ZYXEL

WAC6550 Series

802.11ac 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's 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 for crowded public outdoor venues, the Zyxel WAC6550 Series access points provide Gigabit wireless connectivity to hundreds of users. With Zyxel's commitment to RF First, the WAC6550 Series is able to improve both performance and user satisfaction in public environments.

Cloud management is a simpler, faster and much more efficient way to handle larger networks. However Zyxel knows that it's not always easy for administrators of busy venues to go for cloud immediately. In response to this challenge, the Zyxel WAC6550 Series featuring NebulaFlex Pro offers the full flexibility for users to switch among standalone, controller-managed and cloud-managed modes. In addition, it comes with a 1-year bundled Nebula Professional pack license* that eliminates immediate licensing cost when migrating to full-featured cloud management.

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

802.11ac outdoor access points deliver Gigabit wireless connectivity in crowded public outdoor environments

Excellence performance with integrated smart antenna or high-gain MIMO antenna options proven to provide better coverage and reliability

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

nebula

Zyxel **one** network
Redefining network integration

Benefits

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.

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 WAC6550 Series supports Band Select that steers mobile devices to the best AP and channel in real time.

- The WAC6552D-S features Zyxel's field-proven smart antenna that dynamically changes signal pattern and mitigate interference to extend coverage and provide higher reliability to mobile clients
- The WAC6553D-E is a dual-radio outdoor access point with 3x3 MIMO technology, for which Zyxel offers a series of compatible external antenna to suit different environments.
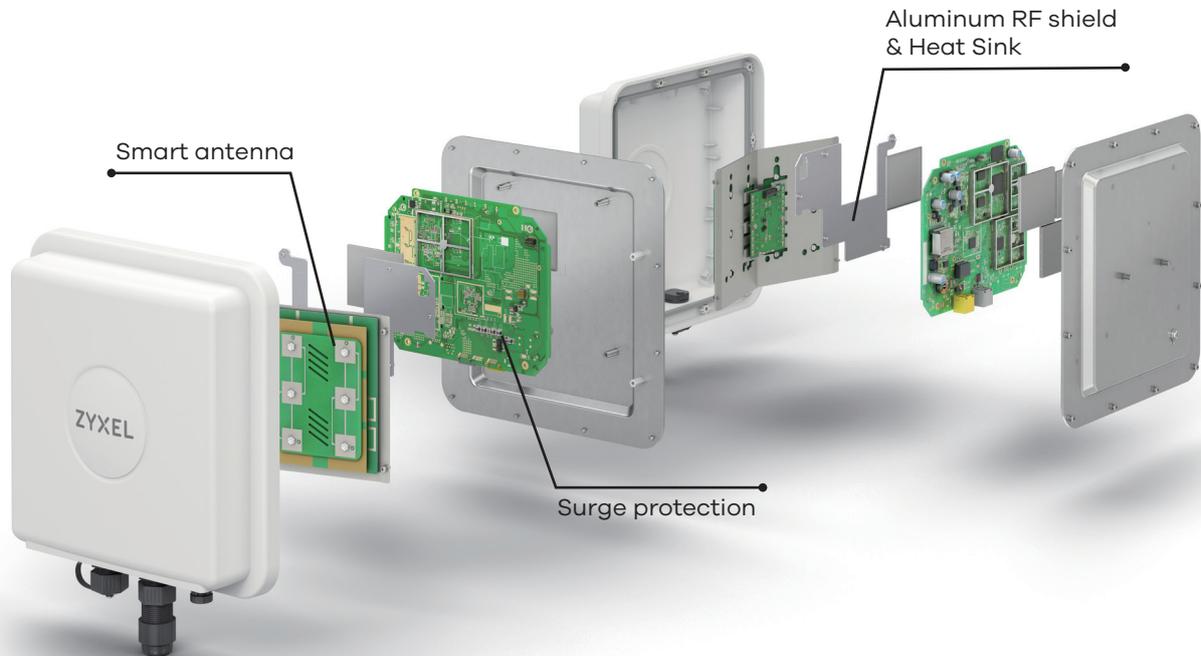
Ideal for harsh outdoor environments

Extending wireless connection to outdoor spots in harsh weather is another challenge. The WAC6550 Series 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 WAC6552D-S provides an extra layer of protection for your investments against surges caused by lightning.
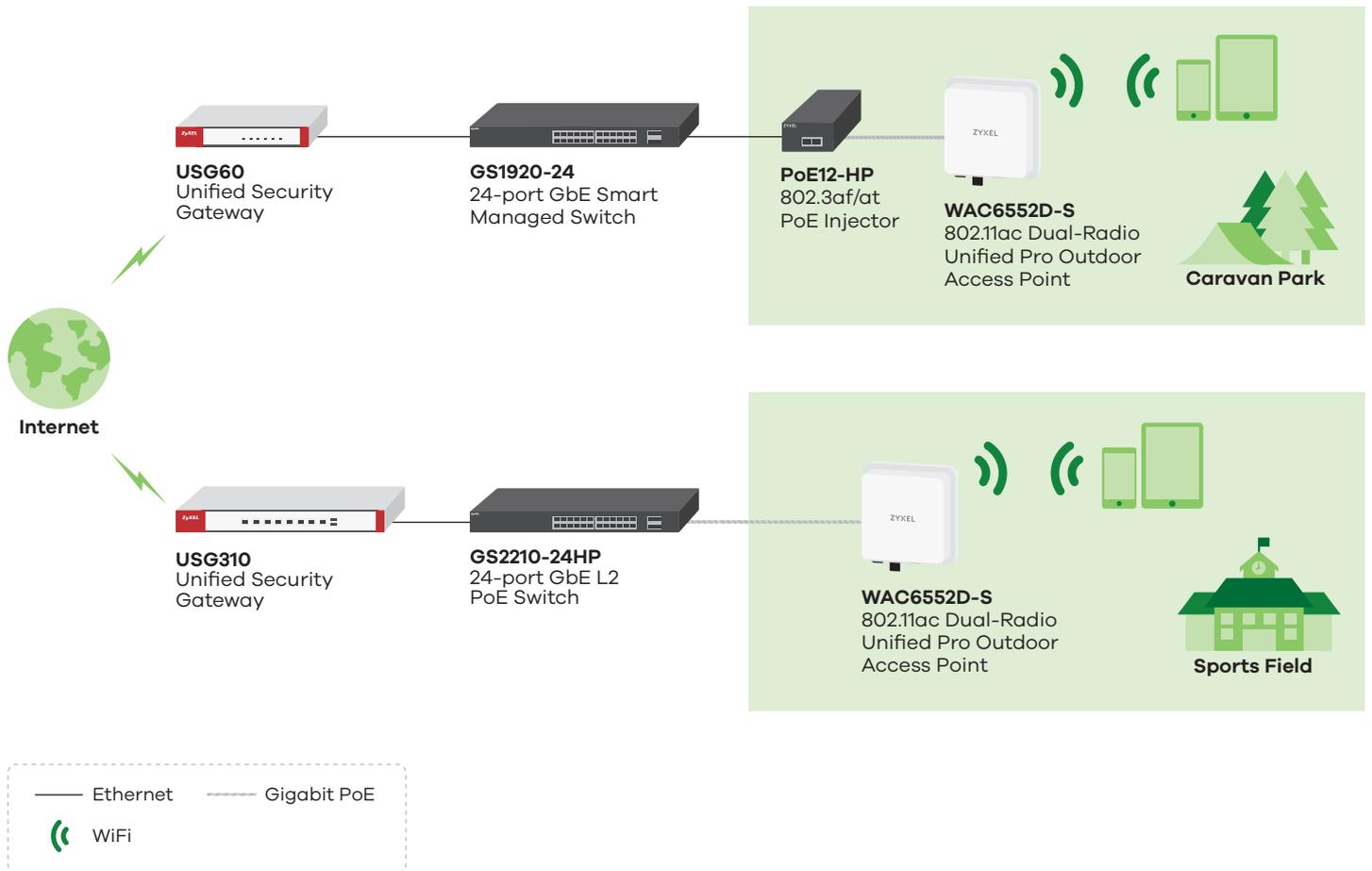
Effortless deployments and lower initial investment

Deployment of outdoor access points is a complex task that involves cabling, installation and maintenance. The WAC6552D-S simplifies the process with its embedded sectorial antenna and pole-mounting kit that save your effort to install and adjust signal patterns. This makes WAC6552D-S an ideal solution to extend reliable wireless connectivity to outdoor venues at an affordable price.

RF First Design

Aluminum RF shield & Heat Sink

Smart antenna

Surge protection

Application Diagram

USG60
Unified Security
Gateway

GS1920-24
24-port GbE Smart
Managed Switch

PoE12-HP
802.3af/at
PoE Injector

WAC6552D-S
802.11ac Dual-Radio
Unified Pro Outdoor
Access Point

Caravan Park

Internet

USG310
Unified Security
Gateway

GS2210-24HP
24-port GbE L2
PoE Switch

WAC6552D-S
802.11ac Dual-Radio
Unified Pro Outdoor
Access Point

Sports Field

——— Ethernet   ‑‑‑‑‑ Gigabit PoE

((WiFi

Specifications

Model	WAC6552D-S	WAC6553D-E
Product name	802.11ac Dual-Radio Unified Pro Outdoor Access Point	802.11ac Dual-Radio External Antenna 3x3 Outdoor Access Point

Wireless			
Standard		IEEE 802.11 ac/n/g/b/a	IEEE 802.11 ac/n/g/b/a
MIMO		MIMO	MIMO
Wireless speed	2.4 GHz (Mbps)	300	450
	5 GHz (Mbps)	866	1300
Frequency band	2.4 GHz (IEEE 802.11 b/g/n)	• USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz	• USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz

	5 GHz (IEEE 802.11 a/n/ac)	• USA (FCC): 5.15 to 5.35 GHz;
		  5.725 to 5.850 GHz
		• European (ETSI): 5.15 to 5.35 GHz;
		  5.470 to 5.725 GHz
			• USA (FCC): 5.15 to 5.35 GHz;
			  5.725 to 5.850 GHz
			• European (ETSI): 5.15 to 5.35 GHz;
			  5.470 to 5.725 GHz

Bandwidth		20-, 40- and 80-MHz	20-, 40- and 80-MHz
Conducted typical transmit output power[1]	2.4 GHz (dBm)	28	29
	5 GHz (dBm)	28	29

Switching Capacity (Gbps)			
Antenna type		2x2 MIMO Smart antenna	6 N-type connectors[2]
Antenna gain	2.4 GHz (dBi)	5	-
	5 GHz (dBi)	10	-
Minimum receive sensitivity		Min. Rx sensitivity up to -101 dBm	Min. Rx sensitivity up to -102 dBm

WLAN Feature		
Band Steering	Yes	Yes
WDS	Yes	Yes
ZyMesh (Controller-managed mode)	Yes (by License)[3]	Yes (by License)[3]
Smart mesh (Cloud mode)	Yes	Yes
Fast roaming[3]	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v

Security		
Encryption	WEP/WPA/WPA2-PSK	WEP/WPA/WPA2-PSK
Authentication	WPA/WPA2-Enterprise/EAP/ IEEE 802.1X/RADIUS authentication	WPA/WPA2-Enterprise/EAP/ IEEE 802.1X/RADIUS authentication
Access management	L2-isolation/MAC filtering/ Rogue AP detection	L2-isolation/MAC filtering/ Rogue AP detection

Networking		
IPv6	Yes	Yes
VLANs	Yes	Yes
WMM	Yes	Yes
U-APSD	Yes	Yes
DiffServ marking	Yes	Yes

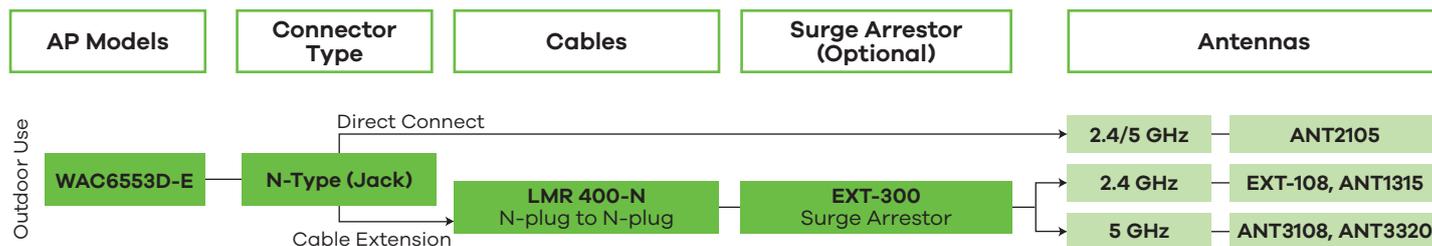*1: Maximum transmit power is limited by local regulatory settings.
*2: The antenna is not embedded and external antennas are separately sold.
*3: Features supported when working with Zyxel NXC controller series.

Model	WAC6552D-S	WAC6553D-E
Management		
Operating mode	Standalone/controller-managed	Standalone/controller-managed

ZON Utility	• Discovery of Zyxel switches, APs and gateways
	• Centralized and batch configurations
	  ▪ IP configuration
	  ▪ IP renew
	  ▪ Device reboot
	  ▪ Device locating
	  ▪ Web GUI access
	  ▪ Firmware upgrade
	  ▪ Password configuration
	  ▪ One-click quick association with Zyxel AP Configurator (ZAC)
		• Discovery of Zyxel switches, APs and gateways
		• Centralized and batch configurations
		  ▪ IP configuration
		  ▪ IP renew
		  ▪ Device reboot
		  ▪ Device locating
		  ▪ Web GUI access
		  ▪ Firmware upgrade
		  ▪ Password configuration
		  ▪ One-click quick association with Zyxel AP Configurator (ZAC)

ZAC	• Batch AP configuration • Batch AP firmware upgrade • Batch AP profile backup	• Batch AP configuration • Batch AP firmware upgrade • Batch AP profile backup
Zyxel Wireless Optimizer	• WiFi AP planning • WiFi coverage detection • Wireless health management	• WiFi AP planning • WiFi coverage detection • Wireless health management
Web UI/CLI	Yes	Yes
SNMP	Yes	Yes
Physical Specifications		
Item	**Dimensions (WxDxH)(mm/in.)**	255 x 256 x 66/10.04 x 10.08 x 2.60	255 x 256 x 62/10.04 x 10.08 x 2.44
	Weight (g/lb.)	1590/3.51	1708/3.77
Packing	**Dimensions (WxDxH)(mm/in.)**	455 x 341 x 131/17.91 x 13.43 x 5.16	393 x 158 x 430/15.47 x 6.22 x 16.93
	Weight (g/lb.)	3500/7.72	3904/8.63
Included accessories		• Pole/wall mounting kits	• Pole/wall mounting kits • PoE injector (optional) • Power cord (optional)
MTBF (hr)		775,977	562,413
Physical Interfaces		
Ethernet port	1 x 10/100/1000M LAN	1 x 10/100/1000M LAN
Power	PoE (802.3at): power draw 15.12 W	PoE (802.3at): power draw 25 W
Environmental Specifications		
Weather protection		IP67	IP66 (Embedded heater for harsh weather)
Operating environment	**Temperature**	-20°C to 60°C/-4°F to 140°F	-40°C to 60°C/-40°F to 140°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
Storage environment	**Temperature**	-40°C to 70°C/-40°F to 158°F	-40°C to 70°C/-40°F to 158°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
Environmental Specifications		
Radio	FCC Part 15C, FCC Part 15E, ETSI EN 300 328, EN 301 893, LP0002	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	FCC Part 15B, EN 301 489-1, EN 301 489-17, EN55022, EN55024, EN61000-3-2/-3, EN60601-1-2, BSMI CNS13438
Safety	EN 60950-1, IEC 60950-1, BSMI CNS14336-1	EN 60950-1, IEC 60950-1, BSMI CNS14336-1

Optional Accessories

Antenna & Cable Compatibility

AP Models	Connector Type	Cables	Surge Arrestor (Optional)	Antennas

Outdoor Use

WAC6553D-E → N-Type (Jack)

Direct Connect ────────────────────────→ 2.4/5 GHz — ANT2105

Cable Extension → **LMR 400-N** N-plug to N-plug → **EXT-300** Surge Arrestor → 2.4 GHz — EXT-108, ANT1315

5 GHz — ANT3108, ANT3320

Power Modules

Part Number	Description
POE12-HP-EU0102F	802.3at PoE injector, ROHS
POE12-HP-US0102F	802.3at PoE injector, ROHS