ZYXEL NETWORKS

NWA220AX-6E

AXE5400 WiFi 6E Dual-Radio Access Point

Featuring 6 spatial streams (4x4 in 6 GHz/5 GHz selectable, 2x2 in 2.4 GHz) with the maximum data rate of 5.4 Gbps, the Zyxel NWA220AX-6E is the dual-radio access point with a BandFlex radio that can support either 5 GHz or 6 GHz by configuration, making it the most economical choice to fit into your existing 5 GHz coverage as well as futureproofing the use of 6 GHz.

NWA220AX-6E includes all the benefits of WiFi 6 capabilities like OFDMA, MU-MIMO, BSS Coloring, and brings them into the brand-new, interference-free 6 GHz that more than doubles the WiFi capacity to deliver multi-gigabit speed, and low-latency connections.

The brand-new, interference-free 6 GHz band presents a solution to quenching the thirst for today's network hungry for more bandwidth, making it a perfect choice for high-density WiFi and emerging technology connectivity. To reach the full potential of the new band, Zyxel 6E Boost, using the high-gain 4x4 streams in 6 GHz, increases the maximum gains in transmit beamforming and receive MIMO to extend its range and ensure the highest performance is delivered.

The NWA220AX-6E is ideal in high density environments such as transport hubs, exhibition halls, schools, offices, hotels, restaurants, or any other organizations that need to accommodate a large number of devices as it can offer the optimal premium service for everyone, every time they connect to WiFi.

- 802.11axe AP (4x4 in 6 GHz/ 5 GHz selectable, 2x2 in 2.4 GHz) to deliver maximum data rate of 5.4 Gbps
- The BandFlex radio design can support either 5 GHz or 6 GHz by configuration, to fit into your 5 GHz coverage as well as futureproofing the use of 6 GHz
- Zyxel 6E Boost, using the high-gain 4 streams in 6 GHz, helps extend range and maximize performance of the new band
- NebulaFlex allows users to switch between standalone or intuitive Nebula cloud managed modes as needed

nebula

Zyxel one network
Redefining network integration

Benefits

WiFi 6E — bringing WiFi 6 into 6 GHz spectrum

WiFi 6E is the WiFi 6 extended into 6 GHz spectrum. It includes all the WiFi 6 features, plus the following:

- 2.5X More Capacity: 2.5 times more spectrum with the extended 6 GHz band with no legacy devices
- Superwide Channels: Utilizing up to seven additional superwide 160 MHz channels in 6 GHz for bandwidth-demanding applications like VR/AR, WiFi calling, and high-definition video streaming
- No Interference: No interference from microwaves and the non-6E devices. Only Wi-Fi 6E capable devices can use the 6 GHz band.

4G/5G cellular network coexistence

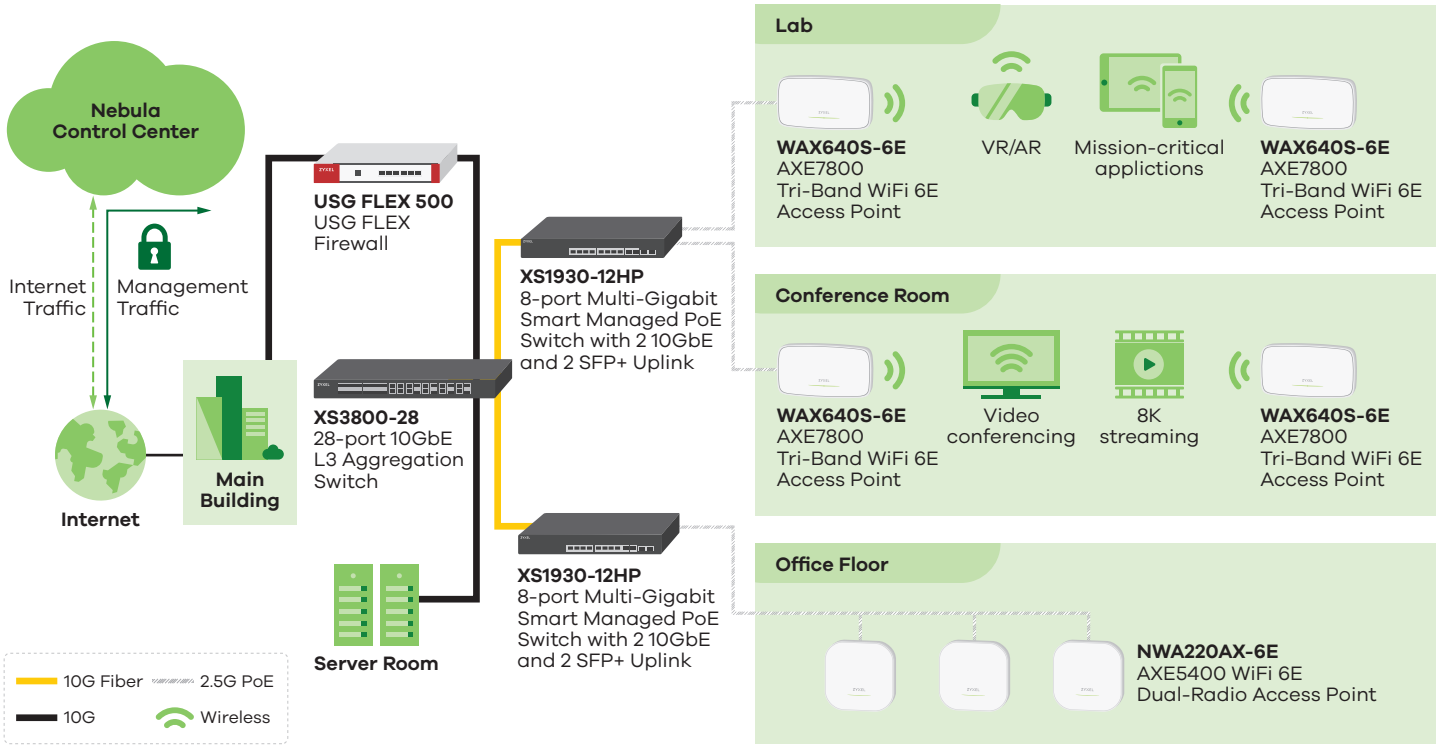
With the exponential growth of mobile devices in the wireless network, users start to experience degraded performance, such as ping drops and high latency; users have to reduce the use of their mobile devices in order to maintain a smooth, working wireless service. Thus, to enable 4G/5G cellular network coexistence and minimize interference from 4G/5G antennas or signal boosters, the NWA220AX-6E has built-in 4G/5G interference filters. As a result, the visible or invisible 4G/5G indoor antennas in the environment is no longer an issue when installing APs.

NebulaFlex — simply manage it your way!

The NebulaFlex provides extended flexibility, allowing users to easily switch among standalone, or our intuitive cloud-managed NCC (Nebula Control Center) modes any time according to your needs without additional cost while protecting wireless technology investments.

The Nebula cloud management platform provides centralized control and visibility over all Nebula networking devices. Simply you only need to register the device on NCC, and it will automatically join, auto provision and begin to give real-time information. The intuitive platform allows you to group your access points together, control centrally, gain access to diagnostics tools and additional features like captive portal all under a single platform.

Application Diagram



Specifications

Model		NWA220AX-6E
Product name		AXE5400 WiFi 6E Dual-Radio Access Point
		
Wireless		
Standard		IEEE 802.11 ax/ac/n/g/b/a
MIMO		MU-MIMO
Wireless speed	**2.4 GHz**	575 Mbps
	5 GHz	4800 Mbps
	6 GHz	4800 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- and 160-MHz
Conducted typical transmit output power*1 (limited by local regulatory requirements)	**US (2.4 GHz/5 GHz/6 GHz)**	24/25/24 dBm
	EU (2.4 GHz/5 GHz/6 GHz)	18/22/19 dBm
RF Design		
Antenna type		4x4 + 2x2 MIMO embedded antenna
Antenna gain	**2.4 GHz**	Peak gain 3 dBi
	5 GHz	Peak gain 5 dBi
	6 GHz	Peakin 6 dBi
Minimum receive sensitivity		Min. Rx sensitivity up to -101 dBm
WLAN Feature		
Band steering		Yes
WDS/Mesh*2		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

*1: Conducted typical transmit output power excludes antenna gain. For total (EIRP) transmit power, add antenna gain.
*2: WDS, ZyMesh, Smart Mesh and Industry's Open Mesh, Easy Mesh are different mesh systems that do not work with one another.

Model		NWA220AX-6E
Management		
Operating mode		Nebula Cloud 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.)**	180 x 180 x 42/7.09 x 7.09 x 1.65
	Weight (g/lb.)	650/1.43
Packing	**Dimensions (WxDxH)(mm/in.)**	197 x 190 x 60/7.76 x 7.48 x 2.36
	Weight (g/lb.)	780/1.72
Included accessories		• Mount plate • Mounting screws
MTBF (hr)		711,333
Physical Interfaces		
Ethernet port		• 1 x 1/2.5 Gbps LAN • 1 x 1 Gbps LAN
Power		• PoE (802.3)at: power draw 21 W • DC input: 12 V DC 2 A
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, ETSI EN 300 328, EN 301 893, EN 303 687, LP0002
EMC		FCC Part 15B, EN 301 489-1, EN 301 489-17, EN55022, EN55024, EN60601-1-2, BSMI CNS13438
Safety		Safety EN 62368, BSMI CNS14336-1

Accessory

Item	Part Number
PoE injector	POE12-30W-EU0101F, POE12-30W-US0101F
Power adapter	ACCESSORY-ZZ0104F
Mounting waterproof enclosure	ACCESSORY-ZZ0102F
T-bar clips	ACCESSORY-ZZ0105F

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

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