ZYXEL NETWORKS

WBE530

BE11000 6-Stream WiFi 7 Triple-Radio NebulaFlex Pro Access Point

Crafted specifically for modern classrooms, the WBE530 boasts a Qualcomm quad-core CPU, delivering lightning-fast WiFi 7 speeds of up to 11 Gbps and a significant capacity boost.

The inclusion of 2 × 2.5G Ethernet ports for multi-Gig networks offers a fitting and cost-effective solution, facilitating easy upgrades to enjoy WiFi 7 performance while seamlessly integrating with existing infrastructure, eliminating the need for expensive re-cabling.

Paired with Zyxel Nebula's comprehensive suite of management and security features, it ensures robust connectivity and reliability to meet the demands of today's educational settings.

The WBE530, equipped with NebulaFlex Pro technology, offers users complete flexibility to seamlessly switch between standalone mode, controller-managed mode, or the intuitive Nebula cloud-managed mode as needed.

- BE11000 (2×2 in 2.4, 5, and 6 GHz) tri-radio access point provides blazingly fast WiFi 7 speeds up to 11Gbps and lower latency for real-time responsiveness
- The 2 × 2.5G Ethernet ports enable seamless integration with the existing infrastructure without re-cabling
- The advanced RF filter prevents interference between the 5 GHz and 6 GHz bands while guaranteeing performance in all channels
- Advanced Cellular Coexistence minimizes interferences from 4G/5G cellular networks
- NebulaFlex Pro allows users to switch between standalone, controller, or intuitive Nebula cloud managed modes as needed

nebula

Zyxel one network
Redefining network integration

Benefits

Revolutionizing education with WiFi 7 connectivity

Providing high-speed internet in schools cannot be emphasized enough. However, many educational institutions still face significant obstacles in delivering stable and sufficient internet bandwidth, directly impacting the quality of education they offer.

But Wi-Fi 7 Can Help — this innovative technology offers a solution to not only satisfy the demand for greater internet bandwidth but also assists in constructing future-proof networks to meet the needs of both current and future students.

Zyxel's WBE530 WiFi 7 access point promises higher speeds, greater capacity, and superior cybersecurity features, helping schools to revolutionize online learning experiences, ensuring efficiency, security, and responsiveness for students to thrive in today's tech-driven world.

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 – 2.4 GHz, 5 GHz, and 6 GHz. With its revolutionary technological advancements, it promises to redefine the concept of speed, delivering unprecedented rates to elevate online experiences in the digital realm.

Coupled with Zyxel's comprehensive range of management and security innovations, the WBE530 ensures the utmost connectivity and reliability for demanding enterprise-grade connectivity.

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 2.4 GHz, 5 GHz, and 6 GHz 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 5 GHz and 6 GHz 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.

Additionally, 4K QAM (MCS-13) requires a good Signal-to-Noise Ratio (SNR). The rectangular design helps maintain excellent isolation between antennas, meeting this requirement more effectively than a circular design.

NebulaFlex Pro – simply manage it your way!

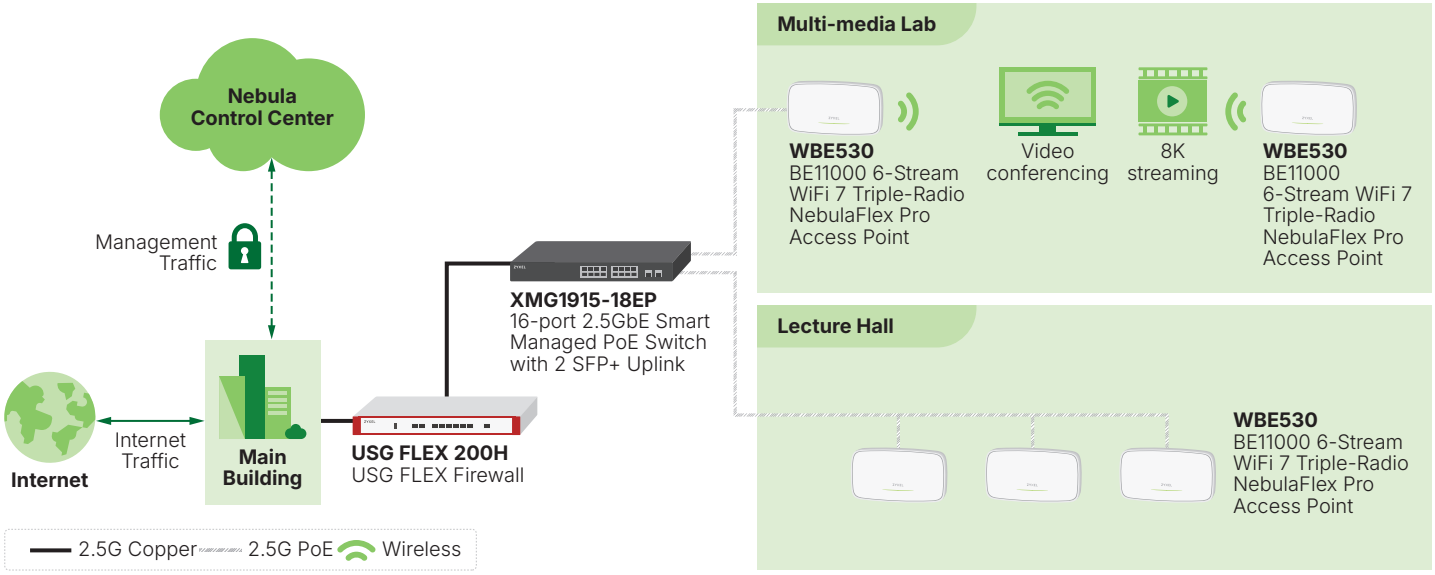
The NebulaFlex Pro provides extended flexibility, allowing users to easily switch among standalone, on-promises controller or our intuitive NCC (Nebula Control Center) modes any time according to your needs without additional cost while protecting wireless technology investments. The privilege of one-year professional pack you can get once upon registration on Nebula includes wireless health, site-wide topology, 365-day statistics on the devices and clients monitoring along with more upcoming advanced features on NCC and its App.

Nebula, the Intelligent cloud management

Nebula offers comprehensive monitoring and reporting capabilities, including real-time notifications for critical events via the mobile app. With Nebula, you can enjoy a streamlined experience for network installation and management, without the need for an additional cost for software or hardware controllers.

- Automated WLAN management & optimization
  With features like WiFi Aid and Wireless health, Nebula enables automated wireless network management and optimization, ensuring the best possible WiFi user experience.
- Enhanced privacy & security
  A range of security add-on features like CDR, Secure WiFi, CNP/CNP+, DPPSK, and advanced authentication methods work together to create a robust and protected environment for your network.

Application Diagram



Specifications

Model		WBE530
Product name		BE11000 6-Stream WiFi 7 Triple-Radio NebulaFlex Pro Access Point
		
Wireless		
Standard		IEEE 802.11 be/ax/ac/n/g/b/a
MIMO		MU-MIMO
Wireless speed	2.4 GHz	688 Mbps
	5 GHz	4324 Mbps
	6 GHz	5764 Mbps
Frequency band	2.4 GHz	• USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz
	5 GHz	• 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
	6 GHz	• 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
Conducted typical transmit output power*1	US (2.4 GHz/5 GHz/6 GHz)	27/25/23 dBm
	EU (2.4 GHz/5 GHz/6 GHz)	19/25/21 dBm
RF Design		
Antenna type		Internal antenna
Antenna gain	2.4 GHz	3 dBi, 2×2: 2SS
	5 GHz	4 dBi, 2×2: 2SS
	6 GHz	4 dBi, 2×2: 2SS
Minimum receive sensitivity		Min. Rx sensitivity up to -99 dBm

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

Model		WBE530
WLAN Feature		
Band steering		Yes
WDS/Mesh*2		Yes
Wireless Bridge		Yes
Fast roaming		Pre-authentication, PMK caching and 802.11r/k/v
DCS		Yes
Load balancing		Yes
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		Nebula cloud managed/controller-managed/standalone
ZON Utility		• Discovery of Zyxel switches, APs and gateways • Centralized and batch configurations ▪ IP configuration ▪ Web GUI access ▪ IP renew ▪ Firmware upgrade ▪ Device reboot ▪ Password configuration ▪ Device locating
Web UI/CLI		Yes
SNMP		Yes
Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	250 × 160 × 47/9.84 × 6.30 × 1.85
	Weight (g/lb.)	808/1.79
Packing	Dimensions (WxDxH)(mm/in.)	279.5 × 180.5 × 66/11.00 × 7.11 × 2.60
	Weight (g/lb.)	1032/2.28
Included accessories		• Mount plate • Mounting screws
MTBF (hr)		698,312
Physical Interfaces		
Ethernet port		2 × 1/2.5 Gbps LAN
Power		• PoE (802.3at) power draw 24 W • DC input: USB PD 15 VDC 2A (Type C)*3 or 12 VDC 2A
PoE modes	IEEE 802.3af	No wireless
	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

*2: WDS, Smart Mesh and Industry's Open Mesh, Easy Mesh are different mesh systems that do not work with one another.
*3: All models released after July, 2025—those with serial numbers starting from S250Y25047911—are equipped with a USB Type-C port.

Recommended Accessories

PoE Injector

Model	PoE12-30W
Product photo	
Description	• RJ-45 (Data) input: 1 • RJ-45 (Data + Power) output: 1 • Data rate: 100 Mbps and 1/2.5 Gbps • PoE standard: PoE, PoE+ • Total PoE budget: 30 watts