

# ZYXEL



## NWA1123-AC PRO

### 802.11ac Dual-Radio Dual Mount PoE Access Point

#### Introducing the new hybrid access point

The Zyxel Hybrid series allows devices like the NWA1123-AC PRO 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 PRO 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 PRO 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 PRO 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 with



Dual-optimized antenna for optimal performance in wall/ceiling-mount installations



802.11ac 3x3 — supporting combined data rate of up to 1.75 Gbps



Robust build quality including solid-state capacitors to ensure long life and operational reliability



## What to benefit from Cloud central management?

When you're ready to join our Nebula cloud management solution, simply register your NWA1123-AC PRO\* 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



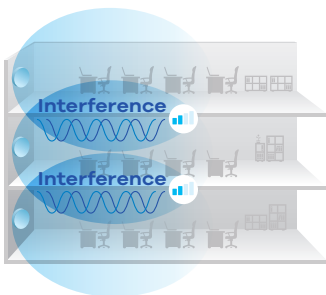
## Dual-optimized antenna — performance for wall or ceiling-mount installations

Most access points are designed to have a static radiation pattern, which is normally optimized for ceiling-mount installations. This means that when an AP is fitted on a wall, the optimum signal from the AP is lost to the upper and lower floor, rather into the area you want to cover.

The NWA1123-AC PRO has the ability to select ceiling-mount mode or wall-mount mode giving you the option to select the optimum radio pattern for its installation. This allows greater coverage to reach clients in the desired area along with reducing the risk of creating interference regardless of mounting (wall or ceiling).

### Traditional (Side View)

Pattern for wall-mount (H-plane, side view)



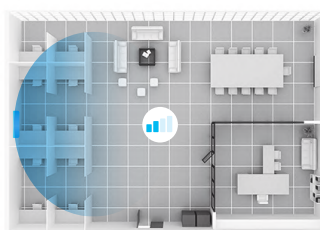
### Dual-optimized (Side View)

Pattern for wall-mount (H-plane, side view)



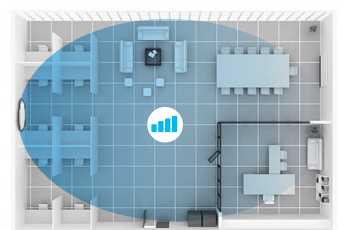
### Traditional (Top View)

Pattern for wall-mount (E-plane, top view)



### Dual-optimized (Top View)

Pattern for wall-mount (E-plane, top view)



## Ultra-slim exterior design

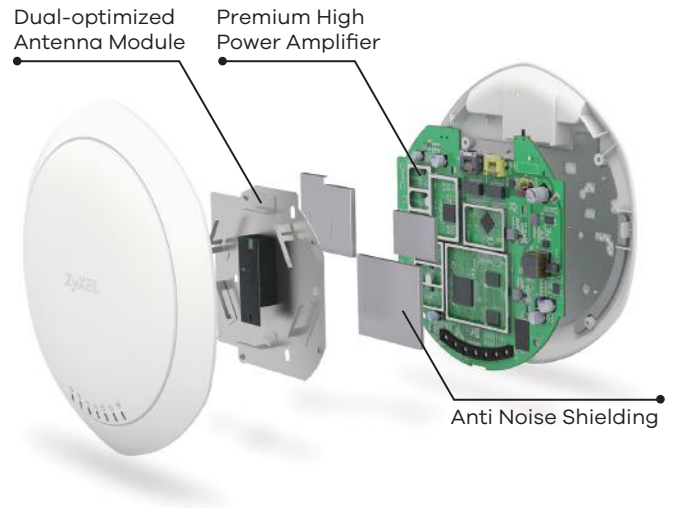
Zyxel Nebula NWA1123-AC PRO's ultra-slim exterior (32 mm in height) and understated white color blend perfectly into all kinds of decorations in various buildings with extraordinary modern tastes. The compact, elegant aesthetics makes NWA1123-AC PRO suitable for different decors no matter it's meant to be visible or not.



## RF First — high performance and reliable connections through design

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

When designing an access point, every hardware design element including the layout and the antenna are all taken into account to ensure that we lead with user experience and gain not only in coverage but also in performance that maximizes the experience in the real world.



## Wireless built for user experience

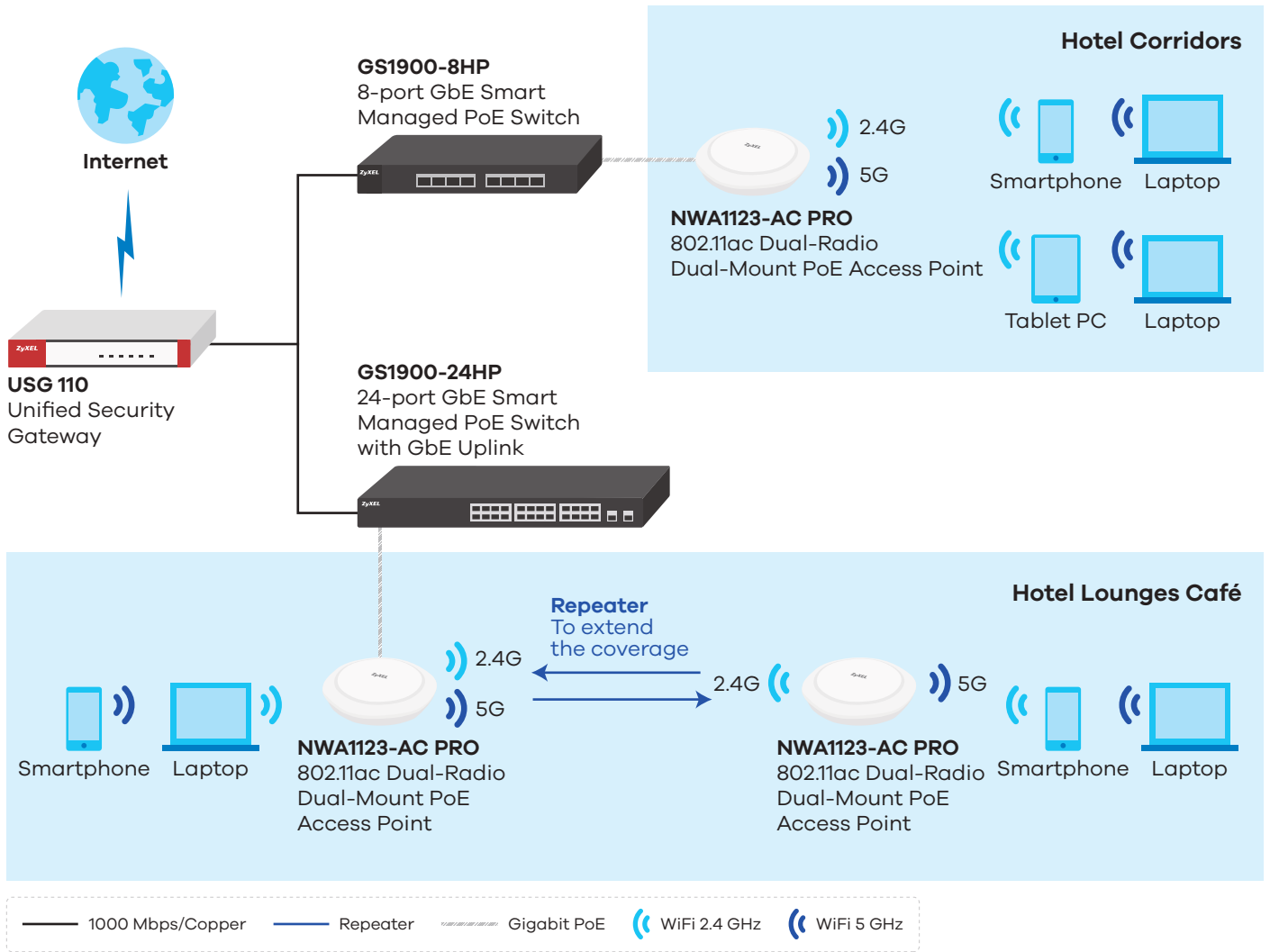
The NWA1123-AC PRO ensures an optimized wireless experience for users by combining wireless technologies like Dynamic Channel Selection (DCS), Load Balancing. DCS minimizes the interference of co-channel and overlapping channels, while Load Balancing enables administrators to easily set limits on the number of clients associated with each AP. These advanced functions ensure that users can enjoy a smooth, consistent and uninterrupted wireless experience.

## Flexible operating modes

The NWA1123-AC PRO not only offers two different styles of management via **NebulaFlex™** (cloud or standalone), but also offers the ability of smart mesh in cloud and WDS in standalone to extend wireless connectivity in challenging locations by wirelessly bridging the devices together without the need to use cables.\*

\* Compatible with all Zyxel access points, excluding Wave 2 AP, WAC5302D-S and NWA1302-AC.

# Applications Diagram



# Specifications

<b>Model</b>	<b>NWA1123-AC PRO</b>
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**Product name** 802.11ac Dual-Radio Dual-Mount PoE Access Point



## Main Design

<b>Wireless frequency</b>	2.4 GHz & 5 GHz
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<b>Radio</b>	2
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## RF Specifications

<b>Frequency band</b>	<b>2.4 GHz (802.11 b/g/n)</b>	<ul style="list-style-type: none"> <li>• USA (FCC): 2.412 to 2.462 GHz</li> </ul>	<ul style="list-style-type: none"> <li>• Europe (ETSI): 2.412 to 2.472 GHz</li> </ul>
	<b>5 GHz (802.11 a/n/ac)</b>	<ul style="list-style-type: none"> <li>• USA (FCC): 5.15 to 5.25 GHz; 5.725 to 5.850 GHz</li> </ul>	<ul style="list-style-type: none"> <li>• European (ETSI): 5.15 to 5.35 GHz; 5.470 to 5.725 GHz</li> </ul>

<b>802.11 premium features</b>	<ul style="list-style-type: none"> <li>• 3x3 Multiple-Input Multiple-Output (MIMO) with three spatial streams</li> <li>• Maximal Ratio Combining (MRC)</li> <li>• 20-, 40- and 80-MHz channels</li> <li>• PHY data rates total up to 450 Mbps (11n) + 1.3 Gbps (11ac)</li> </ul>	<ul style="list-style-type: none"> <li>• Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Tx/Rx)</li> <li>• Cyclic Delay diversity (CSD) support</li> <li>• Maximum Likelihood Demodulation (MLD) support</li> <li>• Low Density Parity Check (LDPC) support</li> </ul>
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<b>Conducted typical transmit output power**</b>	<b>US (FCC) 2.4 GHz</b>	27 dBm
	<b>US (FCC) 5 GHz</b>	27 dBm
	<b>EU (ETSI) 2.4 GHz</b>	18 dBm
	<b>EU (ETSI) 5 GHz</b>	24 dBm

<b>Number of antenna</b>	3T3R MIMO
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<b>Antenna gain</b>	<b>2.4 GHz</b>	<ul style="list-style-type: none"> <li>• Ceiling: 3 dBi</li> </ul>	<ul style="list-style-type: none"> <li>• Wall: 4 dBi</li> </ul>
	<b>5 GHz</b>	<ul style="list-style-type: none"> <li>• Ceiling: 4 dBi</li> </ul>	<ul style="list-style-type: none"> <li>• Wall: 5 dBi</li> </ul>

<b>Support data rate</b>	<ul style="list-style-type: none"> <li>• 802.11a/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps</li> <li>• 802.11n: up to 450 Mbps in MCS15 (40 MHz)</li> </ul>	<ul style="list-style-type: none"> <li>• 802.11ac: up to 1300 Mbps in MCS9 (80 MHz)</li> </ul>
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## RF Specifications

<b>Receive sensitivity</b>	Min. Rx sensitivity to -102 dBm
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## LAN

<b>Number of 10/100/1000M LAN</b>	2
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<b>PoE</b>	Yes
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<b>PoE power draw</b>	12.48 W (802.3at PoE)**
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## WLAN Features

<b>Smart mesh**</b>	Yes
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<b>Mesh AP for multiple SSID with VLAN**</b>	Yes
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<b>Fast Roaming</b>	Pre-authentication, PMK caching and 802.11 r/k/v
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<b>DCS (Dynamic Channel Selection)</b>	Yes
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<b>Load Balancing</b>	Yes
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## WLAN Security

<b>WEP</b>	Yes
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<b>WPA/WPA2-PSK</b>	Yes
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<b>WPA/WPA2-Enterprise</b>	Yes
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<b>EAP type</b>	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, EAP-AKA and EAP-SIM
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<b>WMM</b>	WiFi compliant
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<b>IEEE 802.1X</b>	Yes
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<b>Number of multiple SSID</b>	16
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<b>MAC filtering</b>	Yes
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<b>WLAN Security</b>		
<b>L2 isolation</b>		Yes, multiple profile
<b>RADIUS authentication</b>		Yes
<b>Network</b>		
<b>IPv6 support</b>		Yes
<b>VLANs</b>		Yes
<b>DHCP client</b>		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>▪ IP renew</li> <li>▪ Device reboot</li> <li>▪ Device locating</li> </ul> </li> <li>▪ Web GUI access</li> <li>▪ Firmware upgrade</li> <li>▪ Password configuration</li> <li>▪ One-click quick association with Zyxel AP Configurator (ZAC)</li> </ul>
<b>Management</b>		
<b>ZAC<sup>*4</sup></b>		<ul style="list-style-type: none"> <li>• Batch AP configuration</li> <li>• Batch AP firmware upgrade</li> <li>• Batch AP profile backup</li> </ul>
<b>Standalone AP mode</b>		Yes
<b>CLI</b>		Yes, SSH
<b>SNMP</b>		Yes
<b>Others</b>		
<b>Plenum rating</b>		Yes
<b>Power supply</b>		802.3at PoE only (No DC jack)
<b>MTBF (hr)</b>		1,005,235
<b>Standard Compliance</b>		
<b>Ethernet</b>		IEEE 802.3, IEEE 802.3u, IEEE 802.11ab, IEEE 802.3au, IEEE 802.3az, IEEE 802.3at
<b>WLAN</b>		<ul style="list-style-type: none"> <li style="width: 50%;">• 802.11b: DBPSK, DQPSK, CCK</li> <li style="width: 50%;">• 802.11n: BPSK, QPSK, 16-QAM, 64-QAM</li> <li style="width: 50%;">• 802.11g: BPSK, QPSK, 16-QAM, 64-QAM</li> <li style="width: 50%;">• 802.11ac: BPSK, QPSK, 64-QAM, 256-QAM</li> <li style="width: 50%;">• 802.11a: BPSK, QPSK, 16-QAM, 64-QAM</li> </ul>
<b>Certifications</b>		
<b>Radio</b>		FCC part 15C, FCC part 15E, ETSI EN 300 328, EN 301 893, LP0002
<b>EMC</b>		FCC part 15B, EN 301 489-1, EN 301 489-17, EN55022, EN55024, EN61000-3-2/-3, BSMI CNS13438
<b>Safety</b>		EN 60950-1, IEC 60950-1, BSMI CNS14336-1
<b>Physical Specifications</b>		
<b>Item</b>	<b>Dimensions (WxDxH)(mm/in.)</b>	203.9 x 191.7 x 34.7/8.03 x 7.55 x 1.37
	<b>Weight (g/lb.)</b>	445/0.98
<b>Packing</b>	<b>Dimensions (WxDxH)(mm/in.)</b>	240 x 235 x 100/9.45 x 9.25 x 3.94
	<b>Weight (g/lb.)</b>	1210/2.67
<b>Included accessories</b>		<ul style="list-style-type: none"> <li>• PoE injector<sup>*4</sup></li> <li>• Ethernet 45 cable<sup>*4</sup></li> <li>• Wall/ceiling mount plate</li> </ul>
<b>Physical Specifications</b>		
<b>Operating environment</b>	<b>Temperature</b>	0°C to 50°C/32°F to 122°F
	<b>Humidity</b>	10% to 90% (non-condensing)
<b>Storage environment</b>	<b>Temperature</b>	-40°C to 70°C/-40°F to 158°F
	<b>Humidity</b>	10% to 90% (non-condensing)

\*1: Maximum output power is limited by regional regulatory.

\*2: Max. power draw is 12.48 W. In extreme cases, the inrush current is greater than 802.3af limit, thus 802.3at PoE is required.

\*3: Support from ZAC Utility V11.3 or above; support only in standalone mode.

\*4: The accessories apply to the part code NWA1123ACPRO-US0101F and NWA1123ACPRO-EU0101F.

## Weather-Proof Mounting Option

### Outdoor Enclosure

People like to enjoy the combination of great view, fresh air and WiFi service when they're outdoors. This weather-resistant enclosure brings the Zyxel indoor AP outdoors to make deployments in places such as parks, campus, poolside or camping yard convenient and affordable. This enclosure allows the AP to be easily mounted on any wall or pole. The durable enclosure is designed to withstand a wide range of temperature from 50°C to -20°C, waterproof the APs with IPX5 rating certified and extend lifespan with the UV stabilized plastic, which makes it the most reliable weatherproof enclosure.



### Features

- **Compatible with various APs** including unified, cloud-managed and standalone units
- **Wide operating temperature** range from 50°C to -20°C
- **Compact size** easily blends into any environment seamlessly
- **UV stabilized plastic** extends enclosure lifetime
- **Flexible mount design** for wall mount, or pole mount installation with pole mount kit (sold separately)
- **IPX5 rating** makes Zyxel indoor AP weatherproof



Wall mount installation



Pole mount installation

### Specifications

Model	Enclosure
<b>Dimensions (WxDxH)(mm/in.)</b>	238.54 x 249.72 x 86.97/9.39 x 9.83 x 3.42
<b>Weight (kg/lb.)</b>	0.64/1.4
<b>Mounting options</b>	Wall, pole (pole mount kit is sold separately)
<b>Certified</b>	IPX5
<b>Adjustability</b>	Swivel +/-40°; Tilt +/-15°

### Compatibility List

Model
• NWA1123-ACv2
• NWA5121-NI
• NWA5123-AC
• NAP102
• NWA1123-AC PRO
• WAC6103D-I
• NAP203



### Optional Accessory

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

# ZYXEL

Your Networking Ally

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Datasheet [NWA1123-AC PRO](#)



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