

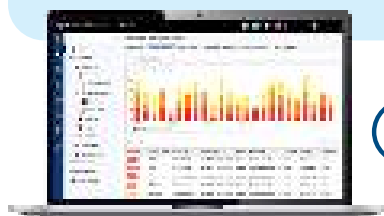
# cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

## 802.11ac Wave 2 Internal Antenna Outdoor Wi-Fi Access Points

Ideal for outdoor communities, public Wi-Fi or enterprise Wi-Fi, these omni-directional access points are tailored to low-, medium- and high- density applications. Each is designed with an integrated mounting bracket & internal antennas to make installation a snap and repeatable from one site to the next.

### QUICK LOOK:

| e505                              | e510                             | e700                       |
|-----------------------------------|----------------------------------|----------------------------|
| 802.11 a/b/g/n/ac Wave 2          |                                  |                            |
| Omni-directional antenna coverage |                                  |                            |
| IP67 rated housing, UV protection |                                  |                            |
| 5 GHz (2x2), 2.4 GHz (2x2)        |                                  | 5 GHz (4x4), 2.4 GHz (2x2) |
| -30°C to 60°C                     | -40°C to 65°C                    | -30°C to 60°C              |
| Small size hides easily           | Shock & Vibration rail certified | 15 W power out on GE2      |



### CLOUD-MANAGED ACCESS

All cnPilot access points are managed by cnMaestro from the cloud, an on-premises VM or a private datacenter. cnMaestro provides a single-pane-of-glass dashboard for Wi-Fi, Ethernet, fixed wireless broadband and service provider home routers.

- Zero-touch onboarding
- Inventory reports, mass configuration and upgrade
- Dashboard views with alarms and key performance metrics
- Remote troubleshooting tools
- Hierarchical device organization
- Cloud-managed guest portal with social login, vouchers, rate, time and throughput limits

cnMaestro Essential cloud management is included at no additional cost. There are no setup fees, license, or recurring costs. cnMaestro includes

detailed network statistics, channel utilization graphs, and integrated remote troubleshooting tools to ensure service is always on.

### FLEXIBLE DESIGN FOR OUTDOOR ENTERPRISE WI-FI

The e505 is designed for fast, discrete deployment of outdoor Wi-Fi, ideal for an aesthetically sensitive area like a hotel pool, or unobtrusive public and community Wi-Fi. The e505 has an omni coverage internal antenna with an integrated mounting bracket.

The e510 is rail shock and vibration certified, and includes extended surge and ESD protection. Additionally, an integrated LTE filter reduces impact from nearby LTE frequencies. Operating temperature spans -40°C to 65°C for a wide range of applications.

The e700 provides edge intelligent services and the 4x4 MU-MIMO antenna array to deliver those services. The dual-gigabit Ethernet ports support link aggregation (LAG) for higher throughput needs, or GE2 can be enabled to deliver 15 W of operating power for a Cambium subscriber module or any Ethernet- and PoE-powered device.

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### Access Point Specifications

|                      | e505                                                                                                           | e510                                                                               | e700                                                                                                                                                                                       |
|----------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FCC</b>           | Ch 1-11, 36-48, 149-169                                                                                        | *Ch 1-11, 36-48, 149-165                                                           | *Ch 1-11, 36-48, 149-165                                                                                                                                                                   |
| <b>ISED Canada</b>   | Ch 1-11, 36-48, 149-169                                                                                        | Ch 1-11, 36-48, 149-165                                                            | Ch 1-11, 36-48, 149-165                                                                                                                                                                    |
| <b>ETSI</b>          | Ch 1-13, 32-48, 159-169                                                                                        | Ch 1-13, 32-48, 149-165                                                            | Ch 1-13, 32-48, 149-165                                                                                                                                                                    |
| <b>ROW</b>           | Ch 1-13, 32-48, 159-169                                                                                        | Ch 1-13, 32-48, 159-169                                                            | Ch 1-13, 32-48, 159-169                                                                                                                                                                    |
| <b>Radios</b>        | 1 x 5 GHz radio (802.11 a/n/ac Wave 2), 2x2<br>1 x 2.4 GHz (802.11 b/g/n), 2x2<br>SU-MIMO / MU-MIMO: 2 streams |                                                                                    |                                                                                                                                                                                            |
| <b>Wi-Fi</b>         | 802.11 a/b/g/n/ac                                                                                              | 802.11 a/b/g/n/ac                                                                  | 802.11 a/b/g/n/ac                                                                                                                                                                          |
| <b>SSID Security</b> | WPA2 (802.11i), WPA2 Enterprise (802.1x/EAP), WPA PSK, Open                                                    |                                                                                    |                                                                                                                                                                                            |
| <b>Max PHY Rate</b>  | <b>2.4 GHz radio:</b> 300 Mbps<br><b>5 GHz radio:</b> 867 Mbps                                                 | <b>2.4 GHz radio:</b> 400 Mbps<br><b>5 GHz radio:</b> 867 Mbps                     | <b>2.4 GHz radio:</b> 400 Mbps<br><b>5 GHz radio:</b> 1733 Mbps                                                                                                                            |
| <b>Ethernet</b>      | One IEEE gigabit<br>Ethernet auto sensing                                                                      | One IEEE gigabit<br>Ethernet auto sensing                                          | One IEEE gigabit<br>Ethernet auto sensing                                                                                                                                                  |
| <b>Antenna</b>       | Internal omni-directional<br><b>2.4 GHz:</b> 5 dBi<br><b>5 GHz:</b> 5 dBi                                      | Internal omni-directional<br><b>2.4 GHz:</b> 8 dBi (2.4 GHz)<br><b>5 GHz:</b> 9 dB | Internal omni-directional<br><b>2.4 GHz:</b> 8 dBi<br><b>5 GHz:</b> 8 dBi                                                                                                                  |
| <b>Max EIRP</b>      | <b>2.4 GHz:</b> 26 dBm<br><b>5 GHz:</b> 26 dBm                                                                 | <b>2.4 GHz:</b> 32 dBm<br><b>5 GHz:</b> 34.5 dBm                                   | <b>2.4 GHz:</b> 33 dBm<br><b>5 GHz:</b> 36 dBm                                                                                                                                             |
|                      | (EIRP limited by country regulations)                                                                          |                                                                                    |                                                                                                                                                                                            |
| <b>WLAN</b>          | 100 clients, 16 SSIDs<br>WPA-TKIP, WPA2 AES, 802.1x,<br>802.11w PMF                                            | 256 clients, 16 SSIDs<br>WPA-TKIP, WPA2 AES, 802.1x,<br>802.11w PMF                | 512 clients, 16 SSIDs<br>WPA-TKIP, WPA2 AES, 802.1x,<br>802.11w PMF                                                                                                                        |
| <b>Power</b>         | 802.3af or 802.3at powered device<br>Typical load: 8 W, Max: 12 W                                              | 802.3af or 802.3at powered device<br>Typical load: 10 W, Max: 12.95 W              | 802.3at powered device<br>Or 60 W Injector for max load with power-out<br>Typical load: 18 W, Max: 25 W<br>40 W when connected to full 802.3af load on GE 2<br>Canopy power out or 802.3af |
| <b>Mounting</b>      | Integrated pole, wall mount                                                                                    | Integrated pole, wall mount                                                        | Integrated pole 38 mm and 76 mm (1.5 in and 2.99 in) , wall mount                                                                                                                          |

\* DFS Channels not supported at first release. Country regulations apply.

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

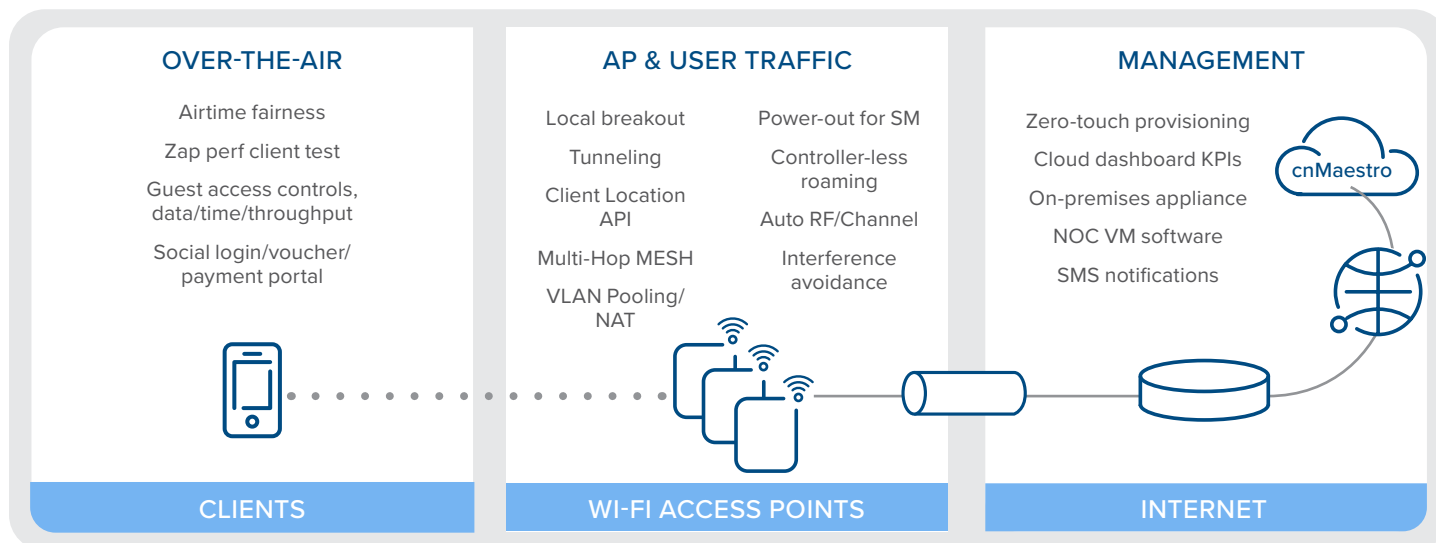
### Access Point Specifications cont'd

|                               | <b>e505</b>                                                                                         | <b>e510</b>                                                                                         | <b>e700</b>                                                                                          |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Dimensions</b>             | 227 mm x 130 mm x 70 mm<br>(8.94 in x 5.12 in x 2.76 in)                                            | 320 mm x 215 mm x 65 mm<br>(12.4 in x 8.46 in x 2.56 in)                                            | 315 mm x 215 mm x 66 mm<br>(12.4 in x 8.46 in x 2.6 in)                                              |
| <b>Weight</b>                 | 800 g (1.76 lbs)                                                                                    | 1,100 g (2.43 lbs)                                                                                  | 1,700g (3.75 lbs)                                                                                    |
| <b>LED</b>                    | Single Tri-color LED<br>(amber, blue, green)                                                        | Single Tri-color LED<br>(amber, blue, green)                                                        | Two single color status LED                                                                          |
| <b>Physical Lock</b>          | Kensington slot                                                                                     | Kensington slot                                                                                     | Kensington Key Slot                                                                                  |
| <b>Ambient op temp</b>        | -30°C to 60°C                                                                                       | -40°C to 65°C                                                                                       | -40°C to 65°C                                                                                        |
| <b>Storage temperature</b>    | -40°C to 70°C                                                                                       | -40°C to 70°C                                                                                       | -40°C to 70°C                                                                                        |
| <b>Humidity</b>               | 95% RH non-condensing                                                                               | 95% RH non-condensing                                                                               | 95% RH non-condensing                                                                                |
| <b>Wind Resistance</b>        | –                                                                                                   | 224 kph (139 mph)                                                                                   | –                                                                                                    |
| <b>LTE Band filter</b>        | –                                                                                                   | 38, 40                                                                                              | 38, 40                                                                                               |
| <b>MTBF</b>                   | –                                                                                                   | –                                                                                                   | 2.3 m hours                                                                                          |
| <b>Overvoltage Protection</b> | –                                                                                                   | –                                                                                                   | Category 1                                                                                           |
| <b>Certifications</b>         | Wi-Fi Alliance 80211a/b/g/n/ac,<br>Passpoint 2.0<br>FCC, ETSI, CE, EN 60601-1-2, IEC60950<br>UI2043 | Wi-Fi Alliance 80211a/b/g/n/ac,<br>Passpoint 2.0<br>FCC, ETSI, CE, EN 60601-1-2, IEC60950<br>UI2043 | Wi-Fi Alliance 802.11a/b/g/n/ac,<br>Passpoint 2.0<br>FCC, ETSI, CE, EN 60601-1-2, IEC60950<br>UI2043 |

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### Management

#### Adaptive cnPilot Network



Cambium Networks cnMaestro uses a distributed intelligence architecture with a cloud-first cnMaestro management and edge-intelligent AP's that self-optimize for the RF environment. cnMaestro and cnPilot AP's provide automatic RF management and seamless roaming, with a cloud-first, multi-site management for up to 10,000 devices and hundreds of thousands of connected clients. cnMaestro delivers single-pane-of-glass management for Cambium Networks broadband fixed wireless, cnMatrix Ethernet switches, enterprise-grade Wi-Fi AP's and service provider residential routers.

**Interfaces** HTTP / HTTPS web interface, SSL, Telnet  
SNMP V1, V2, V3  
Syslog, SNMP traps, NTP

**Deployment** cnMaestro Cloud, cnMaestro on-premises,  
Standalone AP

**Services** Monetized, cloud managed guest portal  
with design tools

**APIs** RESTful management and statistics API  
Presence location API  
Splunk WebSocket integration, WebSocket  
DNS, NAT, TCP connection log

**Captive Portal** Hosted on cnMaestro Controller  
On-AP hosted guest portal  
Redirect to HTTP/RADIUS external portal/  
authentication  
Active Directory integration, Google,  
Facebook, Office 365 integration  
Data rate, time duration, data throughput limit  
Server DNS logging

**Hotspot 2.0** Hotspot 2.0 / Passpoint 2.0

**Accounting** RADIUS accounting, load balancing AAA  
servers, Dynamic Authorization COA, DM

**Service Availability** Critical network resource monitor with  
automatic shutdown maintains device  
connectivity

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### Network Specifications

**Authentication Encryption** 802.1x EAP-SIM/AKA/AKA'/FAST, EAP-PEAP, EAP-TTLS, EAP-TLS/MSCHAPv2, PEAPv0/PEAPv1  
MAC authentication to local database (on AP, on Controller) or external RADIUS.  
MAC auth fallback to guest portal

**Scheduled WLAN** On/off by day, week, time of day

**QoS** 802.11e/WMM QoS. DSCP/ToS mapping

**VLAN** 802.11Q, max 4096

**Fast Roaming** 802.11r, OKC, Enhanced roaming

**Mesh** Multi-hop (3), either band

**Channel Selection** Auto RF: Manual, or automatic

**Auto TX Power** Auto RF: automatically adjust max transmit power

**Network** NAT, NAT logging firewall, DOS protection, L2/L3/DNS ACL, DHCP server, DHCP Relay option 82  
LLDP, IGMP v1, v2, v3  
VLAN Pooling, RADIUS attribute VID  
VLAN per SSID, per user  
Integrated WIDS (wireless intrusion detection)

**Band Steer Load Balance** Yes

**Tunnel** L2TP, L2oGRE, PPPoE

**Network and RF Management Tools** Out-of-band RF spectrum analysis, radio self test network assurance, RF monitor with chn/noise/interference, wired and wireless remote packet capture, auto logging, ZapD performance tool, rogue AP detection, ultralow power mode, honeypot control

### Standards

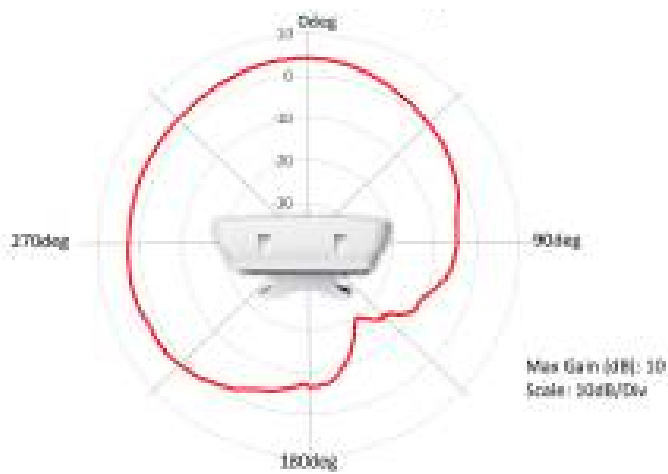
**Wi-Fi Protocols** VHT MCS rates, 256-QAM, HT20/40/80 MHz

Transmit beamsteering, Airtime Fairness, Packet Aggregation (AMSDU, AMPDU) RIFS, STBC, LDPC

MIMO Power Save, MRC

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

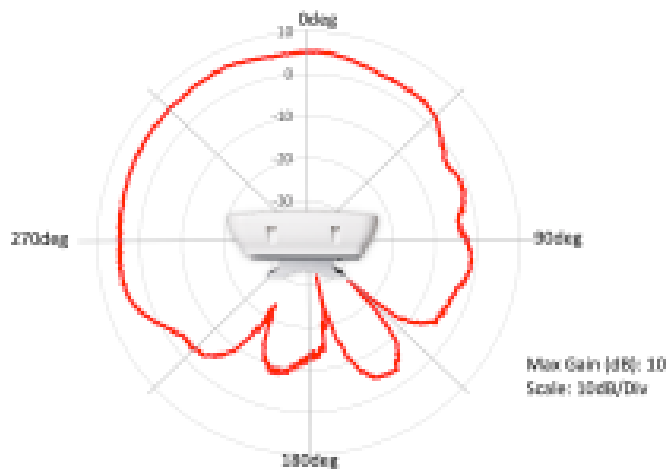
### Antenna Patterns - e505



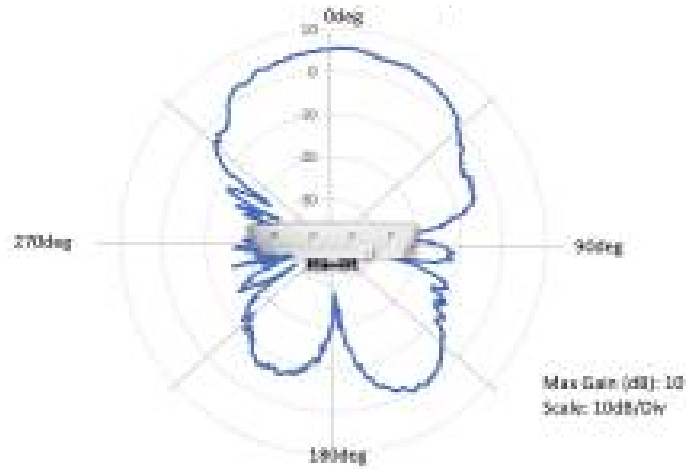
2.4 GHz Azimuth



2.4 GHz Elevation



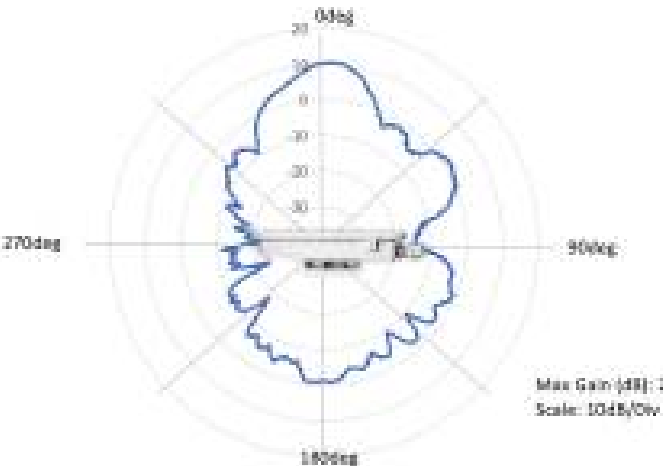
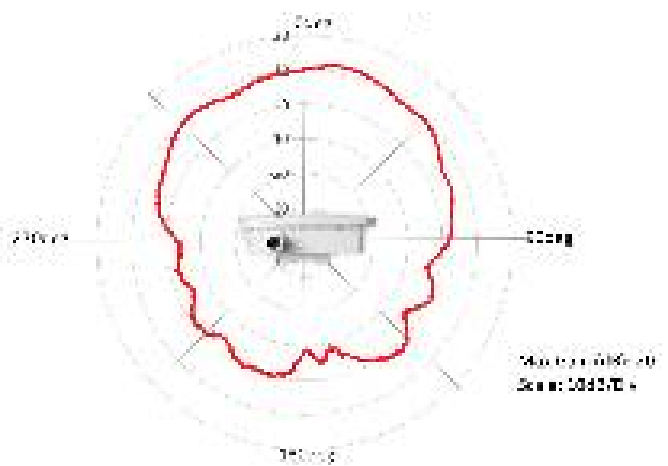
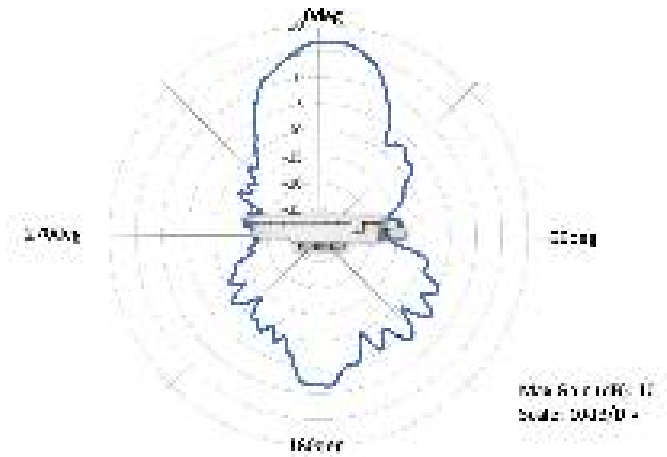
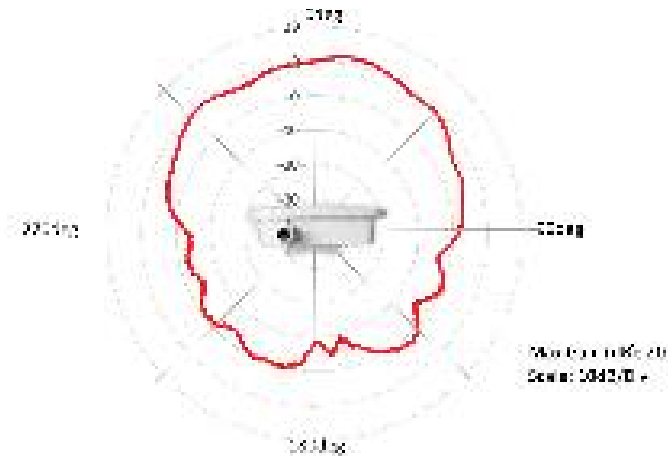
5 GHz Azimuth



5 GHz Elevation

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### Antenna Patterns - e510

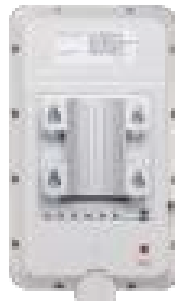


## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

**e505**



Front



Back



Side



Bottom

**e510**



Front



Back



Side

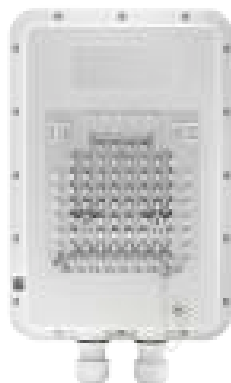


Bottom

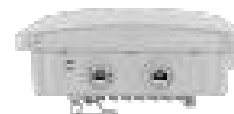
**e700**



Front



Back



Bottom



## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### e505 Ordering Information

|                       |                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------|
| <b>PL-E505X00A-US</b> | cnPilot e505 Outdoor (FCC) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55                                 |
| <b>PL-E505X00A-EU</b> | cnPilot e505 Outdoor (EU) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55                                  |
| <b>PL-E505X00A-RW</b> | cnPilot e505 Outdoor (ROW) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55                                 |
| <b>PL-E505PUSA-US</b> | cnPilot e505 Outdoor (FCC) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55, PoE Injector, Type B line cord |
| <b>PL-E505PEUA-EU</b> | cnPilot e505 Outdoor (EU) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55, PoE Injector, Type C line cord  |
| <b>PL-E505PILA-IL</b> | cnPilot e505 Outdoor (Israel) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55, PoE Injector, Type H cord   |
| <b>PL-E505PUSA-CA</b> | cnPilot e505 Outdoor (Canada) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55. PoE Injector, Type B cord   |
| <b>PL-E505PZAA-RW</b> | cnPilot e505 Outdoor (South Africa) 802.11ac Wave 2, 2x2, PoE Injector, Type M line cord             |
| <b>PL-E505PBRA-RW</b> | cnPilot e505 Outdoor (Brazil) 802.11ac Wave 2, 2x2, PoE Injector, Type N line cord                   |
| <b>PL-E505PEUA-RW</b> | cnPilot e505 Outdoor (ROW) 802.11ac Wave 2, 2x2, PoE Injector, Type C line cord                      |
| <b>PL-E505PARA-RW</b> | cnPilot e505 Outdoor (Argentina) 802.11ac Wave 2, 2x2, PoE Injector, Type I line cord                |
| <b>PL-E505PEUA-EG</b> | cnPilot e505 Outdoor (Egypt) 802.11ac Wave 2, 2x2, PoE Injector, Type C line cord                    |
| <b>PL-E410PANA-RW</b> | cnPilot e410 (ROW with AUS/NZ cord) 802.11ac Wave 2, 2x2, with PoE Injector                          |
| <b>PL-E410PBRA-RW</b> | cnPilot e410 (ROW with Brazil cord) 802.11ac Wave 2, 2x2, with PoE Injector                          |
| <b>PL-E410PARA-RW</b> | cnPilot e410 (ROW with Argentina cord) Wave 2, 2x2, 802.11ac with PoE Injector                       |
| <b>N000000L034A</b>   | Power supply, 30 W, 56 W, RJ45 – Gbps support. C5 AC port. AC line cord sold separately              |

**NOTE:** Not all SKUs are available at first release. Consult your Cambium Networks distributor for country availability.

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### e510 Ordering Information

|                       |                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------|
| <b>PL-E510X00A-US</b> | cnPilot e510 Outdoor (FCC) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP                                    |
| <b>PL-E510X00A-EU</b> | cnPilot e510 Outdoor (EU) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP                                     |
| <b>PL-E510X00A-RW</b> | cnPilot e510 Outdoor (ROW) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP                                    |
| <b>PL-E510PUSA-US</b> | cnPilot e510 Outdoor (FCC, US cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector             |
| <b>PL-E510PEUA-EU</b> | cnPilot e510 Outdoor (EU, EU cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector              |
| <b>PL-E510PXXA-RW</b> | cnPilot e510 Outdoor (ROW, No cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector             |
| <b>PL-E510PEUA-RW</b> | cnPilot e510 Outdoor (ROW, EU cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector             |
| <b>PL-E510PUKA-EU</b> | cnPilot e510 Outdoor (EU, UK cord) 802.11ac Wave 2, 2x2, AP, 8 dBi, WLAN AP, PoE Injector          |
| <b>PL-E510PUKA-RW</b> | cnPilot e510 Outdoor (ROW, UK cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector             |
| <b>PL-E510PUSA-RW</b> | cnPilot e510 Outdoor (ROW, US cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector             |
| <b>PL-E510PINA-RW</b> | cnPilot e510 Outdoor (ROW, India cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector          |
| <b>PL-E510PCNA-RW</b> | cnPilot e510 Outdoor (ROW, China cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector          |
| <b>PL-E510PANA-RW</b> | cnPilot e510 Outdoor (ROW, AUS/NZ cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector         |
| <b>PL-E510PBRA-RW</b> | cnPilot e510 Outdoor (ROW, Brazil cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector         |
| <b>PL-E510PARA-RW</b> | cnPilot e510 Outdoor (ROW, Argentina cord) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector      |
| <b>PL-E510PZAA-RW</b> | cnPilot e510 Outdoor (ROW, South Africa M type) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP, PoE Injector |
| <b>AX-E510RBKT-WW</b> | Shock Mount for e510                                                                               |

## cnPilot™ e505, e510, e700 Outdoor Wi-Fi Access Points

### e700 Ordering Information

|                       |                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------|
| <b>PL-E700X00A-US</b> | cnPilot e700 Outdoor (FCC) 802.11ac Wave 2, 2x2/4x4, AP                                    |
| <b>PL-E700X00A-EU</b> | cnPilot e700 Outdoor (EU) 802.11ac Wave 2, 2x2/4x4, AP                                     |
| <b>PL-E700X00A-RW</b> | cnPilot e700 Outdoor (ROW) 802.11ac Wave 2, 2x2/4x4, AP                                    |
| <b>PL-E700PUSA-US</b> | cnPilot e700 Outdoor (FCC, US cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector             |
| <b>PL-E700PEUA-EU</b> | cnPilot e700 Outdoor (EU, EU cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector              |
| <b>PL-E700PXXA-RW</b> | cnPilot e700 Outdoor (ROW, No cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector             |
| <b>PL-E700PEUA-RW</b> | cnPilot e700 Outdoor (ROW, EU cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector             |
| <b>PL-E700PUKA-EU</b> | cnPilot e700 Outdoor (EU, UK cord) 802.11ac Wave 2, 2x2, AP, 8 dBi, WLAN AP, PoE Injector  |
| <b>PL-E700PUKA-RW</b> | cnPilot e700 Outdoor (ROW, UK cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector             |
| <b>PL-E700PUSA-RW</b> | cnPilot e700 Outdoor (ROW, US cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector             |
| <b>PL-E700PINA-RW</b> | cnPilot e700 Outdoor (ROW, India cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector          |
| <b>PL-E700PCNA-RW</b> | cnPilot e700 Outdoor (ROW, China cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector          |
| <b>PL-E700PANA-RW</b> | cnPilot e700 Outdoor (ROW, AUS/NZ cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector         |
| <b>PL-E700PBRA-RW</b> | cnPilot e700 Outdoor (ROW, Brazil cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector         |
| <b>PL-E700PARA-RW</b> | cnPilot e700 Outdoor (ROW, Argentina cord) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector      |
| <b>PL-E700PZAA-RW</b> | cnPilot e700 Outdoor (ROW, South Africa M type) 802.11ac Wave 2, 2x2/4x4, AP, PoE Injector |

### ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.