



The 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.

OWL500 supports multiple operation modes (AP/CPE/Bridge) 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.

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.

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
- LED indicators to display wireless signal strength

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

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

Power over Ethernet (PoE) & Flexible Mounting Options

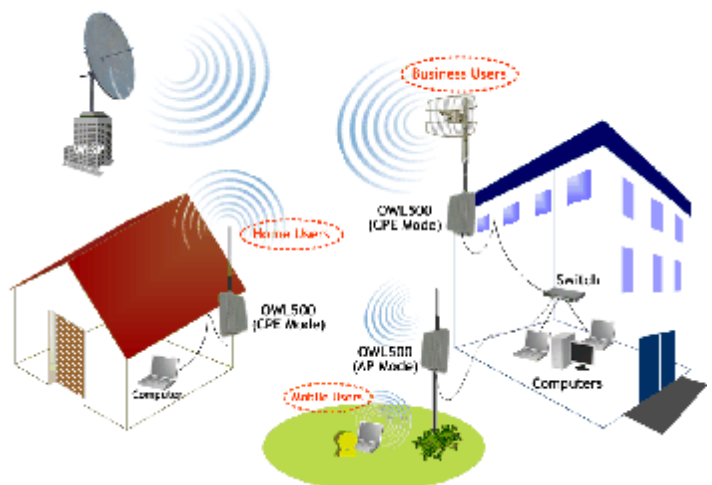
- PoE feature reduces the need of additional power cable to the device; a quality Power Supply Equipment (PSE) is bundled in the package
- Wall and pole mountable; mounting kit included

Multiple Operation Modes for Different Infrastructures

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

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 and Wired Interface

- Wireless:
 - (1) IEEE 802.11g (up to 54Mbps)
 - (2) IEEE 802.11b (up to 11Mbps)
 - (3) Atheros Super G (up to 108Mbps)
- Ethernet: IEEE 802.3 and IEEE 802.3u

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: 108, 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, and 1 Mbps
- Receiver sensitivity:
 - (1) 802.11b: 11Mbps@-89dBm
 - (2) 802.11g: 54Mbps@-74dBm
- RF max transmit power:
 - US version: 500 mW; EU version: 100 mW

Multiple Operating Modes

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

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 (ESSID): 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

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

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 × 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

- OWL500 x 1, Document CD x1, QIG Booklet x1
- PSE (Power Sourcing Equipment) x1, AC Cable x 1
- Mounting Kit x 1

** Specifications subject to change without notice