



- Compact ceiling-mount design
- Plenum rated with Low Smoke Zero Halogen (LOSH) material
- Supports 8 SSIDs
- Supports IPv6
- Coverage-enhancing 11n functions including Low Density Parity Check (LDPC), Maximum Likelihood Demodulation (MLD) and TX Beamforming

## NWA1121-NI 802.11 b/g/n PoE Access Point

## Superior Coverage from Multifunction Ceiling-mount Access Point

The ZyXEL NWA1121-NI is an IEEE 802.11n standard-based, SNMP-managed business WLAN PoE Access Point (AP) with data rates of up to 300 Mbps. The embedded antennas of the ceiling-mount AP enable large interior wireless deployments without sacrificing wireless performance.

The signal coverage of the NWA1121-NI is optimized with 11n technologies such as TX Beamforming and MLD (Maximum Likelihood Demodulation) for better, larger coverage. With the comprehensive design and the support of IPv6, the NWA1121-NI 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 NWA1121-NI 802.11 b/g/n PoE AP has an "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 NWA1121-NI is made non-toxic material without hazardous vapor emission. This safe design makes it more suitable for public indoor wireless deployments.

#### 8 SSIDs 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 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.

#### IPv6/IPv4 compatibility for future-proof expansions


Designed to solve the IPv4 exhaustion problems, the IPv6 architecture is being widely adopted in worldwide deployments. With IPv6 features enabled, the ZyXEL NWA1121-NI ensures businesses with a smooth migration path from the IPv4-based networks to the full IPv6 infrastructure. The NWA1121-NI supports dual-stack that allows coexistence of both IPv4 and IPv6. With IPv6, the NWA1121-NI can meet the networking trend and make all investments future-proof.

### 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 NWA1121-NI features coverage-enhancing 11n technologies such as TX Beamforming, LDPC and MLD to solve these issues. With MLD, the NWA1121-NI 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 ZyXEL NWA1121-NI.

## Specifications

<b>Model</b>	<b>NWA1121-NI</b>		
<b>Product Name</b>	802.11 b/g/n PoE Access Point 		
<b>Main Design</b>			
<b>Wireless Frequency</b>	2.4 GHz		
<b>Radio</b>	1		
<b>RF Specifications</b>			
<b>Frequency band</b>	<ul style="list-style-type: none"> <li>• 2.4 GHz (IEEE 802.11 b/g/n)</li> <li>• USA (FCC): 2.412 to 2.462 GHz</li> <li>• Europe (ETSI): 2.412 to 2.472 GHz</li> <li>• Taiwan (TW): 2.412 to 2.462 GHz</li> </ul>		
<b>802.11n</b>	<ul style="list-style-type: none"> <li>• 2x2 multiple-input multiple-output (MIMO) with two spatial streams</li> <li>• Maximal ratio combining (MRC)</li> <li>• 20- and 40-MHz channels</li> <li>• PHY data rates up to 300 Mbps</li> <li>• Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx)</li> <li>• Cyclic Delay diversity (CSD) support</li> <li>• Transmit Beamforming (TxBF) support</li> <li>• Maximum Likelihood Demodulation (MLD) support</li> <li>• Low Density Parity Check (LDPC) support</li> </ul>		
<b>Maximum Conducted Output Power</b>			
<b>FCC 11 b/g</b>	24 dBm		
<b>FCC 11 g/n</b>	24 dBm		
<b>EU 11 b/g</b>	17 dBm		
<b>EU 11 g/n</b>	17 dBm		
<b>Number of Antenna</b>	2T2R MIMO		
<b>Antenna Gain</b>	3 dBi		
<b>Support Data Rate</b>	<ul style="list-style-type: none"> <li>• 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps</li> <li>• 802.11n: up to 300 Mbps in MCS15 (40 MHz; GI=400 ns)</li> </ul>		
<b>Receive Sensitivity</b>	<ul style="list-style-type: none"> <li>• 802.11 b/g: <ul style="list-style-type: none"> <li>▪ 1 Mbps: -91 dBm</li> <li>▪ 11 Mbps: -85 dBm</li> <li>▪ 6 Mbps: -86 dBm</li> <li>▪ 54 Mbps: -69 dBm</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• 802.11n/20 MHz <ul style="list-style-type: none"> <li>▪ MCS0: -86 dBm</li> <li>▪ MCS7: -70 dBm</li> <li>▪ MCS8: -85 dBm</li> <li>▪ MCS15: -68 dBm</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• 802.11n/40 MHz <ul style="list-style-type: none"> <li>▪ MCS0: -84 dBm</li> <li>▪ MCS7: -66 dBm</li> <li>▪ MCS8: -83 dBm</li> <li>▪ MCS15: -65 dBm</li> </ul> </li> </ul>

Model		NWA1121-NI
<b>LAN</b>		
Number of 10/100/1000M LAN		1
PoE		Yes
PoE Power Draw		4W
<b>WLAN Features</b>		
WEP		Yes
WPA/WPA2-PSK		Yes
WPA/WPA2-Enterprise		Yes
EAP Type	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, EAP-AKA and EAP-SIM	
WMM (Wi-Fi Certified)		Yes
IEEE 802.1X		Yes
MAC Filtering		Yes
RADIUS Authentication		Yes
<b>Network</b>		
IPv6 Support		Yes
VLANs		Yes
DHCP Client		Yes
<b>Management</b>		
Standalone AP Mode		Yes
CLI		Yes
SNMP		Yes
<b>Others</b>		
Plenum Rating		Yes
Power supply	Input AC 100-240 V ~ 50/60 Hz 0.3 A Output DC +12 V 1 A	
MTBF		5 years
<b>Standard Compliance</b>		
Ethernet	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, 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	
<b>Certifications</b>		
Radio	FCC Part 15C 15.247 ETSI EN 300 328 V1.7.1: 11 2006 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	
Safety	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 IEC 60950-1:2005	
<b>Physical Specifications</b>		
Item	Dimensions (WxDxH)(mm/in.)	130 x 130 x 54.5/5.12 x 5.12 x 2.17
	Weight (g/lb.)	230/0.51
Packing	Dimensions (WxDxH)(mm/in.)	282 x 207 x 71/11.10 x 8.15 x 2.80
	Weight (g/lb.)	610/1.34
<b>Environmental Specifications</b>		
Operating Environmnet	Temperature	0°C to 50°C/32°F to 122°F
	Humidity	10% to 90% (Non-condensing)
Storage Environmnet	Temperature	-30°C to 70°C/-22°F to 158°F
	Humidity	10% to 90%

**Application Diagram**

