

# cnPilot e501S

## Outdoor Sector Wi-Fi Access Point

IP67 802.11ac 90°~120° Integrated Sector Antenna



Perfect for demanding, high density applications and longer range coverage across large areas, including: industrial or education campuses, enterprise and hospitality complexes, public parks and recreational areas, or just about any demanding outdoor environment requiring cost-effective, controller managed WLAN access points.

### THE CNPILOT WI-FI NETWORK HIGHLIGHTS

**Operational superiority** – The e501S with integrated sector antenna supports 256 client associations, 16 SSIDs, WPA-2 encryption, Dynamic VLANs, DFS channels, Access Control Lists (ACL), and more. The 802.11ac e501S is the essential workhorse for today's demanding, high density outdoor Wi-Fi 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 simultaneously.


**Wireless Backhaul Integration** – the aux PoE port on the e501S offers PoE out, eliminating the need for a second power line perfect for powering on a standard 802.3af camera, or on Cambium's PMP 450 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 e501S can store two versions of the software – defaulting to a working operational software if needed – reducing the likelihood of site visits and increasing network up-time. Standard 3 year Warranty included, for peace of mind

### DESIGNED FOR THE OUTDOORS

- 802.11ac, 256 users, 16 SSIDs
- 90°~120° coverage
- 23 dBm front-back ratio
- UV rated IP-67 enclosure
- Operating Temp: -30C ~ +60C
- Electrical heater for cold start
- Ruggedized - ESD protection, industrial-grade components
- Packaged with wall & pole mount bracket
- Special LTE coexistence filters
- Light weight ~ 1.3 Kg

### cnMAESTRO™ – WI-FI 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: Wi-Fi APs, clients & Cambium SMS
- Controller: Cloud or Virtual On-premises (NOC) controller

## Access Point Specifications

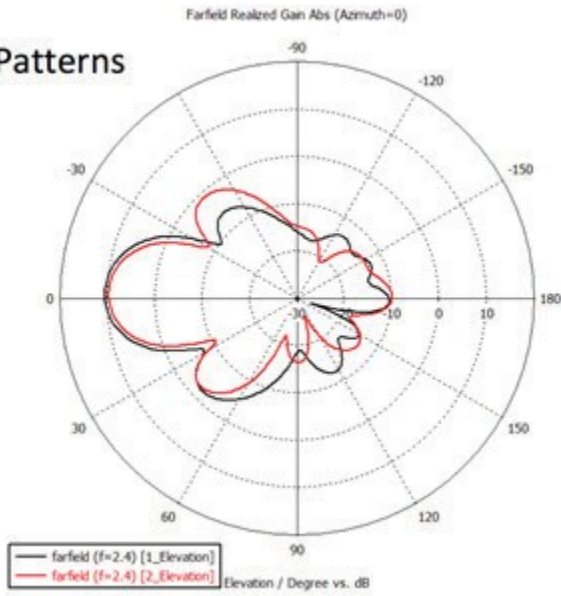
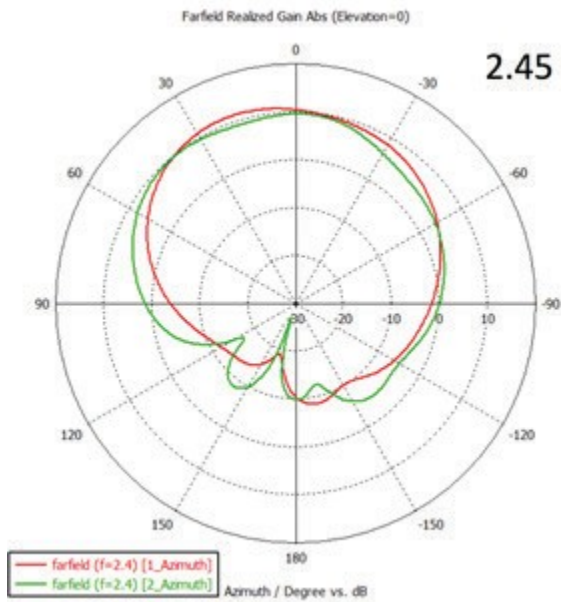
<b>Standards</b>	IEEE 802.11a/b/g/n/ac IEEE 802.11d/e/h/i/k/r/u/v/w Modulation: BPSK, QPSK, CCK, 16/64/256-QAM Radio modes : DSSS, OFDM	<b>Frequency Bands</b>	2.400 to 2.2484 GHz <i>(Country-specific limits apply, some bands require DFS)</i> 5.150 to 5.250 GHz 5.250 to 5.350 GHz 5.470 to 5.725 GHz 5.725 to 5.850 GHz
<b>MIMO, Streams</b>	2x2:2 MIMO	<b>Power Supply</b>	802.3af PoE Injector, or PoE switch. 802.3at or PoE+ if using PoE-Out Aux port.
<b>Channel Width</b>	20MHz, 40MHz, 80MHz	<b>Dimensions</b>	30 x 20.4 x 6.5 cm (11.8 x 8 x 2.55 Inch)
<b>Concurrent Clients</b>	256	<b>Weight</b>	1.3 Kg (2.8 lb)
<b>SSIDs</b>	16	<b>Operating Temperature</b>	-30°C to +60°C (-22°F to +140°F)
<b>Antenna</b>	Dual polarized, Omnidirectional, Integrated	<b>Operating Humidity</b>	up to 95% non-condensing
<b>Transmit Power</b> <i>(conducted total)</i>	2.4GHz : 29dBm    5GHz : 28dBm	<b>Power Consumed</b>	13W (max, without PoE-out) 8W (typical)
<b>Antenna Gain</b>	2.4GHz : 10.5dBi    5GHz : 13dBi	<b>Secure Mounting</b>	Kensington Key Slot
<b>Max Data Rate</b>	2.4GHz : 300Mbps    5GHz : 867Mbps	<b>Environment Rating</b>	IP67
<b>LED</b>	Two multi-color software controlled LEDs	<b>MTBF</b>	2,331,610 Hours
<b>Interference Mgmt</b>	Hardware LTE Filtering	<b>PoE-Out</b>	Aux Port supports Cambium and 802.3af modes
<b>Ethernet Ports</b>	Two auto-sensing auto MDIX Gigabit Ethernet (10/100/1000 Mbps) RJ45 Ports	<b>Reset Button</b>	Supported
<b>Radio Features</b>	Maximum ratio combining (MRC) Cyclic delay/shift diversity (CDD/CSD) Space-time blocking coding (STBC) Low-density parity check (LDPC) Packet Aggregation: A-MPDU, A-MSDU	<b>Certifications</b>	FCC, CE, IC, UL, EN60601-1-2 (Medical EMC), WEEE/RoHS compliance
<b>Wi-Fi Alliance</b>	Wi-Fi certified a,b,g,n,ac WPA2 – Enterprise, Personal WMM, Passpoint	<b>Mounting Options</b>	Wall and Pole mount bracket. Supports Poles with 1.5” and 3” Diameter.

## Wi-Fi Features

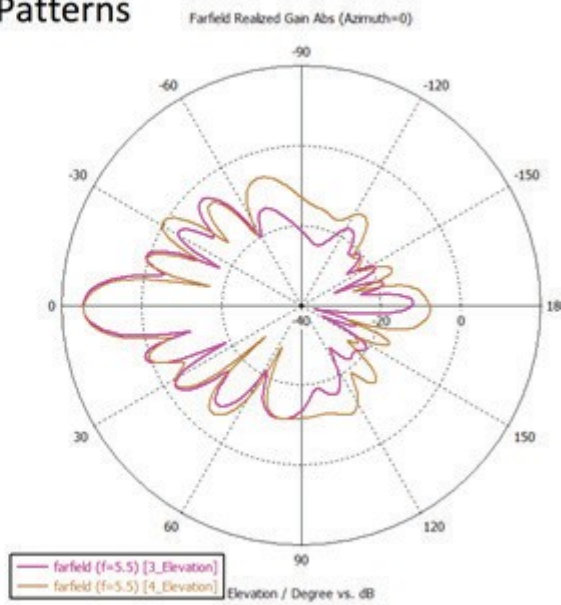
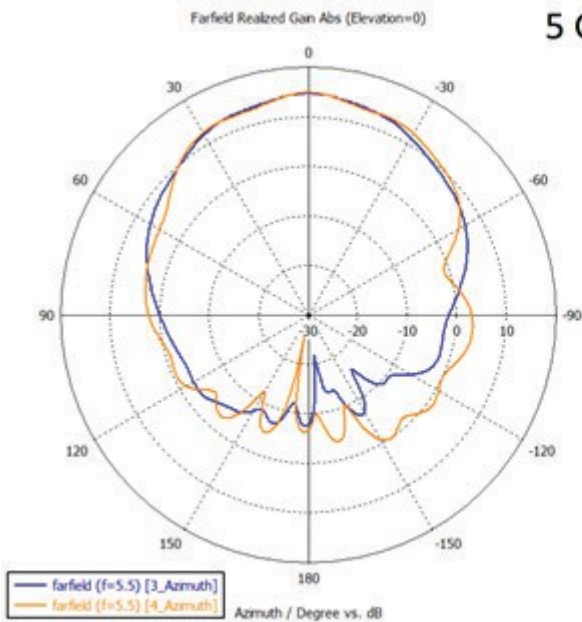
<b>Management Modes</b>	cnMaestro cloud managed cnMaestro on-premises VM controller managed Autopilot (AP as controller) Standalone with AP GUI (http/https), CLI (telnet/ssh)	<b>Wireless Security</b>	WPA-TKIP, WPA2-AES, 802.11i WPA-PSK, WPA2-PSK, WPA2-Enterprise 802.1x Authentication with various EAP types (EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-AKA', EAP-FAST Protected Management Frames (802.11w)
<b>RF Management</b>	AutoRF automatically manages channel and power	<b>Dynamic SSID Service</b>	By time/date, by monitored host.
<b>Guest Access Captive Portal</b>	cnMaestro Controller Portal Integrates with 3 <sup>rd</sup> party Guest Access Portals Built-in Portal on AP LDAP & RADIUS authentication Walled Garden with DNS whitelist Wireless as well as Wired devices supported.	<b>MAC Authentication</b>	On-AP MAC filtering list. On-Controller MAC filtering list. RADIUS MAC Authentication. MAC Authentication fallback to Captive Portal
<b>Rate Limiting</b>	Per-client, Per-WLAN static and dynamic rate limiting	<b>Firewall</b>	Layer-2, Layer-3, DNS ACL. DoS Attack Protection.
<b>Client Isolation</b>	On AP, Network-wide.	<b>3G/4G/LTE Offload</b>	Passpoint (Hotspot 2.0)
<b>Fast Roaming</b>	802.11r, Opportunistic Key Caching, Enhanced Roaming	<b>DHCP Relay</b>	Supported, with Option-82 customization
<b>Airtime Mgmt</b>	Airtime Fairness, Band Steering, Band Balancing	<b>NMS Monitoring</b>	SNMP v1, v2c, v3
<b>AAA Support</b>	RADIUS Authentication, Accounting, Dynamic Authorization (CoA, DM). Server failover, load-balancing	<b>Client APIs</b>	Client Presence/Location API DNS, NAT and TCP Connecting Logging
<b>QoS</b>	802.11e/WMM QoS. DSCP/ToS mapping.	<b>Time Synchronization</b>	Auto (from controller), NTP
<b>Ethernet (L2) Services</b>	802.1p/802.q, RADIUS assigned VLAN, VLAN per SSID, VLAN pooling. LLDP. IGMP Snooping (v1/v2/v3)	<b>Troubleshooting Tools</b>	Packet Capture, Spectrum Analyzer, Ping, Traceroute, Syslogs
<b>Mesh</b>	WDS Mesh with Single and Multiple radio hops.	<b>Traffic Tunnels</b>	L2TP, L2oGRE, PPPoE
<b>Network Services</b>	NAT, DHCP Server		

## 2D GAIN PATTERNS

### 2.45 GHz Patterns



### 5 GHz Patterns



#### ORDERING INFORMATION: cnPILOT e501S

Regulatory Model Number (common to all SKUs):

C000100P501

A Sales part #

Region

PL-E501SYXXA-<US/EU/CA/IL/JP/EG/LK/RW>

Y = if this position has a "p", then that SKU includes a PoE Injector and localized AC line cord  
 Y = if this position has a "X", then that SKU does not include a PoE Injector or AC line cord. YY will always be "00"  
 XX = if this position has a two-digit country code, then a localized AC line cord is included for the specified country code  
 The following countries require a unique two-digit regulatory country code appended to the part number:  
 United States (US), Canada (CA), Europe (EU), Israel (IL), Egypt (EG), Sri Lanka (LK). For other certified countries, use the Rest of World (RW) two-digit country code