Cambium Networks™

cnPilot | e700 Outdoor

802.11ac Mu-MIMO 4x4 8dBi WLAN Omni Access Point
IP67 Industrial Grade Gigabit Wi-Fi

Quick Start Guide

cnMaestro READY

Introduction

This guide provides quick installation steps for cnPilot e700 Access Points (APs).

Package Contents

Tools Required

- Phillips screwdriver (Wall Mounting)
- Flat head screwdriver (Pole Mounting)
- 12 mm wrench (Pole Mounting)

STEP 1 (Pole Mount)

Assemble the radio holder to the pole mounting bracket and secure it with M8 nuts by applying 3.0 Nm torque.

STEP 2 (Pole Mount)

Insert hose clamps through pole mounting bracket and clamp to pole by applying 3.0 Nm torque.

STEP 3 (Pole Mount)

Align the radio chassis with the guide rails of radio holder and slide it downwards until it clicks into place.

STEP 4

Cable gland components

Gland Assembly Components

Cable gland assembly sequence

1. Pass cable through cap.
2. Put seal over the cable.
3. Insert seal into the plastic.

4. Insert seal into body.
5. Assemble cap and body.
6. Assembled cable gland.

STEP 5 (Pole Mount)

Insert RJ45 to radio housing and the lock cable gland to radio housing with 1.5Nm to 2Nm torque.
For suggested Lightning Protection Deployment, visit http://bit.iy/cnPilot_Lightning

STEP 6 (Radio alignment)

Align Radio to required angle by tilting up and down. The maximum radio tilting angle is ± 40°, with an incremental of 10°.

Wall Mounting

Drill 4 holes of Ø6mm (Ø0.25"Inch) on wall. Press fit plastic anchor and assembly fastener. Leave 5mm to 6mm gap between wall and fastener head.
Use the four mounting slots given on the back of the radio to mount to the wall.

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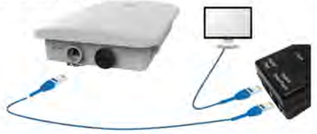
Powering Up

1. Connect the Ethernet cable from Eth1/PoE-IN of e700 to the PoE port of Gigabit Data + Power

2. Connect an Ethernet cable from your LAN or Computer to the Gigabit Data port of the PoE adapter.



3. Connect the Power Cord to the adapter, and then plug the Power Cord into a power outlet.

Once powered ON -- Power LED should illuminate continuously on PoE Adapter.

***Shielded Category 5 (or above) cabling should be used for all outdoor wired Ethernet connections and should be grounded through the AC ground of the PoE.*

Configure Management PC

1. Select Properties for the Ethernet port. In Windows it is found in Control Panel > Network and Internet > Network Connections > Local Area Connection.

2. IP Address Configuration
   Default IP address received via DHCP.
   cnPilot e700 will use a default static IP address of 192.168.0.1, If there is no DHCP server

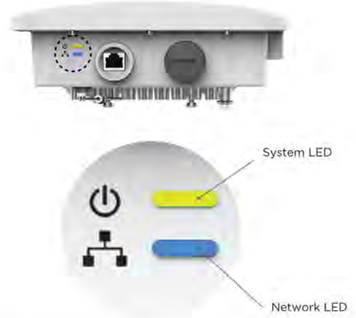
3. Default Login information
   - Username: admin
   - Password: admin

Management Protocols enabled by default -http or https (webpage management interface access), SSH (CLI management interface access).

Quick Link Setup

1. Using a web browser, navigate to 169.254.1.1 and login with username: admin and password: admin
2. Navigate to the Quick Start menu and click the 'Go To Next Page'.
3. Configure your Region and Country of operation. Click the 'Go To Next Page'.
4. Configure the Carrier Frequency. Click the 'Go To Next Page'.
5. Select the Synchronization source. Click the 'Go To Next Page'.
6. Configuration - IP Address, a Subnet Mask, and a Gateway IP Address OR DHCP state to Enabled to have the IP address, subnet mask, and gateway IP address automatically configured by a DHCP server. Click the 'Go To Next Page'.
7. Click the 'Save Changes' button. Click the 'Reboot' button.

Hardware Overview



LED Colour	Status Indication
	System LED colour is "**Amber**" -- E700 is Powering up (Initializing)
	System LED colour is "**Green**" -- E700 is fully powered
	Network LED colour is "**Amber**" -- E700 is not connected to cnMaestro
	Network LED colour is "**Blue**" -- E700 is connected to cnMaestro

Hardware Overview

Secondary Port

The Secondary port is a Gigabit Ethernet port used for bridging.

Reset

The Reset button serves two functions for e700:

- To restart, press and release the Reset button quickly.
- To restore to factory default settings, press and hold the Reset button for more than 10 seconds.

Main Port

The Main port is a Gigabit Ethernet port used to connect the powe should be connected to the LAN and DHCP server.

Specifications

Model: cnPilot e700	
Product Dimension	315 x 215 x 66mm
Weight with Mounting Kit	3.74 lbs. (1700 grams)
Networking Interface	10/100/1000 Mbps Ethernet ports (Two RJ45s)
Operating Frequency 2.4 GHz 5 GHz Bluetooth	 2412 - 2472 MHz 5180 - 5850 MHz 2402 - 2480 MHz
Antenna Gain	7.8 dBi (2.4 GHz) and 7.8 dBi (5 GHz)
Beamwidth	360º Omni directional
Max Power Consumption	24.5W, 37.5W (with Auxiliary device powered)
Max TX Power (Conducted*) 2.4 GHz 5 GHz Bluetooth	 25 dBm 28 dBm 9 dBm
Power Supply	56V/60W Gigabit passive PoE Adapter or 802.3at PSE
Wi-Fi Standards	802.11a/b/g/n/ac
Wireless Security	WPA/WPA2 Pre-shared keys, WPA2 Enterprise
Operating Modes	Wireless Client Connectivity, Mesh
Mounting	Wall/Pole (Kits included)
Supported Pole Size	38.1 to 76.2 (mm) 1.5" to 3.0" (Inch)
IP Rating	IP 67 (completely protected from dust and can also withstand being submerged in 1m of static water for up to 30 minutes)
Operating Temperature	-40°C to +65°C
Operating Humidity	5-95% Noncondensing
Certification	CE, FCC, IC

**Regulatory dependent*

Safety Notice

Warning:
To prevent loss of life or physical injury, observe the following safety guidelines. In no event shall Cambium Networks be liable for any injury or damage caused during the installation of e700 platform. Ensure that only qualified personnel install.

Only use attachments/accessories specified by the manufacturer.

Electrical Safety Information

1. Compliance with manufacturer's label for voltage, frequency, and current requirements. Connecting to a different power source than those specified may result in improper operation, damage to equipment or pose a fire hazard if the limitations are not followed.

2. There are no serviceable parts inside this equipment. Service should be provided only by a qualified service technician.

3. This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.

   a. Do not substitute the power cord with one that is not the provided approved type. Never use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.

   b. The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.

   c. Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment.

   d. Protective earthing is provided by Listed AC adapter. Building installation shall provide appropriate short-circuit backup protection.

   e. Protective bonding must be installed in accordance with local national wiring rules and regulations.

FCC Compliance

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 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.
For product available in the USA/Canada market, only channel 1-11 can be operated. Selection of other channels is not possible.

IMPORTANT NOTE:
FCC 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 24 cm between the radiator & your body.

RoHS/WEEE/CE Compliance

Caring for the Environment: RoHS/WEEE

European Directive 2002/96/EC 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.

CE Marking

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

All operational modes:
2.4GHz: 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40)
5GHz: 802.11a, 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80)

The frequency, mode and the maximum transmitted power in EU are listed below:
2412-2472MHz (802.11n HT40 MCS0): 18.48 dBm
5500-5700MHz (802.11ac VHT80 MCS0/Nss1): 28.14 dBm
5745-5825 MHz (802.11ac (VHT20)-(ChS-20MHz): 28.04 dBm

Hereby, [Cambium Networks Inc.] declares that the radio equipment type [cnPilot e700] is in compliance with Directive 2014/53/EU.

CE

IC Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subj following two conditions: (1) this device may not cause interference, and (2) this device must interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio e licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas pro brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, mê brouillage est susceptible d'en compromettre le fonctionnement.

For product available in the USA/Canada market, only channel 1-11 can be operated. Selection channels is not possible.
Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent êt Sélection d'autres canaux n'est pas possible.

IMPORTANT NOTE:
IC Radiation Exposure Statement:
This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontroll environment. This equipment should be installed and operated with minimum distance 28 cm radiator & your body.
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un en non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 28 cm de distanc source de rayonnement et votre corps.

Online Resources

User Guide and software downloads:
https://support.cambiumnetworks.com/files/e700/

Support:
http://www.cambiumnetworks.com/support/

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http://www.cambiumnetworks.com/support/contact-support/