

ZYXEL



NWA5123-AC HD

802.11ac Wave 2 Dual-Radio Unified Access Point

The Zyxel NWA5123-AC HD is a Wave 2 dual-radio 3x3 MU-MIMO Unified Access Point with a combined data rate of up to 1.6 Gbps. Thanks to 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.

Benefits

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.

Datasheet [NWA5123-AC HD](#)



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 at the same time



Simple installation with APFlex™ or ZyFlex Utility makes installation and setup a breeze whether for just single or multiple units at once



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



Zykel **one** network

Redefining network integration

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 to 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 3G infrastructure deployment at customer sites, users start to experience wireless performance degrade e.g. ping drops and high latency, however whenever users shutdown the 3G 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.

Zyxel One Network experience

Aimed at minimizing the repetitive task of deploying and managing networks, Zyxel One Network (ZON) simplifies configuration, management and troubleshooting of multiple AP and switch deployments. This enables users to focus on their other key business priorities. The Zyxel One Network incorporates Zyxel One Network Utility (ZON Utility), an easy-to-use tool designed for instant network setup and Zyxel Smart Connect, which allows Zyxel networking equipment to find and recognize each other automatically. Zyxel One Network further facilitates remote network maintenance with one-click functions, and works across multiple networking products from Switch to Wireless to Gateway.

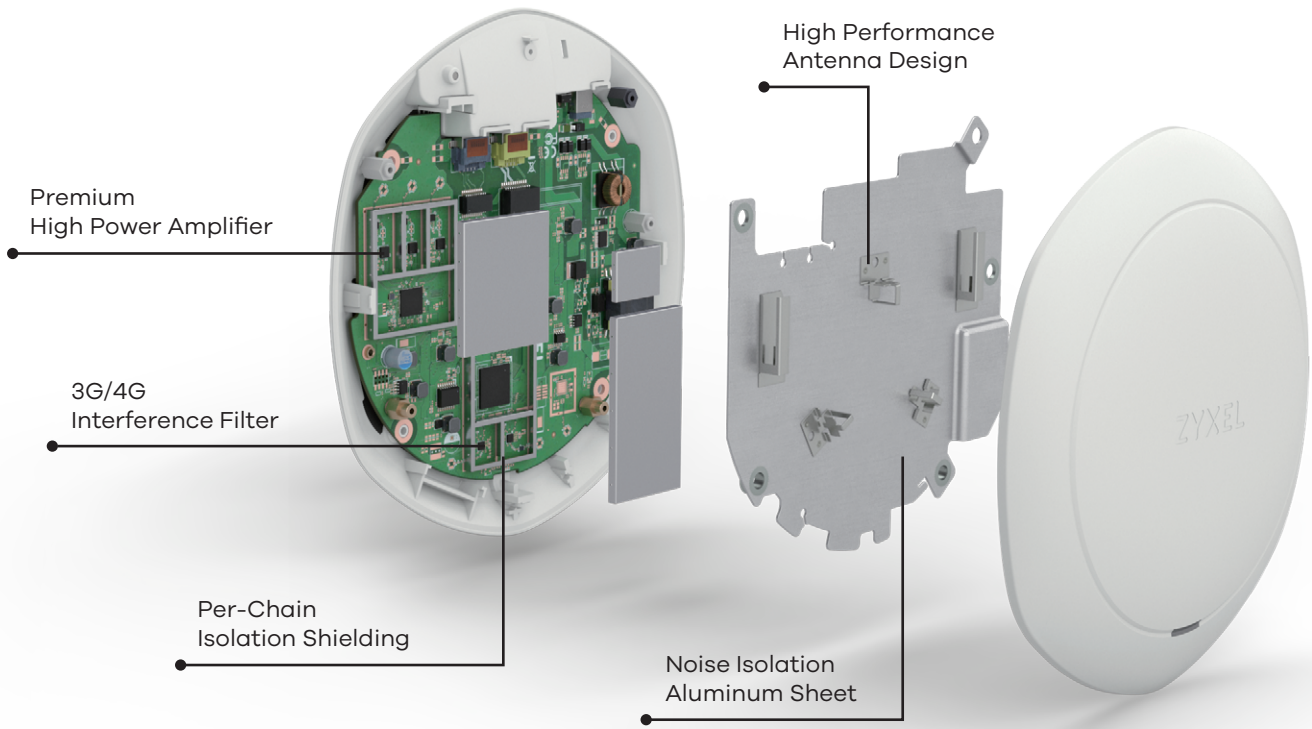
Optimized wireless experience with advanced features

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.

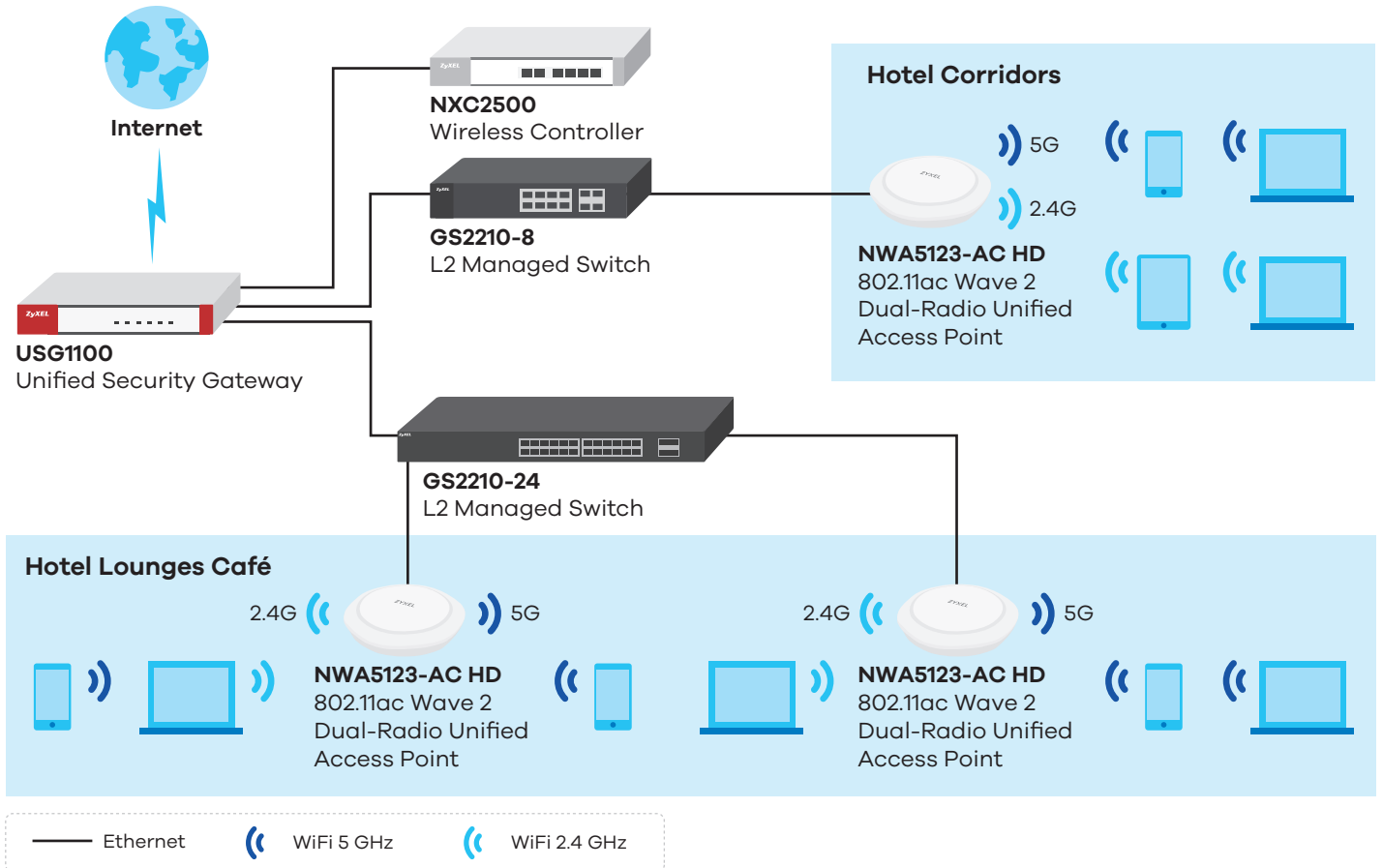
Grow your business with a scalable wireless network

The NWA5123-AC HD can be configured as a fully functional standalone AP. However, it is also capable of working with a Wireless LAN Controller to form a robust controller-based WLAN solution with centralized management as WiFi demand grows. Thanks to the innovative APFlex™ technology, no manual configuration is required to choose between standalone or controller mode; the NWA5123-AC HD will automatically put itself into managed mode if a Zyxel wireless controller is found on the network. Using industry standard CAPWAP technology ensures secure and reliable communication between the controller and AP, even if the controller is located off-site.

Powerful Hardware Design




Application Diagram



*NWA5123-AC HD will support repeater mode and ZyMesh in further features enhancement.

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) <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 	5 GHz (IEEE 802.11 a/n/ac) <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	
Transmission power¹	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 sensitivity²	Min. Rx sensitivity up to -103 dBm	
WLAN Feature		
Band Steering	Yes	
WDS	Future support	
Mesh AP (By license)	Future support	
Mesh AP for multiple SSID with VLAN	Future support	
Fast roaming³	Pre-authentication and PMK caching, 802.11r	
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	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^{*3} 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	2x 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: Max power varies by country setting, band, and MCS rate

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

*3: Supports when working with Zyxel NXC controller

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Your Networking Ally

