



NWA55BE

BE5100 4-Stream WiFi 7 Dual-Radio NebulaFlex Access Point

Thinking of upgrading to WiFi 7 for your outdoor network? The Zyxel NWA55BE is the ideal solution. Built for harsh environments with an IP55 weatherproof rating, it delivers high-performance wireless coverage outdoors. Setup is simple via Nebula Cloud Networking, allowing quick configuration of guest and employee networks to start enjoying ultra-fast WiFi 7 speeds instantly.

Powered by a Qualcomm quad-core CPU, the dual-radio BE5100 (2.4GHz: 2×2:2, 5GHz: 2×2:2) delivers WiFi 7 speeds up to 5.1Gbps for enterprise-grade performance in a compact design. The 2.5GbE port offers speeds beyond gigabit, providing a cost-effective upgrade while maintaining compatibility with your existing infrastructure. With support for captive portal and IEEE 802.1X authentication, the NWA55BE offers enterprise-level security and flexible options to customize login pages for branding and marketing.

Embedded Smart Mesh MLO technology creates dynamic wireless links between APs, extending coverage and bridging connectivity between buildings. Dual-radio backhaul enables cable-free deployment with higher bandwidth, lower latency, and stronger interference resistance—perfect for expanding your outdoor network or connecting multiple buildings.

Its downward-pointing antenna improves protection against rain and moisture, unlike traditional upward designs prone to leaks and damage. The external, detachable antenna design also lets users attach alternative antennas to better suit different needs

Ideal for small businesses, SOHO, or home users, the NWA55BE supports both local GUI and Nebula Cloud management, making setup and network management easy and fast.



BE5100 (2.4GHz: 2×2:2, 5GHz: 2×2:2) dual-radio access point offers blazingly fast WiFi 7 speeds of up to 5.1Gbps



Smart Mesh MLO with dual-radio backhaul enables dynamic, cable-free deployment while delivering higher performance



The detachable antenna design allows users to attach alternative antennas to better suit different needs



Captive portal and IEEE 802.1X authentication support provides enterprise-level security



Built for harsh outdoors with IP55 rating and -25°C to 65°C temperature range

Benefits

Effortless deployments and lower initial investment

Deploying outdoor access points is often complex, involving cabling, installation, and maintenance. The NWA55BE simplifies this process with Smart Mesh MLO technology, which creates dynamic wireless links for extended coverage, higher bandwidth, lower latency, and stronger interference resistance. Combined with external, detachable antennas that ease installation and signal adjustment, the NWA55BE is an ideal, cost-effective solution for extending reliable wireless connectivity outdoors.

Bringing next generation WiFi within reach

WiFi 7, also known as IEEE 802.11be, represents the next evolution in WiFi standards, supporting all three frequency bands – 2.4GHz, 5GHz, and 6GHz. With its revolutionary technological advancements, it promises to redefine the concept of speed, delivering unprecedented rates to elevate online experiences in the digital realm.

Powered by a Qualcomm quad-core CPU, the NWA55BE access point delivers ultra-fast WiFi 7 speeds, ensuring enterprise-grade performance in a compact outdoor design.

MLO: Transforming WiFi 7 for Unprecedented Connectivity

Fundamentally, one of the most pioneering advancements of WiFi 7 is the introduction of MLO (Multiple Link Operation). MLO represents a WiFi technology that empowers devices linked to a WiFi access point (AP) to concurrently transmit and/or receive data through various frequency bands and channels. This entails simultaneous connections across the 2.4GHz, 5GHz, and 6GHz bands, a capability absent in earlier WiFi generations where devices were restricted to a solitary WiFi band connection.

The result is a significant amplification in data throughput, a reduction in latency, and an enhancement in reliability. These outcomes undeniably enhance the user experience and unveil novel opportunities for emerging applications such as VR/AR, online gaming, remote office setups, and cloud computing.

RF First by Design

The advanced RF filter design eliminates interference between the 5GHz and 6GHz bands, while the built-in 4G/5G interference filter allows seamless coexistence with 4G/5G cellular networks and minimizes interference, all of which guarantees a seamless WiFi experience without interruptions.

NebulaFlex – simply manage it your way!

NebulaFlex offers extended flexibility, enabling users to effortlessly switch between standalone mode and our intuitive cloud-managed NCC (Nebula Control Center) modes at any time, without incurring additional costs. This ensures adaptability to changing needs while safeguarding investments in wireless technology.

Flexible Wireless Connectivity for Outdoor Networks

Zyxel's NWA55BE outdoor WiFi 7 access point delivers exceptional flexibility and reliability for outdoor environments such as campuses, hospitality venues, or industrial sites with its Smart Mesh and Wireless Bridge capabilities. Smart Mesh simplifies deployment by automatically creating a self-organising wireless network that adapts to interference, distance, or environmental changes—ensuring stable and seamless connectivity across wide outdoor areas without the need for additional cabling.

The Wireless Bridge function further enhances flexibility by enabling secure, high-speed point-to-point or point-to-multipoint connections between buildings or remote areas. This makes it ideal for extending network coverage to courtyards, outdoor facilities, or detached structures, providing continuous connectivity and reliable data transmission throughout large outdoor spaces.

Specifications

Model	NWA55BE
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Product name BE5100 4-Stream WiFi 7 Dual-Radio NebulaFlex Outdoor Access Point



Wireless

Standard	IEEE802.11 be/ax/ac/n/g/b/a	
MIMO	MU-MIMO	
Wireless speed	2.4GHz	688Mbps
	5GHz	4324Mbps
Frequency band	2.4GHz	<ul style="list-style-type: none"> USA (FCC): 2.412 to 2.462 GHz Europe (ETSI): 2.412 to 2.472 GHz
	5GHz	<ul style="list-style-type: none"> USA (FCC): 5.15 to 5.35 GHz; 5.470 to 5.850 GHz European (ETSI): 5.15 to 5.35 GHz; 5.470 to 5.725 GHz
Bandwidth	20-, 40-, 80-, 160- and 240-MHz	
Conducted typical transmit output power*1	US (2.4GHz/5GHz)	25/26dBm
	EU (2.4GHz/5GHz)	16/26dBm

RF Design

Antenna type	2 detachable 2.4/5GHz external antenna	
Antenna gain	2.4GHz	2dBi, 2x2:2SS
	5GHz	3dBi, 2x2:2SS
Minimum receive sensitivity	Min. Rx sensitivity up to -99 dBm	

WLAN Features

Band Steering	Yes
WDS/ Smart Mesh*2	Yes
Wireless Bridge	Yes
Fast roaming	Pre-authentication, PMK caching and 802.11r/k/v
DCS	Yes
Load balancing	No
Advanced Cellular Coexistence	Yes

Security

Encryption	WEP/WPA/WPA2/WPA3
Authentication	IEEE 802.1X/ RADIUS authentication
Access management	L2-isolation/MAC filtering/Rogue AP detection

Networking

IPv6	Yes
VLANs	Yes
WMM	Yes
U-APSD	Yes

Model	NWA55BE	
Management		
Operating mode	Cloud managed / standalone	
ZON Utility	<ul style="list-style-type: none"> • Discovery of Zyxel switches, APs and gateways • Centralized and batch configurations <ul style="list-style-type: none"> ▪ IP configuration ▪ IP renew ▪ Device reboot ▪ Device locating ▪ Web GUI access ▪ Firmware upgrade ▪ Password configuration 	
Web UI/CLI	Yes	
SNMP	No	
Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	308 × 136.4 × 49.6/12.13 × 5.37 × 1.95
	Weight (g/lb.)	575.6 / 1.27
Packing	Dimensions (WxDxH)(mm/in.)	221 × 188 × 59/8.70 × 7.40 × 2.32
	Weight (g/lb.)	984.5 / 2.17
Included accessories	<ul style="list-style-type: none"> • PoE injector • Mounting screws 	
MTBF (hr)	631,165	
Physical Interfaces		
Ethernet port	1 × 1/2.5GbE LAN	
Power	PoE (802.3at): power draw 24W	
PoE modes	IEEE 802.3af	Not supported
	IEEE 802.3at	Unrestricted
	IEEE 802.3bt	Unrestricted
Environmental Specifications		
Weather Protection	IP55	
Operating	Temperature	-25°C to 65°C/-13°F to 149°F
	Humidity	10% to 90% (non-condensing)
Storage	Temperature	-40°C to 70°C/-40°F to 158°F
	Humidity	10% to 90% (non-condensing)
Certifications		
Radio	FCC Part 15C, FCC Part 15E, FCC Part 2.1091, ETSI EN 300 328, EN 301 893, Draft EN 303 687, EN 50385, EN 50665, EN IEC 62311, LP0002	
EMC	FCC Part 15B, EN 301 489-1, EN 301 489-17, EN55032, EN55035, EN61000-3-2/-3, EN60601-1-2, BSMI CNS15936	
Safety	EN 62368-1, IEC 62368-1, BSMI CNS15598-1	

*1: Maximum transmit power is limited by local regulatory settings.

*2: WDS, Smart Mesh and Industry's Open Mesh, Easy Mesh are different mesh systems that do not work with one another.

For more product information, visit us on the web at www.zyxel.com

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