



NWA5123-AC HD

802.11ac Wave 2 Dual-Radio Unified Access Point

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 NWA5123-AC HD 11ac Wave 2 Dual-Radio Unified Pro Access Point 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.

The Zyxel NWA5123-AC HD is a Wave 2 dual-radio 3x3 MU-MIMO access point with a combined data rate of up to 1.6 Gbps. Its superior hardware design with next generation beamforming technology and advanced noise suppression, the NWA5123-AC HD delivers increased coverage and improved connection speeds for every client. The high-performance NWA5123-AC HD is future-proof for the ever-growing mobility demands in high-density environments such as campuses and hotels.



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



Excellent wireless coverage and performance with the latest 3x3 Wave 2 802.11ac technology



Next generation beamforming technology delivers maximum coverage



Innovative MU-MIMO technology increases downstream throughput by simultaneously talking to multiple devices



Solid state capacitors and advanced heat dissipation ensure high reliability and long life—even in the toughest environments



Advanced Cellular Coexistence minimizes interference from 3G/4G cellular networks



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.

Second Generation MU-MIMO – the true breakthrough in wireless connectivity

Stepping up from 802.11ac, the Wave 2 technology introduces Multi-User MIMO (MU-MIMO). This is an important WiFi development that enables an AP to communicate with multiple clients at a time offering up to 300% performance for a 3x3 AP. The benefits of Wave 2 technology are clear, but there are still two well-known technical challenges: the airtime cost when performing channel measurement, and the data rate being limited by the slowest client in the MU group.

To overcome those challenges, the NWA5123-AC HD uses second generation transmit beamforming technology incorporating Low End Sensitivity Improvements and Time Domain Channel Smoothing allowing data rates to increase for not only MU-MIMO clients, but for all existing ones as well. Additionally, the NWA5123-AC HD is built with a high-efficiency antenna module, premium power amplifiers and low-noise elements delivering superior wireless performance over other Wave 2 access points on the market.

Unbeatable coverage

Maximizing wireless coverage is more than just a game of output power. Every hardware design details including the layout, the antenna and the ability to distinguish between numerous sources of noise all contribute in determining coverage and throughput. Unlike most products on the market that measure only conducted sensitivity without considering the effect of antennas, Zyxel examines sensitivity with antenna (a.k.a. OTA sensitivity) as a whole wireless system to minimize the degradation in sensitivity at receiver end. In short, Zyxel has optimized the design of the NWA5123-AC HD to boost sensitivity and maximize real world performance.

ThermoSense Adjustment Technology

Zyxel's ThermoSense Adjustment Technology is an innovative feature that extends the operating temperature range to as high as 60°C. It does this by monitoring the temperature threshold intelligently and making adjustments to operating parameters. This ensures continued performance in extreme environments such as warehouses and factory floors.

3G/4G cellular network coexistence

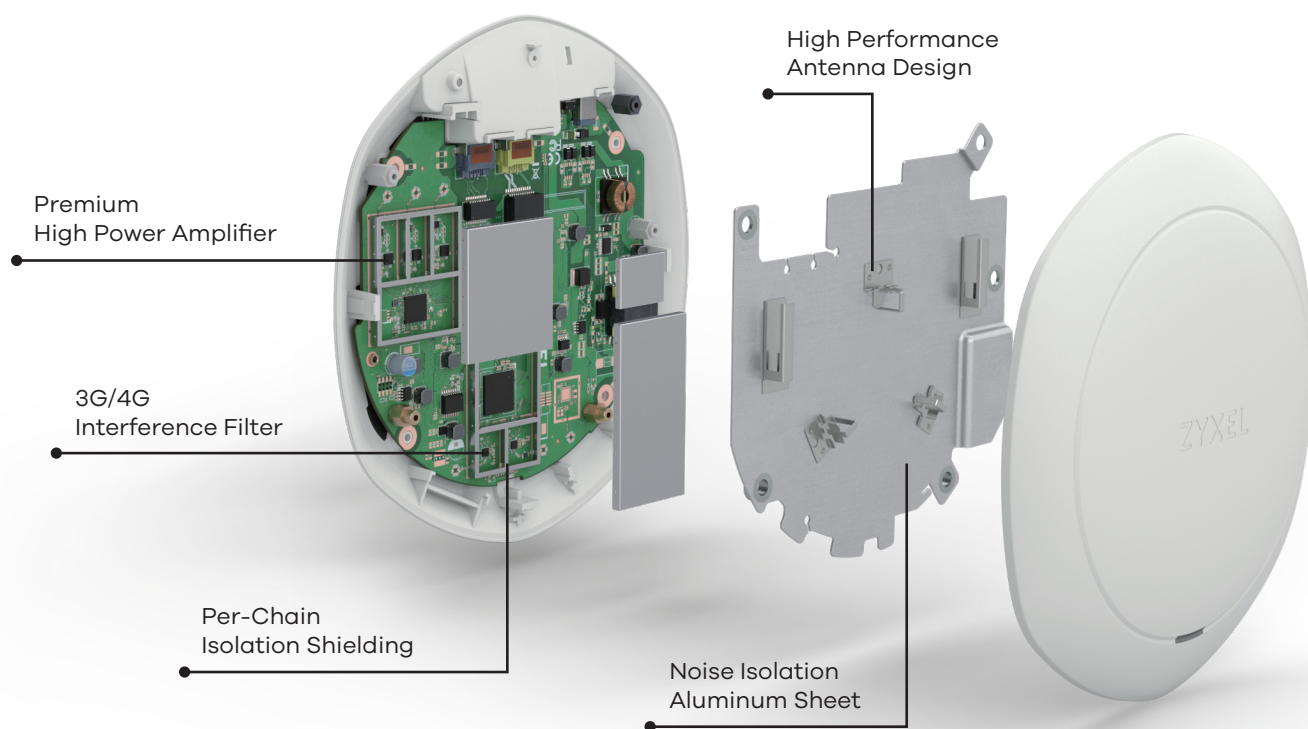
With gradually pervasive mobile infrastructure deployment at customer sites, users start to experience wireless performance degrade e.g. ping drops and high latency, however whenever users shutdown the mobile equipment, wireless service resumes working smooth. To enable 3G/4G cellular network coexistence and minimize interference from 3G/4G antennas or signal boosters, the NWA5123-AC HD has built-in 3G/4G interference filters. As a result, installation of the AP no longer needs to worry about the visible or invisible 3G/4G indoor antennas around.

Optimized wireless experience with advanced features

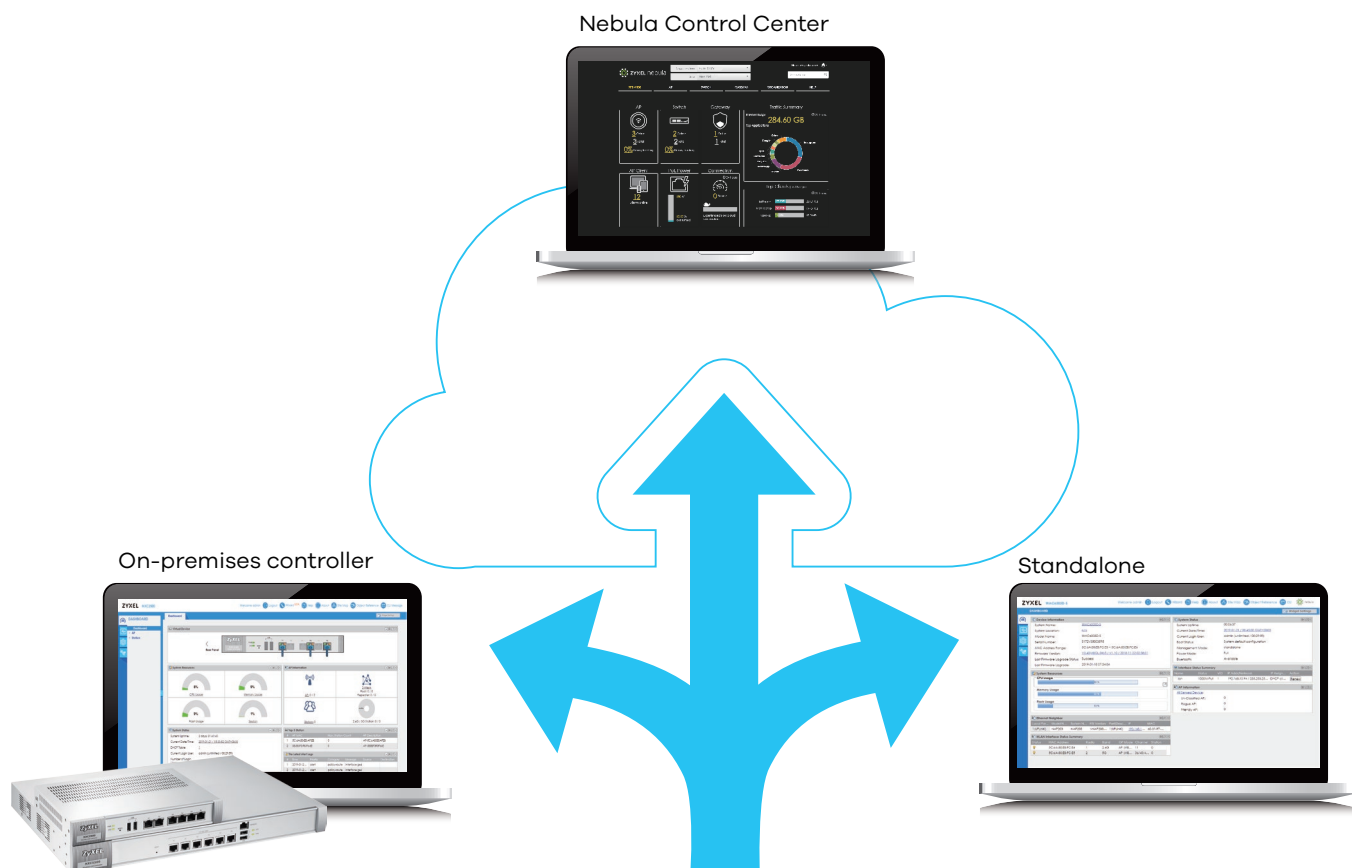
The NWA5123-AC HD ensures an optimized wireless experience for users with a range of wireless features such as Dynamic Channel Selection (DCS), Load Balancing and Smart Client Steering. DCS minimizes the interference of co-channel and overlapping channels. Load Balancing enables administrators to set 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.

* The licensing terms may vary depending on part numbers or regions
Please contact your local sales representative.


Powerful Hardware Design



Switch Among Triple Modes



Specifications

Model	NWA5123-AC HD		
Product name	802.11ac Wave2 Dual-Radio Unified Access Point		
			
Wireless			
Standard	IEEE802.11 ac/n/g/b/a		
MIMO	SU-MIMO and MU-MIMO		
Wireless speed	2.4 GHz	300 Mbps	
	5 GHz	1300 Mbps	
Frequency band	2.4 GHz (IEEE 802.11 b/g/n)		5 GHz (IEEE 802.11 a/n/ac)
	<ul style="list-style-type: none"> • USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz • Taiwan (TW): 2.412 to 2.462 GHz 		<ul style="list-style-type: none"> • USA (FCC): 5.150 to 5.250 GHz; 5.250 to 5.350 GHz; 5.470 to 5.725 GHz; 5.725 to 5.850 GHz • European (ETSI): 5.150 to 5.350 GHz; 5.470 to 5.725 GHz • Taiwan (TW): 5.150 to 5.250 GHz; 5.250 to 5.350 GHz; 5.470 to 5.725 GHz; 5.725 to 5.850 GHz
Bandwidth	20-, 40- and 80-MHz		
Conducted typical transmit output power*1 (limited by local regulatory requirements)	US (2.4 GHz/5 GHz)	25/28 dBm	
	EU (2.4 GHz/5 GHz)	20/26 dBm	
RF Design			
Antenna type	2.4 GHz	2x2 MIMO	
	5 GHz	3x3 MIMO	
Antenna gain	2.4 GHz	3 dBi	
	5 GHz	3 dBi	
Minimum Receive sensitivity*2	Min. Rx sensitivity up to -103 dBm		
WLAN Feature			
Band Steering	Yes		
WDS/Mesh*3	Yes		
Fast roaming	Pre-authentication, PMK caching and 802.11 r/k/v		
DCS	Yes		
Load balancing	Yes		
Security			
Encryption	WEP/WPA/WPA2-PSK		
Authentication	WPA/WPA2-Enterprise/EAP (-TLS, -TTLS, -PEAP, -FAST, -AKA and -SIM)/IEEE 802.1X/RADIUS authentication		
Access management	L2-isolation/MAC filtering/Rogue AP detection		
Networking			
IPv6 host	Yes		
VLANs	Yes		
WMM	Yes		
U-APSD	Yes		
DiffServ marking	Yes		

Model		NWA5123-AC HD
Management		
Operating mode	Nebula cloud managed/controller-managed/standalone	
ZON Utility	<ul style="list-style-type: none"> Discovery of Zyxel switches, APs and gateways Centralized and batch configurations <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Batch AP configuration Batch AP firmware upgrade Batch AP profile backup 	
Zyxel Wireless Optimizer	<ul style="list-style-type: none"> WiFi AP planning WiFi coverage detection Wireless health management 	
Web UI/CLI	Yes	
SNMP	Yes	
Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	211 x 223 x 39/8.31 x 8.78 x 1.54
	Weight (g/lb.)	750/1.65
Packing	Dimensions (WxDxH)(mm/in.)	251 x 247 x 55/9.88 x 9.72 x 2.17
	Weight (g/lb.)	990/2.18
Included accessories	<ul style="list-style-type: none"> Wall/ceiling mount plate Mounting screws 	
MTBF (hr)	4,134,738	
Physical Interfaces		
Ethernet port	2 x 10/100/1000 Mbps (switch port)	
Power	<ul style="list-style-type: none"> 12 V 2 A DC input 802.3at (Full mode; power draw 15.5 W) 802.3af (Restrict 2.4G & 5G radio to one transmit stream only.) 	
Environmental Specifications		
Operating	Temperature	-20°C to 60°C/-4°F to 140°F
	Humidity	10% to 90% (non-condensing)
Storage	Temperature	-40°C to 70°C/-40°F to 158°F
	Humidity	10% to 90%
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, EN55024, EN61000-3-2/-3, BSMI CNS13438	
Safety	EN 60950-1, IEC 60950-1, BSMI CNS14336-1	

*1: Conducted typical transmit output power excludes antenna gain. For total (EIRP) transmit power, add antenna gain.

*2: Rx sensitivity varies by band, channel width, and MCS rate

*3: WDS, ZyMesh, Smart Mesh and Industry's Open Mesh, Easy Mesh are different mesh systems that do not work with one another.

Optional Accessory

Part Number	Description
ACCESSORY-ZZ0104F	Universal power adapter (12 V/2.5 A)
ACCESSORY-ZZ0105F	Accessory, T-bar ceiling clips for ceiling mount AP to WAC6303D-S, 5 sets, ROHS
POE12-HP-EU0102F	802.3at PoE injector, ROHS
POE12-HP-US0102F	802.3at PoE injector, ROHS



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Datasheet [NWA5123-AC HD](#)

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