

## Long Range Outdoor Wireless Access Point WAP-240

### *Carrier Class WAP-240 2.4 GHz 600mW High Power Radio with Superior Performance Routing Base or Backhaul Radio Units*



The WAP-240 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-240 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 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. 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-1900](#), or [CAP-2400L](#) / [CAP-2400](#) Series 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-240 Series** WAP-240 is expandable for dual radio that you can add additional radios for backhaul or sector broadcast.

WiBorne has developed the WAP-240 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.

#### Features:

- Single to Quad Atheros high power 600mW radio for 802.11 b/g. Radio sensitivity up to -94dBm
- Super G (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 (802.11g channel bonding)
- Packet Aggregation for improved VoIP and gaming
- Extreme distances, up to 233 KM 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
- 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 NATting
- 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
- 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
- Watchdog for auto and remote reboot

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<b>Model No.</b>	WAP-240
<b>Standard</b>	IEEE 802.11 b/g (Wireless LAN), IEEE 802.3 (Ethernet)
<b>Wireless &amp; Wired Security Functions</b>	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 (IPS)
<b>Operation Functions</b>	Static, dynamic (RIP v1/2, OSPFv2), or policy (source) routing, DHCP Server / Client Super G mode (Hardware compression, aggregation and bursting). Turbo mode for 108Mbps Mesh-WDS or Mesh routing using OLSR Support up to 7 Virtual AP 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 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
<b>Operation Modes</b>	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)
<b>Management</b>	SSH-based configuration interface with text / Web GUI, Serial-based CLI, SNMP, Telnet, FTP
<b>Power over Ethernet</b>	18, 24, or 48 VDC Passive – depends on hardware platform
<b>Interface</b>	One RJ45 (PoE) Bulkhead connectors, one internal RS232, one Reset button, 1 to 4 MiniPCI slots
<b>Mounting</b>	Pole or wall mount via 2pc clamps(included)
<b>Enclosure</b>	IP67 / NEMA6 die cast aluminum with white epoxy powder coat paint
<b>Weight</b>	2.65 lbs (1.20 Kg)
<b>Dimension (L x W x H)</b>	H=10"/254mm W=7.1"/180mm D=2.25"/57mm
<b>Temperature Range</b>	Operating: -20°C to 70°C (-4°F to 158°F). Storage: -40°C to 80°C (-40°F to 176°F)
<b>Relative Humidity</b>	10% to 95% non condensing
<b>Lighten Protector</b>	Gas discharge tube design with multi-strike capability. Infinite strike is optional
<b>Antenna connectors</b>	External antennas with up to 4 N connectors
<b>Platform Characteristics</b>	
<b>Platforms</b>	MIPS architectures with CPU 175MHz, 266MHz, up to 400 MHz
<b>Memory</b>	64MB DDR RAM
<b>Radio Characteristics</b>	
<b>Radio Scheme</b>	802.11g: OFDM; 802.11b: DSSS
<b>Frequency Range</b>	2.4 GHz. (optional 700/900MHz, 2.3-2.9 3.4-3.4, 4.9-6.1 GHz)
<b>Data Rate</b>	54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps, 108Mbps turbo mode
<b>Channels</b>	North America: 12 Channels (US, Canada) ETSI: 13 Channels (Most European Countries) TELEC: 4 Channels (Japan)
<b>Range</b>	70 km / 44 miles or more, depends on terrain, antennas, and throughput
<b>Output Power (radio)</b>	802.11b/g: 400mW, or optional 600mW. Up to quad radios
<b>Receiver Sensitivity (without antenna)</b>	54Mb@-74dBm, 48Mb@-77dBm, 36Mb@-83dBm, 24Mb@-86dBm, 18Mb@-90dBm, 12Mb@-91dBm, 9Mb@-93dBm, 6Mb@-94dBm
<b>Approvals</b>	Radio FCC Part15, Section 15.247, CE