Superior Coverage from Multifunction Ceiling Mount Access Point

- **Compact ceiling-mount design with optimized RF performance**
- **High performance for better Wi-Fi experiences (IEEE 802.11n/IEEE 802.11ac)**
- **Easy RF planning with the same 2.4 GHz and 5 GHz signal coverage (NWA1123-AC)**
- **Flexible operating modes (stand-alone, client mode, root-AP/ repeater mode)**

The ZyXEL NWA1120 Series is a standard-based, SNMP-managed PoE Access Point (AP) that includes two models: the 2.4 GHz NWA1121-NI and newly introduced NWA1123-AC featuring the advanced 802.11ac technology. The smoke detector look exterior makes the NWA1120 Series perfect for indoor ceiling-mount installation; with the optimized antennas built-in, its design solves the common interference issue in ceiling-mount deployments. The NWA1120 Series supports multiple operating modes, such as wireless client and repeater, which make it an ideal, flexible solution for small business, hotels and school environments.

Benefits

Ceiling-mount design with best interior wireless performance

Different from traditional business wireless APs struggling between performance and environment cohesion, the ZyXEL NWA1120 Series of PoE AP features embedded antennas and ceiling-mount capability without sacrificing wireless performance. In typical ceiling-mount installations, the access points with external antennas are mostly hidden in the plenum area; to prevent performance degradation, the antennas usually stick out of the ceiling—messy for indoor deployments. The smoke detector-style exterior of ZyXEL NWA1120 Series is suitable for ceiling installation that prevents equipment theft. Although the NWA1120 Series uses built-in antennas, it outperforms APs with internal antennas and blends into the interior better as well.

In addition, the ZyXEL NWA1120 Series adopts non-toxic casing material, since it's usually placed in plenum areas, to prevent hazardous vapor emission in case of fire; this is especially important to public venues such as offices, hotels and schools.

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 Smart Connect is supported on selected models. Please refer to specifications for more detail.*

ZyXEL**one**network
Redefining network integration

NWA1120 Series
802.11ac and 11n Ceiling Mount PoE Access Point

ZON Utility
ZyXEL AP Configurator

High-density with high-quality user experience

It's now common for a user to carry two or more devices that use different Wi-Fi bands; this challenges many places that still use legacy Wi-Fi AP with insufficient capability to serve the high-bandwidth devices. NWA1123-AC is compatible with concurrent 2.4 GHz and 5 GHz Wi-Fi bands to support more users at the same time. Featuring the latest IEEE 802.11ac technology, including the expanded channel binding of 80 MHz and the highest 256 QAM (Quadrature Amplitude Modulation), the new NWA1123-AC delivers data speeds of up to 3 times faster. This brings the best user experience through higher number of parallel video data streams for minimized latency on the network.

Easy RF planning with same 2.4 GHz and 5 GHz signal coverage (NWA1123-AC)

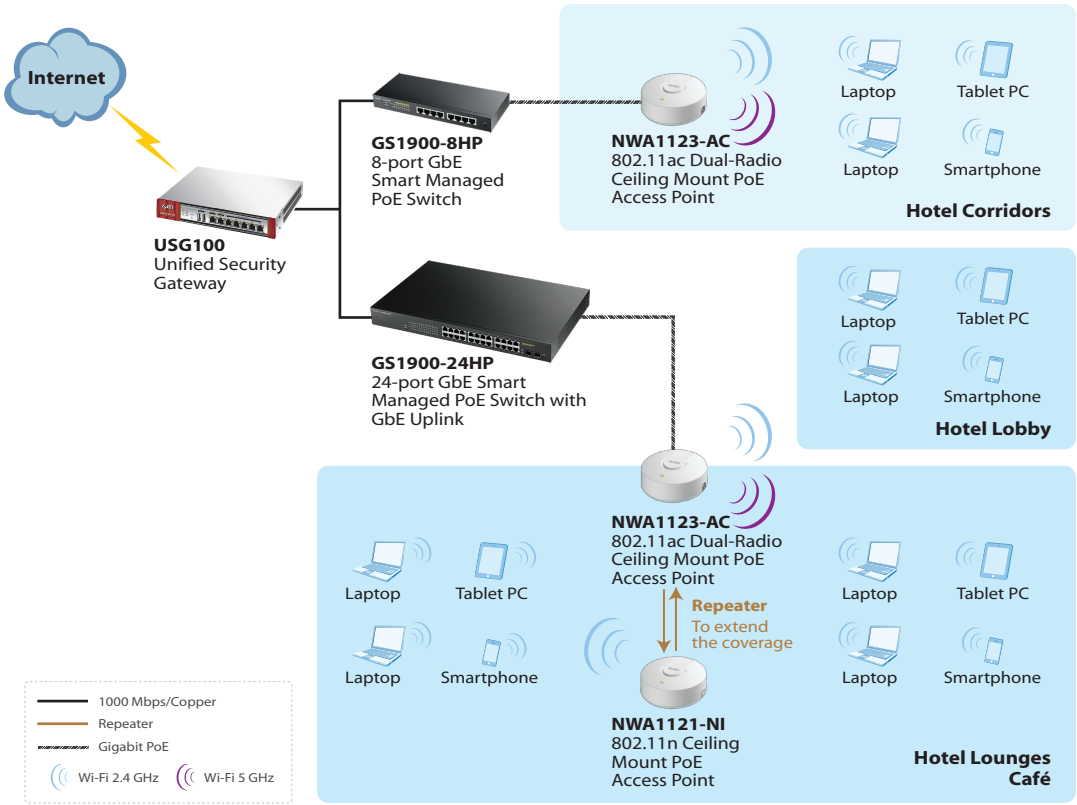
Most Wi-Fi devices around us operate in the crowded 2.4 GHz band where only three non-overlapping channels can be used for deployments, and complaints for the unsatisfactory network performance are not uncommon. As many recent mobile or laptop devices support both 2.4 GHz and 5 GHz bands, users tend to choose the 5 GHz band as their first priority; as a result, serving the 5 GHz devices becomes more important than before. However, the coverage of the higher-frequency 5 GHz band is inherently smaller comparing to the 2.4 GHz band, given the same output power. With a fine-tuned 5 GHz radio mechanism that boosts performance at the frequency, the coverage of NWA1123-AC becomes comparable to which at the 2.4 GHz band to reduce the complexity of deployments considerably.

Multi-operation flexibility and practical business features

The NWA1120 Series of PoE Access Points supports multiple operating modes including stand-alone access point, wireless client and repeater/root-AP mode. The wireless client mode enables office peripherals like printers or fax machines to connect to the network in case they are located in places difficult for cabling. The NWA1120 Series also extends Wi-Fi services utilizing the repeater or root-AP mode to prevent excessive cable constructions. The NWA1120 Series is the best choice for small businesses for its practical features designed for business deployments: multiple SSID, solid Wi-Fi security of WPA2 Enterprise, Layer-2 isolation and 802.1 x radius authentication. All these practical features along with the high-performance RF design make the ZyXEL NWA1120 Series the best solution for building flexible Wi-Fi networks in small businesses.

Application Diagram

- **NWA1123-AC with dual-radio offer 2.4 GHz or 5 GHz for different environments**
- **NWA1121-NI as a root AP and repeater extend the coverage with less effort for cabling**



Specifications

Model		NWA1121-NI	NWA1123-AC
Product name		802.11n Ceiling Mount PoE Access Point 	802.11ac Dual-Radio Ceiling Mount PoE Access Point 
Main Design			
Wireless frequency		2.4 GHz	2.4 GHz & 5 GHz
Radio		1	2
RF Specifications			
Frequency band	**2.4 GHz**	• 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	• 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
	5 GHz	-	• 5 GHz (IEEE 802.11 a/n/ac) • USA (FCC): 5.15 to 5.35 GHz; 5.725 to 5.850 GHz • Europe (ETSI): 5.15 to 5.35 GHz; 5.470 to 5.725 GHz
802.11 premium features		• 2x2 Multiple-Input Multiple-Output (MIMO) with two spatial streams • Maximal Ratio Combining (MRC) • 20- and 40-MHz channels • PHY data rates up to 300 Mbps • Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) • Cyclic Delay Diversity (CSD) support • Maximum Likehood Demodulation (MLD) support • Low Density Parity Check (LDPC) support	• 2x2 Multiple-Input Multiple-Output (MIMO) with two spatial streams • Maximal Ratio Combining (MRC) • 20-, 40- and 80-MHz channels • PHY data rates total up to 300 Mbps (11n) + 866 Mbps (11ac) • Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) • Cyclic Delay diversity (CSD) support • Maximum Likehood Demodulation (MLD) support • Low Density Parity Check (LDPC) support
Conducted typical transmit output power	**US (FCC) 2.4 GHz**	20 dBm, 2 antennas	23 dBm, 2 antennas
	US (FCC) 5 GHz	-	23 dBm, 2 antennas
	EU (ETSI) 2.4 GHz	18 dBm, 2 antennas	17 dBm, 2 antennas
	EU (ETSI) 5 GHz	-	23 dBm, 2 antennas
Number of antenna		2T2R MIMO	2T2R MIMO
Antenna gain	**2.4 GHz**	7 dBi	4 dBi
	5 GHz	-	6 dBi
Support data rate		• 802.11a/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)	• 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) • 802.11ac: up to 866 Mbps in MCS9 (80 MHz; 2 spatial streams; GI = 400 ns)
Receive sensitivity		2.4 GHz: • 802.11b/g, min. up to -91 dBm • 802.11n/20 MHz, min. up to -86 dBm • 802.11n/40 MHz, min. up to -84 dBm	2.4 GHz: • 802.11b/g, min. up to -97 dBm • 802.11n/20 MHz, min. -93 dBm • 802.11n/40 MHz, min. up to -90 dBm 5 GHz: • 802.11a, min. up to -94 dBm • 802.11ac/n/20 MHz, min. -91 dBm • 802.11ac/n/40 MHz, min. -91 dBm • 802.11 ac/n/80 MHz, min. -90 dBm
LAN			
Number of 10/100/1000M LAN		1	1
PoE		Yes	Yes
PoE power draw		4 W	7 W

NWA1120 Series
802.11ac and 11n Ceiling Mount PoE Access Point

Model		NWA1121-NI	NWA1123-AC
WLAN Security			
WEP		Yes	Yes
WPA/WPA2-PSK		Yes	Yes
WPA/WPA2-Enterprise		Yes	Yes
EAP type		EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, EAP-AKA and EAP-SIM	
WMM (Wi-Fi certified)		Yes	Yes
IEEE 802.1X		Yes	Yes
Number of multiple SSID		8	16
MAC filtering		Yes	Yes
RADIUS authentication		Yes	Yes
Network			
IPv6 support		Yes	Yes
VLANs		Yes	Yes
DHCP client		Yes	Yes
ZyXEL One Network			
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)	
Management			
ZAC		• Batch AP configuration • Batch AP firmware upgrade • Batch AP profile backup	
Standalone AP mode		Yes	Yes
CLI		Yes	Yes
SNMP		Yes	Yes
Others			
Plenum rating		Yes	Yes
Power supply		Input: AC 100 - 240 V -50/60 Hz 0.3 A; Output: DC +12 V 1 A	
MTBF (hrs)		627,152	656,972
Standard Compliance			
Ethernet		IEEE 802.3, IEEE 802.3u, IEEE 802.3az, IEEE 802.3af	IEEE 802.3, IEEE 802.3u, IEEE 802.11ac, IEEE 802.3az, IEEE 802.3af
WLAN		• 802.11b: DBPSK, DQPSK, CCK • 802.11g: BPSK, QPSK, 16-QAM, 64-QAM • 802.11n: BPSK, QPSK, 16-QAM, 64-QAM	• 802.11b: DBPSK, DQPSK, CCK • 802.11g: BPSK, QPSK, 16-QAM, 64-QAM • 802.11a: BPSK, QPSK, 16-QAM, 64-QAM • 802.11n: BPSK, QPSK, 16-QAM, 64-QAM • 802.11ac: BPSK, QPSK, 64-QAM, 256-QAM
Certifications			
Radio		FCC Part 15C 15.247, ETSI EN 300 328, EN60601-1-2 DGT LP0002	FCC Part 15C, FCC Part 15E, ETSI EN 300 328, EN 301 893, LP0002, EN 60601-1-2
EMC		FCC Part 15/107, EN301 489-17, EN301-489-1, EN55022, EN55024, BSMI CNS 13438	FCC Part 15B, EN 301 489-1, EN 301 489-17, EN55022, EN55024, EN61000-3-2/-3, BSMI CNS13438
Safety		EN 60950-1, IEC 60950-1, BSMI CNS14336-1	EN 60950-1, IEC 60950-1 BSMI CNS14336-1
Physical Specifications			
Item	Dimensions (WxDxH)(mm/in.)	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
	Weight (g/lb.)	230/0.51	260/0.57
Packing	Dimensions (WxDxH)(mm/in.)	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
	Weight (g/lb.)	610/1.34	640/1.41
Included accessories		• Power adapter	• Wall/ceiling mount plate
Environmental Specifications			
Operating environment	Temperature	0°C to 50°C/32°F to 122°F	
	Humidity	10% to 90% (non-condensing)	
Storage environment	Temperature	-30°C to 70°C/-22°F to 158°F	
	Humidity	10% to 90%	

** Gateways support ZON utility with firmware version V4.11 or above.*

For more product information, visit us on the web at www.ZyXEL.com

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