BDCOM

In-Wall Intelligent Wireless AP
WAP2100-W618

High cost-effective
Up to dual-frequency 11ac
Qualcomm chip
Half-occupation of Lic

Simple and easy
86-box in-wall design
Slender chassis
Convenient installation

User-friendly design
LED on-off as your wish
Dustproof Ethernet port
Invisible cables

Product Overview

WAP2100-W618 is the BDCOM-developed high-performance WiFi6 in-wall wireless AP oriented for space-intensive indoor scenarios such as school dormitories, hotel rooms, hospital wards, and apartments.

WAP2100-W618 in-wall AP is suitable for 86*86mm universal design and conforms to national standards. The AP's power supply, data cable and WiFi antenna can be hid when installing, which helps to keep the user's indoor environment clean and tidy, and also helps to reduce network failure nodes and maintenance difficulty.

Product Characteristics

High-performance Wireless Solutions

WAP2100-W618 is built with high-performance wireless chipset, and supports 802.11a/b/g/n/ac/wave2/ax and other wireless protocols, with high throughput and good stability. The 2.4G and 5G devices can support 1775Mbps air interface bandwidth to satisfy up to 80 users with service access, with strong concurrency capability.

WAP2100-W618 supports wireless load balancing. In high-density access scenarios, WAP2100-W618 can achieve reasonable allocation of terminals within a single AP through the 2.4GHz and 5GHz spectrum while ensuring balanced traffic distribution among multiple APs to avoid congestion, which enables the AP to access more end users, and provides the better Internet service.

Comprehensive Security Features

WAP2100-W618 supports WEP/WPA/WAP2/WPA3 access modes, wireless IPS/IDS, the layer-2 user isolation, and centralized ACL control.

WAP2100-W618 supports docking with WSC6100 wireless AC and BCP8200 cloud platform, provides rich and practical diversified authentication functions for computers, mobile phones, tablets and other terminals, to facilitate user access authentication.

WAP2100-W618 provides illegal AP detection and subsequent processing, wireless attack defense, static black and white lists, to reduce the illegal intrusion on wireless networks.

Rich Manageable Features

WAP2100-W618 supports the integrated design of fat and thin APs, which can be individually configured, and can also be connected to BDCOM WSC6100 series wireless ACs to realize CLI, Web, SNMP management.

WAP2100-W618 can also be managed through the BDCOM cloud-based operation platform to achieve unified management of AC, switches, routers, security and other products, greatly improving the efficiency of operation and maintenance.

User-friendly Design Details

WAP2100-W618 is equipped with LED controllable design: the LED lights can be turned off during the night break to avoid irritating the eyes; all the LED lights can be turned on to improve the operation efficiency during the network inspection. All the LEDs can be controlled in batches through the AC, and can also be switched individually with each AP button, which is very flexible and convenient.

WAP2100-W618, equipped with a downward network ports, can effectively prevent dust to keep the device clean and tidy.
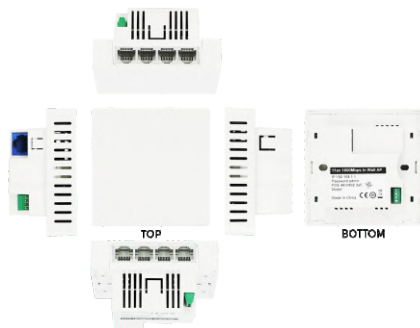
In addition to classic white shell, WAP2100-W618 is also available in pure black, dark gray and light gold, which perfectly match the user's interior decoration style.

Practical Engineering Design

The compact design of WAP2100-W618 can be completely embedded in the wall of 86*86mm national standard size. In the case of ensuring wireless signal coverage and heat control, the size of the AP is reduced by about 15%, which can not only keep the overall environment neat, but also help to deal with difficulties such as "cement block obstacles", "network cable reservation", and "thermal expansion and cold contraction" during construction.

WAP2100-W618 provides a wired and wireless integrated design. While providing WLAN wireless signal coverage, WAP2100-W618 also features an Ethernet interface to ensure that users' original network cable resources are not wasted.
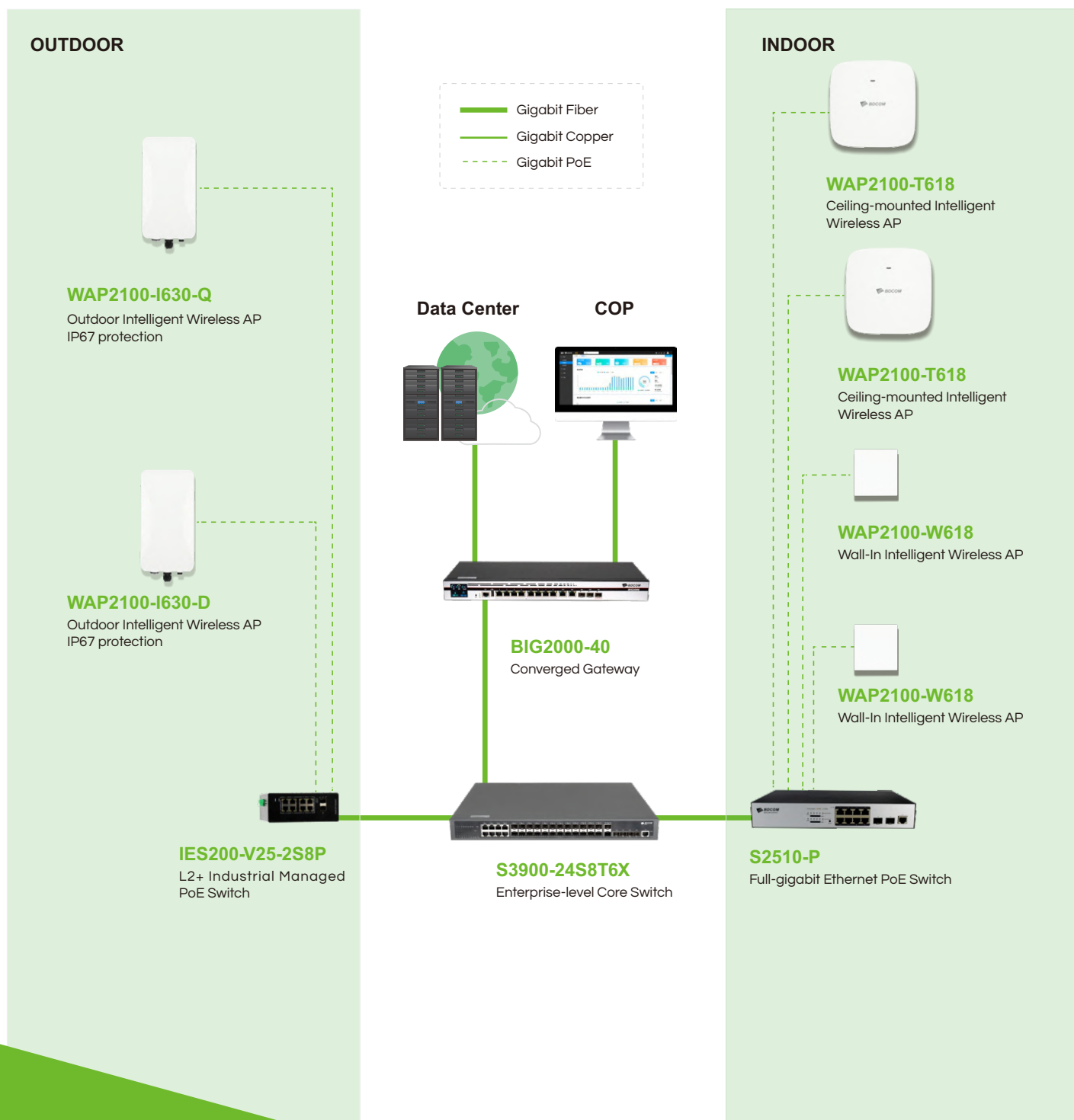
Model

WAP2100-W618

- 1 GE WAN port (POE supported)
- 3 GE LAN ports
- 1 RJ11 telephone port (pass-through)
- 802.11 a/b/g/n/ac/wave2/ax
- 1775Mbps wireless
- 802.3at PoE

Application Diagram

OUTDOOR

Gigabit Fiber
Gigabit Copper
Gigabit PoE

WAP2100-I630-Q
Outdoor Intelligent Wireless AP
IP67 protection

WAP2100-I630-D
Outdoor Intelligent Wireless AP
IP67 protection

IES200-V25-2S8P
L2+ Industrial Managed
PoE Switch

Data Center

COP

BIG2000-40
Converged Gateway

S3900-24S8T6X
Enterprise-level Core Switch

INDOOR

WAP2100-T618
Ceiling-mounted Intelligent
Wireless AP

WAP2100-T618
Ceiling-mounted Intelligent
Wireless AP

WAP2100-W618
Wall-In Intelligent Wireless AP

WAP2100-W618
Wall-In Intelligent Wireless AP

S2510-P
Full-gigabit Ethernet PoE Switch

3

System Performance

Item	WAP2100-W618
Interface	
Mounting method	In-wall
Dimensions (HxWxD)	86×86×45mm
Ethernet port	1 GE WAN port (POE supported) 3 GE LAN ports 1 RJ11 port
PoE power supply	POE input
Antenna type	Built-in omnidirectional
Antenna gain	2.4G: 2.5dBi 5G: 2.5dBi
Operating frequency bands	2.4GHz and 5GHz
Wi-Fi data rate	2.4G: 2*2 11ax 573Mbps 5G: 2*2 11ax 1200Mbps
Maximum transmit power	2.4 GHz: 18 dBm (combined power) 5 GHz: 18 dBm (combined power) The actual transmit power depends on local laws and regulations.
Modulation	OFDM : BPSK@6/9Mbps, QPSK@12/18Mbps, 16-QAM@24Mbps, 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps, DQPSK@2Mbps, CCK@5.5/11Mbps MIMO-OFDM (11n): MCS 0-15 MIMO-OFDM (11ac): MCS 0-9 MIMO-OFDM (11ax): MCS 0-11
Modulation mode	11b: DSS: CCK@5.5/11Mbps, DQPSK@2Mbps, DBPSK@1Mbps 11a/g: OFDM: 64QAM@48/54Mbps, 16QAM@24Mbps, QPSK@12/18Mbps, BPSK@6/9Mbps 11n: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM 11ac/ac wave2: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM 11ax: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Power adjustment	Automatic
Reset	Supported
Status LED	Solid on / Blinking/ Network error (The LED can be turned off using software.)
Operating temperature/ Storage temperature	0° C~50° C
Operating humidity	10%~95% (non-condensation)
Protection degree	IP41
Power consumption	< 10W
MTBF	> 250000H

Technical Specifications

11ax supported	Working frequency bands	2.4GHz+5GHz
	A-MPDU	Supported
	A-MSDU	Supported
	MU-MIMO	Supported
	OFDMA	Supported
	Transmit Beamforming (TxBF)	Supported
	Maximum Likelihood Demodulation (MLD)	Supported
	Maximum Ratio Combining(MRC)	Supported
	Space-Time Block Coding(STBC)	Supported
	Low Density Parity Check(LDPC)	Supported
11ac supported	Working frequency bands	5GHz
	A-MPDU	Supported
	A-MSDU	Supported
	Transmit Beamforming (TxBF)	Supported
	Maximum Likelihood Demodulation (MLD)	Supported
	Maximum Ratio Combining (MRC)	Supported
	Space-Time Block Coding (STBC)	Supported
	Low Density Parity Check (LDPC)	Supported
11n supported	Working frequency bands	2.4GHz+5GHz
	A-MPDU	Supported
	Transmit Beamforming (TxBF)	Supported
	Maximum Likelihood Demodulation (MLD)	Supported
	Maximum Ratio Combining (MRC)	Supported
	Space-Time Block Coding (STBC)	Supported
	Low Density Parity Check (LDPC)	Supported
WLAN basics	Maximum users per radio	128
	WPAPSK/WPA2PSK/WPA3	Supported
	RTS/CTS	Supported
	Guest network	Supported
	Smart device unique SSID	Supported
	Automatic link fault detection and recovery	Supported
Advanced networking features	Automatic network-wide channel adjustment	4
	Automatic network-widebandwidth adjustment	Supported
	802.11i	Supported
	Encryption	AES,WPA3
	Automatic network-wide power adjustment	Supported
Security policy	Authentication	MACAddress/PSK
	User isolation	1.Layer-2 user isolation
		2.SSID-based user isolation
	Forwarding security	Packet filtering,MAC address filtering,broadcast storm suppression
	SSID-VLAN binding	Supported
	802.11w	Supported

Technical Specifications

Layer-2 and layer-3 features	IP address configuration	Static IP address,DHCP, and PPPoE
	Local forwarding	Local forwarding based on SSID+VLAN
	Multicast	IGMP Snooping
Advanced Wi-Fi features	802.11e	WMM
	Priority	Ethernet port 802.1P identification and marking
		Mapping from wireless priorities to wired priorities
	Ai QoS	Mapping based on application traffic and air interface queue
Advanced Wi-Fi features	Automatic channel/bandwidth/power selection	Supported
	Load balancinga	Basedontraffic/ numberofusers/bands/ airinterfaceload
	802.11k/802.11v/802.11r	Supported
	AP Steering	Supported
	Band Steering	Supported
	Automatic power control/Packet-by-packet power control	Supported
	Multicast enhancement	Multicast-to-unicast (IPv4)
Installation, management and maintenance	Wizard-guided installation with app	Supported
	Network pre-deployment	Supported
	Local management with app/Remote management	Supported
	Cloud AC management	Supported
	Remote maintenance	Supported

Technical Specifications

Working mode

- Supports AP Mode
- Routing mode
- Bridging Mode

IP functions

- Supports IPv4, DHCP, NTP protocols
- Supports static IP allocation, dynamic DHCP and PPPoE dial-up

Wireless management

- Supports CAPWAP management protocol
- Supports Option43, DNS to discover AC
- Supports Layer 2 and Layer 3 networking of AC and AP
- Supports cross-NAT networking of AC and AP
- Supports Layer 2 and Layer 3 user roaming
- Supports clock, version and configuration synchronization of AC and AP

Application added

- Supports for RTLS probes
- Supports docking wireless positioning system

Wireless access

- Supports 802.11 protocol suite
- Supports multiple SSID management, Chinese SSID and SSID hiding
- Supports no SSID, VLAN binding function
- Supports SSID-based user limit and isolation
- Supports each SSID to specify the parameter template separately
- Supports country code setting

User authentication

- Supports local authentication and Cloud authentication
- Supports multiple authentication methods such as local account, SMS, WeChat, and Vouther
- Supports user black and white lists
- Supports account-based access period control and bandwidth control
- Supports country code setting
- Supports country code setting

Security

- Supports PSK authentication method
- Supports WEP, WPA, WPA2, WPA3 wireless encryption
- Supports IP-based, MAC-based filtration
- Supports DDoS, De-Auth anti-attack
- Supports Rogue AP detection

QoS

- Supports 802.11e/WMM
- Supports global traffic rate limit
- Supports AP-based, VLAN-based, User-based traffic rate limit
- Supports frequency-based, AP-based flow load balancing

Wireless optimization

- Supports one-click network optimization, customs wireless RF parameters
- Default 8 wireless scene templates, supports user-defined templates
- Supports automatic background optimization
- Supports 5G prior access, supports restrict access of low-rate users

Management and maintenance

- Supports traditional device management such as Telnet, SSH, Web, SNMP and TR069
- Supports ping, tracert, debug and other diagnostic tools
- Supports CAPWAP-based AC centralized management
- Supports COP unified management
- Support AP indicator on and off

Ordering Information

WAP2100-W618	WAP2100-W618 in-wall intelligent WiFi6 AP, 1 GE-WAN PoE port, 4 GE-LAN ports, built-in MIMO antenna, WiFi6 , 1775Mbps, PoE power supply (POE devices need to purchase.)

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