

Long Range Outdoor Wireless Access Point WAP-500

Carrier Class WAP-500 5 GHz 600mW High Power and Superior Performance Routing Base or Backhaul Radio Unit



The WAP-500 is specially designed for point-to-multipoint applications to provide a superior performance solution for connecting many locations through wireless, yet flexible to customize for your deployment. It has up to quad wireless interface for sectors or backhaul. The WAP-500 delivers Internet service to your clients' network for extreme distance of 145 miles or more. You can use this package to provide high data rates and superior throughput for data-intensive yet up to hundreds of concurrent users for WiFi Citywide project. Multiple sites can share a single, high-speed connection to the Internet. The feature rich radio firmware allows you to apply the most advanced firewall, NAT, bandwidth shaping, cloaking modes, Super A or Turbo modes for up to 108 Mbps of throughput, and other technologies to create a smart and manageable network. You can secure wireless traffic with firewall, VLAN, encryption (WEP/WPA/WPA2) from base to individual clients. Mesh / WDS Spanning Tree Bridging are available for all connected APs and clients in the same SSID group or Multiple SSIDs. QoS with video / gaming priority is available.

Optional channel selections from 760-780 & 900-922 MHz, 2.3-2.5, 2.55-2.6, 2.7-2.9, 3.4-3.7, 3.65, 4.9-6.1GHz. While bundle with WiBorne's CPE [CAP-5000L](#) or [CAP-5000](#) and [HSG Access Controllers](#), it supports remote management from individual clients to backhaul network management systems for hundreds of base stations with thousands of wireless clients.

WAP-500 Series WAP-500 is expandable for dual radio that you can add additional radios for backhaul or sector broadcast.

WiBorne has developed the WAP-500 platform based on state-of-the-art wireless technology. The 2nd generation intelligent wireless edge platform enables new revenue generating converged services for IP data, voice and video streaming. The WAP platform is a rugged communications-grade wireless delivery system with superior performance and high reliability to enable cost effective deployment.

- Single to quad Atheros high power 400mW radio for 802.11a. Optional 600mW. Radio sensitivity up to -94dBm
- Super A (hardware compress, aggregation, and bursting)
- Data throughput of 26 Mbps or 43 Mbps in Turbo. Data Compression for throughput approaching 60 Mbps in Standard 54 Mbps Mode
- 108Mbps Turbo (802.11a channel bonding)
- Packet Aggregation for improved VoIP and gaming
- Extreme distances, up to 233km are supported.
- Channel width (Cloaking mode) for 5/10/20/40 MHz
- Radio options from 700/900MHz, 2.3-2.9 3.4-3.4, 4.9-6.1GHz providing support for both public and licensed bands
- NEMA 6 Aluminum outdoor case
- Lighten protector is gas discharge tube design with multi-strike capability
- Firewall and NAT with stateful packet filtering
- QoS by IP/ protocol / subnet / ports, HTB, PCQ (500M)
- VRRP for High Availability
- Mesh - WDS (wireless distribution service), Nstreme and Nstreme2 protocols, AP bridging
- 802.11e QoS (WMM) Setting for priority of Video and Voice
- Tools: Device Discovery, Bandwidth, Link Test, Network Monitoring, Neighbor Viewer, Radio/Traffic Statistics
- Bridge: spanning tree protocol; multiple bridge interfaces; bridge firewalling, MAC NATing
- Client statistics (current signal level/quality, rate TX/RX, bytes TX/RX, radio rate)
- 64/128/152 bits WEP and WPA/WPA2 support.
- IPSec: DES, 3DES, AES-128, AES-192, AES-256 (500M)
- Routing for RIP, BGP, OSPF, static routing
- VLAN: 802.1q, multiple VLANs; VLAN bridging
- Console/Terminal/SSH/Telnet/CLI/SNMP/FTP
- Neighbor Discovery; ping; traceroute; bandwidth test; ping flood; packet sniffer; Dynamic DNS update tool
- Proxy: FTP & HTTP caching proxy server; HTTPS, DNS and HTTP, DNS entries, caching lists, access control lists
- Authentication: PPTP, PPPoE, L2TP, WPA, access control, MSCHAPv1/v2, RADIUS, MPPE encryption
- DHCP server/client/relay, multiple DHCP networks
- Layer 2 connectivity: bridge, synchronous, Asynchronous, ISDN, and SDSL
- UPnP, NTP, SNMP/MIB II, Cisco CDP, Syslog/SNMP traps
- Monitoring and accounting for traffic, firewall logging
- MiniPCI radio module swappable
- 802.11n upgradeable
- Watchdog for auto and remote reboot

Long-Range Outdoor High Power Access Point WAP-500

Model No.	WAP-500
Standard	IEEE 802.11a (Wireless LAN), IEEE 802.3 (Ethernet)
Wireless & Wired Security Functions	Secure with WPA, WPA2, AES-CCM & TKIP Encryption, 802.1x, 64/128/152 bits WEP, IPSec/VPN Mac Access Control Lists, Custom scan lists that prevent clients from scanning unwanted channels Full firewall, NAT and Bandwidth Management support, Mac Authentication 802.1q VLAN support, multiple VLANs; VLAN bridging client list, DHCP auto-auth configuration Multiple SSID, Multiple Access Points mode, Sniffer detects intrusion attempts (lite IPS)
Operation Functions	Static, dynamic (RIP v1/2, OSPFv2), or policy (source) routing, DHCP Server / Client Super A mode (Hardware compression, aggregation and bursting). Turbo mode for 108Mbps Mesh-WDS or Mesh routing using OLSR Support up to 7 Virtual Access Point mode for single interface that you can create multiple Access Points with different Service Set Identifier, WDS settings, and even different MAC address (500M) Cloaking to reduce interference, dynamic frequency selection (dfs) mode for auto channel Firmware upgradeable LED and audible alignment methods based on signal strength for antenna aiming Beacon real-time traffic monitor, AP association displays, with per-user, and system wide throughput and traffic reporting. Wireless site survey. ACK Timing, RTS Fragmentation Threshold Adjustable transmit power up to 400mW or 600mW 802.11e QoS for Video and Voice Priority, Layer-7 filtering and shaping Layer 2 connectivity: bridge, synchronous, Asynchronous, ISDN, and SDSL
Operation Modes	AP, Bridging, Ethernet to WLAN Bridge, AP Client with Routing function, dynamic WDS, mesh-WDS, High performance learning bridge with optional Spanning Tree Protocol (STP)
Management	SSH-based configuration interface with text / Web GUI, Serial-based CLI, SNMP, Telnet, FTP
Power over Ethernet	18, 24, or 48 VDC Passive – depends on hardware platform
Interface	One RJ45 (PoE) Bulkhead connectors, one internal RS232, one Reset button, 1 to 4 MiniPCI slots
Mounting	Pole or wall mount via 2pc clamps(included)
Enclosure	IP67 / NEMA6 die cast aluminum with white epoxy powder coat paint
Weight	2.65 lbs (1.20 Kg)
Dimension (L x W x H)	H=10"/254mm W=7.1"/180mm D=2.25"/57mm
Temperature Range	Operating: -20°C to 70°C (-4°F to 158°F). Storage: -40°C to 80°C (-40°F to 176°F)
Relative Humidity	10% to 95% non condensing
Lighten Protector	Gas discharge tube design with multi-strike capability. Infinite strike is optional
Antenna connectors	External antennas with up to 4 N connectors
Platform Characteristics	
Platforms	MIPS architectures with CPU 175MHz, 266MHz, up to 400 MHz
Memory	64MB DDR RAM
Radio Characteristics	
Radio Scheme	802.11a: OFDM
Frequency Range	5.1 GHz ~5.8GHz (optional 700/900MHz, 2.3-2.9 3.4-3.4, 4.9-6.1 GHz)
Data Rate	802.11a: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps, 108Mbps turbo mode
Range	Up to 233 km / 145 miles, depends on terrain, antennas, and throughput
Output Power (radio)	802.11a: 400mW, or optional 600mW. Up to quad radios
Receiver Sensitivity (without antenna)	54Mb@-74dBm. 48Mb@-77dBm, 36Mb@-83dBm, 24Mb@-86dBm, 18Mb@-90dBm, 12Mb@-91dBm, 9Mb@-93dBm, 6Mb@-94dBm
Approvals	Radio FCC Part15, Section 15,247, IC RS210