



### **AIRY-WB900-8K**

COMMANDO AirY 900Mbps, 5.8GHz, 18dBi,  
802.11ac Wave 2, P2P/P2MP,  
8KM Wireless Bridge

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## Product Overview

COMMANDO AIRY-WB900-8K is a high-performance 5.8GHz Outdoor Wireless Bridge designed to provide reliable long-distance wireless connectivity for surveillance networks, campus interconnections, industrial sites, warehouses, farms, and remote network deployments. Based on IEEE 802.11ac Wave 2 technology, it delivers a maximum wireless throughput of up to 867Mbps.

Equipped with a built-in 18dBi directional antenna, the AIRY-WB900-8K supports wireless transmission distances of up to 8 kilometers, making it ideal for Point-to-Point (P2P) and Point-to-Multipoint (P2MP) wireless bridging applications. The device features intelligent channel analysis and automatic optimal channel selection to help maintain stable wireless performance in challenging outdoor environments.

The wireless bridge is powered by a robust hardware platform along with 128MB DDR2 memory and 16MB Flash, ensuring reliable operation and efficient data transmission. It is equipped with Gigabit WAN and Gigabit LAN ports, supporting both 12~48V PoE and 12V DC power input for flexible deployment options.

Designed for outdoor installations, the AIRY-WB900-8K features an IP65-rated enclosure, built-in surge and ESD protection, one-click pairing functionality, and support for AP Mode and Repeater Mode, providing a dependable and cost-effective wireless bridging solution for long-distance outdoor connectivity.

## Product Highlights

- Delivers high-performance 5.8GHz wireless connectivity with a maximum wireless data rate of up to 867Mbps based on IEEE 802.11ac Wave 2 technology.
- Supports Point-to-Point (P2P) and Point-to-Multipoint (P2MP) wireless bridge deployments with transmission distances of up to 8KM.
- Equipped with a built-in 18dBi high-gain directional antenna for stable long-distance wireless communication.
- Features 1 × Gigabit WAN port with 12V Passive PoE and 1 × Gigabit LAN port for high-speed wired connectivity.
- Supports 12~48V Passive PoE and 12V DC power input for flexible deployment in various outdoor environments.
- Supports AP Mode and Repeater Mode for flexible wireless bridge deployment and network expansion.
- Supports up to 4 SSIDs, Wireless MAC Filtering (Whitelist), Wireless Isolation, RF Power Adjustment, and VLAN Configuration for enhanced network management and security.
- Supports intelligent channel analysis, automatic optimal channel selection, and one-click pairing for simplified deployment and improved wireless performance.
- Supports up to 64 wireless clients, making it suitable for surveillance, industrial, campus, rural broadband, and remote networking applications.
- Industrial-grade IP65-rated outdoor enclosure with ESD and surge protection for reliable operation in harsh outdoor environments.

## Features and Benefits

### Long-Distance Wireless Connectivity

The COMMANDO AIRY-WB900-8K is designed for long-range outdoor wireless transmission and supports communication distances of up to 8 kilometers, making it suitable for connecting remote buildings, surveillance systems, industrial sites, campuses, and rural network deployments.

### High-Gain Directional Antenna

Equipped with a built-in 18dBi directional antenna, the wireless bridge provides focused signal transmission and reception, helping improve link stability, signal strength, and long-distance performance.

### High-Speed Wireless Performance

Based on IEEE 802.11ac Wave 2 technology, the AIRY-WB900-8K delivers wireless speeds of up to 867Mbps, enabling reliable transmission of video, voice, and data traffic across long-distance wireless links.

### Point-to-Point and Point-to-Multipoint Deployment

Supports both:

- Point-to-Point (P2P)
- Point-to-Multipoint (P2MP)

This flexibility allows the device to be deployed in a wide variety of wireless bridge and outdoor connectivity applications.

### Intelligent Channel Optimization

Supports intelligent channel analysis and automatic optimal channel selection, helping reduce interference and improve wireless link stability in crowded RF environments.

## **One-Click Pairing**

Features one-click pairing, enabling fast and simplified deployment of wireless bridge links while reducing installation time and configuration complexity.

## **Flexible Operating Modes**

Supports:

- AP Mode
- Repeater Mode

These operating modes provide deployment flexibility for different wireless networking scenarios.

## **Gigabit Wired Connectivity**

Equipped with:

- 1 × Gigabit WAN Port
- 1 × Gigabit LAN Port

The Gigabit interfaces provide reliable wired connectivity and support high-throughput wireless bridge applications.

## **Flexible Power Options**

Supports both:

- 12~48V PoE
- 12V DC Power Input

This enables flexible installation in various outdoor deployment environments.

## **Enhanced Wireless Security**

Provides multiple security mechanisms including:

- NONE (Open)
- WPA/WPA2-PSK (TKIP/AES)
- EAP Authentication
- Wireless MAC Address Filtering (Whitelist Support)
- Wireless Client Isolation
- AP Internal Isolation

These features help improve network security and access control.

### **Advanced Wireless Management**

Supports:

- Hide SSID
- RF Power Adjustment
- WiFi Timing ON/OFF
- Relay Function
- Wireless Client Limitation
- Multiple SSIDs (Up to 4)

These features help optimize wireless network performance and administration.

### **Reliable Outdoor Design**

Designed with an IP65-rated enclosure for protection against dust and water ingress, ensuring reliable operation in outdoor environments.

### **Industrial-Grade Protection**

Provides enhanced protection against electrical disturbances:

- ESD Protection:
  - Air:  $\pm 8\text{KV}$
  - Touch:  $\pm 6\text{KV}$
- Electrical Surge Protection:
  - Common Mode: 2KV
  - Differential Mode: 1KV

These protection mechanisms help ensure reliable operation in outdoor deployments.

### **Energy-Efficient Operation**

With power consumption of less than 10W, the AIRY-WB900-8K delivers reliable wireless bridge performance while maintaining low power consumption.

### **Cost-Effective Wireless Bridge Solution**

Combining 8KM transmission distance, 18dBi directional antenna, P2P/P2MP support, Gigabit connectivity, one-click pairing, and IP65 protection, the COMMANDO AIRY-WB900-8K provides a reliable and cost-effective solution for long-distance outdoor wireless networking applications.

## Software

COMMANDO AIRY-WB900-8K supports standalone wireless bridge management through an intuitive WEB GUI interface, enabling easy configuration, monitoring, and maintenance for long-distance wireless deployments.

### Monitoring

Provides real-time monitoring of:

- System Information
- Device Status
- Wireless Status
- Network Status
- Connected Wireless Clients
- Running Status

### System Setup

Supports:

- Backup Configuration
- Restore Configuration
- Restore Factory Settings
- Firmware Upgrade
- Scheduled Restart
- Immediate Restart
- Time Management
- Time Synchronization
- System Log

## **Network**

Supports network configuration features including:

- DHCP Server
- VLAN Configuration

These features provide flexible deployment and network segmentation capabilities.

## **Wireless Management**

### **Operating Modes**

Supports:

- AP Mode
- Repeater Mode

### **Wireless Features**

- Up to 4 SSIDs
- Hide SSID
- Relay Function
- WiFi Timing ON/OFF
- RF Power Adjustment
- Wireless Client Limitation
- Intelligent Channel Analysis
- Automatic Optimal Channel Selection
- One-Click Pairing

These features help optimize wireless performance and simplify deployment.

## Wireless Security

Supports:

- NONE (Open)
- WPA/WPA2-PSK (TKIP/AES)
- EAP Authentication

Additional security features include:

- Wireless MAC Address Filtering (Whitelist Support)
- Wireless Network Isolation
- AP Internal Isolation

These mechanisms help secure wireless communications and control network access.

## User Management

Supports wireless client management and user access control.

- Wireless Client Limitation
- Supports up to 64 wireless users
- Wireless User Monitoring

These features help maintain stable performance in multi-user environments.

## Device Management

Supports:

- Backup Configuration
- Restore Configuration
- Factory Reset
- Firmware Upgrade
- Scheduled Restart

- Immediate Restart
- Time Synchronization
- System Logging

These management tools simplify ongoing maintenance and troubleshooting.

### **Easy Configuration**

The AIRY-WB900-8K supports one-click pairing, intelligent channel selection, AP/Repeater mode switching, and WEB GUI management, helping reduce deployment time and simplify wireless bridge installation.

### **Logs**

Supports System Logs for device monitoring, diagnostics, and maintenance activities.

## Hardware

### Solid Performance with Non-Blocking Architecture

Powerful hardware platform with 128MB DDR2 memory and 16MB Flash, the COMMANDO AIRY-WB900-8K is designed to deliver stable wireless bridge performance and reliable long-distance data transmission. The optimized hardware architecture ensures efficient operation for Point-to-Point and Point-to-Multipoint wireless deployments.

### Physical Ports and Networking Interfaces

- 1 × 10/100/1000Mbps RJ45 WAN Port with 12V Passive PoE Support
- 1 × 10/100/1000Mbps RJ45 LAN Port
- DC 12V Power Input
- Reset Button
- AP/Repeater Mode Selection Switch
- LED Indicators (SYS, WAN, LAN, 5G WiFi, Signal Strength ×4)

The Gigabit Ethernet interfaces provide high-speed wired connectivity, while the integrated PoE support simplifies outdoor deployment by carrying both power and data through a single Ethernet cable.

### High-Gain Directional Antenna System

The AIRY-WB900-8K features a built-in 18dBi directional antenna designed specifically for long-distance wireless bridge applications.

- Operating Frequency: 5150MHz – 5850MHz
- Antenna Gain: 18dBi
- Polarization: Vertical / Horizontal Dual Polarization
- Horizontal Beam Angle: 30°
- Vertical Beam Angle: 15°

This antenna design helps achieve stable long-range wireless links while minimizing interference from unwanted directions.

### **Long-Distance Wireless Bridge Design**

Designed for outdoor wireless bridge deployments, the AIRY-WB900-8K supports transmission distances of up to 8 kilometers and is suitable for:

- Building-to-Building Connectivity
- CCTV Backhaul Networks
- Campus Connectivity
- Industrial Networking
- Rural Broadband Deployments

### **Flexible Power Options**

Supports multiple power input methods:

- 12~48V PoE
- DC 12V Power Input

An optional IEEE 802.3af 48V PoE version can also be customized according to deployment requirements.

### **Reliable Outdoor Operation**

Designed to operate reliably in outdoor environments.

- Operating Temperature: -20°C to 55°C
- Storage Temperature: -40°C to 70°C
- Humidity: 5% to 95% (Non-Condensing)

These specifications ensure dependable performance across varying environmental conditions.

## Industrial-Grade Protection

The AIRY-WB900-8K includes built-in protection mechanisms to enhance reliability and operational stability.

- ESD Protection:
  - Air:  $\pm 8\text{KV}$
  - Touch:  $\pm 6\text{KV}$
- Electrical Surge Protection:
  - Common Mode: 2KV
  - Differential Mode: 1KV

These features help protect the device against electrical disturbances commonly encountered in outdoor deployments.

## Weather-Resistant Outdoor Design

Featuring an IP65-rated enclosure, the AIRY-WB900-8K is designed to withstand challenging outdoor conditions while maintaining reliable wireless bridge performance.

## Energy-Efficient Operation

With power consumption of less than 10W, the AIRY-WB900-8K provides reliable long-distance wireless connectivity while maintaining low power requirements.

## Compact and Lightweight Design

The compact outdoor enclosure enables easy installation and deployment.

- Dimensions: 168mm × 86mm × 42.5mm
- Weight: 0.5kg

Its lightweight construction simplifies mounting and alignment during outdoor installations.

## Specifications

The COMMANDO AIRY-WB900-8K is a high-performance 5.8GHz Outdoor Wireless Bridge based on IEEE 802.11ac Wave 2 technology. It supports wireless transmission distances of up to 8KM, built-in 18dBi directional antenna, Point-to-Point (P2P) and Point-to-Multipoint (P2MP) deployments, Gigabit Ethernet connectivity, and flexible power options for long-distance outdoor networking applications.

Table 1. Specifications

| Technical Parameters           | Specification                                    |
|--------------------------------|--------------------------------------------------|
| Model                          | AIRY-WB900-8K                                    |
| Wireless Standard              | IEEE 802.11a/n/ac Wave 2                         |
| Memory                         | 128MB DDR2                                       |
| Flash                          | 16MB                                             |
| Frequency Band                 | 5.8GHz                                           |
| Frequency Range                | 5150MHz – 5850MHz                                |
| Wireless Data Rate             | Up to 867Mbps                                    |
| Wireless Transmission Distance | Up to 8KM                                        |
| Wireless Deployment Mode       | Point-to-Point (P2P), Point-to-Multipoint (P2MP) |
| Operating Mode                 | AP Mode, Repeater Mode                           |
| Maximum Wireless Clients       | Up to 64 Users                                   |
| Multiple SSID                  | Up to 4 SSIDs                                    |

| Technical Parameters    | Specification                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Type            | Built-in Directional Antenna                                                                                                                               |
| Antenna Gain            | 18dBi                                                                                                                                                      |
| Polarization Mode       | Vertical / Horizontal Dual Polarization                                                                                                                    |
| Horizontal Beam Angle   | 30°                                                                                                                                                        |
| Vertical Beam Angle     | 15°                                                                                                                                                        |
| Hardware Interfaces     | 1 × 10/100/1000Mbps WAN Port with 12V Passive PoE, 1 × 10/100/1000Mbps LAN Port, DC Power Interface, Reset Button, AP/Repeater Switch                      |
| LED Indicators          | SYS, WAN, LAN, 5G WiFi, Signal Strength (4 LEDs)                                                                                                           |
| Wireless Security       | NONE (Open), WPA/WPA2-PSK (TKIP/AES), EAP Authentication                                                                                                   |
| Access Control Features | Wireless MAC Address Filtering (Whitelist), Wireless Isolation, AP Internal Isolation                                                                      |
| Wireless Features       | Hidden SSID, RF Power Adjustment, WiFi Timing ON/OFF, Relay Function, Intelligent Channel Analysis, Automatic Optimal Channel Selection, One-Click Pairing |
| Network Features        | VLAN Configuration, DHCP Server                                                                                                                            |
| Management              | WEB GUI Management                                                                                                                                         |
| Device Management       | Configuration Backup, Configuration Restore, Factory Reset, Firmware Upgrade, Scheduled Restart, Immediate Restart, Time Synchronization, System Log       |
| Power Input             | 12~48V PoE or DC 12V                                                                                                                                       |
| Power Consumption       | < 10W                                                                                                                                                      |

| Technical Parameters        | Specification                            |
|-----------------------------|------------------------------------------|
| Protection Grade            | IP65                                     |
| Dimension (L × W × H)       | 168mm × 86mm × 42.5mm                    |
| Weight                      | 0.5kg                                    |
| Operating Temperature       | -20°C to 55°C                            |
| Storage Temperature         | -40°C to 70°C                            |
| Humidity                    | 5% ~ 95% (Non-Condensing)                |
| ESD Protection              | Air: ±8KV, Touch: ±6KV                   |
| Electrical Surge Protection | Common Mode: 2KV, Differential Mode: 1KV |
| Warranty Period             | 2 Year                                   |

Table 2. COMMANDO AIRY-WB900-8K LED Indication

| LED Indicator | LED Status                                                                    |
|---------------|-------------------------------------------------------------------------------|
| SYS           | Blinking: System is operating normally.                                       |
| WAN           | ON/Blinking: WAN port is connected and network activity is present.           |
| LAN           | ON/Blinking: LAN port is connected and network activity is present.           |
| 5G WiFi       | ON/Blinking: 5GHz wireless radio is enabled and wireless activity is present. |
| Signal * 4    | Indicates wireless signal strength level.                                     |

## Included in the Bundle/Box

COMMANDO AIRY-WB900-8K comes with the following accessories:

- 1 × COMMANDO AIRY-WB900-8K Wireless Bridge.
- 1 × PoE Adapter
- 2 × Nylon Ties
- 1 × Guide Manual
- 1 × Gift Box

## Support and Warranty

- Same-day assistance
- Comprehensive 24-hour support using common communication/chat platforms, Email and Telephone.
- Provide FAQs and troubleshooting help online (self-service) through cloud-based solutions.
- Highly technical and trained representatives to resolve issues.
- Two-year default warranty with option of warranty extension up to 3 years

COMMANDO WarrantyX Program available  
on: <https://www.commandonetworks.com/warranty>

Table 3. Support and Warranty

| Warranty and Support |                                                                                                                                                                                                                                                                                                                       |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Products covered     | COMMANDO AirY 900Mbps, 5.8GHz, 18dBi, 802.11ac Wave 2, P2P/P2MP, 8KM Wireless Bridge                                                                                                                                                                                                                                  |
| Warranty duration    | Two Year RTB (Return To Base) replacement warranty – optionally extendable up to 3 years.                                                                                                                                                                                                                             |
| Hardware replacement | COMMANDO, its resellers or its service center will use commercially reasonable efforts to replace the product subject to stock availability. Otherwise, a replacement will be arranged within 15 working days after receipt of the Return Materials Authorization (RMA) request.                                      |
| End-of-life policy   | In case of discontinuation of the product, support is limited to 3 years from announcement date.                                                                                                                                                                                                                      |
| Effective date       | Hardware warranty commences from the date of shipment to customer (and in case of resale by a COMMANDO reseller, not more than 90 days after original shipment by COMMANDO).                                                                                                                                          |
| Support duration     | Lifetime support.                                                                                                                                                                                                                                                                                                     |
| COMMANDO Care        | COMMANDO will provide 24x7 support for basic configuration, diagnosis, and troubleshooting of device-level problems for up to one year from the date of shipment of the originally purchased product. This support does not include solution or network-level support beyond the specific device under consideration. |
| Online Portal Access | Warranty allows guest access to commandonetworks.com for all available technical queries.                                                                                                                                                                                                                             |

## Ordering Information

To place an order, please contact your local reseller/distributor or COMMANDO Sales Representative at [www.commandonetworks.com/catalog](http://www.commandonetworks.com/catalog)

Table 4. COMMANDO wireless bridge Ordering Information

| Product Code   | Product Description                                                                             |
|----------------|-------------------------------------------------------------------------------------------------|
| AIRY-WB900-8K  | COMMANDO AirY 900Mbps, 5.8GHz, 18dBi, 802.11ac Wave 2, P2P/P2MP, 8KM Wireless Bridge            |
| AIRY-WB900P-5K | COMMANDO AirY 900Mbps, 5.8GHz, 14dBi, 802.11ac Wave 2, P2P/P2MP, PoE, Disp, 5KM Wireless Bridge |
| AIRY-WB900-5K  | COMMANDO AirY 900Mbps, 5.8GHz, 15dBi, 802.11ac Wave 2, P2P/P2MP, 5KM Wireless Bridge            |
| AIRY-WB900-3K  | COMMANDO AirY 900Mbps, 5.8GHz, 12dBi, 802.11ac Wave 2, P2P/P2MP, 3KM Wireless Bridge            |
| AIRY-WB300-1K  | COMMANDO AirY 300Mbps, 2.4GHz, 6dBi, 802.11n, P2P/P2MP, 1KM Wireless Bridge                     |

## Document History

| Release   | New or Revision | Described in  | Date           |
|-----------|-----------------|---------------|----------------|
| Release 1 | First Release   | First Release | July 1st, 2026 |