



NWA55AX PTP

AX2400 2-Stream WiFi 6 (5GHz, 5km) NebulaFlex Outdoor Wireless Bridge

The NWA55AX PTP is an AX2400 2-stream WiFi 6 outdoor wireless bridge designed to deliver reliable, high-speed connectivity over long distances. Operating on 5GHz (2x2:2) 802.11ax technology, it supports data rates of up to 2.4Gbps, making it ideal for point-to-point wireless backhaul applications.

Engineered for extended range, the NWA55AX PTP enables stable wireless links of up to 5km (3 miles), providing a powerful and cost-effective solution for connecting campuses, farms, warehouses, or remote outbuildings without the need for cabling. Its 160MHz channel width further enhances performance by creating a wider wireless backhaul, increasing throughput and ensuring faster, more stable connectivity even in demanding environments.

Deployment is simple and efficient with the pre-configured 2-piece kit, which comes factory-paired to enable true out-of-the-box operation. With auto-pairing functionality and a clear LED indicator on the repeater, users can quickly establish and verify the connection, significantly reducing installation time and complexity.

A dedicated 2.4GHz radio is reserved for management access, allowing users to connect to the device for configuration and monitoring without impacting the 5GHz wireless backhaul link. This ensures stable bridge performance while still providing convenient local access for maintenance and setup when needed.

Built for outdoor durability, the NWA55AX PTP features an IP55-rated weatherproof enclosure and an operating temperature range of -30°C to 50°C, ensuring reliable performance in harsh environmental conditions. Its sleek, compact design with integrated internal antennas not only enhances visual appeal but also protects critical antenna components from damage, ensuring long-lasting performance in outdoor deployments. The wireless bridge can be powered by a PoE switch or by the PoE injector included in the package, ensuring flexible and simplified installation.



5GHz (2x2:2) 802.11ax outdoor wireless bridge provides maximum speeds up to 2.4Gbps



Easy setup with a pre-configured 2-piece kit that delivers fast deployment with auto-pairing and a seamless out-of-the-box experience



Long-range 5GHz transmission designed for wireless links up to 5km (3 miles)



160MHz channel width support provides a wider wireless backhaul, increasing throughput for faster and more stable connectivity



Designed for challenging outdoor environments with an IP55 rating and operating temperature range of -30°C to 50°C



Sleek, compact design with internal antennas enhances aesthetic appeal while protecting the antennas from damage

Benefits

Seamless Out-of-the-Box Setup with Auto-Pairing Design

The NWA55AX PTP is designed to deliver a true out-of-the-box experience, enabling fast and effortless deployment with minimal setup required. The pre-configured 2-piece kit comes factory-paired, allowing both units to connect automatically upon installation. With auto-pairing functionality and a clear LED indicator on the repeater, users can quickly verify link status and complete installation with confidence. This streamlined design significantly reduces configuration time and complexity, making it ideal for rapid outdoor wireless bridge deployment.



Extended 5km Range with 5 GHz WiFi 6 Performance

The NWA55AX PTP leverages 5GHz WiFi 6 technology to deliver long-distance wireless connectivity of up to 5km (3 miles), enabling stable and high-performance point-to-point links. By operating on the 5GHz band, it minimizes interference while maximizing throughput, making it ideal for reliable outdoor backhaul connections over extended distances. Combined with WiFi 6 efficiency improvements, it ensures consistent performance, lower latency, and enhanced stability even in challenging outdoor environments.



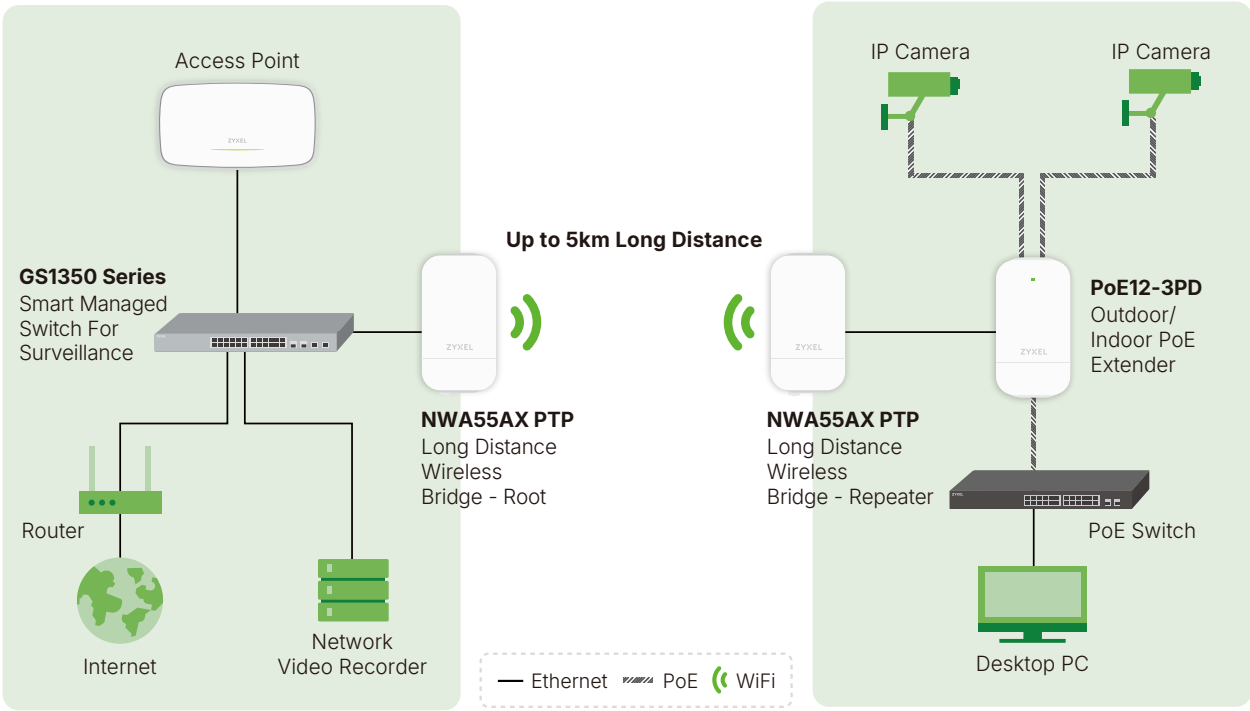
Compact, Durable Design for Easy Deployment

The NWA55AX PTP's compact form with integrated internal antennas simplifies installation and eliminates the need for manual adjustments. Its IP55-rated enclosure and enclosed antennas protect against dust, rain, and physical impact, enhancing durability and reducing maintenance. The sleek, unobtrusive design allows flexible wall or pole placement, making it an ideal solution for extending reliable outdoor wireless connectivity with minimal effort and optimized cost.

RF First by Design

The advanced RF filter design eliminates interference between the 2.4GHz and 5GHz 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.

Application Diagram



Specifications

Model	NWA55AX PTP
Product name	AX2400 2-Stream WiFi 6 (5GHz, 5km) NebulaFlex Outdoor Wireless Bridge



Wireless		
Standard		IEEE802.11 ax/ac/n/g/b/a
MIMO		MU-MIMO
Wireless speed	2.4GHz	287Mbps (Management Access)
	5GHz	2400Mbps
Frequency band	2.4GHz	- USA (FCC): 2.412 to 2.462 GHz - Europe (ETSI): 2.412 to 2.472GHz
	5GHz	- USA (FCC): 5.15 to 5.35 GHz; 5.470 to 5.850 GHz - Europe (ETSI): 5.15 to 5.35 GHz; 5.470 to 5.725 GHz
Bandwidth		20-, 40-, 80- and 160-MHz
Conducted typical transmit output power*1	US (2.4GHz/5GHz)	22/28dBm
	EU (2.4GHz/5GHz)	20/24dBm
RF Design		
Antenna type		Internal Antenna
Antenna gain	2.4GHz	3dBi, 1x1:1SS
	5GHz	9dBi, 2x2:2SS
Minimum receive sensitivity		Min. Rx sensitivity up to -99 dBm
HPBW/Horizontal		▶ 70°
HPBW/Vertical		▶ 22°

Model		NWA55AX PTP
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
Management		
Operating mode		Cloud managed/standalone
Web UI/CLI		Yes
SNMP		No
Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	180 x 99 x 35.9 / 7.09 x 3.90 x 1.41
	Weight (g/lb.)	300 / 0.66
Packing	Dimensions (WxDxH)(mm/in.)	345 x 197 x 58 / 13.58 x 7.56 x 2.28
	Weight (g/lb.)	1278 / 2.82
Included accessories		• PoE injector • Mounting screws
MTBF (hr)		695,292
Physical Interfaces		
Ethernet port		1 x 1GbE LAN
Power		PoE (802.3af): power draw 12W
PoE modes	IEEE 802.3af	Unrestricted
	IEEE 802.3at	Unrestricted
	IEEE 802.3bt	Unrestricted
Environmental Specifications		
Weather Protection		IP55
Operating	Temperature	-30°C to 50°C/-22°F to 122°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; ETSI EN 300 328, EN 301 893; LP0002
EMC		FCC Part 15B, EN 301 489-1; EN 301 489-17, EN55032, EN55035, EN61000-3-2/-3, 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.

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