



- Compact ceiling-mount design
- Plenum rated with LOSH material
- Coverage-enhancing 11n functions including Low Density Parity Check (LDPC), Maximum Likelihood Demodulation (MLD) and TX Beamforming
- Supports up to 8/16 SSIDs
- Easy to RF planning with the same 2.4 GHz and 5 GHz signal coverage (NWA1123-NI)

NWA1120 Series **802.11n Ceiling Mount** **PoE Access Point**

Superior Coverage from Multifunction Ceiling-mount Access Point

The ZyXEL NWA1120 Series is a standard-based, SNMP-managed 802.11n PoE Access Point (AP) with data rates of up to 300 Mbps per port or up to 600 Mbps of combined dual-band data rates. The embedded antennas of the ceiling-mount AP enable large interior wireless deployments without sacrificing wireless performance.

The signal coverage of the ZyXEL NWA1120 Series optimized with 11n technologies such as TX Beamforming and Maximum Likelihood Demodulation (MLD) for better, larger coverage. With the comprehensive design and the support of IPv6, the NWA1120 Series is an ideal and optimized solution for business, hospitality and education environments.

Benefits

Multifunction ceiling-mount design benefits large interior wireless deployments

Different from traditional business wireless APs struggling to provide better coverage or performance, the ZyXEL NWA1120 Series comprises PoE AP and with a “multifunction” design that solves all problems. It embeds antennas without sacrificing wireless performance, while the ceiling-mount design fulfills non-invasive deployment needs with factory-optimized coverage, especially for hospitality and education areas.

Designed for plenum rating, the ZyXEL NWA1120 Series is made non-toxic material without hazardous vapor emission. This safe design makes it more suitable for public indoor wireless deployments.

11n wireless technologies enhance coverage for up to 50%

Although 11n is the mainstay wireless standard today, it still has a few unsolved problems such as dead spots and inefficient coverage due to the output power limited by regulations. The ZyXEL NWA1120 Series 802.11n PoE AP features coverage-enhancing 11n technologies such as TX Beamforming, LDPC and MLD to solve these issues. With MLD, the NWA1120 Series improves Signal-to-Noise Ratio (SNR) for about 3 dB that make wireless services even more stable and better to satisfy more mobile users.

Meanwhile, TX Beamforming also eliminates dead spots by expanding the coverage with continuous, dynamic change of signal phases. Better and larger coverage reception will benefit low-power devices such as smartphones or tablets. With this enhancement, users can experience the best mobile wireless service anytime, anywhere with the NWA1120 Series.

Easy to RF planning with the same 2.4 GHz and 5 GHz signal coverage (NWA1123-NI)

There are many 802.11g Wi-Fi devices around us and they are making the 2.4 GHz frequency extremely crowded. Worse yet, only three non-overlapping channels are available and they may conflict with each other to cause network traffic jam.

The ZyXEL NWA1123-NI 802.11 a/b/g/n Dual-Radio PoE AP consists of 2.4 GHz and 5 GHz dual-band radio to match the concurrent Wi-Fi services with either frequency. As more and more recent 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.

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 NWA1123-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.

8/16 SSID for comprehensive user management

In different public environments, the administrators may use VLAN switches to separate the traffics from different type of users; as such different group of users may need independent Wi-Fi security settings too. The ZyXEL NWA1121-NI provides up to 8 SSIDs and the NWA1123-NI provides up to 16 SSIDs (dual-band) to map the VLAN security level settings to classify users for different application services, such as public Internet access or restricted Web contents. This function allows businesses to make consistent user management in wireless edge.

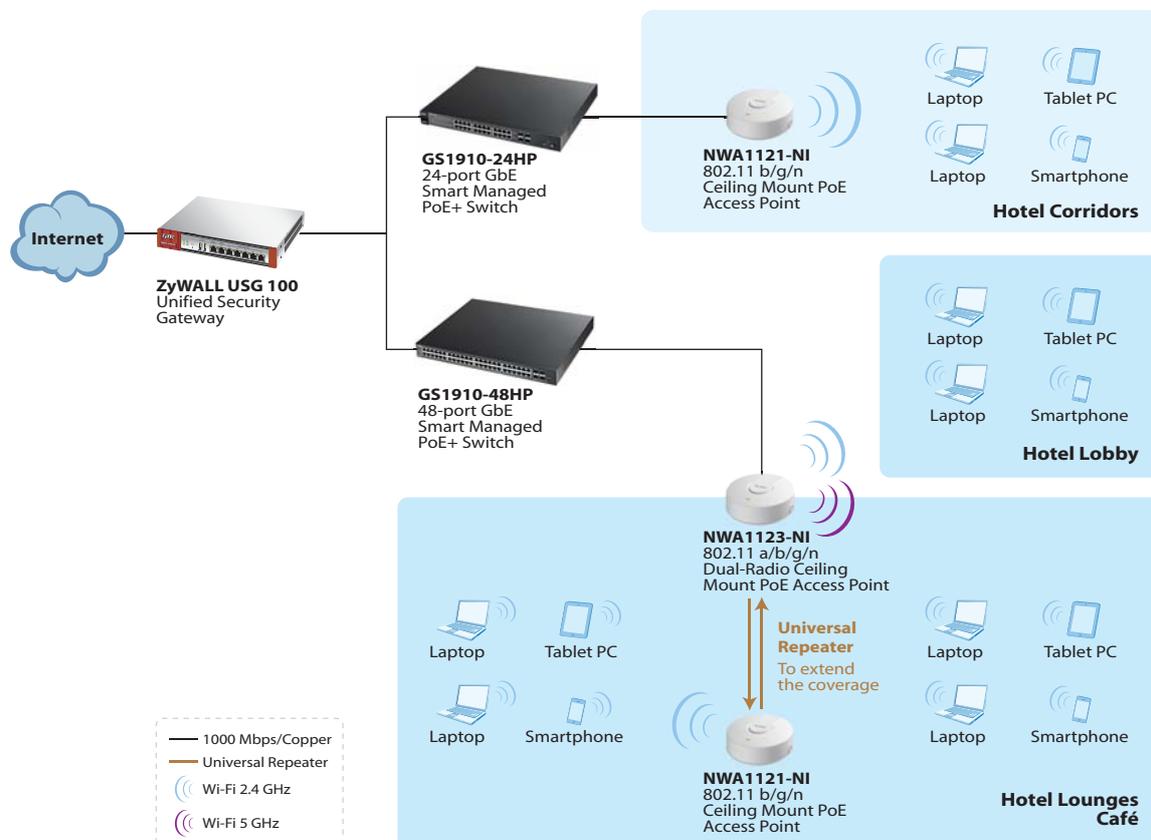
Specifications

Model		NWA1121-NI	NWA1123-NI
Product name		802.11 b/g/n Ceiling Mount PoE Access Point 	802.11 a/b/g/n 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	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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
	5 GHz	-	<ul style="list-style-type: none"> • 5 GHz (IEEE 802.11 a/n) • 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 • Taiwan (TW): 5.15 to 5.35 GHz; 5.725 to 5.850 GHz
802.11n		<ul style="list-style-type: none"> • 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 • Transmit Beamforming (TxBF) support • Maximum Likelihood Demodulation (MLD) support • Low Density Parity Check (LDPC) support 	<ul style="list-style-type: none"> • 2x2 multiple-input multiple-output (MIMO) with two spatial streams • Maximal ratio combining (MRC) • 20- and 40-MHz channels • PHY data rates up to 600 Mbps (combined rates) • Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx) • Cyclic Delay Diversity (CSD) support • Transmit Beamforming (TxBF) support • Maximum Likelihood Demodulation (MLD) support • Low Density Parity Check (LDPC) support

Model		NWA1121-NI	NWA1123-NI
Maximum conducted output power	FCC 11 b/g	24 dBm	29 dBm
	FCC 11 g/n	24 dBm	29 dBm
	FCC 11 a	-	30 dBm
	FCC 11 a/n	-	30 dBm
	EU 11 b/g	17 dBm	17 dBm
	EU 11 g/n	17 dBm	17 dBm
	EU 11 a	-	27 dBm
	EU 11 a/n	-	27 dBm
Number of antenna		2T2R MIMO	2T2R MIMO
Antenna gain	2.4 GHz	4.5 dBi	3 dBi
	5 GHz	-	2 dBi
Support data rate		<ul style="list-style-type: none"> 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) 	<ul style="list-style-type: none"> 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: <ul style="list-style-type: none"> 20-MHz bandwidth: MCS 0-15 for supported data rates 40-MHz bandwidth: MCS 0-15 for supported data rates
Receive sensitivity		<ul style="list-style-type: none"> 802.11 b/g <ul style="list-style-type: none"> 1 Mbps: -91 dBm 11 Mbps: -85 dBm 6 Mbps: -86 dBm 54 Mbps: -69 dBm 802.11n/20 MHz <ul style="list-style-type: none"> MCS0: -86 dBm MCS7: -70 dBm MCS8: -85 dBm MCS15: -68 dBm 802.11n/40 MHz <ul style="list-style-type: none"> MCS0: -84 dBm MCS7: -66 dBm MCS8: -83 dBm MCS15: -65 dBm 	<p>2.4 GHz:</p> <ul style="list-style-type: none"> 802.11 b/g <ul style="list-style-type: none"> 1 Mbps: -93 dBm 6 Mbps: -91 dBm 11 Mbps: -88 dBm 54 Mbps: -74 dBm 802.11 gn/20 MHz <ul style="list-style-type: none"> MCS0: -90 dBm MCS7: -71 dBm 802.11 gn/40 MHz <ul style="list-style-type: none"> MCS0: -86 dBm MCS7: -68 dBm <p>5 GHz:</p> <ul style="list-style-type: none"> 802.11a <ul style="list-style-type: none"> 6 Mbps: -91 dBm 54 Mbps: -75 dBm 802.11 an/20 MHz <ul style="list-style-type: none"> MCS0: -89 dBm MCS7: -71 dBm 802.11 an/40 MHz <ul style="list-style-type: none"> MCS0: -86 dBm MCS7: -69 dBm
LAN			
Number of 10/100/1000M LAN		1	1
PoE		Yes	Yes
PoE power draw		4 W	7 W
WLAN Features			
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	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, EAP-AKA and EAP-SIM
WMM (Wi-Fi certified)		Yes	Yes
IEEE 802.1X		Yes	Yes
MAC filtering		Yes	Yes
RADIUS authentication		Yes	Yes
Network			
IPv6 support		Yes	Yes
VLANs		Yes	Yes
DHCP client		Yes	Yes
Management			
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	Input: AC 100-240 V - 50/60 Hz 0.3 A Output: DC +12 V 1 A
MTBF		5 years	5 years
Standard Compliance			
Ethernet		IEEE 802.3, IEEE 802.3u, IEEE 802.3az, IEEE 802.3af	IEEE 802.3, IEEE 802.3u, 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	802.11a: BPSK, QPSK, 16-QAM, 64-QAM 802.11b: DBPSK, DQPSK, CCK 802.11g: BPSK, QPSK, 16-QAM, 64-QAM 802.11n: BPSK, QPSK, 16-QAM, 64-QAM

Model		NWA1121-NI	NWA1123-NI
Certifications			
Radio		FCC Part 15C 15.247 ETSI EN 300 328 V1.7.1:11 2006 EN60601-1-2:2007 DGT LP0002	FCC Part 15C 15.247, FCC Part 15E ETSI EN 300 328 V1.7.1:11 2006 EN 301 893 V1.2.3:08-2003 EN60601-1-2:2007, DGT LP0002
EMC		FCC Part 15/107 EN 301 489-17 V2.1.1:05-2009 EN 301 489-1 V1.8.1:04-2008	FCC Part 15/107, EN 301 489-17 V2.1.1:05-2009 EN 301 489-1 V1.8.1:04-2008 EN55022:2010, EN55024:2010
Safety		EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 IEC 60950-1:2005	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 IEC 60950-1:2005, BSMI
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	250/0.55
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	630/1.39
Environmental Specifications			
Operating environment	Temperature	0°C to 50°C/32°F to 122°F	0°C to 50°C/32°F to 122°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
Storage environment	Temperature	-30°C to 70°C/-22°F to 158°F	-30°C to 70°C/-22°F to 158°F
	Humidity	10% to 90%	10% to 90%

Application Diagram



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