

## Long Range Outdoor Wireless Access Point WAP-900

*Carrier Class WAP-900 Non Line of Sight (NLoS) 900MHz with Up To 700mW High Power and Superior Performance Routing Base or Backhaul Single to Triple Radio Unit*



WAP-900 Series

The WAP-900 is specially designed for applications of point-to-point, point-to-multipoint as based AP to provide a superior performance solution for connecting many locations through wireless where line of sight is unavailable, yet flexible to customize for your deployment. It has up to three wireless interfaces for sectors or backhaul. The WAP-900 delivers Internet service for NLoS with 900MHz ISM band. 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/G 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.

While bundling with WiBorne's CPEs with 13 dBi 900MHz integrated antennas, 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.

WiBorne has developed the WAP-900 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 to triple Atheros high power max. 700mW radio for 907-922MHz. Radio sensitivity up to -93dBm
- Ideal for non Line of Sight deployment
- 108Mbps Turbo mode. Data throughput of 26 Mbps
- Packet Aggregation for improved VoIP and gaming
- IP67 certified 100% sealed with strong mechanical structure, die cast all weather-proof hinged housing
- 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, CIR, EBS, and PIR. Equivalent WiMAX 802.16 QoS Classifier
- VRRP for High Availability
- Layer 2 Mesh, Nstreme / bonding protocols, AP routing / 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 NATting
- Client statistics (current signal level/quality, rate TX/RX, bytes TX/RX, radio rate)
- Layer 2 Mesh, WDS, Nstreme / bonding protocols, AP routing / bridging
- 802.11e QoS (WMM) Setting for priority of Video and Voice
- Virtual Machine (VM) for 3<sup>rd</sup> party application software
- 64/128/152 bits WEP and WPA/WPA2 support.
- IPSec: DES, 3DES, AES-128, AES-192, AES-256
- 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 optional
- 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-900

<b>Model No.</b>	WAP-900
<b>Standard</b>	IEEE 802.11 b/g (Wireless LAN), IEEE 802.3 (CSMA/CD Ethernet)
<b>Wireless &amp; Wired Security Functions</b>	Secure with WPA, WPA2, 802.1x (EAP, MIC, TKIP and AES), 64/128/152 bits WEP, IPSec/VPN. WPA-PSK, WPA2-PSK, WPA-EAP, EPA-EAP2, EAP-TLS, AES-CCM, 802.11i TKIP, PEAP-MSCHAPv2, PEAP-TTLS 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, 4096 VLANs; VLAN bridging client list, DHCP auto-auth configuration Multiple SSID, Multiple Access Points mode, Sniffer detects intrusion attempts (lite IPS)
<b>Operation Functions</b>	Static, dynamic (RIP v1/2, OSPFv2), or policy (source) routing, DHCP Server / Client Super G modes (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 (optional) 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 700mW dependent on radio module and frequency 802.11e QoS for Video and Voice Priority, protocol / port / IP / MAC filtering and shaping Layer 2 connectivity: bridge, synchronous, Asynchronous, ISDN, and SDSL
<b>Operation Modes</b>	AP, Bridging, Ethernet to WLAN Bridge, AP Client with Routing function, dynamic WDS, L2 mesh, High performance learning bridge with optional Spanning Tree Protocol (STP)
<b>Management</b>	SSH-based interface, Web / text GUI, HTTP, Serial-based CLI, SNMP, Telnet, FTP, TFTP
<b>Power over Ethernet</b>	12-28 VDC with overvoltage protection. High power PoE available for multiple radio.
<b>Interface</b>	1 J45 (PoE) Bulkhead connector, 1 RS232, 1 Reset button, 3 MiniPCI slots, 3 Ethernet ports
<b>Mounting</b>	Pole or wall mount via 2pc clamps(included)
<b>Enclosure</b>	IP67 certified 100% sealed with die cast all weather-proof housing hinged housing
<b>Weight</b>	6 lbs (2.73 Kg)
<b>Dimension (L x W x H)</b>	H=12"/304.8mm W=9"/228mm D=3.5"/89mm
<b>Temperature Range</b>	Operating: -35°C to 70°C (-31°F to 158°F). -40°C to 80°C (-40°F to 176°F) for radio and board
<b>Relative Humidity</b>	0% to 95% non condensing
<b>Lighten Protector</b>	Gas discharge tube design with multi-strike capability. Optional Polyphaser, Citel
<b>Antenna connectors</b>	External antennas with up to 3 N connectors
<b>Platform Characteristics</b>	
<b>Platforms</b>	680MHz Atheros MIPS CPU
<b>Memory</b>	128MB DDR RAM
<b>Radio Characteristics</b>	
<b>Radio Scheme</b>	802.11b: DSSS 802.11g: OFDM
<b>Frequency Range</b>	907 ~ 922 MHz
<b>Data Rate</b>	802.11b/g: 54 / 48 / 36 / 11 / 6 / 5.5 / 2 / 1 Mbps, 108Mbps turbo mode
<b>Channels</b>	North America: 4 Channels (US, Canada)
<b>Range</b>	Over 50KM, depends on terrain, antennas, and throughput
<b>Throughput</b>	Single radio: over 26 Mbps
<b>Output Power (radio)</b>	Up to 700mW
<b>Receiver Sensitivity (without antenna)</b>	54Mb@-71dBm. 48Mb@-74dBm, 36Mb@-82dBm, 11Mb@-90dBm, 6Mb@-91dBm, 2Mb@-92dBm, or 1Mb@-93dBm