



COMMANDO AirPRO Series Wireless Bridge Data Sheet

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Product Overview

COMMANDO AirPRO Series Wireless Bridge complies with IEEE 802.11ac standard and is backward compatible with IEEE 802.11b/g/n standard along with built in MIMO High Gain 25/16/10dBi MIMO Internal Antenna as per model specifications. All Wireless Bridges Support HI-MAX TDMA Technology which use polling technique to solve the hidden node and resource waste problem between the CPE and base station. It provides low latency, high throughput in PTP/PTMP/MTMP application likes IP camera, long range Wi-Fi Transmission) with Beamforming Technology.

It has IP65 Waterproof and Dust proof Enclosure casing and enables the connection of two or more different local area network (LAN) segments by bridging a wireless connection between them. It works much like a wired network bridge and is used to connect LANs that are logically separated and/or located in different physical locations. It is primarily used in corporate LANs, which often span across geographical locations. At the backend the wireless bridges are connected to the LAN switch or router. For the two network segments to communicate, each data packet travels from the local Ethernet/router to the wireless bridge, which wireless broadcasts it to the wireless bridge of the other LAN segment. Besides point-to-point bridging, a wireless bridge can also be connected to more than one (Up to 4) wireless bridge simultaneously forming a mesh network. Unlike traditional enterprise Wi-Fi systems that required a controller. It comes as a standalone device.

It is designed for the Outdoors with weather resistant IP65 case specifically for outdoor installations. It has 4 in 1 mode like AP, Wireless Client, AP Repeater, Mesh mode with range up to 15 Kms with up to 27dBi input Power. It is industrial grade Wireless Bridge with great communication efficiency which enhances the sharing of files, photo, audio, video and gaming experience over wireless network.

It can identify and determine the correct transmission speed and half/full duplex mode of the attached devices. It also supports standard Auto-MDI/MDI-X that can detect the type of connection to any Ethernet device without requiring special straight or crossover cables, Store- and-Forward forwarding scheme to ensure low latency and high data integrity.

Product Highlights

- Supports Mesh mode can connect multi point to multi point connection to other bridges and APs (up to 4).
- Supports IEEE 802.11ac 5GHz Wireless bands.
- Multiple Operational Modes like AP, Wireless Client, AP Repeater, Mesh. All COMMANDO AirPRO Series Wireless Bridge default mode is AP mode.
- POE IN 24V DC, 0.5A power inputs as per model.
- IEEE 802.1q Tag based VLAN
- Support Enterprise security: WPA, WPA2, 802.1x RADIUS
- Supports IEEE 802.11ac 5GHz Wireless with inbuilt 25/16/10dBi gain Antenna with RF input Power up to 27dBi.
- Support wireless RF power adjustable as per user movements from bridge.
- Supports intelligent load balance based on users.
- Support seamless roaming and low-rate terminal access.
- Support inbuilt Wi-Fi channel analyzer.
- Supports Wi-Fi client distance up to 15KM depending on surrounding conditions.
- Support Open or encryption like WPA/WPA2-PSK.
- Plug and Play design simplifies installation with self-adaption.
- Compact IP65 casing comes with ABS waterproof, dust proof and sunscreen shell which avoid the damage from dust & rainy weather. Meantime, it is adaptive to various environment.
- Silent design perfect for noise sensitive environments.
- With Zero Touch Provisioning: Plug and play and no setup. Affordable, Easy-to-Use AP for Small Business Networks, with Zero Configuration Required.
- Built-in High-Performance Processor with long life, Suitable for Deployment of large scale Commercial Scenarios
- Comes with one-year default warranty – optionally extendable up to 3 years.

Features and Benefits

Multiple Operational Modes

It has 4 in 1 mode like AP, Wireless Client, AP Repeater, Mesh. All COMMANDO AirPRO Series Wireless Bridge default mode is in AP mode.

Fast Ethernet LAN speed

It provides and offers a wide range of models for different network deployment requirements with Fast Ethernet speed. Auto-negotiation senses the link speed of a network device in wired 10 or 100 Mbps. Auto sensing 10/100 ports with auto MDIX capabilities which also removes speed and duplex mismatches automatically.

Easy to Use

COMMANDO AirPRO Bridge are WEB GUI based easy to use and manage standalone device. It requires minimal configuration, so setup is simple and hassle-free. For wireless clients/users. It can intelligently adjust for compatibility and optimal performance by DFS. Its compact size makes it ideal for Outdoor desktops/wall/ceiling with limited space. Dynamic LED lights provide real-time work status display and basic fault diagnosis. Easy Installation, Plug- and-play installation with no configuration required.

Wireless speed for client and bridge

By setting channel bandwidth up to 20/40 MHz can increase the speed of bridge connection up to 300Mbps between bridges and also can check free channels available with inbuilt Wi-Fi analysis.

Weatherproof Enclosure with IP65

It has IP65 resilient weatherproof enclosure protects the access points against harsh outdoor condition. It comes with ABS waterproof, dust proof and sunscreen shell which avoid the damage from dust & rainy weather. Meantime, it is adaptive to various environment with ± 6 KV Lightning Protection with no Ingress of dust as well as waterproof enclosure. These energy efficient Bridges are well built and rigorously tested and can sustain in very rough environment to provide the reliable performance.

Wi-Fi That Goes the Distance

Supports bridge distance of up to 15KM with (Point to Point) PTP / (Point to Multi Point) PTMP / (Multi Point to Multi Point) MTMP. Designed for Point-to-Point and Point-to-Multipoint applications with 27dBi high power and 25dBi MIMO high gain internal antenna which can greatly increase the Wi-Fi range to 15KM distance and supply

stable Wi-Fi signal for users.

Network Security

Support Flexible user Access Control Policies. MAC Filtering function to block the access of illegal hosts. Access Rules can be applied to permit or deny Wi-Fi users.

Compact and Silent Performance

It operates quietly, making it ideal for use in virtually any room or office. Perfect for noise sensitive environments.

Support uninterrupted critical network infrastructure

POE+ IN or 24V DC depending on model, power input which protect from power failures and increases life of device. It comes with Lighting surge protection Common mode $\pm 6\text{KV}$ and Differential mode $\pm 2\text{KV}$. With this feature protect on cost and the impact to your business by losing these network devices and thus the users/servers connected to them.

Cost Efficient

State of art quality product that can serve on real time high-speed Performance with AC input power, highly reliable, conformance to international open standards, durable, serviceable, aesthetics, perceived quality, enhanced performance leads to value to money.

Green Technology

It features the energy-efficient Ethernet that can save power. It automatically adjusts power consumption according to the link status to limit the carbon footprint of your network. It also complies with RoHS, prohibiting the use of certain hazardous materials. Besides that, most of the packaging material can be recycled and reused.

Software

COMMANDO AirPRO Series Wireless Bridge software functions with following pages.

Main:

The following page shows the current status and some basic settings of the device like Status, Statistics, Connections.

Wizard:

Setup Wizard will guide you through a step-by-step process to configure your wireless device, Setup Country, Setup IP Address, Setup Wireless Parameters, Setup Wireless Security.

System:

System Settings to configure the Country, Time Zone of device, Password Settings, Firmware Upgrade, Backup / Restore, Reboot Device, User Certificates RADIUS Settings.

Network:

Network Settings configures the IP address, subnet mask, DHCP, and other parameters for your local area network that is connected to the LAN port of the device, SNMP Settings, VLAN Settings, Bridge Info, ARP Info.

Wireless:

Use this page to change the wireless mode as well as configure any associated wireless network parameters, Basic Settings, VAP Settings, Advanced Settings, Access Control, Throughput Control, Wireless Schedule.

Logout:

Use this page to logout.

Services:

Services like Speed Test, Site Survey, System Log, Network Ping, Ping Watchdog, Device Discovery, Antenna Alignment, Network Traceroute.

It also supports following functions

- Support TDMA Setting.
- Support multiple SSID Up to 4.
- Support WEP encryption Setting like Wireless Security WEP Encryption-64/128/152 bits, WPA/WPA2 Personal Encryption (WPA-PSK using TKIP or AES), WPA/WPA2 Enterprise Encryption (WPA-EAP using TKIP)
- Support System Setting with Web-based configuration.
- Firmware upgrade either via web browser or TFTP.
- Administration Management with Admin Username / Password can be configured.
- Online System monitoring like device and networking status statistic.
- Support System Log like local log, host log, log file exporting.
- Reset to factory defaults.
- Backup device configuration, then restore this configuration if need.

Hardware

Solid performance with non-blocking architecture

- All ports capable of Fast Ethernet speed. Full speed of data transferring with (Auto-Negotiation/Auto MDI/MDIX).
- Solid performance with non-blocking architecture.

Physical Ports and Networking Interfaces

- LED Indicators: Power, Diag, Ethernet
- Reset Button
- PoE 24V DC/0.5/1A Input

Extra Long operational life

- High Quality PCB Circuit Board and PCB Surface Treatment Using Gold Sinking Process.
- Support temperature range 0° C to 55° C
- Lighting surge protection Common mode $\pm 6\text{KV}$ and Differential mode $\pm 2\text{KV}$.
- Exceptional Performance in Harsh Outdoor Climates with IP65 weatherproof and dust proof enclosure ensuring it can withstand harsh outdoor and indoor environments.

Table 1. Hardware Specifications

HARDWARE SPECIFICATION	
Standard	IEEE 802.11 ac/b/g/n
Interface	1* 10/100 Mbps
Antenna	Directional 25/16/10dBi MIMO Panel antenna.
Working Temperature	0°C to +55°C
Working Humidity	5%~95%RH (Non-condensing)
Warranty Period	1 Year

Specifications

It supports AP, Wireless Client, AP Repeater, Mesh to suit for variety application environment. Avoid the complex setup program, save much human work and cost, make the long-range wireless coverage, data transmit and wireless monitoring simple and professional. Plug and Play, installed in areas where power outlets are not readily available, eliminating the mess of altering existing network infrastructure. Time-division multiple access (TDMA) is a channel access method for shared-medium networks. It allows several users to share the same frequency channel by dividing the signal into different time slots. The users transmit in rapid succession, one after the other, each using its own time slot. This allows multiple stations to share the same transmission medium (eg. radio frequency channel) while using only a part of its channel capacity. Supports 802.11ac, Standalone models with either open or WPA/WPA2-PSK encryption.

Table 2. Specifications

Technical Specification	
Wireless	IEEE 802.11 a/n, 300Mbps MIMO Technology
Interface	1*10/100Mbps LAN Port 1 Reset Button to restore factory default
Data Rate	300Mbps
Network Protocol	IEEE 802.3(Ethernet) IEEE 802.3u(Fast Ethernet) IEEE802.11 a/n
Wireless Setting	Support TDMA Support multiple SSID Support WEP encryption
Wireless Security	WEP Encryption-64/128/152 bit WPA/WPA2 Personal Encryption (WPA-PSK using TKIP or AES) WPA/WPA2 Enterprise Encryption (WPA-EAP using TKIP) High SSID up to 4

Table 3. Model Comparison

Product Code	AIR-WB5G-15K-PRO	AIR-WB5G- 3K-PRO	AIR-WB5G- 8K-PRO-HG
PTP Distance	15KM	3KM	8KM
Operation mode	AP, Wireless Client, AP Repeater, Mesh	AP, Wireless Client, AP Repeater, Mesh	AP, Wireless Client, AP Repeater, Mesh
Wireless data rate	300Mbps	300Mbps	300Mbps
Antenna	25dBi, 2x2 MIMO Dual- polarized Directional Antenna	10dBi, 2x2 MIMO Omni Internal Antenna	16dBi, 2x2 MIMO, Omni Internal Antenna
Wireless Power	27dBm	20dBm	27dBm
Frequency	5GHz	5GHz	5GHz

Table 4. COMMANDO AirPRO Series AP LED indication

LED Indicator	LED Status
Power	Green OFF: No power. Green ON: POE DC power given.
Diag	Diagnostic Green Blinking: Device connected and Green blinking shows activity. Green OFF: Device not working.
Ethernet	Green Blinking: LAN connected to PC, Green blinking shows user activity. Green OFF: LAN cable not connected

Included in the bundle/box

COMMANDO AirPRO Series Wireless Bridge

All COMMANDO AirPRO Series Wireless Bridge made available for use globally along with accessory used to facilitate or enhance operations. All COMMANDO AirPRO Series Wireless Bridge Comes with following Accessories.

- COMMANDO AirPRO Series Wireless Bridge.
- Patch Cord
- Rackmount with Mounting Screws
- 1x LAN cable

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.
- One-year default warranty with option of warranty extension up to 3 years

Table 5. Support and Warranty

Warranty and Support	
Products covered	COMMANDO AirPRO Series Wireless Bridge
Warranty duration	One 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 Cis	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

Ordering information for the COMMANDO AirPRO series Bridge, To place an order, please contact your local reseller/distributor or COMMANDO Sales Representative at www.commandonetworks.com/ordering

Table 6. COMMANDO AirPRO series Bridge Ordering Information

Product Code	Information
AIR-WB5G-3K-PRO	COMMANDO AirPRO 3KM, 300Mbps, 5GHz, 802.11n, 10dBi, 20dBm, 2x2 MIMO, Cloud Wireless Bridge
AIR-WB5G-15K-PRO	COMMANDO AirPRO 15KM, 300Mbps, 5GHz, 802.11n, 25dBi, 27dBm, 2x2 MIMO, Cloud Wireless Bridge
AIR-WB5G-8K-PRO-HG	COMMANDO AirPRO 8KM, 300Mbps, 5GHz, 802.11n, High Gain 16dBi, 27dBm, 2x2 MIMO, Cloud Wireless Bridge

Document History

Release	New or Revision	Described in	Date
Release 1	First Release	First Release	January 4, 2021