

# cnPilot™ E500 Outdoor Omni

## Gigabit IP67 802.11ac Outdoor Access Point

Omni coverage for Enterprise campuses, Public Wi-Fi, Hospitality, Educational institutions, Industrial campuses or just about any demanding outdoor environment requiring cost-effective, controller managed WLAN Access Points



### Highlights

**Operational superiority** - Supporting 256 max concurrent client associations, 16 SSIDs, WPA-2 encryption, Dynamic VLANs, DFS channels, Access control lists (ACL), zero touch provisioning and more, the 802.11ac E500 is the essential workhorse for today's demanding high density outdoor WiFi networks

**High performance Wi-Fi network** - All cnPilot's Enterprise Access Points (APs), support features like controller-less roaming, dynamic channel selection, automatic transmit power control, band steering, and more – essential features for easy Wi-Fi operations

**Mesh** Rapidly setup multi-hop mesh networks either dedicating one radio (e.g.: 5 GHz) for mesh backhaul, or using both bands for client access at the same time



**Wireless Backhaul Integration** – the aux PoE port on the E500 offers *PoE out* eliminating the need for a second power line – perfect for powering on a standard 802.3af camera, or powering on Cambium's PMP450 or ePMP backhaul subscriber modules (SMs) for wireless backhaul enabled Wi-Fi hotspots

**Resilience** - Dual on-board Active/Standby memory banks ensure higher availability. The E500 can store two versions of the software and if needed fall back to a working operational software, reducing the likelihood of site visits and increasing network up-time.

### Designed for the outdoors

- 802.11ac, 256 users, 16 SSIDs, Omni antenna
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- UV rated IP-67 enclosure
- Operating Temp: -30°C ~ +65°C\*
- Operating humidity : 10% to 95%
- Electrical heater for cold start
- Ruggedized - ESD protection, Industrial grade components
- Packaged with wall mount brackets
- Special LTE coexistence filters
- Light weight - 881g

### cnMaestro - WiFi Controller

- Guest Access: Custom Splash pages, Vouchers, Social login  
- Zero-touch Provisioning
- Inventory tracking
- Map location
- Monitoring: key Stats, Alarms
- Mass (bulk) upgrade
- Integrated troubleshooting: WiFi APs, Clients & Cambium SMs
- Available in Cloud or as On-premises (NOC) Virtual controller

\* Under conditions when the optional PoE out feature of the E500 is not used.

## A cnPilot E500 Wi-Fi Network



- Configure, Monitor & Manage
- 802.11ac Omni coverage Mesh APs
- High client capacity

### ACCESS POINT SPECIFICATIONS

<b>FREQUENCY BANDS</b>	2.4 GHz: 2.4 – 2.4835 GHz Channels 1 – 13 (ETSI/CE), Channels 1 – 11 (US) 5 GHz: 5.15 – 5.85 GHz
<b>SSID SECURITY</b>	WPA-2 (802.11i): WPA2-Enterprise (802.1x/EAP) & WPA2-Preshared-keys, Open
<b>MAX SSIDS</b>	16
<b>MAX CONCURRENT CLIENTS</b>	256
<b>MAX RANGE</b>	<b>Client:</b> 213 m (700 Ft); Range will vary based on RF conditions & client capability. <b>Mesh:</b> 2.4 GHz: 3,000 m (9840 Ft.) 5 GHz: 1,500 m (4,900 Ft.)
<b>MAX DATA RATES</b>	1.16 Gbps
<b>ETHERNET PORTS</b>	Dual Gigabit Ethernet ports (2 x 10/100/1000Base-T)
<b>ANTENNA</b>	Dual polarized. 2x2 MIMO. Integrated Omni (360°) antenna
<b>ANTENNA GAIN</b>	5 dBi
<b>POWER SUPPLY</b>	56V/30W Gigabit passive PoE injector
<b>POE OUT</b>	Aux port: capable of 802.3af Power out or Canopy power (for supported Cambium ePMP or PMP450 SMs)
<b>TRANSMIT POWER</b>	29dBm @ 2.4GHz 28dBm @ 5 GHz
<b>POWER CONSUMED</b>	Typical: 8W Max: 12.95W (no auxiliary device connected)
<b>DIMENSIONS (CM)</b>	30 x 20.4 x 6.5 cm (without bracket)
<b>WEIGHT</b>	Without bracket: 881 g (0.88 Kg); with Bracket: 1,063 g (1.06 Kg)
<b>OPERATING TEMPERATURE</b>	-30°C ~ +60°C
<b>MOUNTING OPTIONS</b>	Pole mount bracket (included) or wall-mount (with included bracket or without)
<b>LTE CO-EXISTENCE</b>	Special filter for rejecting interference on 2.4 GHz from adjacent LTE bands 38, 40
<b>PHYSICAL SECURITY</b>	Kensington Lock bracket
<b>VISUAL STATUS</b>	Two (2) multi-color LEDs indicating Access Point & cnMaestro connectivity status

\* Under conditions when the optional PoE out feature of the E500 is not used.

WIFI FEATURES

Controller modes	<ul style="list-style-type: none"> <li>Autonomous Controller-less operations (E.g.: roaming)</li> <li>Cloud Managed</li> <li>On-premise virtualized controller</li> </ul>	ACS: Automatic Channel Selection	autoTune: Autonomous dynamic off-channel scans w/o disconnecting clients. Periodic scans and scheduled scanning
Secure WLAN	WPA-TKIP, WPA2 AES, 802.1x 802.11w (Protected Management Frames)	Automatic Tx Power control	autoRF: Autonomous controller-less transmit power control
Hotspot 2.0/Passpoint	Yes	NAT	Yes
Captive Portal	<ul style="list-style-type: none"> <li>cnMaestro Controller</li> <li>Stand-alone AP based</li> <li>Redirection to external RADIUS</li> <li>Server DNS logging</li> </ul>	DHCP Server	Yes
Authentication	<ul style="list-style-type: none"> <li>RADIUS based 802.1x including EAP-SIM/AKA, EAP-PEAP, EAP-TTLS, and EAP-TLS</li> <li>MAC authentication (local database or External RADIUS server)</li> </ul>	Firewall	Yes. NAT logging
Accounting	Yes. Supports RADIUS based accounting to multiple AAAAs	ACL, DNS-ACL	Yes. L2, L3 or DNS based access control
Scheduled SSID	Turn SSID ON/OFF on a daily/weekly/time of day basis	Band Steering	Yes
Guest Access	Yes. With Active Directory Integration	Band Balancing	Yes
VLAN	VLAN pooling, Dynamic VLAN assignment from RADIUS server. VLAN per SSID per user	Airtime Fairness	Yes
Data Limiting	Dynamic rate limiting of client traffic per SSID	Tunneling	<ul style="list-style-type: none"> <li>L2TP</li> <li>L2oGRE</li> <li>PPPoE</li> </ul>
Subscriber QoS	WMM	Tools	<ul style="list-style-type: none"> <li>Packet capture</li> <li>Sniffer</li> <li>Open source ZapD compliant performance test tool</li> <li>IP connectivity</li> <li>Wi-Fi analyzer</li> <li>Auto logging</li> </ul>
		Services	<ul style="list-style-type: none"> <li>NTP server config</li> <li>Syslog servers</li> <li>SNMP traps support</li> <li>DNS proxy</li> <li>cnPilot's dependent resource state awareness feature (ADRES) turns SSID ON/OFF based on underlying resource connectivity state</li> </ul>
		APIs	Presence Location APIs
		Certifications	FCC, ETSI, CE EN 60601-1-2 (Medical EMC)

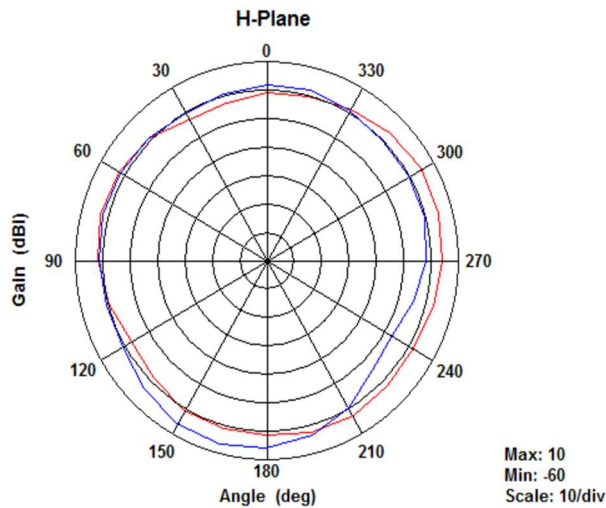
CNMAESTRO WIFI CONTROLLER

<b>COMMON FRAMEWORK</b>	Single-pane-of-glass common manager for Cambium's cnPilot WiFi, ePMP and PMP wireless backhaul products
<b>ON-BOARDING</b>	Secure zero touch fast on-boarding
<b>PROVISIONING</b>	Easy zero touch virtual network provisioning Provision before install (pre-provision)
<b>DEVICE INVENTORY</b>	Inventory tracking
<b>TROUBLE SHOOTING</b>	ezDetect: Advanced end to end troubleshooting of WiFi Access Point and Client devices on one single screen. Extends to Wireless backhaul (PTP), Wi-Fi Hotspot & Clients . Includes Packet capture and Wireless Analyzer functions
<b>INTUITIVE VIEWS</b>	Map location Hierarchical Dashboard views
<b>CLIENT INSIGHT</b>	Client history with client manufacturer view
<b>MONITORING &amp; ALARMS</b>	Alarms and events management – Critical/Major/Minor Key statistics graphs and <i>sticky</i> alarm summary display
<b>CONFIGURATION</b>	GUI based configuration or template based configuration options
<b>SOFTWARE UPGRADE</b>	Bulk upgrade with ability to upgrade multiple WiFi APs
<b>MULTIPLE ADMINS</b>	Multiple admin provisioning per account

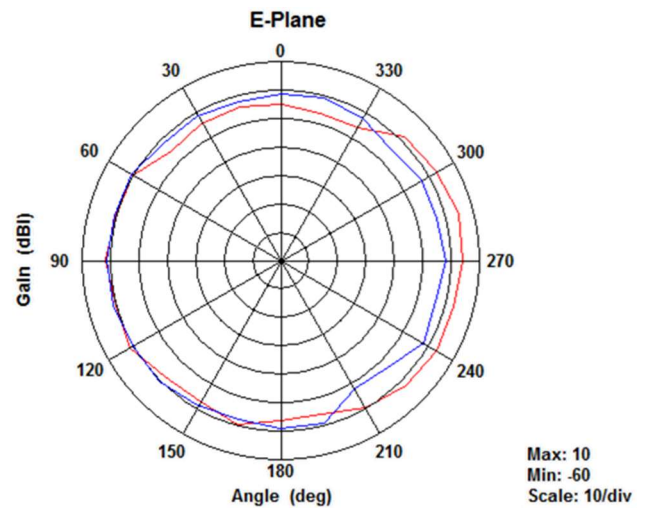
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## 2D Gain Patterns

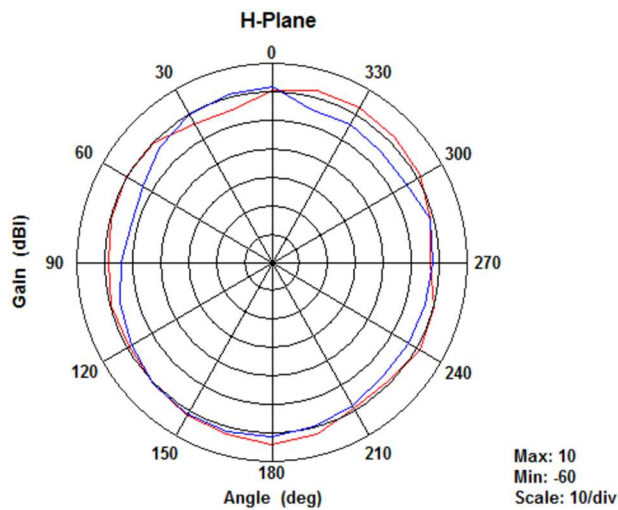
2.4 GHz Azimuth (Horizontal) Gain Pattern



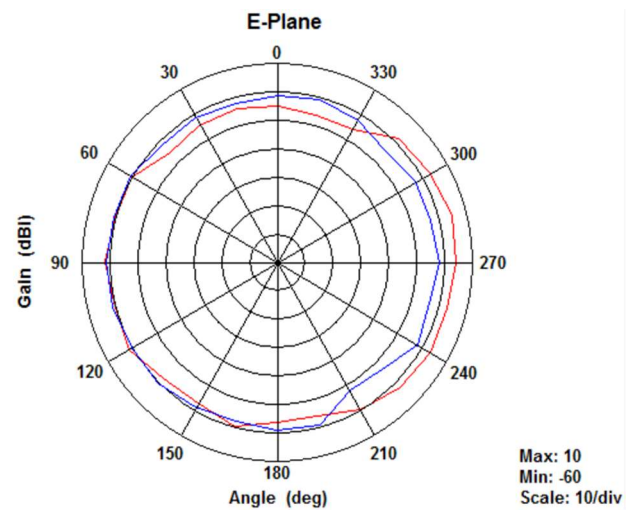
2.4 GHz Elevation (Vertical) Gain pattern


 Notation 2.4 GHz: **Red:** Antenna 1 , **Blue** Antenna 2

5 GHz Azimuth (Horizontal) Gain Pattern



5 GHz Elevation (Vertical) Gain pattern


 Notation: **Red:** Antenna 3, **Blue** Antenna 4

### E500 Ordering Information: cnPilot Outdoor E500

**Regulatory Model Number** (common to all SKUs): C000100P500A

Sales part #	Region
PL-E500XXXA- <US/EU/ROW>	E500 for US, EU or RoW with PoE injector. XXX = US, EU and various other country cords supported models XX examples: IN (India), UK (The United Kingdom), AN (Australia & NZ), CN (China), BR (Brazil) etc.
PL-E500NPSA-RW	E500 without a PoE injector. Available in RoW model

 Discover more information on cnPilot at: <http://community.cambiumnetworks.com/>