

博达数据通信产品

WLAN 无线产品

WAP2100-I654-Q series
Integrated Outdoor Wireless AP

【Product Overview

The BDCOM WAP2100-I654-Q is an outdoor wireless AP series designed and developed by Shanghai Baud for a variety of outdoor medium- to high-density wireless scenarios, including campuses, scenic spots, factories, warehouses, and stadiums.

The WAP2100-I654-Q features a high-performance RF chip design, delivering high wireless throughput and strong concurrent access capabilities. It comes with built-in high-power MIMO antennas and lightning protection modules, which not only provide robust wireless coverage for complex outdoor environments but also significantly reduce installation complexity.

The I654-Q supports IP67 protection and a wide temperature design, as well as a 2.5G ultra-gigabit interface for backhaul. It utilizes standard PoE remote power supply, offering great flexibility for AP planning and placement. This makes it an ideal choice for building various high-density outdoor wireless networks.



BDCOM WAP2100-I654-Q

【Key Features

1. High-Performance Wireless Solution

- **The WAP2100-I654-Q is built with high-performance wireless chips and supports multiple wireless protocols, including 802.11a/b/g/n/ac/wave2/ax.**
- **It delivers high throughput and excellent stability, offering up to 5400Mbps air interface bandwidth on dual 2.4GHz and 5GHz bands.**
- **It supports access for over 200+ terminal users with strong concurrent capabilities.**

- **Wireless load balancing technology ensures balanced traffic distribution among multiple APs in high-density access scenarios, preventing local congestion.**
- **Within a single AP, terminals are reasonably allocated between the 2.4GHz and 5GHz spectrums, ensuring a good internet experience for all users.**

2. Powerful Automated Network Optimization

- **The WAP2100-I654-Q supports advanced features like wired and wireless QoS, automatic terminal identification, automatic channel selection, power adjustment, and dynamic receive sensitivity.**
- **It provides an easy-to-use WLAN service for enterprise customers with minimal maintenance requirements.**
- **When paired with the WSC6100 series wireless controllers, the AP enables “one-click auto-optimization” and “background auto-optimization” to ensure continuous performance, even as wireless conditions change or user experiences degrade.**

3. Comprehensive Security Features

- **Offers various secure access options, including WEP/WPA/WPA2/WPA3 encryption.**
- **Supports wireless IPS/IDS, Layer 2 user isolation, centralized ACL control, and other security measures.**
- **When integrated with the WSC6100 wireless AC, it provides diverse authentication options tailored for devices like PCs, smartphones, and tablets.**
- **Features illegal AP detection, wireless attack prevention, and static black/white lists to protect the network from unauthorized users.**

4. Industrial-Grade Product Design

- The WAP2100-I654-Q integrates built-in antennas and lightning protection modules to simplify installation and maintain consistency during large-scale deployments.
- It supports IP67-rated waterproof and dustproof protection, withstanding temperatures from -30°C to 55°C, making it suitable for harsh outdoor environments.
- The device can be pole- or wall-mounted and powered via PoE, supporting distances of up to 100 meters, reducing site selection constraints.

5. Rich Management Features

- The WAP2100-I654-Q supports both standalone (FAT) and centralized (FIT) AP configurations.
- It integrates seamlessly with the WSC6100 series wireless AC, offering CLI, Web, and SNMP management options.
- When connected to the BDCOM Pallas cloud management platform, it enables unified cloud management of ACs, switches, routers, and security products, greatly enhancing operation and maintenance efficiency.

【Hardware Specifications】

Product Model	WAP2100-I654-Q
Standard Ports	1-Port 2.5G PoE-in WAN + 1-Port Gigabit RJ45 LAN
Operating Frequency	2.4GHz and 5GHz
Wireless Protocols	802.11 a/b/g/n/ac/wave2/ax
Wireless MIMO	2.4GHz: MIMO 2×2 5GHz: MIMO 4×4 Dual-band with 6 spatial streams
Wireless Bandwidth	5400Mbps

Antenna Type	Built-in omnidirectional
RF Power	27dBm
Coverage Radius	100 meters (may vary based on environmental factors)
Recommended Concurrent Users	200 active users (may vary based on environmental factors)
Power Supply	Standard 48V PoE
Power Consumption	Maximum 20W
Deployment Method	Pole-mounted
Device Dimensions	304 × 180 × 88 mm
Device Weight	2.5 kg
Operating Temperature	-30°C to 55°C, supports cold start at -15°C
Operating Humidity	10% to 95% (non-condensing)
Protection Rating	IP67

【Software Features】

Operating Modes, AP mode, Routing mode, Bridging mode

IP Functions	DHCP service, NTP
CAPWAP	Supports Option43 and DNS for AC discovery, Layer 3 and NAT networking, Intra-AC Layer 2 and Layer 3 roaming, Clock and version synchronization, AC-to-AP configuration distribution
Wireless Access	Supports 802.11 protocol suite, Multi-SSID, VLAN-based user isolation, User limit per SSID, Automatic aging for inactive users, Online status detection, Hidden SSID, Chinese SSID, Multi-country code deployment, Open System, WPA/WPA2/WPA&WPA2 mixed authentication

Wireless Authentication	Local and cloud authentication, WeChat QR code login, Account-based time and bandwidth control, Authentication whitelist
QoS	802.11e/WMM, ESS-based traffic rate limiting, Global traffic rate limiting, VLAN-based traffic rate limiting, User-based traffic rate limiting, AP and band-based load balancing
Wireless Optimization	Static and dynamic channel/power settings, 5G priority access, Low-speed user access restrictions, Predefined and custom scenario management, One-click network optimization
Security Defense	ACL, MAC, and URL filtering, DDoS and De-Auth attack prevention, Rogue AP detection
Value-Added Applications	RTLS, Wireless positioning
Management & Maintenance	Telnet, SSH, Web interface, SNMPv2/v3, Global LED control, Global AP and terminal status monitoring, Network diagnostic tools, Integration with BDCOM Pallas cloud management platform

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【Ordering Information】

WAP2100-I654-Q	WAP2100-I654-Q - High-density outdoor wireless AP with 1-Port 2.5G PoE-in WAN + 1-Port Gigabit RJ45 LAN. Supports WiFi 6 protocol with a
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	maximum speed of 5400Mbps. Built-in high-gain MIMO omnidirectional antenna. IP67 protection rating, PoE-powered (power supply sold separately).
WAP-PSE-1000	Single-port gigabit PSE power supply module



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