

A background image showing a series of concentric, overlapping circles in shades of grey and brown, resembling a signal or interference pattern. A white horizontal line is positioned above the text.

# WLAN Wireless

Three thick, parallel diagonal bars in shades of teal and dark blue, slanted from the bottom-left towards the top-right, with a slight drop shadow effect.

WAP2100-W512B

In-wall/panel wireless APs

## Product Overview

BDCOM WAP2100-W512B is a high-performance wireless AP product designed and launched by Shanghai Boda for space-intensive indoor scenarios such as school dormitories, hotel rooms, hospital wards, collective apartments, etc.

The WAP2100-W512B In-wall AP is compatible with 86\*86mm design, conforms to national standards, and is extremely versatile. Its flush mounting solution keeps the AP's power, data and WiFi antennas all hidden, helping to keep the user's room clean and attractive. It also helps to reduce network failure nodes and ease maintenance.



WAP2100-W512B

## "Key Features"

### ▪ **High-performance wireless solutions**

The WAP2100-W512B is built with a high performance wireless chip scheme, supporting 802.11a/b/g/n/ac/wave2 and other wireless protocols, with high throughput and stability. The unit can support 1267Mbps open bandwidth with 2.4G and 5G, which can meet up to 40 users with business access, with extremely high concurrent capabilities.

The WAP2100-W512B supports wireless load balancing technology. In high-density access scenarios, not only can you ensure that traffic is evenly distributed across multiple APs, avoiding local congestion; Within a single AP, the terminal can also be properly allocated through the 2.4GHz and 5GHz spectrum. This ensures that the AP not only has access to more end users, but also that each user has a good online experience.

### ▪ **Comprehensive security features**

WAP2100-W512B can provide a variety of secure access methods such as WEP/WPA/WAP2, support wireless IPS/IDS, support Layer 2 user isolation, support centralized ACL control, and so on.

Supports docking to WSC6100 Wireless AC, BCP8200 Cloud Platform for PCs, cell phones, A variety of terminals, such as tablets, provide rich and practical diversity authentication features, to provide users with convenient access services.

Supports rogue AP detection and follow-up, supports wireless attack prevention, supports static black and white lists, and reduces intrusion of rogue users into the wireless network.

- **Human-focused detail optimization**

WAP2100-W512B supports LED controlled design: During night rest, the device can be operated LED light off, avoid the light source irritating the human eye; When the network patrol, the LED lights can be turned on all the time, improving the efficiency of the engineer. All LEDs can be issued in bulk on the AC controller, or push-button switch on a per AP basis, providing flexibility and convenience.

The W512B supports case exchange and is available in a variety of colors including Pure Black, Dark Grey and Light Gold in addition to Classic White. The perfect match to the user-personalized interior design.

- **Practical engineering**

The WAP2100-W512B is a compact design, can be fully embedded inside the wall of 86\*86mm national scale, beautiful and generous. Reduce the size of the AP body by approximately 15% while ensuring wireless coverage and thermal control. This will not only ensure the overall simplicity and beauty, but also make sure that when the product is delivered, it will be easier to deal with construction difficulties such as the "Cement Block Barrier", the "network cable reservation", "thermal expansion", and "contraction".

The WAP2100-W512B provides wired wireless integration design, while providing WLAN wireless coverage, also provides a single Ethernet interface, ensuring that the user's original network cable resources are not wasted. Protect your investment.

- **Rich management features**

The WAP2100-W512B supports thick-thin AP all-in-one design, can be configured for use separately, or can interface to the Borda WSC6100 Series wireless AC products, implementing the CLI. Web, SNMP, and more.

The W512B interfaces to the Borda PALLAS platform, enabling and AC, switching, routing, Security and other products, greatly improve dispute operations efficiency.

## "Hardware Specifications"

Product model number	BDCOM WAP2100-W512B
Mesh ports are standard	1 Gigabit WAN port (POE support) 1 Gigabit LAN port
Operating frequency	2.4GHz and 5GHz
Wireless Protocol	802.11 a/b/g/n/ac/wave2
Wireless MIMO	Dual band 4-stream
Air velocity	1267Mbps
Antenna type	Built-in omni-directional
RF Power	18dBm
Number of coverage areas	Recommended 10 meters, one single room
Recommend concurrent users	40 with business users (may be affected by the environment)
Other interfaces	One RST/LED switch
Power supply mode	POE input
Overall power consumption	10W maximum
Deployment methods	86 boxes into the wall
Device dimensions	86×86×40mm
The weight of the device	100g
Operating temperature	0°C to 50°C
Operating humidity	10% to 95% (non-condensing)
Degree of protection	IP41

## "Software Features"

Operating mode	Supports AP mode, route mode, bridge mode
IP Function	Support for IPv4, DHCP, NTP, and more
	Supports address acquisition methods such as static IP assignment, dynamic DHCP, and PPPoE dial-up
Wireless management	Support CAPWAP management protocol
	Supports discovery of AC in Option43, DNS, etc.
	Supports AC, AP Layer 2 and Layer 3 networking
	Support AC and AP cross-NAT networking
	Supports Layer 2 and Layer 3 user roaming

	Supports AC, AP clock synchronization, version synchronization, and configuration synchronization
Wireless access	Supports 802.11 protocol suite
	Support multi-SSID management, Chinese SSID and SSID hiding
	Support SSID-free and VLAN binding function
	Supports SSID-based user count limiting and isolation
	Each SSID is supported to specify a parameter template individually
	Support country code settings
User authentication	Supports on-premises and cloud certifications
	Support local account number, SMS, WeChat, card voucher and other authentication methods
	Supports black-and-white lists of users
	Time period control and bandwidth control for user access is supported
QoS	Supports 802.11e/WMM
	Support for global traffic speed limiting
	Supports AP, VLAN, and user-based traffic limits
	Supports radio band and AP based user load balancing
Wireless optimization	Supports one-touch automatic network optimization and radio frequency parameter customization
	8 wireless scene templates are factory-set to allow user-defined add-on templates
	Supports automatic background optimization without manual intervention
	Supports 5G priority access, enabling low-rate users to limit access
Security Defense	Supports PSK authentication methods
	Supports wireless encryption such as WEP, WPA, WPA2, etc.
	Supports secure filtering based on IP, MAC, etc.
	Support DDoS, De-Auth and other attack protection
	Support Rogue AP detection
Apply value added	Support RTLS probe
	Supports docking the wireless positioning system
Management and Operations	Supports legacy device management such as Telnet, SSH, Web, SNMP, and TR069
	Supports multiple diagnostic tools such as ping, tracert, debug, etc.
	Supports centralized management of CAPWAP-based AC
	Support PALLAS unified cloud management
	Supports AP indicator on/off

## "Ordering Information"

WAP2100-W512B	WAP2100-W512B In-Wall Smart Wireless AP, 1 Gigabit WAN port, 1 Gigabit LAN port, 1 LED switch, internal MIMO antenna, Wave2 protocol support, Maximum speed 1267Mbps; POE powered, POE equipment sold separately.
---------------	---

WAP-PSE-1000	Single-port Gigabit PSE power supply module

**Copyright © 2025 Shanghai Baud Data Communication Co., Ltd. All rights reserved**

No unit or individual may reproduce and copy the contents of this manual without the written consent of Shanghai Baud Data Communication Co., Ltd. and shall not disseminate it in any form.

## **Disclaimer of Warranties**

This manual is for reference only and does not constitute any contract or promise, Shanghai Baud Data Communication Co., Ltd. seeks to provide accurate information in this manual, but does not warrant that the contents of the manual are free from technical descriptive errors or typographical errors, BDCOM assumes no liability in this regard. BDCOM reserves the right to make changes to the contents of this manual without notice or notice.



# **Shanghai Baud Data Communication Co., Ltd.**

Address: No.123 Juli Road, Pudong Zhangjiang High Tech Park, Shanghai 201203, P.R. China

Official website: [www.bdcom.cn](http://www.bdcom.cn)

Tel: 021-50800666

Fax: 021-50801839