ZYXEL
NETWORKS

WAX655E
AX5400 Dual-Radio WiFi 6 (802.11ax) Outdoor Access Point

Almost nothing can make users to put down mobile gadgets even in awesome festivals or parties as people are so busy recording and sharing their life with their phones. If there is something that can really stop them, it must be bad WiFi access. Bad WiFi experiences can easily turn into negative reviews on the Internet.

Designed to combat congested mobile data networks and bad WiFi offloading, the Zyxel WAX655E access points provides multi-gigabit wireless connectivity to hundreds of users. With Zyxel's commitment to RF First, the WAX655E is able to provide both superb performance and user satisfaction in public environments.

The embedded Zyxel Smart Mesh Technology not only forms dynamic wireless links between APs for extended range, but also is able to bridge the wireless connectivity from one building to another. It is no doubt that WAX655E is an ideal choice to simply extend your wireless network outdoors as well as forming an interconnected wireless network through outdoor inter-building links.

Cloud management is a simpler, faster and much more efficient way to handle larger networks. Featuring NebulaFlex Pro, Zyxel WAX655E gives you an advantage to manage your network on our intuitive NCC cloud platform and its 1-year bundled Nebula Pro Pack license helps eliminate immediate licensing cost when migrating to full-featured cloud management. In addition, the WAX655E offers the full flexibility for users to switch among standalone, controller-managed and cloud-managed modes.

AX 802.11 802.11ax dual radio outdoor AP delivers blazing-fast speeds up to 5400 Mbps

Designed for harsh outdoor environments with up to IP67 industrial-grade weather proofing

Obtain multi-gigabit performance with a 2.5 Gbps PoE port to support the demand for better outdoor WiFi

ZyMesh Smart Mesh automatically forms dynamic wireless links to bridge networks for inter-building settings and mitigates complex, inconvenient cabling WiFi deployments

NebulaFlex Pro offers the full flexibility for users to easily switch between Nebula cloud-managed, controller-managed, and standalone modes

nebula

Zyxel one network
Redefining network integration

Benefits

Bringing next generation WiFi within reach

WiFi 6 made tremendous improvement by introducing new technologies, such as orthogonal frequency-division multiple access (ODFMA), and spatial re-use, which is also referred to as Basic Service Set (BSS) coloring.
It aims to simultaneously satisfy all requirements from rapidly growing mobile users. Zyxel's WAX655E is a true WiFi 6 access point which support essential 11ax functions that delivers faster performance and massive increased capacity, making the user experience even better.

Apart from running at 25% faster speed, WAX655E can also maximize WiFi efficiency by allowing simultaneous data transmission for multiple clients; thus, the air time contention is no longer an issue here.

Optimized wireless experience for mobile clients

Users won't always stay on the same spot, but mobile gadgets may stick with the same AP even they could have better choices. To provide superior user experience, the Zyxel WAX655E supports Band Select that steers mobile devices to the best AP and channel in real time.

• The WAX655E is a dual-radio outdoor access point with 4x4 + 2x2 MU-MIMO technology, for which Zyxel offers a series of compatible external antenna to suit different environments.

Ideal for harsh outdoor environments

Extending wireless connection to outdoor spots in harsh weather is another challenge. The WAX655E offers up to IP67 industry-grade weather proofing and the capability to work in extremely high- or low-temperature conditions. Moreover, the built-in surge protector of WAX655E provides an extra layer of protection for your investments against surges caused by lightning.

NebulaFlex Pro – simply manage it your way!

The NebulaFlex Pro provides extended flexibility, especially for those who hesitate to step up for cloud networking. You can easily switch network management modes among standalone, on-premises controller and our intuitive NCC cloud platform. You can even change your mind any time without additional cost while protecting previous investments on wireless technology. You can have the privilege to use advanced features with professional pack for one year upon registration on Nebula; these features include site-wide topology, 365-day statistics on the device and client monitoring along with more upcoming new features on NCC and its App.

Specifications

Model	WAX655E
Product name	AX5400 Dual-Radio WiFi 6 (802.11ax) Outdoor 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
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*1	US (2.4 GHz/5 GHz)	24/28 dBm
	EU (2.4 GHz/5 GHz)	18/25 dBm

RF Design	
Antenna type	4x4 + 2x2, 6 N-type connectors*2
Minimum receive sensitivity	Min. Rx sensitivity up to -101 dBm

WLAN Feature	
Band steering	Yes
WDS/Mesh*3	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-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 (Doesn't support traffic shaping in NCC)
WMM	Yes
U-APSD	Yes

*1: Maximum transmit power is limited by local regulatory settings.
*2: The antenna is not embedded and external antennas are separately sold.
*3: WDS, ZyMesh, Smart Mesh and Industry's Open Mesh, Easy Mesh are different mesh systems that do not work with one another.

Model		WAX655E
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.)	256 x 257 x 70/10.07 x 10.11 x 2.75
	Weight (g/lb.)	1,365/3.00
Packing	Dimensions (WxDxH)(mm/in.)	427 x 284 x 111/16.81 x 11.18 x 4.37
	Weight (g/lb.)	2,925/6.44
Included accessories		Pole/wall mounting kits
MTBF (hr)		992,516
Physical Interfaces		
Ethernet port		1 x 1/2.5 Gbps LAN
Power		PoE (802.3)at: power draw 25.5 W
PoE modes	IEEE 802.3af	No Wireless
	IEEE 802.3at	Unrestricted
	IEEE 802.3bt	Unrestricted
Environmental Specifications		
Operating	Temperature	-40°C to 65°C/-40°F to 149°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)
Weather protection		IP67
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

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

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Datasheet WAX655E