



NWA90BE PRO

BE6500 4-Stream WiFi 7 Dual-Radio NebulaFlex Access Point

Zyxel's NWA90BE PRO is a WiFi 7 access point designed for small businesses and SoHo users seeking a cost-effective yet high-performance upgrade. Ideal for home offices, compact workspaces, and residential use, it delivers a seamless transition to WiFi 7 with faster speeds and dependable, wide-reaching coverage.

Powered by a Qualcomm quad-core CPU, the BE6500 (2.4GHz: 2x2:2, 5/6GHz: 2x2:2) dual-radio access point delivers blazing-fast WiFi 7 speeds of up to 6.5Gbps, ensuring enterprise-grade performance in a compact design. Its innovative BandFlex radio lets you choose between 5GHz and 6GHz, providing a budget-friendly solution that fits seamlessly into your existing 5GHz coverage while being ready for future 6GHz deployment.

Additionally, with support for a captive portal and IEEE 802.1X authentication, the NWA90BE PRO not only offers small business users enterprise-level security to protect their networks but also provides flexible options to customize wireless network login pages for marketing and brand recognition.

Zyxel's NWA90BE PRO uses Smart Mesh MLO technology to create dynamic wireless links—no more messy cables or complex setups. Unlike traditional mesh systems limited by single-radio backhaul, its dual-radio design ensures higher bandwidth, lower latency, and stronger interference resistance for seamless, high-performance connectivity.

With NebulaFlex, you get the freedom to manage your network your way—locally via Standalone local GUI or effortlessly through Nebula Cloud, with no IPs or passwords to remember.



BE6500 (2.4GHz: 2x2:2, 5/6GHz: 2x2:2) dual-radio access point offers blazingly fast WiFi 7 speeds of up to 6.5Gbps



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



BandFlex design supports either 5GHz or 6GHz by configuration, fitting seamlessly into existing 5GHz coverage while futureproofing for 6GHz



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



The 2.5GbE port boosts speed beyond gigabit for a cost-effective, WiFi 7-ready upgrade

Benefits

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 NWA90BE PRO access point provides ultra-fast WiFi 7 speeds, ensuring enterprise-grade performance in a compact, small business AP.

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.

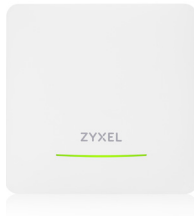
RF First by Design

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.

Specifications

Model		NWA90BE PRO	
Product name		BE6500 4-Stream WiFi 7 Dual-Radio NebulaFlex Access Point	
			
Wireless			
Standard		IEEE802.11 be/ax/ac/n/g/b/a	
MIMO		MU-MIMO	
Wireless speed	2.4GHz	688Mbps	
	5GHz	4324Mbps	
	6GHz	5764Mbps	
Frequency band	2.4GHz	• USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz	
	5GHz	• 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	
	6GHz	• USA (FCC): 5.925 to 6.425 GHz; 6.525 to 7.125 GHz • European (ETSI): 5.925 to 6.425 GHz	
Bandwidth		20-, 40-, 80-, 160-, 240- and 320-MHz	

Model		NWA90BE PRO
Wireless		
Conducted typical transmit output power*1	US (2.4GHz/5GHz/6GHz)	26/25/22dBm
	EU (2.4GHz/5GHz/6GHz)	20/25/22dBm
RF Design		
Antenna type		Internal Antenna
Antenna gain	2.4GHz	2 dBi, 2x2:2SS
	5GHz	3 dBi, 2x2:2SS
	6GHz	3 dBi, 2x2:2SS
Minimum receive sensitivity		Min. Rx sensitivity up to -99 dBm
WLAN Features		
Band Steering		Yes
WDS/ Mesh*2		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
Management		
Operating mode		Cloud managed / standalone
ZON Utility		- Discovery of Zyxel switches, APs and gateways - Centralized and batch configurations - 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.)	150 x 150 x 35 /5.91 x 5.91 x 1.38
	Weight (g/lb.)	412 / 0.91
Packing	Dimensions (WxDxH)(mm/in.)	244 x 168 x 60 / 9.61 x 6.61 x 2.36
	Weight (g/lb.)	785 / 1.73
Included accessories		- Power adapter - Mount plate - Mounting screws
MTBF (hr)		870,551
Physical Interfaces		
Ethernet port		1 x 1/2.5GbE LAN
Power		- Power Adapter: AC100 - 240V - 50/60Hz 0.3A; Output: DC +12V 1.5A - PoE (802.3at): power draw 16W

Model		NWA90BE PRO
Physical Interfaces		
PoE modes	IEEE 802.3af	Not supported
	IEEE 802.3at	Unrestricted
	IEEE 802.3bt	Unrestricted
Environmental Specifications		
Operating	Temperature	0°C to 50°C/32°F to 122°F
	Humidity	10% to 95% (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, ZyMesh, Smart Mesh and Industry's Open Mesh, Easy Mesh are different mesh systems that do not work with one another.

Recommended Accessories

Mounting Accessory

Model	ACCESSORY-ZZ0105F
Product photo	
	
Description	BAR ceiling clips for ceiling mount Zyxel AP (5 sets)

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

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