNICATIONS FACILITIES, INCLUDING THE INTERNET, AND THAT THE PRODUCTS AND SERVICES MAY BE SUBJECT TO LIMITATIONS, INTERRUPTIONS, DELAYS, CANCELLATIONS AND OTHER PROBLEMS INHERENT IN THE USE OF COMMUNICATIONS FACILITIES. UBIQUITI NETWORKS, ITS AFFILIATES AND ITS AND THEIR THIRD PARTY PROVIDERS ARE NOT RESPONSIBLE FOR ANY INTERRUPTIONS, DELAYS, CANCELLATIONS, DELIVERY FAILURES, DATA LOSS, CONTENT CORRUPTION, PACKET LOSS, OR OTHER DAMAGE RESULTING FROM ANY OF THE FOREGOING. In addition, UBIQUITI NETWORKS does not warrant that the operation of the Products will be error-free or that operation will be uninterrupted. In no event shall UBIQUITI NETWORKS be responsible for damages or claims of any nature or description relating to system performance, including coverage, buyer’s selection of products (including the Products) for buyer’s application and/or failure of products (including the Products) to meet government or regulatory requirements.

Limitation of Liability
EXCEPT TO THE EXTENT PROHIBITED BY LOCAL LAW, IN NO EVENT WILL UBIQUITI OR ITS SUBSIDIARIES, AFFILIATES OR SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES (INCLUDING LOST PROFIT, LOST DATA, OR DOWNTIME COSTS), ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF THE PRODUCT, WHETHER BASED IN WARRANTY, CONTRACT, TORT OR OTHER LEGAL THEORY, AND WHETHER OR NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
Note
Some countries, states and provinces do not allow exclusions of implied warranties or conditions, so the above exclusion may not apply to you. You may have other rights that vary from country to country, state to state, or province to province. Some countries, states and provinces do not allow the exclusion or limitation of liability for incidental or consequential damages, so the above limitation may not apply to you. EXCEPT TO THE EXTENT ALLOWED BY LOCAL LAW, THESE WARRANTY TERMS DO NOT EXCLUDE, RESTRICT OR MODIFY, AND ARE IN ADDITION TO, THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE LICENSE OF ANY SOFTWARE (EMBEDDED IN THE PRODUCT) TO YOU. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to any transactions regarding the sale of the Products.

Compliance

FCC
Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This radio transmitter (FCC ID: SWX-NS5ACLW) has been approved by FCC.
ISED Canada

**CAN ICES-3(A)/NMB-3(A)**

This device complies with ISED Canada licence-exempt RSS standard(s). 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.

This radio transmitter (IC: 6545A-NS5ACLW) has been approved by ISED Canada.

**CAN ICES-3(A)/NMB-3(A)**

Le présent appareil est conforme aux CNR d'ISED 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;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Le présent émetteur radio (IC: 6545A-NS5ACLW) a été approuvé par ISDE Canada.
RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 25 cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

Les antennes utilisées pour ce transmetteur doivent être installé en considérant une distance de séparation de toute personnes d’au moins 25 cm et ne doivent pas être localisé ou utilisé en conflit avec tout autre antenne ou transmetteur.

Australia and New Zealand

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

Country List

<table>
<thead>
<tr>
<th>AT</th>
<th>BE</th>
<th>BG</th>
<th>CY</th>
<th>CZ</th>
<th>DE</th>
<th>DK</th>
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<td>RO</td>
<td>SE</td>
<td>SI</td>
<td>SK</td>
<td>UK</td>
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Note: BFWA (Broadband Fixed Wireless Access) members noted in blue

Note: This device meets Max. TX power limit per ETSI regulations.

The following apply to products that operate in the 5 GHz frequency range:

Note: This device is restricted to indoor use only when operating in the 5150 - 5350 MHz frequency range within all member states.

Note: All countries listed may operate at 30 dBm. BFWA member states may operate at 36 dBm.

Note: Operation in the 5.8 GHz frequency band is prohibited in BFWA member states. Other countries listed may use the 5.8 GHz frequency band.
RoHS/WEEE Compliance Statement

English

European Directive 2012/19/EU requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

Deutsch

Español
La Directiva 2012/19/UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya deshacerse de estos aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al deshacer y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Français
La directive européenne 2012/19/UE exige que l’équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L’élimination et le recyclage en bonne et due forme ont pour but de lutter contre l’impact néfaste potentiel de ce type de produits sur l’environnement et la santé publique. Pour plus d’informations sur le mode d’élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l’endroit où vous avez acheté le produit.

Italiano
La direttiva europea 2012/19/UE richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull’imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l’ambiente e per la salute dell’essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.
Declarations of Conformity

Hereby, UBIQUITI NETWORKS declares that the radio equipment type NS-5ACL is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.ubnt.com/compliance

Norsk [Norwegian]  UBIQUITI NETWORKS erklærer herved at utstyret NS-5ACL er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EU. Den fulle teksten til EU-samsvarserklæringen er tilgjengelig på følgende internettadresse: www.ubnt.com/compliance


Português [Portuguese]  O(a) abaixo assinado(a) UBIQUITI NETWORKS declara que o presente tipo de equipamento de rádio NS-5ACL está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: www.ubnt.com/compliance


Slovenčina [Slovak]  UBIQUITI NETWORKS týmto vyhlasuje, že rádiové zariadenie typu NS-5ACL je v súlade so smernicou 2014/53/EÚ. Úplné EU vyhlásenie o zhode je k dispozicii na tejto internetovej adrese: www.ubnt.com/compliance

Slovenščina [Slovenian]  UBIQUITI NETWORKS potrjuje, da je tip radijske opreme NS-5ACL skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: www.ubnt.com/compliance

Español [Spanish]  Por la presente, UBIQUITI NETWORKS declara que el tipo de equipo radioeléctrico NS-5ACL es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: www.ubnt.com/compliance


Online Resources

Support  help.ubnt.com
Community  community.ubnt.com
Downloads  downloads.ubnt.com