



The 4ipnet OWL500 is a 500mW Wi-Fi 802.11b/g device for **long range** wireless transmission. Its rugged IP68-rated metal housing is weatherproof, watertight and rust-resistant, making it an ideal solution for deployments in harsh conditions, such as outdoor or industrial environments.

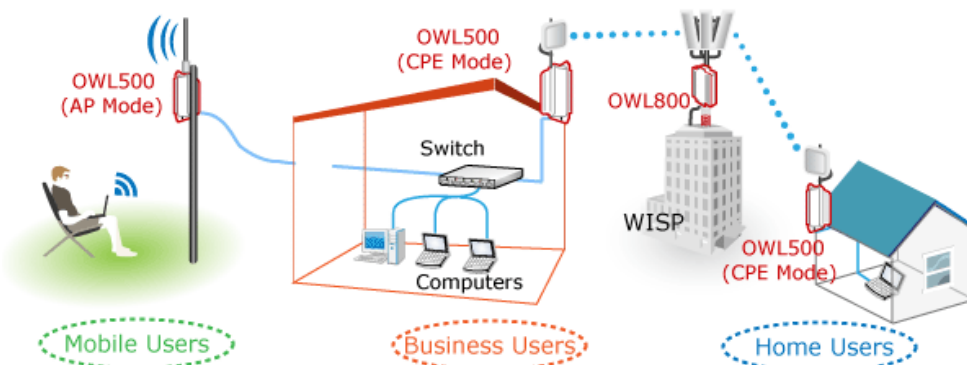


When in **AP mode**, OWL500 operates as an AP station with wall-penetrating high-power signal and long-range coverage to better serve Wi-Fi clients. In addition, it can be set up as a WDS-mesh node by establishing multiple **WDS links to bridge** neighbor access points together.

Coming with business-class security, OWL500 in **AP mode** is also ideal for enterprise applications. Furthermore, one OWL500 with multiple SSIDs is capable of acting as multiple Virtual APs (VAPs). By tagging the traffic from each VAP with a unique VLAN ID, it allows for segmenting a corporate network using VLANs to protect critical resources.

OWL500 supports multiple operation modes (AP/Bridge/CPE) and works well as a last-mile solution for wireless ISPs (WISPs). When operating in **CPE (Client) mode**, it functions as a Wi-Fi modem gateway to receive wireless signal over the last-mile Internet feed from WISPs. The CPE's bandwidth to the Internet can be assigned by the WISP.

Being a versatile Wi-Fi device, OWL500 does not limit itself to outdoor usage only. When managed by a 4ipnet Controller (such as the WHG-series), it performs as a Wi-Fi base station in either a public or private wireless access deployment.



## FEATURES & BENEFITS

### Rugged, Compact-Sized, and Adaptive to Versatile Environments

- Diversified deployments:
  - (1) Municipal Wi-Fi service
  - (2) Home Owner Association (HOA), RV parks, and recreation resorts
  - (3) Hotels, mobile hospitals, and mobile libraries
  - (4) Shopping malls, airports, harbors, roadways, warehouse, and manufacturing plants
- IP68 weather- and water-proof, housed in durable, rust-resistant metal casing

### High Transmit Power and N-type Connector

- Up to 500mW output power from the board to transmit stronger signals for longer range
- N-type connector allows for choosing suitable antenna types and gains with flexibility

### High-speed with QoS for Voice, Video, and Data Applications

- Equipped with a high-speed IEEE 802.11g chipset, supporting transmit rate up to 108Mbps (Super G mode)
- Support IEEE 802.11e Wireless Multi-Media to fulfill bandwidth thirsty triple-play (voice, video, and data) applications

### Power over Ethernet (PoE) & Flexible Mounting Options

- PoE feature reduces the need of additional power cable to the device; a quality Power Supply Equipment (PSE) is bundled in the package
- Wall and pole mountable; mounting kit included

### Multiple Operation Modes for Different Infrastructures

- Two administrator accounts – one for WISP to manage wireless broadband one for subscribers
- Multiple operation modes:
  - (1) **AP Mode** – pure AP
  - (2) **WDS Mode** – AP with wireless bridge
  - (3) **Universal Repeater Mode** – with MAC NAT
  - (4) **CPE Mode** – wireless modem with IP sharing

### Business-class Security and Multiple-SSID/ VLAN tagging Support

- Full range of enterprise-grade wireless security mechanisms such as WEP, WPA and WPA2 (802.11i)
- Multiple-SSID capability enables one OWL500 to behave like up to 8 unique Virtual APs (VAPs), the equivalent of 8 wireless Virtual LANs (VLANs) to securely segment wireless network traffic
- Support client isolation in public hotspot operation

## Wireless Radio

- Frequency band: 2.4 GHz
- Modulations:
  - (1) 802.11b: DSSS (CCK, DQPSK, DBPSK)
  - (2) 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)
- Channels:
  - (1) USA (Channel 1~11)
  - (2) Japan (Channel 1~14)
  - (3) Europe (Channel 1~13)
- Data rate with auto fallback:
  - (1) 802.11b: 1~11 Mbps
  - (2) 802.11g: 6~108 Mbps
- Receiver sensitivity:
  - (1) 802.11b: 11Mbps@-89dBm
  - (2) 802.11g: 54Mbps@-74dBm
- RF max transmit power:
  - (1) US version: 500 mW
  - (2) EU version: 100 mW

## Multiple Operating Modes

- Wireless architecture:
  - (1) AP mode
  - (2) WDS repeater mode (WDS Bridge)
    - Supporting up to 8 WDS links per AP
  - (3) Universal repeater mode (MAC NAT)
    - Acting as AP and STA client simultaneously
  - (4) CPE mode (Client gateway)

## Gateway Features in CPE Mode

- Built-in NAT mode: To support IP sharing on the LAN side for multiple users (subscribers) to get access to the Internet
- Built-in DHCP server for issuing local IP addresses
- Built-in DDNS/DNS client
- Bandwidth management: To limit the uplink and downlink throughput
- Client connection control: For WISP's operator to remotely suspend or resume the service for subscribers at the CPE
- IP/Port forwarding and DMZ

## General Access Point Features

- Number of VAP (SSID): 8
- Number of associated clients per VAP: 32
- Setting for maximum number of associated clients
- Beacon interval: Adjustable to best adapt to the deployment environment
- Auto fallback: Data rate for long distance communication in noisy environments
- IAPP: To provide a faster roaming capability for the stations among different APs nearby
- 802.11g protection: Not to be affected with surrounding existence of 802.11b stations
- RTS/CTS and fragmentation control
- ACK timeout support
- Adjustable transmission power: 5 levels
- Wireless site survey: For scanning the surrounding access points for connection
- Support IEEE 802.11e WMM and QoS within WDS Link

## Security

- Data encryption: WEP (64/128/152-bits), WPA/WPA2 with TKIP or AES-CCMP with key's refreshing period setting
- User Authentication: WEP, IEEE 802.1X, WPA-PSK, WPA-RADIUS, MAC ACL, MAC authentication using RADIUS with built-in 802.1X Authenticator
- Supports IEEE 802.11 mixed mode; open and shared key authentication
- Hidden ESSID: Broadcast SSID enable/disable
- Station Isolation : All associated stations can not communicate with each other when enabled
- Supports AES data encryption over WDS link
- Build-in Layer 2 Firewall, blocking Dynamic ARP Inspection & DHCP Snooping

## Administration

- Web-based management interface with remote configuration management and firmware upgrade capabilities
- Software one-button-click to reset factory defaults
- Utilities for system configuration backup and restoration
- Two administration accounts in CPE mode:
  - (1) "root" for the WISP administrator, who can change all settings including bandwidth limit
  - (2) "admin" for the local administrator, who can view all settings and change only some preferences
- SNMP MIBII support (v1/v2c)
- NTP time synchronization
- Watch dog: Auto recovery while detecting system fault
- Syslog client
- Supports Event Log and SYSLOG reporting to external server
- Supports RADIUS accounting and accounting update
- Supports statistics on total transmission encountered and transmitting error occurred

## Hardware and Environment

- Metal case: Weather proof, compliant with IP68 Standard
- LAN Port: 1 x 10/100 Base-T Ethernet with PoE
- N-type(female) connector for external antenna
- LED Indication: Power x 1, Ethernet x 1, Wireless x 1, Wireless Signal Strength x 3
- PSE for PoE: DC 48V/0.4A
- Form Factor: Wall or Pole Mountable
- Dimensions (W x D x H): 6.5" x 3.8" x 1.9" (165 x 96 x 48 mm)
- Weight: 1.6 lbs (0.72 kg)
- Operation Temperature: -30 ~ +70 °C (-22 ~ 158°F)
- Storage Temperature: -40 ~ +85 °C (-40~185 °F)
- Operation Humidity: 100% maximum (Non-condensing)
- Storage Humidity: 100% (Non-condensing)

## Certifications

- FCC, CE, IP68, RoHS compliant

## Package Contents

- 4ipnet OWL500 x 1
- CD-ROM (with User's Manual and QIG) x 1
- Quick Installation Guide x 1
- PSE with Power cord x 1
- Mounting Kit x 1

**\*\* Specifications subject to change without notice**