



## Solving the WLAN Problems of Tomorrow, Today

- Ceiling and wall mountable
- Plenum rated housing
- 2-in-1 standalone/managed AP design
- CAPWAP management supported
- 2.4 GHz and 5 GHz concurrent dual-band (NWA5123-NI)
- High-performance RF technology: Tx Beamforming and Rx Maximum Likelihood Demodulation (MLD)

The ZyXEL NWA5120 Series 802.11 a/b/g/n Unified Access Point is a highly future-proof WLAN solution perfect for growing business, hospitality and education environments. With a 2-in-1 standalone/managed AP design, users can initially use it as a standalone AP, and convert it to a controller-managed AP when Wi-Fi demand grows. The Series is designed with industry-leading technology to provide trouble-free wireless quality to lower IT overhead. The embedded antennas and signal output are fine-tuned to provide easy RF planning and maximum signal coverage. It also supports such features as dynamic channel selection, load balancing and pre-authentication for superb Wi-Fi experience.

### Benefits

#### Ceiling-mount design blends into environments

Different from traditional business routers, the slick “smoke detector” ceiling-mount design of ZyXEL NWA5120 Series provides better coverage and performance. The NWA5120 Series is a PoE AP with a multifunction design that solves all problems by offering internal as well as external antennas to enhance wireless performance and to eliminate coverage dead spots. Moreover, the signal outputs have been fine-tuned to provide easy RF planning and excellent signal coverage especially for hospitality and education environments.

The ZyXEL NWA5120 Series has been designed with plenum rating and made of non-toxic materials without hazardous emission – the safe design makes it more suitable for public indoor wireless deployments.

#### ZyXEL ONE Network experience

Aiming for relieving our customers from repetitive operations of deploying and managing a network, ZyXEL ONE Network is designed to simplify the configuration, management, and troubleshooting, allowing our customers to focus on the business priorities. ZyXEL ONE Network presents an easy-to-use tool, ZyXEL ONE Network Utility (ZON Utility), to realize speed network setup. ZyXEL Smart Connect allows ZyXEL networking equipment to be aware and recognize each other and further facilitating the network maintenance via one-click remote functions such as factory reset or power cycling. ZyXEL ONE Network redefines the network integration across multiple networking products from switch to Wi-Fi AP and to Gateway.



ZyXEL **onenetwork**  
Redefining network integration

**NWA5120 Series**  
802.11 a/b/g/n Unified  
Access Point



ZyXEL AP  
Configurator



ZON Utility



Neighbor Device  
Discovery



Web GUI  
Redirection

### Effortless conversion from standalone to centrally-managed

The ZyXEL NWA5120 Series Unified APs can be configured as a fully functional standalone AP and also capable to work with Wireless LAN Controller to form a robust controller-based WLAN solution with centralized management when Wi-Fi demand grows, as well as auto AP provisioning over both LAN and WAN connections. After being installed and powered on, the APs automatically look for the Wireless LAN Controller and establish connections. Utilizing the CAPWAP protocol, connections can be established between the controller and APs without needing to change the existing LAN infrastructure.

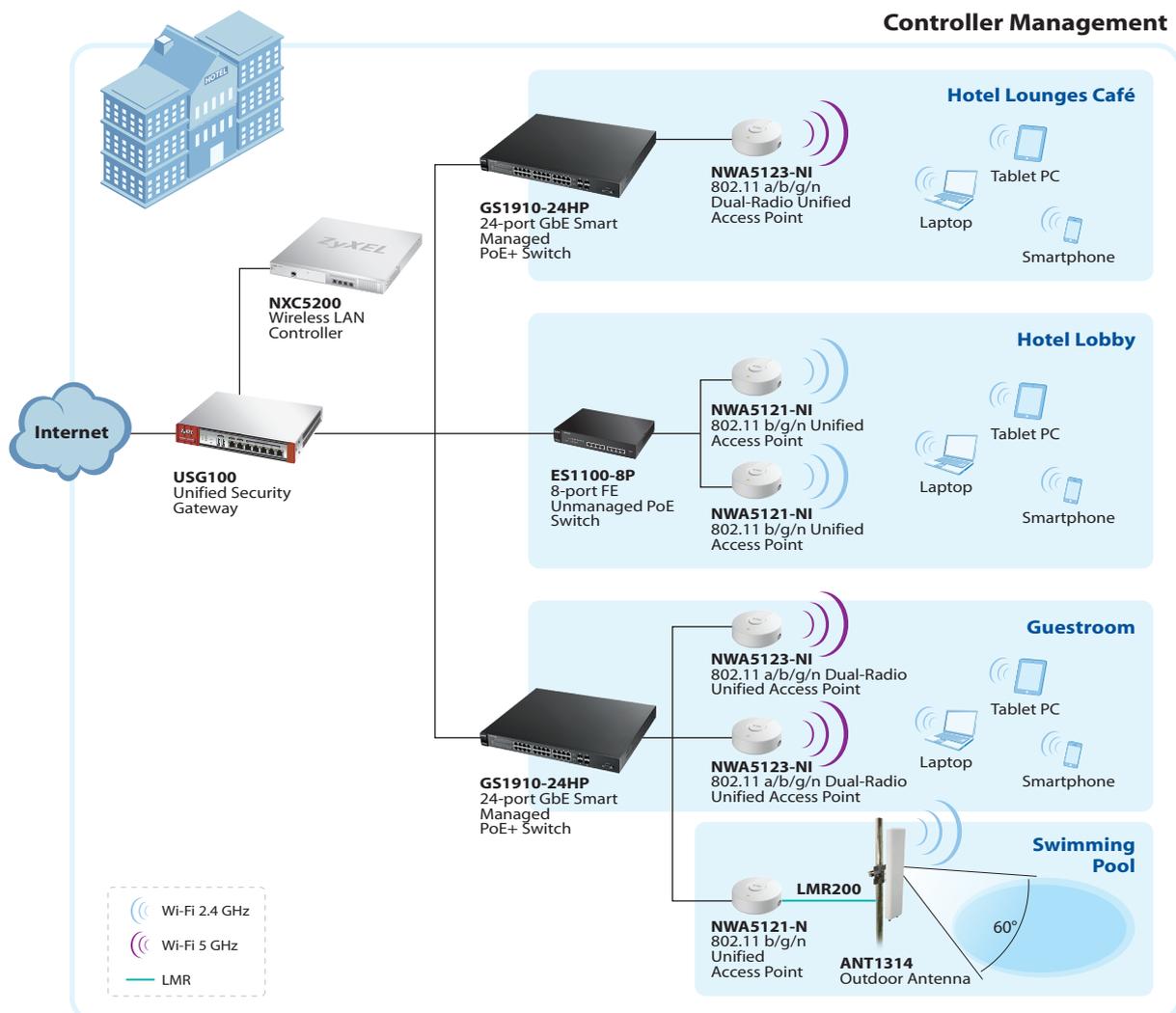
### Easy to RF planning with the same 2.4 GHz and 5 GHz signal coverage (NWA5123-NI)

As more and more mobile or laptop devices support both 2.4 GHz and 5 GHz bands, users can choose 5 GHz as the first priority for default searching and balance heavy network loading with the 2.4 GHz band, besides, to have always on and stable connection become one of the essential elements of Wi-Fi network. The ZyXEL NWA5123-NI 802.11 a/b/g/n Dual-Radio Unified AP consists of 2.4 GHz and 5 GHz dual-band radio to match the concurrent Wi-Fi services with either frequency. The higher frequency of the 5 GHz band provides a shorter signal range compared to the 2.4 GHz band with the same transmit output power. The NWA5123-NI consist of high 5 GHz transmit output power can boost the 5 GHz signal range, providing signal coverage equal to the 2.4 GHz wireless network. Therefore, the complexity of deployment can be considerably reduced.

### Continuous wireless services for better reliability and network quality

The ZyXEL NWA5120 Series 802.11n PoE AP features coverage-enhancing 11n technologies such as TX Beamforming, LDPC and MLD to eliminate issues of dead spots and inefficient coverage. With MLD, the NWA5120 Series boosts the Signal-to-Noise Ratio (SNR) to 3 dB for more stable wireless services and better performance. Meanwhile, TX Beamforming also eliminates dead spots by expanding the coverage with continuous, dynamic changing of signal phases. With non-stop wireless services, the NWA5120 Series provides reliable network connectivity for better business productivity.

## Application Diagram



### Specifications

Model	NWA5121-NI	NWA5121-N	NWA5123-NI	
<b>Product name</b>	802.11 b/g/n Unified Access Point 	802.11 b/g/n Unified Access Point 	802.11 a/b/g/n Dual-Radio Unified Access Point 	
<b>Main Design</b>				
<b>Wireless frequency</b>	2.4 GHz	2.4 GHz	2.4 GHz & 5 GHz	
<b>Radio</b>	1	1	2	
<b>Antenna</b>	Embedded 2x2 7 dBi antenna	2 External 3 dBi dipole antenna	Embedded 2x2 5 dBi/6 dBi antenna	
<b>RF Specifications</b>				
<b>Frequency band</b>	<b>2.4 GHz (11 g/n)</b>	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 Taiwan (TW): 2.412 to 2.462 GHz		
	<b>5 GHz (11 a/n)</b>	-		
<b>Max. transmit power*</b>	<b>US (FCC) 2.4 GHz</b>	20 dBm, 2 antennas	20 dBm, 2 antennas	23 dBm, 2 antennas
	<b>US (FCC) 5 GHz</b>	-	-	26 dBm, 2 antennas
	<b>EU (ETSI) 2.4 GHz</b>	17 dBm, 2 antennas	18 dBm, 2 antennas	17 dBm, 2 antennas
	<b>EU (ETSI) 5 GHz</b>	-	-	26 dBm, 2 antennas
<b>Received sensitivity</b>	2.4 GHz: • 802.11b/g, min. up to -95 dBm • 802.11n/20 MHz, min. up to -93 dBm • 802.11n/40 MHz, min. up to -92 dBm		2.4 GHz: • 802.11b/g, min. up to -97 dBm • 802.11n/20 MHz, min. up to -93 dBm • 802.11n/40 MHz, min. up to -90 dBm 5 GHz: • 802.11a, min. up to -94 dBm • 802.11n/20 MHz, min. up to -93 dBm • 802.11n/40 MHz, min. up to -91 dBm	
<b>LAN</b>				
<b>Number of 10/100/1000 Mbps LAN ports</b>	1	1	1	
<b>PoE</b>	Yes	Yes	Yes	
<b>PoE power draw</b>	4 W	4 W	7 W	
<b>WLAN Security</b>				
<b>Support data rate</b>	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: up to 300 Mbps in MCS15 (40 MHz; GI=400 ns)	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: up to 300 Mbps in MCS15 (40 MHz; GI=400 ns)	802.11 a/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: up to 300 Mbps in MCS15 (40 MHz; GI=400 ns)	
<b>WMM (Wi-Fi certified)</b>	Yes	Yes	Yes	
<b>WEP</b>	Yes	Yes	Yes	
<b>WPA/WPA2-PSK</b>	Yes	Yes	Yes	
<b>WPA2 (Wi-Fi certified)</b>	Yes	Yes	Yes	
<b>WPA/WPA2-Enterprise</b>	Yes	Yes	Yes	
<b>IEEE 802.1X</b>	Yes	Yes	Yes	
<b>Number of multiple SSID</b>	8	8	16	
<b>MAC filtering</b>	Yes	Yes	Yes	
<b>RADIUS authentication</b>	Yes	Yes	Yes	
<b>EAP types</b>	TLS, TTLS, PEAP, FAST, AKA and SIM			
<b>Rogue AP detection</b>	Yes	Yes	Yes	

\*: Max. total channel

Model	NWA5121-NI	NWA5121-N	NWA5123-NI	
<b>Network</b>				
<b>VLANs</b>	Yes	Yes	Yes	
<b>DHCP client</b>	Yes	Yes	Yes	
<b>QoS</b>				
<b>WMM</b>	Yes	Yes	Yes	
<b>WMM power saving</b>	Yes	Yes	Yes	
<b>ZyXEL ONE Network</b>				
<b>ZON Utility</b>	<ul style="list-style-type: none"> <li>Discovery of ZyXEL switches, APs and gateways*</li> <li>Centralized and batch configurations                             <ul style="list-style-type: none"> <li>IP configuration</li> <li>Device locating</li> <li>Password configuration</li> </ul> </li> <li>IP renew</li> <li>Web GUI access</li> <li>One-click quick association with ZyXEL AP Configurator (ZAC)</li> <li>Device reboot</li> <li>Firmware upgrade</li> </ul>			
<b>Smart Connect</b>	<ul style="list-style-type: none"> <li>Discover neighboring devices</li> <li>One-click remote management access to the neighboring ZyXEL devices</li> </ul>			
<b>Management Features</b>				
<b>ZAC</b>	• Batch AP configuration	• Batch AP firmware upgrade	• Batch AP profile backup	
<b>CLI</b>	Yes	Yes	Yes	
<b>Others</b>				
<b>Plenum rating</b>	Yes	Yes	Yes	
<b>MTBF (hr)</b>	627,152	627,152	781,396	
<b>Standard Compliance</b>				
<b>Ethernet</b>	IEEE 802.3, IEEE 802.3u	IEEE 802.3, IEEE 802.3u	IEEE 802.3, IEEE 802.3u	
<b>PoE</b>	IEEE 802.3af	IEEE 802.3af	IEEE 802.3af	
<b>Radio modulation</b>	IEEE 802.11 a/g (OFDM/DSSS) <ul style="list-style-type: none"> <li>48/54 Mbps (QAM-64)</li> <li>24/36 Mbps (QAM-16)</li> <li>12/18 Mbps (QPSK)</li> <li>6/9 Mbps (BPSK)</li> </ul>	IEEE 802.11b (DSSS) <ul style="list-style-type: none"> <li>5.5/11 Mbps (CCK)</li> <li>2 Mbps (DQPSK)</li> <li>1 Mbps (DBPSK)</li> </ul>	IEEE 802.11n (OFDM/DSSS) <ul style="list-style-type: none"> <li>QAM-64</li> <li>QAM-16</li> <li>QPSK</li> <li>BPSK</li> </ul>	
<b>Certification</b>				
<b>Radio</b>	ETSI EN 300 328 V1.7.1: 11-2006 FCC Part 15.247 LP0002 EN 60601-1-2: 2007		ETSI EN 300 328 V1.7.1: 11-2006 EN 301 893 V1.5.1 FCC Part 15.247 FCC Part 15E LP0002 EN 60601-1-2: 2007	
<b>EMC</b>	EN 301 489-1 V1.8.1: 04-2008 EN 301 489-17 V2.1.1: 05-2009 EN55022: 2010 EN55024: 2010 EN61000-3-2/-3 FCC Part 15.107 BSMI CNS13438.99; CNS14336: 99		EN 301 489-1 V1.8.1: 11-2008 EN 301 489-17 V2.1.1: 05-2009 EN55022: 2010 EN55024: 2010 EN61000-3-2/-3 FCC Part 15.107 BSMI CNS13438.99; CNS14336: 99	
<b>Safety</b>	EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 IEC 60950-1: 2005 BSMI		EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 IEC 60950-1: 2005 BSMI	
<b>Power Requirement</b>				
<b>Power supply</b>	12 V DC, 1 A	12 V DC, 1 A	12 V DC, 1 A	
<b>Physical Specifications</b>				
<b>Item</b>	<b>Dimensions (WxDxH)(mm/in.)</b>	130 x 130 x 54.5/ 5.12 x 5.12 x 2.17	130 x 130 x 54.5/ 5.12 x 5.12 x 2.17	130 x 130 x 54.5/ 5.12 x 5.12 x 2.17
	<b>Weight (kg/lb.)</b>	0.23/0.51	0.23/0.51	0.25/0.55
<b>Packing</b>	<b>Dimensions (WxDxH)(mm/in.)</b>	282 x 207 x 71/ 11.10 x 8.15 x 2.80	282 x 207 x 71/ 11.10 x 8.15 x 2.80	282 x 207 x 71/ 11.10 x 8.15 x 2.80
	<b>Weight (kg/lb.)</b>	0.61/1.34	0.61/1.34	0.63/1.39
<b>Included accessories</b>	• Power adapter		• Wall/ceiling mount plate	
<b>Environmental Specifications</b>				
<b>Operating environment</b>	<b>Temperature</b>	0°C to 50°C/32°F to 122°F	0°C to 50°C/32°F to 122°F	0°C to 50°C/32°F to 122°F
	<b>Humidity</b>	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
<b>Storage environment</b>	<b>Temperature</b>	-30°C to 70°C/-22°F to 158°F	-30°C to 70°C/-22°F to 158°F	-30°C to 70°C/-22°F to 158°F
	<b>Humidity</b>	10% to 90%	10% to 90%	10% to 90%

\* Gateway supporting ZON utility is scheduled for future release.

For more product information, visit us on the web at [www.ZyXEL.com](http://www.ZyXEL.com)



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