

Long Range Outdoor Wireless Access Point WAP-500

Carrier Class WAP-500 5 GHz 630mW High Power and Superior Performance Routing Base or Backhaul Radio Unit



WAP-500 Series

The WAP-500 is specially designed for applications of point-to-point or point-to-multipoint as based AP to provide a superior performance solution for connecting many locations through wireless, yet flexible to customize for your deployment. It has up to three wireless interfaces 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. Layer 2 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.

Frequency selection 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 CPEs [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.

Features such as MIMO 802.11n and 3G technology present WAP-500 a scalable device. With 802.11n radio module, WAP-500 produces 150Mbps+ of PtMP performance. USB slots allow you to add 3G wireless modem(s) for backup, mobile installation, or multi-WAN (multiplexing)

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 (VoIP) and video streaming / conferencing / messaging. The WAP platform is a rugged communications-grade wireless delivery system with superior performance and high reliability to enable cost effective deployment.

Features:

- Single Atheros high power max. 630mW (28 dBm) radio for 802.11a. Radio sensitivity up to -97dBm
- Time Division Duplex (TDD) with CSMA/CA, TDMA
- 108Mbps Turbo mode (Super A/G). Data throughput of 40 Mbps, or max 80 Mbps in Turbo, or MIMO for 300Mbps
- Swappable to 2.4GHz mode.
- Packet Aggregation for improved VoIP and gaming
- Extreme distances, up to 233km are supported.
- Channel width (spacing) for 5/10/20/40 MHz
- MIMO 802.11n radio modules available
- USB slots for 3G Technology as backup or multiplexing bonding for large bandwidth.
- 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 case, wind resistance < 200 km/h
- Lighten protector: multi-strike capability (gas discharge)
- Firewall and NAT with stateful packet filtering
- QoS by IP/ protocol / subnet / ports / packet classification & marking at L2-L4, 802.1p, DiffServ/TOS, HTB, PCQ, CIR, EBS, and PIR. WiMAX 802.16 QoS Classification for Pre-WiMAX, WMM Setting for priority of Video and Voice
- VRRP for High Availability
- Layer 2 Mesh, WDS, Nstreme / bonding protocols, AP routing / bridging
- Virtual Machine (VM) for 3rd party application software
- Latency: <2 ms, disponibility 99.99%, depends on terrain
- Bridge: spanning tree protocol (STP); multiple bridge interfaces; bridge firewalling, MAC NATting
- Client statistics (current signal level/quality, rate TX/RX, bytes TX/RX, radio rate) with graphical indication
- 64/128/152 bits WEP and WPA/WPA2 support.
- IPsec: DES, 3DES, AES-128, AES-192, AES-256
- Routing for RIP, BGP, MPLS, VPLS, OSPF, GRE. Static
- 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
- Produce maximum of 48 dBm EIRP (with antennas)
- UPnP, NTP, SNMP/MIB II, Cisco CDP, Syslog/SNMP traps
- Monitoring and accounting for traffic, firewall logging, graphical bandwidth for each interface
- Watchdog for auto and remote reboot
- Tools: Device Discovery, Bandwidth, Link Test, Network Monitoring, Neighbor Viewer, Radio/Traffic Statistics
- Dynamic Multicast Filtering support for video surveillance

Long-Range Outdoor High Power Access Point WAP-500

Model No.	WAP-500
Standard	IEEE 802.11a (Wireless LAN), IEEE 802.3 (CSMA/CD Ethernet), MIMO 802.11n & 3G
Wireless & Wired Security Functions	Secure with WPA, WPA2, 802.1x (EAP, MIC, TKIP and AES), 64/128/152 bits WEP, DES, IPSec/VPN. WPA-PSK, WPA2-PSK, WPA-EAP, EPA-EAP2, EAP-TLS, AES-CCM, 802.11i TKIP, PEAP- MSCHAPv2, PEAP-TTLS, RADIUS client 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 (WIPS Sensor)
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 / OLSR / RSTP, or Layer 2 Mesh routing 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 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 630mW 802.11e QoS for Video and Voice Priority, protocol / port / IP / MAC filtering and shaping Layer 2 connectivity: bridge, synchronous, Asynchronous, ISDN, and SDSL
Operation Modes	AP (P2P, P2MP), Bridging, Ethernet to WLAN Bridge, AP Client with Routing function, dynamic WDS, L2 mesh. High performance learning bridge with STP. 3G connectivity.
Management	SSH-based interface, Web / text GUI, HTTP, Serial-based CLI, SNMP V1/2, Telnet, FTP, TFTP
Power over Ethernet	12-28 VDC Passive with overvoltage protection, power consumption up to 9W, 220VAC
Interface	One RJ45 (PoE) Bulkhead connectors, one internal RS232, one Reset button, 1 MiniPCI slot. USB slot for external storage devices or 3G modem
Mounting	Pole or wall mount via 2pc clamps(included)
Enclosure	IP67 / NEMA6 die cast aluminum with white epoxy powder coat paint
Weight	2.25 lbs (1.10 Kg)
Dimension (L x W x H)	H=10"/254mm W=7.1"/180mm D=2.25"/57mm
Temperature Range	Operating: -40°C to 80°C (-40°F to 176°F) for radio and board
Relative Humidity	0% to 95% non condensing
Lighten Protector	Gas discharge tube design with multi-strike capability. Polyphaser, Citel
Antenna connectors	External antennas with up to 3 N connectors for variety of platform
Platform Characteristics	
Platforms	680MHz Atheros MIPS CPU (300MHz if equipped with 3G USB slot)
Memory	64MB DDR RAM (32MB if equipped with 3G USB slot)
Radio Characteristics	
Radio Scheme	802.11a: FDD / OFDM. MIMO 802.11n and/or 802.11b/g. Access Method: Time Division Duplex (TDD) with CSMA/CA, TDMA. FSK equivalent functions reduce interference for P2P. Non-overlapping 12 Channels. Signal / interference ratio: -10dBm ~ -70dBm
Frequency Range	4.9GHz ~5.85GHz (or 700/900MHz, 2.3-2.9 3.4-3.4, 4.9-6.1 GHz)
Data Rate	802.11a: 108 / 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps, 802.11n MIMO for 300Mbps
Range	Up to 233 km / 145 miles, depends on terrain, antennas, and throughput
Throughput	4.9-5.8GHz: up to 80Mbps or 40/40Mbps as up/down for single radio.
Output Power (radio)	802.11a: max 630mW
Receiver Sensitivity (without antenna)	54Mb@-74dBm. 48Mb@-77dBm, 36Mb@-83dBm, 24Mb@-86dBm, 18Mb@-90dBm, 12Mb@-91dBm, 9Mb@-93dBm, 6Mb@-94dBm, 1.5Mb@-102dBm or 1Mb@-97dBm depends on radio
Approvals	Radio FCC Part15, Section 15.247, IC RS210. WPC

Note: Sales price may be varied that is dependent on components for specific requirement.