

ZYXEL



NWA1123-AC HD

802.11ac Wave 2 Dual-Radio PoE Access Point

Introducing the new hybrid access point

The Zyxel Hybrid series allows devices like the NWA1123-AC HD to be used in two modes by utilizing Zyxel's **NebulaFlex™**, you are able to easily switch between standalone and our License Free Nebula cloud management platform, anytime, with a few simple clicks.

By allowing the two different modes, you are able to protect your investment in wireless technology by having the flexibility to benefit from the cloud in your own time, without the need to worry about additional ongoing licensing costs.

When used with Nebula you are able to centrally manage, access real-time network information and gain effortless control over the NWA1123-AC HD and other Hybrid and Nebula devices, all under a single intuitive platform without the need to install any software or add additional equipment like a controller.

Not ready for the cloud... Just yet?

For those of you who are not ready for the cloud the NWA1123-AC HD offers a standalone mode, allowing you to setup each AP via its local user-friendly web interface and setup wizard. The wizard will quickly guide you through the initial setup and have you up running in minutes. Additionally you can manage and monitor the AP via traditional SNMP methods that you may have already in place. The NWA1123-AC HD is also part of the Zyxel One Network. This means that you can use the complimentary Zyxel One Network Utility to help with repetitive operations during deployment.



NebulaFlex™ gives you the flexibility to switch between standalone and our License Free Nebula cloud management



Nebula cloud management allows easy deployment, real-time configurations and access to all your access points anytime



Achieve reliable connectivity, support for more connected clients and better wireless coverage with the latest Wave 2 WiFi standard



Up to 300% more performance from MU-MIMO technology



Robust build quality including solid-state capacitors and advanced heat dissipation design to ensure long life and operational reliability



Protect against 3G/4G cellular network interference with Zyxel advanced cellular mitigation design

What to benefit from Cloud central management?

When you're ready to join our Nebula cloud management solution, simply register your NWA1123-AC HD* via Nebula Control Center and the device will automatically join, auto provision and begin to give real-time information. The intuitive platform allows you to group your access points together, control centrally, gain access to diagnostics tools and additional features like captive portal all under a single platform.

The Nebula platform has no limits to how many access points can be added, giving you an easy to use, scalable platform that you can access anytime, anywhere.

*: Requires 5.20 version of firmware

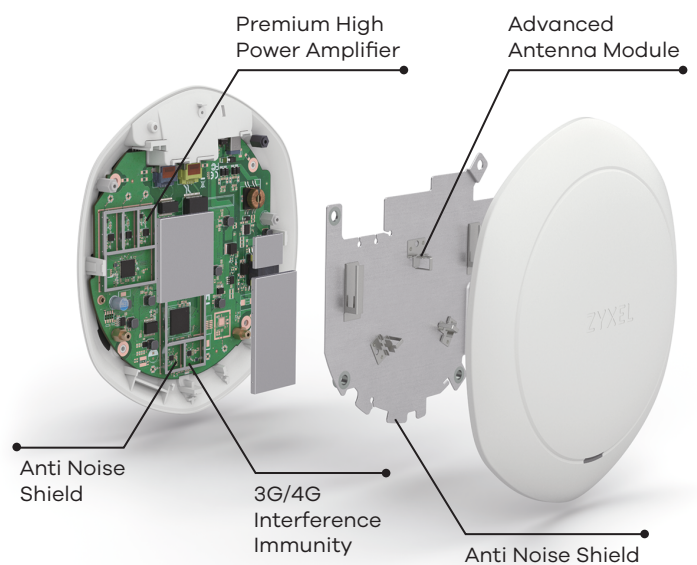


RF First – high performance and reliable connections through design

With Zyxel's commitment to "RF First" for high performance and reliable connections through design, the NWA1123-AC HD delivers increased coverage and improved connection speeds for every client.

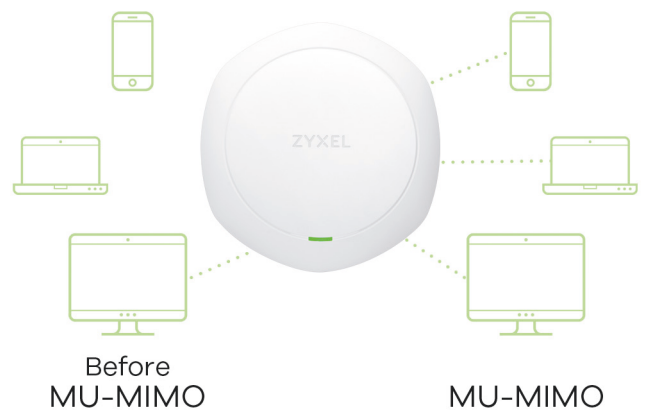
Built on over 15 years of experience in innovating business class wireless solutions, our access points are designed and crafted by selecting high quality components. Every hardware design detail including the layout, the antenna and the ability to distinguish between numerous sources of noise all contribute in determining coverage and throughput.

Zyxel examines sensitivity combined with the antenna (OTA sensitivity) as a whole wireless system to minimize the degradation in sensitivity (desense) at the receiver end. This combined with fine-tuning all the elements ensures that we always lead with user experience.



Gain a better overall networking experience with Wave 2

Progressing from the highly successful 802.11ac standard, the second-generation 802.11ac Wave 2 WiFi standard introduces Multi-User MIMO (MU-MIMO). This important development in WiFi enables an AP to communicate with multiple clients at the same time offering up to 300% improvement in performance when used with supported client devices.



Breakthrough in wireless connectivity

To achieve reliable connectivity with greater support for more connected clients, the NWA1123-AC HD uses 2nd Generation Transmit Beamforming (TxBF) technology. This gives the ability to increase overall data rates (Transmission rates), which benefits not only MU-MIMO client devices, but also all older generation client devices.

3G/4G cellular network coexistence

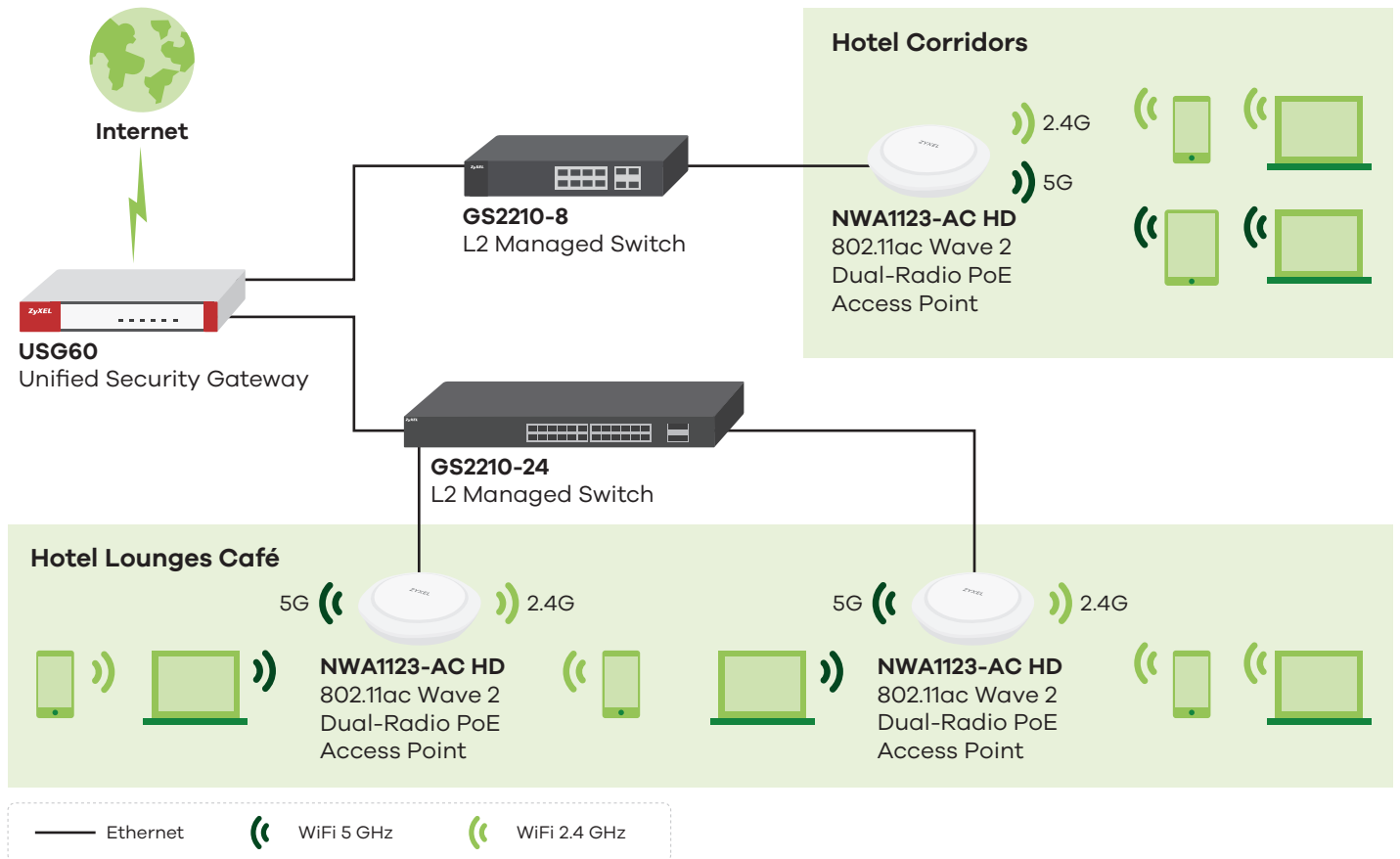
With gradually pervasive 3G infrastructure deployment at customer sites, users start to experience adverse effects on their wireless performance e.g. high latency or ping drops. To allow the co-existence of 3G/4G cellular network and minimize interference from 3G/4G antennas or signal boosters, the NWA1123-AC HD has been designed to include built-in 3G/4G interference filters to allow it continue operating with optimal performance when this type of interference exists.

Wireless built for user experience


The NWA1123-AC HD ensures an optimized wireless experience for users by combining wireless technologies like 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 combined together 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 for users.

Application Diagram



Specifications

Model	NWA1123-AC HD	
Product name	802.11ac Wave 2 Dual-Radio Unified Pro Access Point	
		
Wireless		
Standard	IEEE 802.11 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 power^{*1}	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		
Fast Roaming	Pre-authentication, PMK caching and 802.11 r/k/v	
DCS (Dynamic Channel Selection)	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	

*1: Max power varies by country setting, band, and MCS rate

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

Model		NWA1123-AC HD
Management		
Operating mode	Cloud 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.)	750/1.76
Packing	Dimensions (WxDxH)(mm/in.)	266 x 268 x 56/10.47 x 10.55 x 2.21
	Weight (g/lb.)	1090/2.40
Included accessories	<ul style="list-style-type: none"> • Wall/ceiling mount plate • 12 V 2 A adapter*1 • Mounting screws 	
MTBF (hr)	1,306,790	
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 50°C/-4°F to 122°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: The accessory applies to the part code NWA1123-ACHD-US0101F and NWA1123-ACHD-EU0101F.

Optional Accessory

Part Number	Description
ACCESSORY-ZZ0105F	Accessory, T-bar ceiling clips for ceiling mount AP to WAC6303D-S, 5 sets, ROHS

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Datasheet [NWA1123-AC HD](#)



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