

## 11a Wireless Outdoor Bridge

**High Transmission Rate Networks--**LevelOne's WBA-4000 Wireless Outdoor Bridge is a cost effective solutions for wireless networks in outdoor environment. With the Turbo A technology, WBA-4000 delivers data rates of up to 108 Mbps in the 5.15 to 5.85 GHz frequency band, and outstanding performance in all aspects.

**Multipoint and Backhaul Solutions--** Using the point-to-point or point-to-multipoint bridge technologies, WBA-4000 offers reliable and flexible wireless connections among buildings and for backhaul solutions. With LevelOne's optional antennas, WBA-4000 allows transmission ranges up to 17 kilometers across buildings, campuses, factories, etc. There are two modes on security setting for WBA-4000: Shared Key and Unique Key, both with 64/128/152-bit WEP (Wireless Encryption Protocol) encryption to ensure sucure data transmissions.

**Waterproof/Weatherproof Installation--** The WBA-4000 features IP68 rated watertight and weatherproof metal housing to avoid water invasion and weather corrosion, thus making it ideal for outdoor installations. This unit also includes an embedded surge protector to prevent damages from lightning or static electricity. The built-in POE function allows you to reduce power cable and adapter expenses and increase location options while deploying wireless outdoor AP installation anywhere.

**Easy to Configure and Management—**The WBA-4000 provides SNMP functions for administrators to manage the networks with ease. All configuration and maintance of this AP can be done with a web browser throught the web-based management interface.

One possible application is for WBA-4000 to be the last-mile connection. With features including low cost, low power consumption, high security and good wireless coverage, WBA-4000 allows service providers or carriers to deploy WAN or LAN rapidly for their customers.



**WBA-4000**

### Related Products



**WAN-4220**

11a 22dBi Outdoor Grid Antenna Kit



**WAN-4230**

11a 23dBi Outdoor Patch Antenna Kit



**WAS-4002**

11a Antenna Splitter

## Key Features

- Complies with IEEE 802.11a standards
- Supports Turbo A 108Mbps
- Highly efficient design mechanism to provide unbeatable performance
- IP-68 rated water-resistant and weatherproof metal housing
- Built-in surge protector
- Power over Ethernet design to eliminate power cable and adapter expanse
- Point-to-Point, Point-to-Multi Point bridge
- Support 64/128/152-bit WEP encryption
- Adjustable output power: 100mW, 50mW, 25mW, 13mW, and 6mW
- The operating range can up to 17KM at 7Mbps data rate with 5GHz 22dBi antenna

## Technical Specification

- **Standard Conformance**  
IEEE802.11a,
- **LAN Port**  
1 x 10/100 Mbps Auto-MDIX RJ-45 Ethernet port
- **IP Configuration**  
Manually Setup IP address  
Automatically get IP address (DHCP client)
- **Radio Operation**
  - **Frequency Type**  
DSSS
  - **Frequency Band**  
5.15~5.35 GHz  
5.50~5.70 GHz  
5.725~5.85 GHz
  - **Operating Channel**  
9 non-overlapping channels
  - **Data Transfer Rate**  
802.11a up to 54 Mbps (6/9/12/18/24/36/48/54 Mbps)  
Turbo A to 108 Mbps (12/18/24/36/48/72/96/108 Mbps)
  - **Modulation**

|                   |                    |
|-------------------|--------------------|
| Basic Mode:       | Turbo Mode:        |
| 6,9 Mbps: BPSK    | 12,18 Mbps: BPSK   |
| 12,18 Mbps: QPSK  | 24,36 Mbps: QPSK   |
| 24,36 Mbps: 16QAM | 48,72Mbps: 16QAM   |
| 48,54 Mbps: 64QAM | 96,108 Mbps: 64QAM |
  - **Receiver Sensitivity**

|                 |                  |
|-----------------|------------------|
| Basic Mode:     | Turbo Mode:      |
| 6 Mbps: -82dBm  | 12 Mbps: -85dBm  |
| 9 Mbps: -81dBm  | 18 Mbps: -84dBm  |
| 12 Mbps: -79dBm | 24 Mbps: -83dBm  |
| 18 Mbps: -77dBm | 36 Mbps: -81dBm  |
| 24 Mbps: -74dBm | 48 Mbps: -78dBm  |
| 36 Mbps: -70dBm | 72 Mbps: -73dBm  |
| 48 Mbps: -66dBm | 96 Mbps: -69dBm  |
| 54 Mbps: -65dBm | 108 Mbps: -65dBm |

- **Antenna Type**  
External high gain antenna
- **RF Connector**  
1 x N-Type connector
- **RF Output Power:**  
Up to 100mW(Software provisionable)
- **Operation mode**  
Point to Point Bridge Modes  
Point to Multi Point Bridge Modes

### Security

WEP 64/128/152-bit encryption,  
MAC Address Access Control List

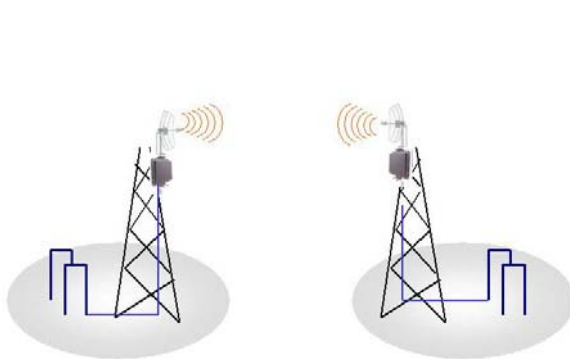
### Management

SNMP v2c read capability  
Web Based Management  
Firmware upgrade via FTP

### Physical Spec.

- **Housing**  
IP-68 Rated housing
- **Lightning Protection**  
Built-in
- **POE Power Spec**  
Power Input: 48VDC, 300mA  
Power Supply: 100~240V, 50~60Hz, 0.25A
- **Temperature**  
Operation: -33~70°C  
Storage: -40~80°C
- **Humidity**  
10%~90%(non-condensing)
- **Dimensions**  
320mm(W) \* 310mm(D) \* 48mm(H)
- **Certification**  
FCC, CE

## Product Diagram



Point-to-Point (Backhaul) Application



Point-to-Multipoint Application

## Ordering Information

- WBA-4000: 11a Wireless Outdoor Bridge

For more information, please contact your LevelOne representative, or visit [www.level1.com](http://www.level1.com)  
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