

cnPilot™ E501S Outdoor Sector

IP67 802.11ac 90° ~ 120° Outdoor Sector Access

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 Access Points



Highlights

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 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 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.

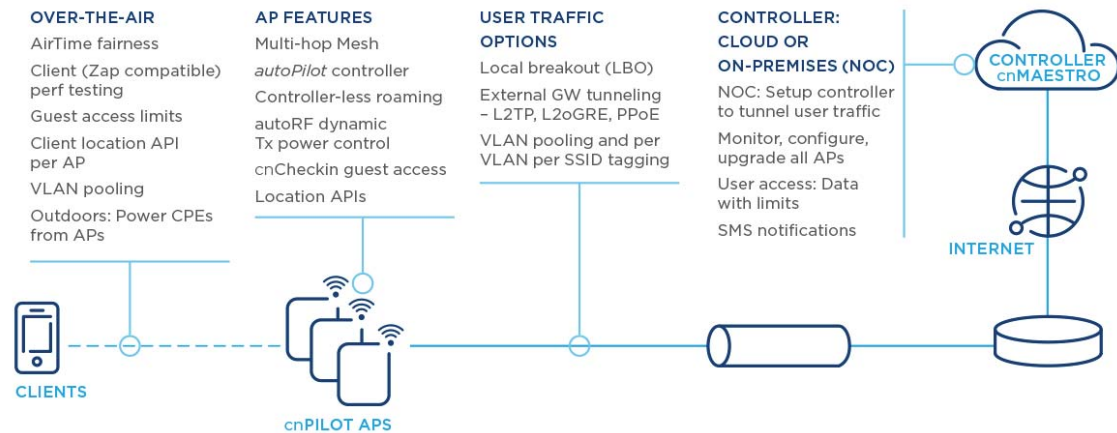
Designed for the outdoors

- 802.11ac, 256 users, 16 SSIDs
- 90°-120° coverage
- 23 dBm front-back ratio
- UV rated IP-67 enclosure
- Operating Temp: -30°C ~ +60°C
- 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  
- 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

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	1.01 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

WIFI FEATURES

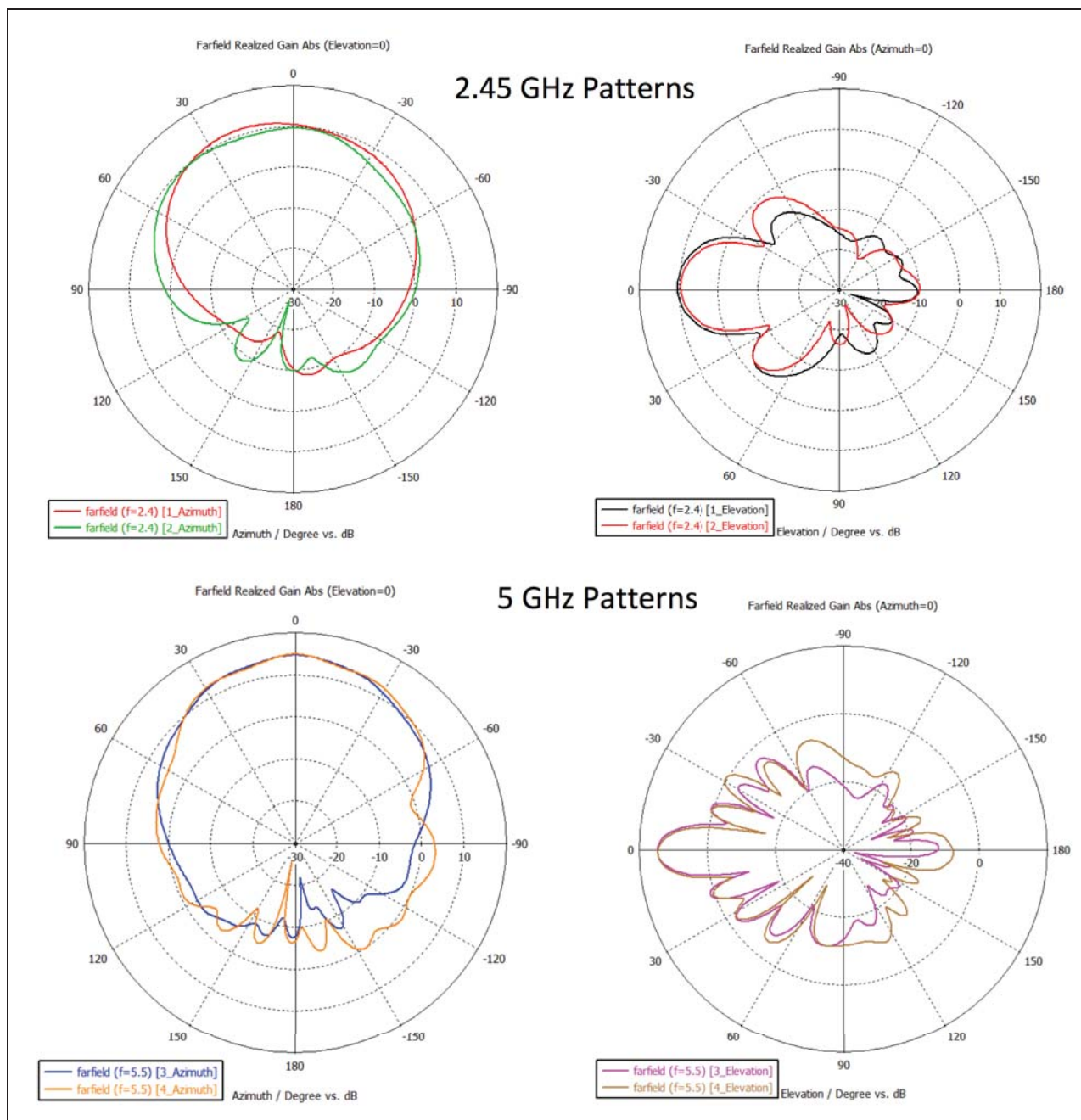
Controller modes	<ul style="list-style-type: none"> Autonomous Controller-less operations (E.g.: roaming) Cloud Managed On-premise virtualized controller
Secure WLAN	<ul style="list-style-type: none"> WPA-TKIP, WPA2 AES, 802.1x 802.11w (Protected Management Frames)
Hotspot 2.0/Passpoint	Yes
Captive Portal	<ul style="list-style-type: none"> cnMaestro Controller Redirection to external RADIUS Stand-alone AP based Server DNS logging
Authentication	<ul style="list-style-type: none"> 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
VLAN	<ul style="list-style-type: none"> 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
Controller-Less Fast Roaming	Yes. 802.11r, Opportunistic Key Caching supports Enhanced roaming. Disconnect for sticky clients
Airtime Fairness	Yes
Meshing	Multi-hop meshing supported (3)

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	<ul style="list-style-type: none"> L2TP L2oGRE PPPoE
Tools	<ul style="list-style-type: none"> Packet capture Sniffer ZapD (Open source) compliant performance test tool IP connectivity Auto logging Wi-Fi analyzer
Services	<ul style="list-style-type: none"> NTP server config Syslog servers SNMP traps support DNS proxy cnPilot's dependent resource state awareness feature (ADRES) turns SSID ON/OFF based on underlying resource connectivity state
APIs	Presence Location APIs
Certifications	FCC, ETSI, CE EN 60601-1-2 (Medical EMC) UL2043 Plenum rated

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
GUEST PORTAL (ezCheck In)	Create free or paid guest sessions – Limit by Time, Rate and Bytes. Includes portal customization and built-in social login

2D Gain Patterns



Ordering Information: cnPilot Outdoor E501S

Regulatory Model Number (common to all SKUs): C000100P501A	
Sales part #	Region
PL-501SPXXA-<US/EU/RW>	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>	E501S model without a PoE injector. Available in US, EU or RoW models

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