

# Twoja Infrastruktura IT

## netf.pl

NETF, specjalizujemy się w sprzedaży zaawansowanej infrastruktury IT. Znajdą tu Państwo szeroki asortyment produktów od czołowych światowych producentów sprzętu i oprogramowania IT, w tym H3C, Huawei, Cisco, Juniper, Fortinet, a także Dell, IBM, CommVault i ESET. Dzięki współpracy z tymi renomowanymi partnerami, NETF zapewnia swoim klientom dostęp do najnowocześniejszych rozwiązań technologicznych.

---

**Bezpieczeństwo,  
Efektywność,  
Optymalizacja**



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

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

## QUICK LOOK:

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.

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



### 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 Access Points

### Access Point Specifications

	<b>e505</b>	<b>e510</b>	<b>e700</b>
<b>US-FCC</b>	Ch 1–11, 36–64, 100–140, 149–165	Ch 1–11, 36–64, 100–140, 149–165	Ch 1–11, 36–64, 100–140, 149–165
<b>ISED Canada</b>	Ch 1–11, 36–64, 100–116, 149–165	Ch 1–11, 36–64, 100–116, 149–165	Ch 1–11, 36–64, 100–116, 149–165
<b>EU-ETSI</b>	Ch 1–13, 36–64, 100–140	Ch 1–13, 36–64, 100–140	Ch 1–13, 36–64, 100–140
<b>ROW</b>	Ch 1–13, 36–64, 100–144, 149–173 <i>individual country limits apply</i>	Ch 1–13, 36–64, 100–144, 149–173 <i>individual country limits apply</i>	Ch 1–13, 36–64, 100–144, 149–173 <i>individual country limits apply</i>
<b>Radios</b>	1 x 5 GHz radio (802.11 a/n/ac Wave 2), 2x2 1 x 2.4 GHz (802.11 b/g/n), 2x2 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 <b>5 GHz radio:</b> 867 Mbps	<b>2.4 GHz radio:</b> 400 Mbps <b>5 GHz radio:</b> 867 Mbps	<b>2.4 GHz radio:</b> 400 Mbps <b>5 GHz radio:</b> 1733 Mbps
<b>Ethernet</b>	1 IEEE Gigabit, auto sensing	1 IEEE Gigabit, auto sensing	2 IEEE Gigabit, auto sensing 1 port with Cambium 30V or 48V PoE Out
<b>Antenna</b>	Internal omni-directional <b>2.4 GHz:</b> 5 dBi <b>5 GHz:</b> 5 dBi	Internal omni-directional <b>2.4 GHz:</b> 8 dBi <b>5 GHz:</b> 9 dB	Internal omni-directional <b>2.4 GHz:</b> 8 dBi <b>5 GHz:</b> 8 dBi
<b>Max EIRP</b>	<b>2.4 GHz:</b> 26 dBm <b>5 GHz:</b> 26 dBm	<b>2.4 GHz:</b> 32 dBm <b>5 GHz:</b> 34.5 dBm	<b>2.4 GHz:</b> 33 dBm <b>5 GHz:</b> 36 dBm
	(EIRP limited by country regulations)		
<b>WLAN</b>	100 clients per radio, 32 SSIDs (16 per radio) WPA-TKIP, WPA2 AES, 802.1x, 802.11w PMF	256 clients per radio, 32 SSIDs (16 per radio) WPA-TKIP, WPA2 AES, 802.1x, 802.11w PMF	512 clients per radio, 32 SSIDs (16 per radio) WPA-TKIP, WPA2 AES, 802.1x, 802.11w PMF
<b>Power</b>	802.3af or 802.3at powered device Typical load: 8W, Max: 12W	802.3af or 802.3at powered device Typical load: 10W, Max: 12.95W	802.3at powered device Or 60 W Injector for max load with power-out Typical load: 18W, Max: 25W 40W when connected to full 802.3af load on GE 2 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

## cnPilot e505, e510, e700 Outdoor Access Points

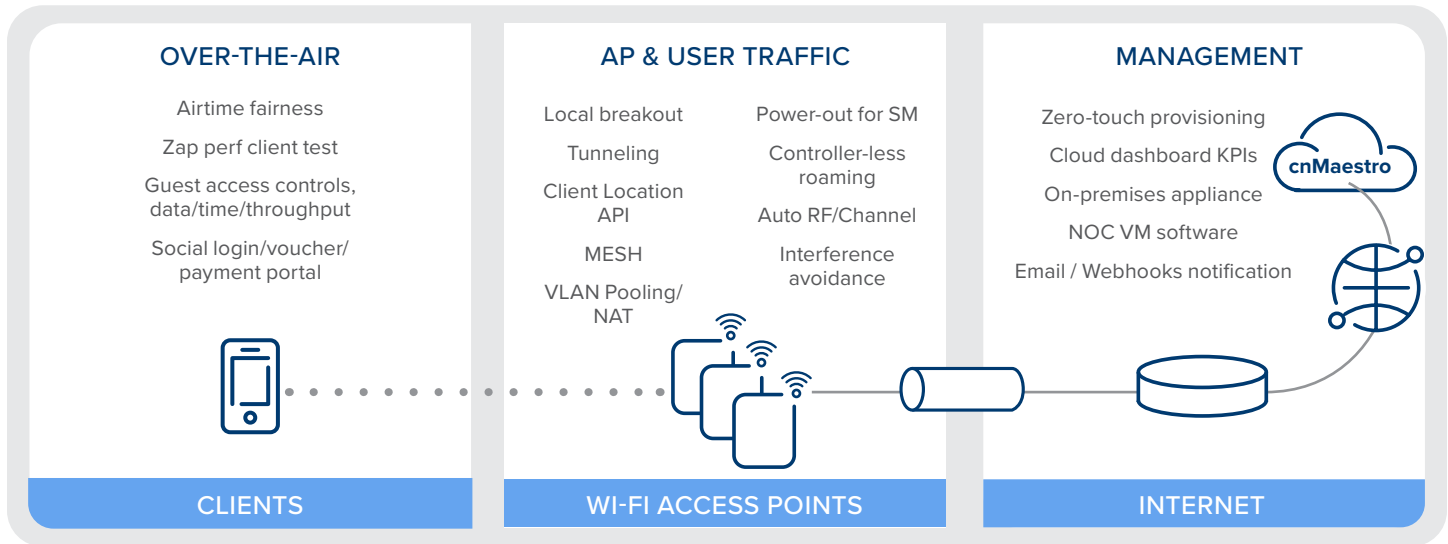
### Access Point Specifications cont'd

	<b>e505</b>	<b>e510</b>	<b>e700</b>
<b>Dimensions</b>	227 mm x 130 mm x 70 mm (8.94 in x 5.12 in x 2.76 in)	290 mm x 208 mm x 78 mm (11.32 in x 8.19 in x 3.07 in)	315 mm x 215 mm x 66 mm (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 (amber, blue, green)	Single Tri-color LED (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>	116k hours	420k hours	700k hours
<b>Overvoltage Protection</b>	–	–	Category 1
<b>Certifications</b>	802.11u, Hotspot 2.0 FCC, ETSI, CE, EN 60601-1-2, IEC60950 UL2043	Wi-Fi Alliance 80211a/b/g/n/ac, Passpoint 2.0 FCC, ETSI, CE, EN 60601-1-2, IEC60950 UL2043	Wi-Fi Alliance 802.11a/b/g/n/ac, Passpoint 2.0 FCC, ETSI, CE, EN 60601-1-2, IEC60950 UL2043

## cnPilot e505, e510, e700 Outdoor 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, SSH, Telnet  
SNMP V1, V2, V3  
Syslog, SNMP traps, NTP

**Deployment** Monetized guest portal with design tools

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

**Captive Portal** **Portal features hosted on cnMaestro:**  
Design templates, customization tools  
supports 3rd party external portal  
RADIUS/LDAP/Click Through authentication  
Active Directory, Google, Facebook, Office 365, OAuth 2.0  
Data Rate/Throughput limits, Time duration

**Portal features hosted on the AP:**  
supports 3rd party external portal  
RADIUS/LDAP/Click Through authentication  
Data Rate/Throughput limits, Time duration

**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 SSID shutdown

## cnPilot e505, e510, e700 Outdoor 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

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

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

**VLAN** 802.11Q, max 4096

**Fast Roaming** 802.11r, OKC, cnMaestro assisted roam

**Sticky Client** Enhanced roaming with thresholds

**Mesh** Multi-hop (2), either band

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

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

**Band Steer Load Balance** Yes

**Tunnel** L2TPv2, L2GRE, PPPoE

**Network and RF Management Tools** Out-of-band RF spectrum analysis, radio self test network assurance, RF monitor with channel/noise/interference, wired and wireless remote packet capture, ZapD performance tool, rogue, AP detection

### Standards

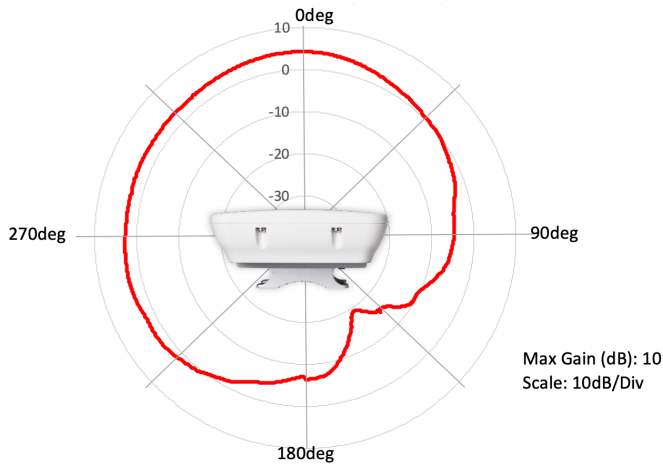
**Wi-Fi Protocols** VHT MCS rates, 256-QAM, HT20/40/80 MHz

Transmit beamsteering, Airtime Fairness, Packet Aggregation (AMSDU, AMPDU) RIFS, STBC, LDPC, 802.11k, 802.11v, 802.11i

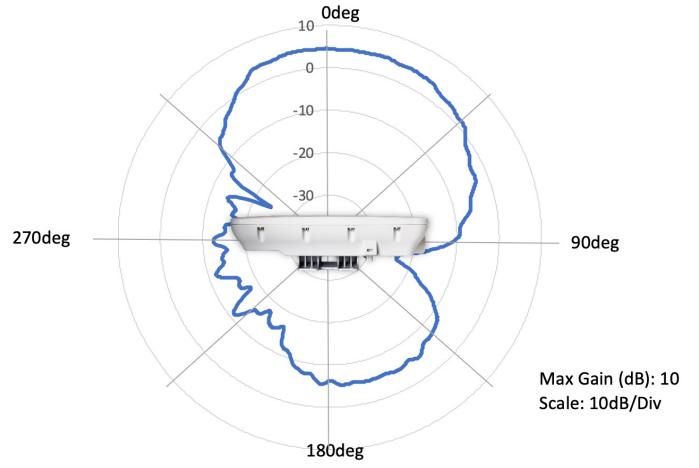
MIMO Power Save, MRC, BPSK, QPSK, CCK, DSSS, OFDM. IEEE 802.11d/e/h/i/k/r/u/v

cnPilot e505, e510, e700 Outdoor Access Points

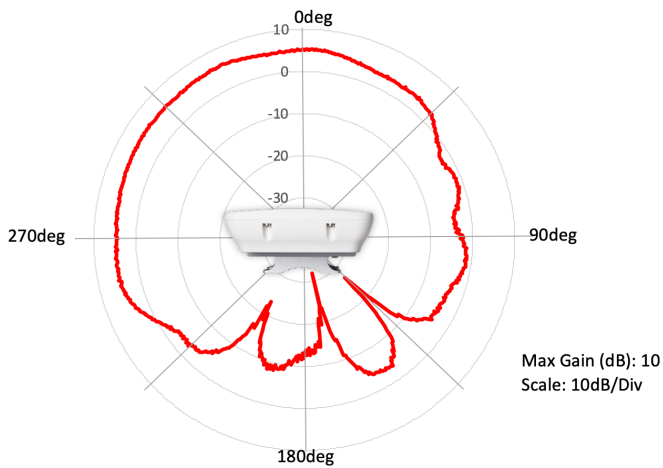
Antenna Patterns - e505



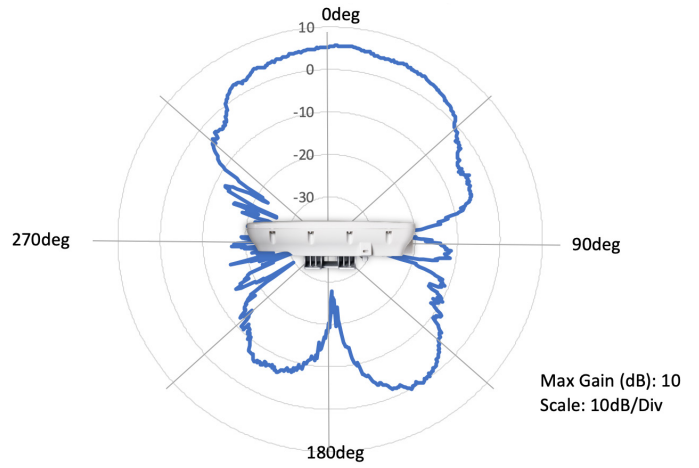
2.4 GHz Azimuth



2.4 GHz Elevation



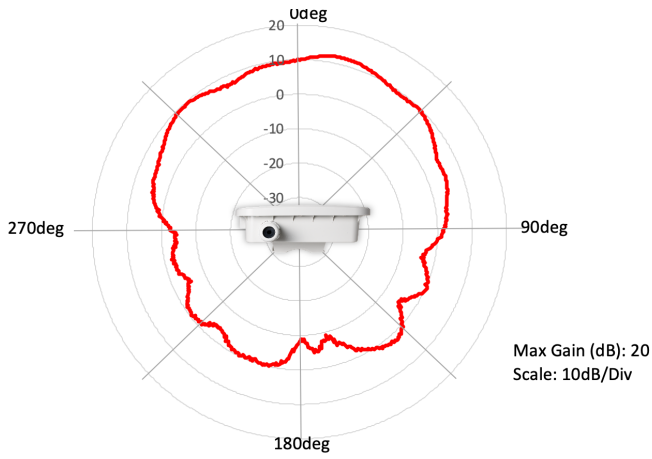
5 GHz Azimuth



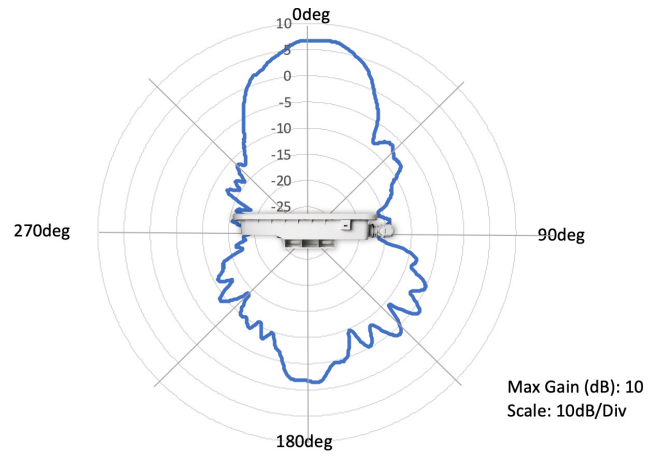
5 GHz Elevation

### cnPilot e505, e510, e700 Outdoor Access Points

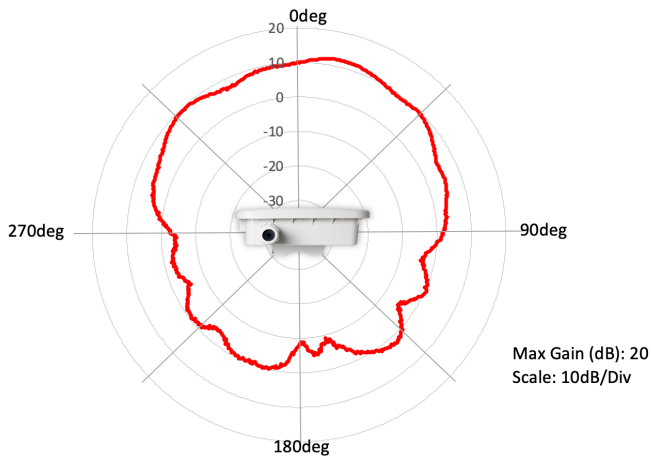
#### Antenna Patterns - e510



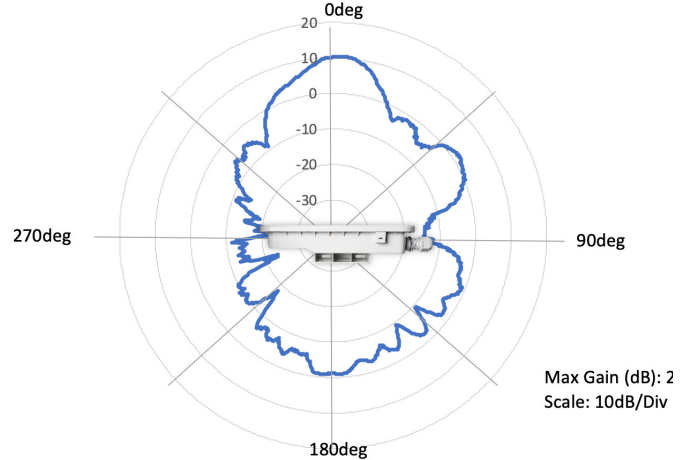
2.4 GHz Azimuth



2.4 GHz Elevation



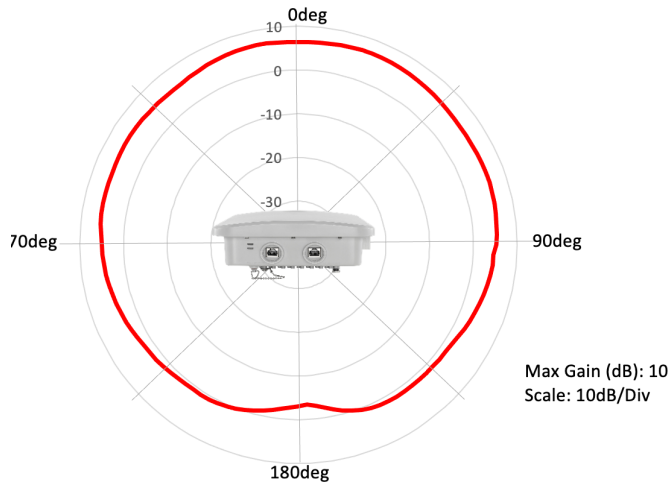
5 GHz Azimuth



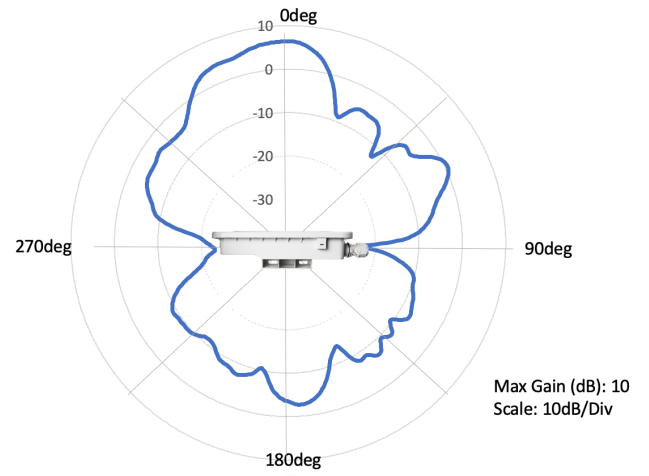
5 GHz Elevation

## cnPilot e505, e510, e700 Outdoor Access Points

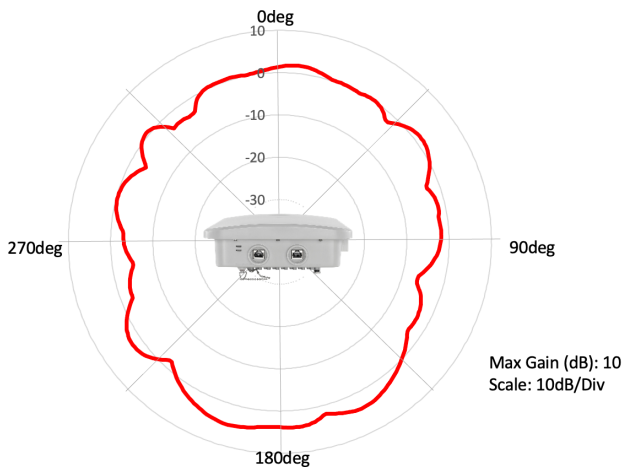
### Antenna Patterns - e700



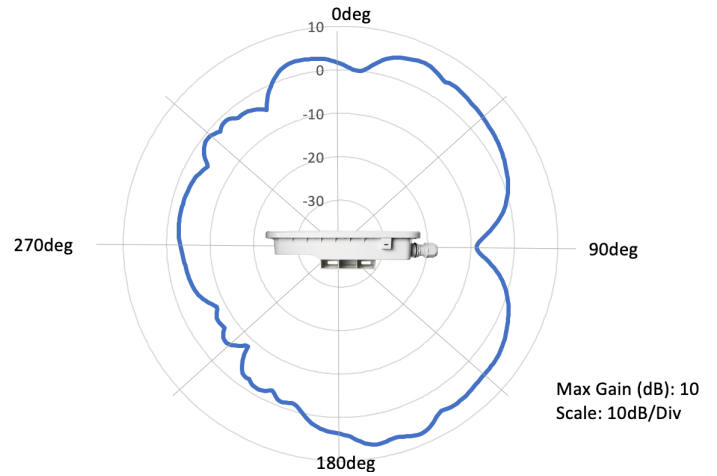
2.4 GHz Azimuth



2.4 GHz Elevation



5 GHz Azimuth



5 GHz Elevation

### cnPilot e505, e510, e700 Outdoor Access Points

**e505**



Front



Back



Side



Bottom

**e510**



Front



Back



Side

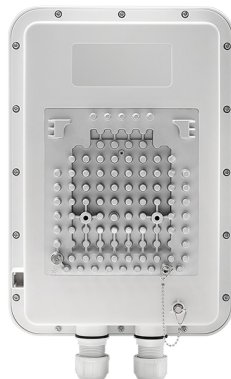


Bottom

**e700**



Front



Back



Bottom

## cnPilot e505, e510, e700 Outdoor Access Points

### e505 Ordering Information

<b>PL-E505X00A-US</b>	e505 Outdoor (FCC) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55
<b>PL-E505X00A-EU</b>	e505 Outdoor (EU) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55
<b>PL-E505X00A-RW</b>	e505 Outdoor (ROW) 802.11ac Wave 2, 2x2, 5 dBi Omni AP, IP55
<b>N000000L034A</b>	Power supply, 30W, 56W, RJ45 – Gbps support. C5 AC port. AC line cord sold separately

### e510 Ordering Information

<b>PL-E510X00A-US</b>	e510 Outdoor (FCC) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP
<b>PL-E510X00A-EU</b>	e510 Outdoor (EU) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP
<b>PL-E510X00A-RW</b>	e510 Outdoor (ROW) 802.11ac Wave 2, 2x2, 8 dBi, WLAN AP
<b>AX-E510RBKT-WW</b>	Shock mount bracket for e510

### e700 Ordering Information

<b>PL-E700X00A-US</b>	e700 Outdoor (FCC) 802.11ac Wave 2, 2x2/4x4, AP
<b>PL-E700X00A-EU</b>	e700 Outdoor (EU) 802.11ac Wave 2, 2x2/4x4, AP
<b>PL-E700X00A-RW</b>	e700 Outdoor (ROW) 802.11ac Wave 2, 2x2/4x4, AP

### cnMaestro X Ordering Information

<b>MSX-SUB-T3-1</b>	cnMaestro X for Enterprise: Advanced management and includes Cambium Care Pro Support; 1-year term
<b>MSX-SUB-T3-3</b>	cnMaestro X for Enterprise: Advanced management and includes Cambium Care Pro Support; 3-year term
<b>MSX-SUB-T3-5</b>	cnMaestro X for Enterprise: Advanced management and includes Cambium Care Pro Support; 5-year term
<b>MSX-SUB-T3-M</b>	cnMaestro X for Enterprise: Advanced management and includes Cambium Care Pro Support; 1-month term

## cnPilot™ e505, e510, e700 Outdoor Access Points

### Cambium Care Ordering Information

<b>CCADV-SUP-XV3-8-1</b>	Cambium Care Advanced, 1-year support for one cnPilot e505, e510 or e700 AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
<b>CCADV-SUP-XV3-8-3</b>	Cambium Care Advanced, 3-year support for one cnPilot e505, e510 or e700 AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
<b>CCADV-SUP-XV3-8-5</b>	Cambium Care Advanced, 5-year support for one cnPilot e505, e510 or e700 AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
<b>CCPRO-SUP-XV3-8-1</b>	Cambium Care Pro, 1-year support for one cnPilot e505, e510 or e700 AP. 24x7 TAC support and SW updates
<b>CCPRO-SUP-XV3-8-3</b>	Cambium Care Pro, 3-year support for one cnPilot e505, e510 or e700 AP. 24x7 TAC support and SW updates
<b>CCPRO-SUP-XV3-8-5</b>	Cambium Care Pro, 5-year support for one cnPilot e505, e510 or e700 AP. 24x7 TAC support and SW updates

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

### LIMITED WARRANTY

Cambium Networks cnPilot e505, e510, e700 are covered by an extended hardware warranty for a period of 3 years after point of sale.

#### ABOUT CAMBIUM NETWORKS

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences, and device connectivity, with compelling economics. Our ONE Network platform simplifies management of Cambium Networks wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

[cambiumnetworks.com](http://cambiumnetworks.com)