ZYXEL
NETWORKS

WAX630S
802.11ax (WiFi 6) Dual-Radio Unified Pro Access Point

Featuring 6 spatial streams (4x4:4 in 5 GHz, 2x2:2 in 2.4 GHz), OFDMA and MU-MIMO capabilities, the Zyxel WAX630S is the true WiFi 6 access point that provides ultra-fast speed and consistent performance for your wireless network. Any environment that needs to accommodate a large number of devices, it can offer a faster and smarter connection to everyone every time when they connect to the WiFi.

The built-in smart antenna technology, proven to be capable to mitigate co-channel interference, continuously monitors the connection and adaptively adjusts its antenna patterns to ensure that the optimum performance is delivered to every connection, which means more users and devices can be connected without any degradation in performance or response time even in high-density environments.

The WAX630S is not only efficient at delivering impressive high speeds with smooth and consistent delivery to wireless clients, but also it's efficient on power. The WAX630S can deliver its impressive performance while keeping the consumption of PoE within the PoE+ standard, so that you can enjoy the latest WiFi 6 technology, experience first-hand the uncompromising multi-gigabit speed when coupling with the capacity of Zyxel XS1930 Series switches without the need of re-cabling.

AX 802.11 Dual-radio (dual 4x4+2x2 MIMO) 802.11ax AP provides maximum data rate of 2975 Mbps

Smart antenna is the proven technology that can mitigate interference and boost WiFi 6 performance

Coupled the capacity with Zyxel XS1930 Series switches, the 2.5GbE uplink delivers uncompromising multi-gigabit speed without the need of re-cabling

NebulaFlex Pro allows users to switch among standalone, on-premises controller managed or intuitive Nebula cloud managed modes as needed

Advanced Cellular Coexistence minimizes interferences from 4G/5G cellular networks

nebula

Zyxel**one**network
Redefining network integration

Benefits

Bringing next generation WiFi within reach

Zyxel's new WAX630S is a next-generation WiFi 6 access point that delivers faster performance and massive increased-capacity, which along with unique Zyxel technology, make the user experience even better.

Apart from running at 25% faster speed, the WAX630S can also accommodate more client devices without any fall-off in speed, allowing an easy scale-up capacity to support hundreds of connections without increased latency.

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.

Unparalleled high-density performance

Essentially, there are two technologies that make a real difference in WiFi 6 – orthogonal frequency-division multiple access (ODFMA), and spatial re-use, which is also referred to as Basic Service Set (BSS) coloring. These make WiFi 6 a much more efficient technology than 802.11ac. The BSS coloring allows multiple access points to be used in the same vicinity without fear of co-channel-interference. Zyxel smart antenna technology has elevated the effectiveness of spatial reuse even further by physically change the antenna pattern to avoid interference from other co-channel APs. This makes WAX630S really help in exceptionally very dense environments.
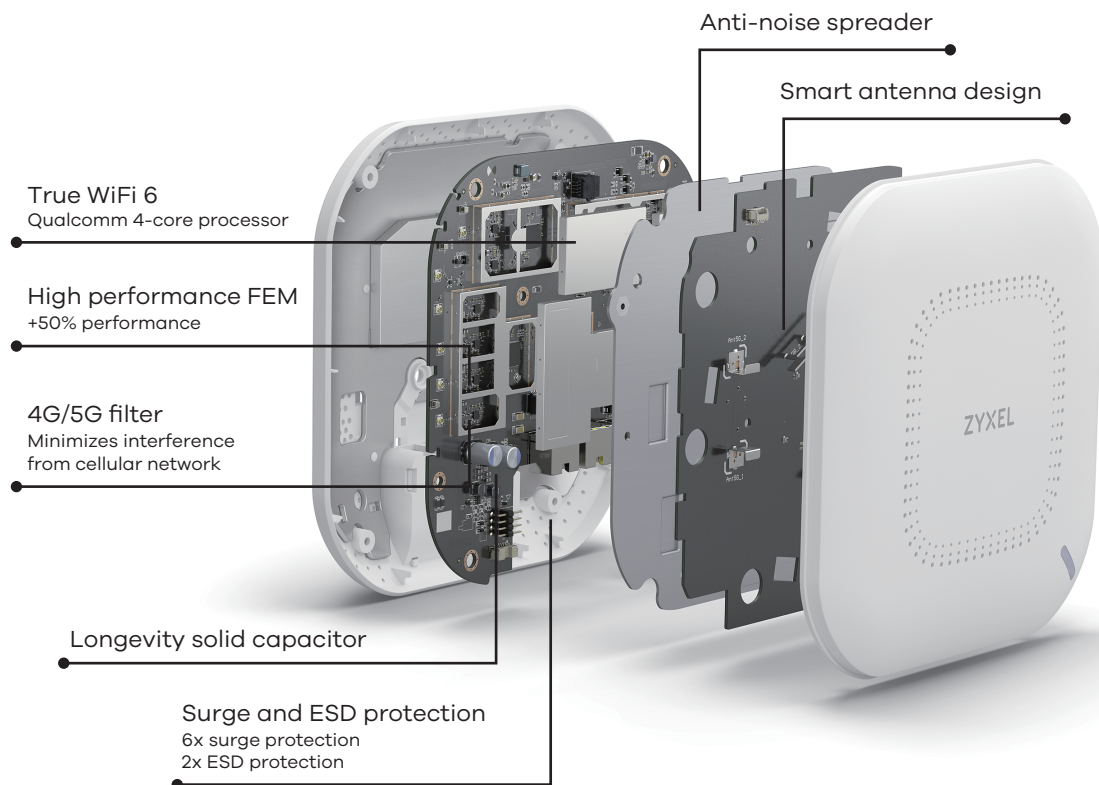
4G/5G cellular network coexistence

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 WAX630S 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.
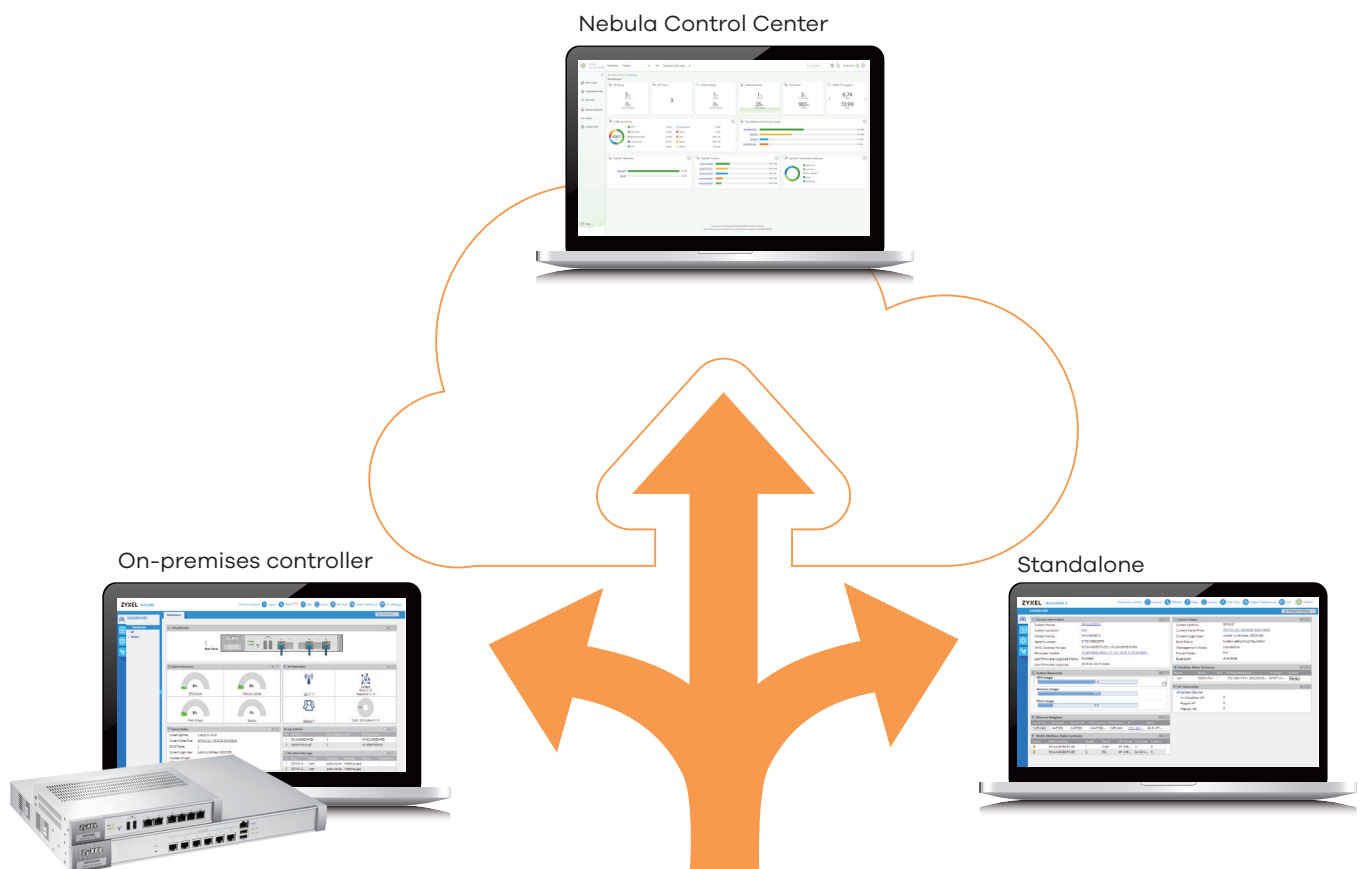
Optimized wireless experience with advanced features

The WAX630S ensures an optimized wireless experience for users with a range of wireless features such as Dynamic Channel Selection (DCS), Load Balancing and Smart Client Steering. DCS minimizes the interference of co-channel and overlapping channels. Load Balancing enables administrators to set limits on the number of clients associated with each AP. Furthermore, Smart Client Steering features with Band Select, Signal Threshold and Band Balancing combine to deliver stable, reliable wireless connections. Band Select and Signal Threshold monitor the capabilities of each wireless client and steer them to the less-congested band and AP with better signals. Band Balancing detects dual-radio clients and distributes clients across 2.4 GHz and 5 GHz bands on AP. All of these deliver a smooth, consistent and uninterrupted wireless experience to its users.
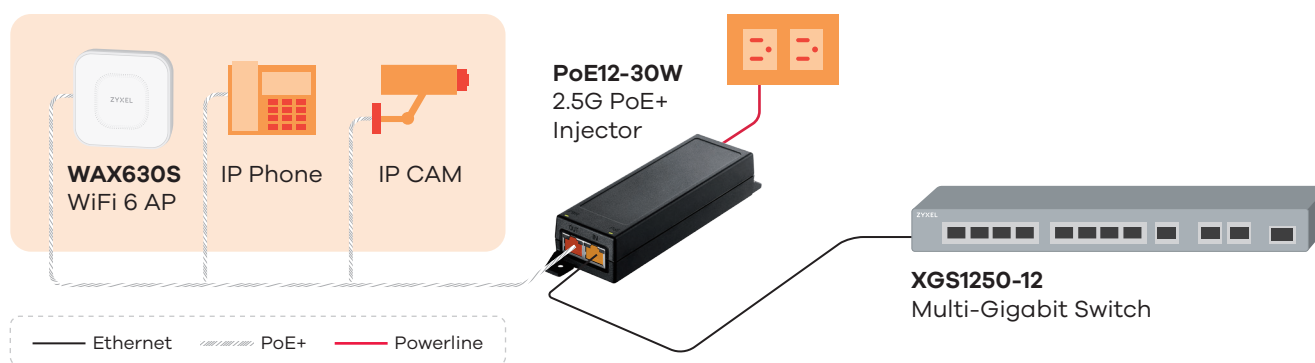
Powerful Hardware Design

Anti-noise spreader

Smart antenna design

True WiFi 6
Qualcomm 4-core processor

High performance FEM
+50% performance

4G/5G filter
Minimizes interference
from cellular network

Longevity solid capacitor

Surge and ESD protection
6x surge protection
2x ESD protection

Switch Among Triple Modes

Nebula Control Center

On-premises controller

Standalone

Suggested PoE Injector

Specifications

Model	WAX630S
Product name	802.11ax (WiFi 6) Dual-Radio Unified Pro 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	2400 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
Bandwidth		20-, 40-, 80- and 160-MHz
Conducted typical transmit output power	US (2.4 GHz/5 GHz)	23/28 dBm
	EU (2.4 GHz/5 GHz)	19/25 dBm

RF Design		
Antenna type		4x4 + 2x2 smart antenna
Antenna gain	2.4 GHz	Peak gain 3 dBi
	5 GHz	Peak gain 4.5 dBi
Minimum receive sensitivity		Min. Rx sensitivity up to –101 dBm

WLAN Feature	
Band steering	Yes
WDS/Mesh	Yes
Fast roaming	Pre-authentication, PMK caching and 802.11r/k/v
DCS	Yes
Load balancing	Yes

Model	WAX630S
Security	
Encryption	WEP/WPA/WPA2-PSK/WPA3
Authentication	WPA/WPA2/WPA3-Enterprise/EAP/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
Zyxel Wireless Optimizer	• WiFi AP planning • WiFi coverage detection • Wireless health management
Web UI/CLI	Yes
SNMP	Yes

Physical Specifications		
Item	**Dimensions (WxDxH)(mm/in.)**	180 x 180 x 39/7.09 x 7.09 x 1.54
	Weight (g/lb.)	530/1.17
Packing	**Dimensions (WxDxH)(mm/in.)**	228 x 216 x 63/8.98 x 8.5 x 2.48
	Weight (g/lb.)	765/1.69
Included accessories		• Mount plate • Mounting screws
MTBF (hr)		321,114

Physical Interfaces	
Ethernet port	1 x 1/2.5 Gbps LAN 1 x 1 Gbps LAN
Power	• PoE (802.3) at: power draw 19 W • DC input: 12 VDC 2 A

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, LP0002
EMC	FCC Part 15B, EN 301 489-1, EN 301 489-17, EN55022, EN55024, EN61000-3-2/-3, EN60601-1-2, BSMI CNS13438
Safety	Safety EN 60950-1, IEC 60950-1, BSMI CNS14336-1

Accessory

Model	PoE12-30W

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

13/12/21

Datasheet WAX630S