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# Quick Start **Guide**

## Smart Antenna Tool

NRB-0206-02-01

Model: NRB-0206

# Welcome

This quick start guide is designed to familiarize you with the features and use of the NetComm Wireless Smart Antenna Tool.

The Smart Antenna Tool is a battery-powered tool which connects to the alignment port on the back of a NetComm Wireless Outdoor Unit, providing power and a wireless access point. The installer can then use a portable wireless device, such as a laptop or tablet, to connect to the Outdoor Unit to read signal strength data and align it in the optimal position.

# Package contents

## The NRB-0206-02-01 package includes:

1 x NRB-0206-02-01 Smart Antenna Tool

1 x Smart Antenna Tool pouch


1 x WiFi security card


1 x Quick Start Guide

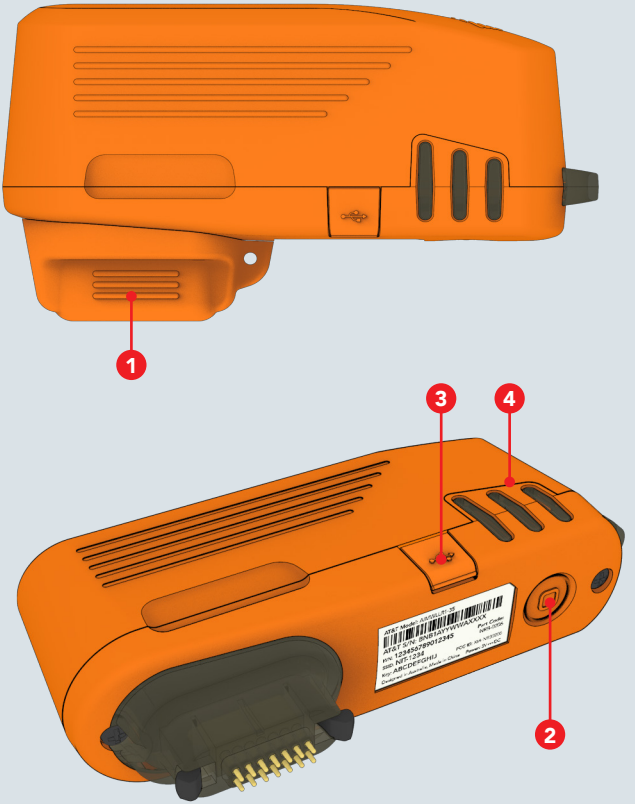
1 x Micro USB to Type-A charge cable

1 x AC wall charger (5V/2A)*

** Photo for illustration purposes only, actual charger may vary*

# Device overview

| ITEM | | DESCRIPTION |
|---|---|---|
| 1 | Connector protective cap | Protects the connector from dust and moisture when the Smart Antenna Tool is not in use. |
| 2 | Power button | Push once to power the Smart Antenna Tool on. In approximately three (3) seconds the LEDs will illuminate.<br>When turned on and not connected to the Outdoor Unit, the Smart Antenna Tool displays the remaining battery charge level. See the LED indicator section for details on the battery level indication.<br>Press and hold the Power button for four (4) seconds to turn off the Smart Antenna Tool. The LEDs will all turn off.<br>Press and hold the Power button for eight (8) seconds to reboot the Smart Antenna Tool.<br>The device will automatically power off after 15 minutes of inactivity. Also note that once turned off, the unit may not be powered on again for the next 30 seconds. |
| 3 | Micro USB port to charge the battery | The Micro USB port connects to a USB power source using the supplied USB cable to charge the internal battery. Connect the Smart Antenna Tool to a 5V/2A power source for optimum charging speed. |
| 4 | Multipurpose LED indicators | The LED indicators on the Smart Antenna Tool are multifunctional. They display:<br>1. Remaining battery level when power is on and the unit is not in any of the following three modes<br>2. Compass recalibration required (Compass Calibration mode)<br>3. RF signal strength during alignment (Cell scanning mode)<br>4. System status when the Outdoor Unit is in normal operation (Normal operation mode)<br>See the LED indicator section for more information. |

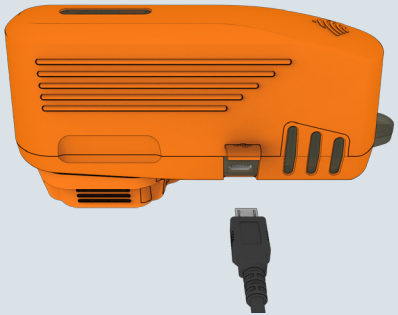

1
3
4
2

# Charging the Smart Antenna Tool

The included USB cable can be used to charge the Smart Antenna Tool. Connect the USB cable from the Micro USB port on the Smart Antenna Tool to the included AC wall charger or another 5V/2A power source for optimum charging speed. The LED indicators on the side of the Smart Antenna Tool light up and may flash depending on the remaining battery level. See the LED indicator section for details on reading the battery level.

**NOTE:** The battery cannot be charged while it is connected to an Outdoor Unit. Do not power off the Smart Antenna Tool while it is charging.

**WARNING:** Wait at least 10 seconds after powering off the Smart Antenna Tool before connecting the USB charge cable. Failure to do so will require you to remove the charge cable and reboot the tool by holding the power button down for 8 seconds.



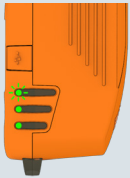
# LED Indicators

**WARNING:** The LED indicators are designed to be bright so that they are visible outdoors. Do not view the LED indicators from close proximity or for long periods.

The same LED indicators can have different meanings depending on the mode of operation which the Smart Antenna Tool is currently in.

a) **Battery check mode** – When the Smart Antenna Tool is powered on and not connected to an Outdoor Unit or the battery is charging.

95-100%



80-94%

65-79%

50-64%

35-49%

20-34%

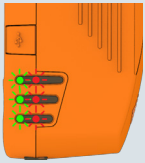
0-19%

b) **Compass Calibration mode** - The Smart Antenna Tool contains an electronic compass which periodically requires calibration in order to provide the most accurate orientation possible.

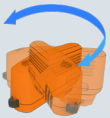
Calibrate the device at every start and recalibrate when all three LED indicators flash both red and green twice a second.

To calibrate the device, first isolate it from any magnetic field or metal structures (for example vehicles, the antenna pole, power lines, etc.) and then rotate the unit fully through all three axes, see drawings below.

When recalibration is successful, the LEDs will stop flashing.



All LEDs flashing



Turn

Spin

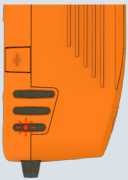
Flip

c) **Cell scanning mode** - When the Smart Antenna Tool is connected to and powering an Outdoor Unit (i.e. Power over Ethernet is not provided to the Outdoor Unit). This mode is used when installing the Outdoor Unit.

Strong signal

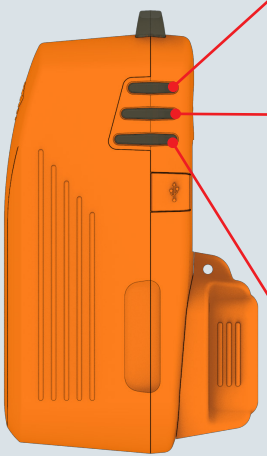
Medium signal

Low signal



No cell detected

d) **Normal operation mode** – When the Smart Antenna Tool is connected to an Outdoor Unit and Power over Ethernet is also being supplied to the Outdoor Unit. This mode is used on an existing installation.



**LED 1** indicates the **Ethernet connection** status of the Outdoor Unit.

| LED 1 | DESCRIPTION |
|---|---|
| ● | Link is up |
| ✳ | Activity on Ethernet |

**LED 2** indicates the **Cellular connection** status of the Outdoor Unit.

| LED 2 STATUS | DESCRIPTION |
|---|---|
| ● | Data APN attached |
| ✳ | Data APN attaching |
| ● + ● | LTE registered |
| ✳ + ✳ | LTE registering |
| ● | LTE not registered |

**LED 3** indicates the **Power** status of the Outdoor Unit.

| LED 3 STATUS | DESCRIPTION |
|---|---|
| ⊘ | No power |
| ● | Power on |

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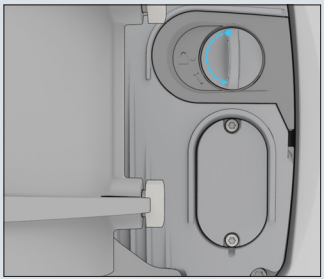
# Using the Smart Antenna Tool to align an Outdoor Unit

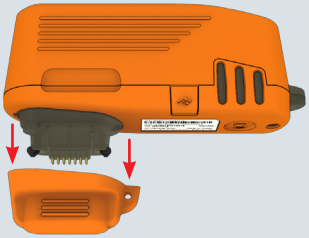
Before beginning to align an Outdoor Unit, press the Power button on the bottom of the Smart Antenna Tool and observe the battery level indicated by the LED indicators. Ensure that you have an adequate charge level for the installation.

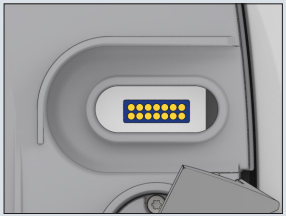
To align an Outdoor Unit:

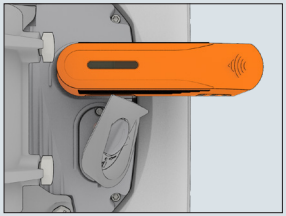
1. Prepare the Outdoor Unit as per the Installation Guide.
2. On the Outdoor Unit, locate the alignment port and remove the protective cap from it.

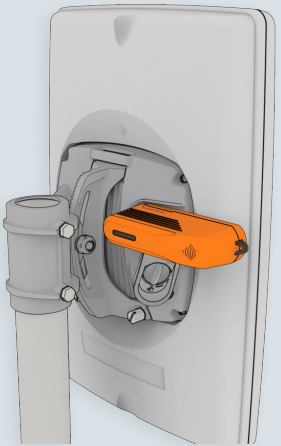


3. Power on the Smart Antenna Tool and calibrate the compass as described on page 8. Remove the protective cap from the Smart Antenna Tool's connector then connect the Smart Antenna Tool to the alignment port of the Outdoor Unit as shown below.









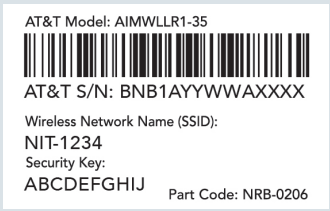
4. Wait approximately 1 minute for the Outdoor Unit to go through its boot up process.

   ***WARNING:*** *When the Smart Antenna Tool is connected to the Outdoor Unit, do not point the front panel of the Outdoor Unit directly at other people or yourself. Always maintain a separation distance of 8 inches between any part of your body and the front of the Outdoor Unit (the official FCC recommendation specifies 20cm separation). We recommend that you disconnect the PoE cable and Smart Antenna Tool if you are working in proximity to the Outdoor Unit and it is not required to be on.*

5. Using a portable wireless device such as a laptop or tablet, scan for nearby wireless networks. Connect to the network being broadcast by the Smart Antenna Tool using the Network Name and Password which are printed on the label and on the WiFi security card included in the package.
6. When the wireless connection has been established, use your wireless device to browse to the IP address of the Smart Antenna Tool (http://192.168.3.1).

   ***NOTE:*** *If the web interface does not show immediately, ensure that you have waited long enough for the antenna to have completed its boot process.*

7. To complete the installation, follow the Installation Guide that comes with your Outdoor Unit.

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# Safety & Regulatory Information

# RF Exposure

The NRB-0206-02-01 contains a transmitter and a receiver. When it is on, it receives and transmits RF energy. When you communicate with your device, the system handling your connection controls the power level at which your device transmits.

The NRB-0206-02-01 meets the government's requirements for exposure to radio waves. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

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

2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 5mm between the radiator and your body.

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# FCC Statement

## FCC compliance

Federal Communications Commission Notice (United States): Before a wireless device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure.

## FCC regulations

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 device 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 Outdoor Unit.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

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

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## Product Warranty

For warranty information please visit
**http://support.netcommwireless.com/warranty-info**

## Safety and product care

Please refer to the user guide for safety and product care information.

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