

WiBORNE, INC.

Long Range Outdoor Wireless Access Point WAP-280

Carrier Class WAP-280 2.7GHz – 2.9GHz 300mW High Power and Superior Performance Routing Base or Backhaul Single to Triple Radio Unit



WAP-280 Series

The WAP-280 is specially designed for point-to-multipoint (P2MP) applications 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 interface for sectors or backhaul. The WAP-280 delivers Internet service to your clients' network for extreme distance over 20KM 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, channel width / cloaking modes, 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.



For deployment of P2MP, WiBorne offers omni (8-12 dBi) or sector antennas (13 dBi) for base stations, while equipped external directional panel antennas (10-20 dBi) for CPE that equipped with [CAP-280W](#) with same radio of WAP-280. This bundle deploys P2MP for 25KM of range while support few hundreds concurrent CPEs!

Features:

- Single to triple Atheros high power 300mW radio for 2.7-2.9GHz. Radio sensitivity up to -92dBm
- Time Division Duplex (TDD) with CSMA/CA, TDMA
- Data throughput of 26 Mbps or 43 Mbps in Turbo.
- 108Mbps Turbo (OFDM channel bonding)
- Packet Aggregation for improved VoIP and gaming
- Extreme distances, up to 50 km are supported.
- Channel width (Cloaking mode) for 5/10/20/40 MHz that can not be seen from standard wifi radio
- Radio from 700/900MHz, 2.3-2.9 3.4-3.4, 4.9-6.1 GHz providing support for both public and licensed bands
- 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, EBS, & RIP
- VRRP for High Availability
- Layer 2 Mesh, WDS, Nstreme and 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
- Virtual Machine (VM) for 3rd party application software
- 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)
- 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
- Dynamic Multicast Filtering support for video surveillance

[OA-2815P](#)

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Long-Range Outdoor High Power Access Point WAP-280

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| Model No. | WAP-280 |
| Standard | IEEE 802.11 (Wireless LAN), IEEE 802.3 (Ethernet) |
| Wireless & Wired Security Functions | 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 to 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) |
| 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 300mW 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, L2 mesh, High performance learning bridge with Spanning Tree Protocol (STP) |
| Management | SSH-based interface, Web / text GUI, HTTP, Serial-based CLI, SNMP, Telnet, FTP, TFTP |
| Power over Ethernet | 12-28 VDC, no power over data lines |
| Interface | One RJ45 (PoE) Bulkhead connector, 1 RS232, 1 Reset button, 3 MiniPCI slots, 3 Ethernet ports |
| Mounting | Pole or wall mount via 2pc clamps(included) |
| Enclosure | IP67 certified 100% sealed with strong mechanical structure, die cast all weather-proof housing |
| Weight | 6 lbs (2.73 Kg) |
| Dimension (L x W x H) | H=12"/304.8mm W=9"/228mm D=3.5"/89mm |
| Temperature Range | 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 |
| 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 |
| Platform Characteristics | |
| Platforms | 680 MHz Atheros MIPS CPU |
| Memory | 128 MB DDR RAM |
| Radio Characteristics | |
| Radio Scheme | 802.11a: OFDM Access Method: Time Division Duplex (TDD) with CSMA/CA, TDMA |
| Frequency Range | 2.7 GHz ~ 2.9 GHz |
| Data Rate | 802.11a: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps, 108Mbps turbo mode |
| Channels | North America: 12 Channels (US, Canada) ETSI: 13 Channels (Most European Countries) TELEC: 4 Channels (Japan) |
| Range | 20KM or above, depends on terrain, antennas, and throughput |
| Output Power (radio) | 300mW.. Up to triple radios or expansion cards for even more radios |
| Receiver Sensitivity (without antenna) | 54Mb@-73dBm. 48Mb@-75dBm, 36Mb@-81dBm, 24Mb@-84dBm, 18Mb@-88dBm, 12Mb@-89dBm, 9Mb@-90dBm, 6Mb@-92dBm |
| Approvals | Radio FCC Part15, Section 15.247, IC RS210 |

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