

cnPilot™ E501S Outdoor Sector

IP67 802.11ac 90° ~ 120° Outdoor Sector Access Point

Perfect for high density applications and longer range coverage across Enterprise campuses, Public Wi-Fi, Hospitality, Educational institutions, Industrial campuses or just about any demanding outdoor environment requiring cost-effective, controller managed WLAN



Highlights

Access Points

Operational superiority – The E501S with an integrated sector antenna supports 256 max 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 WiFi networks

High performance Wi-Fi network - All *cn*Pilot'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 E501S 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 E501S 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
- Antenna: 90°~120° coverage
- 23 dBm front-back ratio
- UV rated IP-67 enclosure
- Operating Temp: $-30^{\circ}\text{C} \sim +65^{\circ}\text{C}^*$
- 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 ~ 1Kg

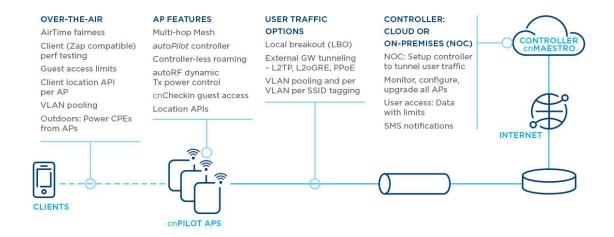
cnMaestro - WiFi Controller

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

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



The cnPilot Wi-Fi Network



ACCESS POINT SPECIFICATIONS		
FREQUENCY BANDS	2.4 GHz: 2.4 – 2.4835 GHz Channels 1 – 13 (ETSI/CE), Channels 1 – 11 (US) 5 GHz: 5.15 – 5.85 GHz	
SSID SECURITY	WPA-2 (802.11i): WPA2-Enterprise (802.1x/EAP) & WPA2-Preshared-keys, Open	
MAX SSIDS	16	
MAX CONCURRENT CLIENTS	256	
MAX RANGE	Client: 213 m (700 Ft); Actual range will vary based on local RF conditions & client capability. Mesh: 2.4 GHz: 3,000 m (9840 Ft.) 5 GHz: 1,500 m (4,900 Ft.)	
MAX DATA RATES	1.16 Gbps	
ETHERNET PORTS	Dual Gigabit Ethernet ports (2 x 10/100/1000Base-T)	
ANTENNA	Dual polarized. 2x2 MIMO. Integrated Sector antenna	
ANTENNA GAIN	10.5 dBi on 2.4GHz 13 dBi on 5GHz	
POWER SUPPLY	56V/30W Gigabit passive PoE injector	
POE OUT	Aux port: capable of 802.3af Power out or Canopy power (for supported Cambium ePMP or PMP450 SMs)	
TRANSMIT POWER	29dBm @ 2.4GHz 28dBm @ 5 GHz	
POWER CONSUMED	Typical: 8W Max: 12.95W (no auxiliary device connected)	
DIMENSIONS (CM)	30 x 20.4 x 6.5 cm (without bracket)	
WEIGHT	Without bracket: 881 g (0.88 Kg); with Bracket: 1,063 g (1.06 Kg)	
OPERATING TEMPERATURE	-30°C ~ +60°C	
MOUNTING OPTIONS	Pole mount bracket (included) or wall-mount (with included bracket or without)	
LTE CO-EXISTENCE	Special filter for rejecting interference on 2.4 GHz from adjacent LTE bands 38, 40	
PHYSICAL SECURITY	Kensington Lock bracket	
VISUAL STATUS	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	Autonomous Controller-less operations (E.g.: roaming) Cloud Managed On-premise virtualized controller		
Secure WLAN	• WPA-TKIP, WPA2 AES, 802.1x • 802.11w (Protected Management Frames)		
Hotspot 2.0/Passpoint	Yes		
Captive Portal	• cnMaestro Controller • Stand-alone AP based	Redirection to external RADIUS Server DNS logging	
Authentication	RADIUS based 802.1x including EAP-SIM/AKA, EAP-PEAP, EAP-TTLS, and EAP-TLS MAC authentication (local database or External RADIUS server)		
Accounting	Yes. Supports RADIUS based accounting to multiple AAAs		
Scheduled SSID	Turn SSID ON/OFF on a daily/weekly/time of day basis		
Guest Access	Yes. With Active Directory Integration • Vouchers • Rate limiting • Splash page creation on cnMaestro		
VLAN	VLAN pooling, Dynamic VLAN assignment from RADIUS server. VLAN per SSID per user		
Data Limiting	Dynamic rate limiting of client traffic per SSID		
Subscriber QoS	WMM		
Client Isolation	Yes		

ACS: Automatic Channel Selection	autoTune: Autonomous dynamic off-channel scans w/o disconnecting clients. Periodic scans and scheduled scanning	
Automatic Tx Power control	autoRF: Autonomous controller-less transmit power control	
NAT	Yes	
DHCP Server	Yes	
Firewall	Yes. NAT logging	
ACL, DNS-ACL	Yes. L2, L3 or DNS based access control	
Band Steering Band Balancing	Yes	
Airtime Fairness	Yes	
Tunneling	• L2TP • L2oGRE • PPPoE	
Tools	 Packet IP connectivity Wi-Fi analyzer capture Sniffer Auto logging ZapD (Open source) compliant performance test tool 	
Services	NTP server config Syslog servers SNMP traps support DNS proxy Syslog servers (ADRES) turns SSID ON/OFF based on underlying resource connectivity state	
APIs	Presence Location APIs	
Certifications	FCC, ETSI, CE EN 60601 1.2 (Modical EMC)	

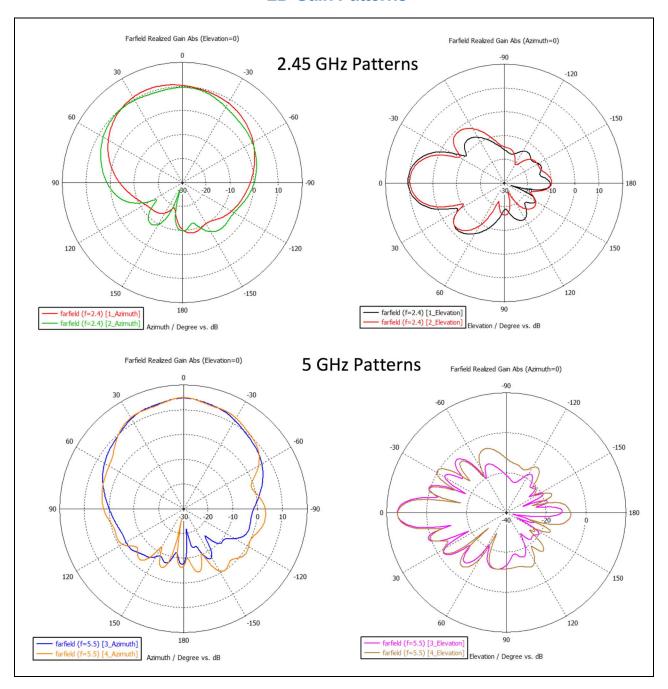
CNMAESTRO WIFI CONTROLLER

COMMON FRAMEWORK	Single-pane-of-glass common manager for Cambium's cnPilot WiFi, ePMP and PMP wireless backhaul products
ON-BOARDING	Secure zero touch fast on-boarding
Provisioning	Easy zero touch virtual network provisioning Provision before install (pre-provision)
DEVICE INVENTORY	Inventory tracking
TROUBLE SHOOTING	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
Intuitive views	Map location Hierarchical Dashboard views
CLIENT INSIGHT	Client history with client manufacturer view
MONITORING & ALARMS	Alarms and events management – Critical/Major/Minor Key statistics graphs and <i>sticky</i> alarm summary display
CONFIGURATION	GUI based configuration or template based configuration options
SOFTWARE UPGRADE	Bulk upgrade with ability to upgrade multiple WiFi APs
MULTIPLE ADMINS	Multiple admin provisioning per account
~	

^{*} Under conditions when the optional PoE out feature of the E500 is not used.



2D Gain Patterns



Ordering Information: cnPilot Outdoor E501S

Regulatory Model Number (common to all SKUs): C000100P501A		
Sales part #	Region	
PL-501SPXXA- <us eu="" rw=""></us>	E501S for US, EU or RoW with PoE injector. XX = 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-501S000A- <us eu="" rw=""></us>	E501S model without a PoE injector. Available in US, EU or RoW models	

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

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

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