

# ZYXEL

Your Networking Ally



# Wireless LAN

Quick Sales Guide

# WLAN Portfolio Lineup

## On-premise management

### Features/Scalability



Standalone AP Series

Products shown: NWA1123-AC HD\*, NWA1123-AC PRO\*, NWA1123-ACv2\*, NWA1302-AC\*



Unified AP Series

Products shown: NWA5123-AC HD\*, NWA5123-AC, WAC5302D-S, NWA5121-NI, NWA5301-NJ



Unified Pro AP Series

Products shown: WAC6553D-E\*, WAC6503D-S\*, WAC6502D-S\*, WAC6552D-S\*, WAC6303D-S\*, WAC6103D-I\*

Business Scale **Small**

\*: Works in the Nebula cloud or on-premise environments



nebula

# Nebula cloud management



NXC5500



NXC2500

**NXC Controller**



NWA1123-AC HD



NWA1123-AC PRO



NWA1123-ACv2



NWA1302-AC

**NebulaFlex AP Series**



WAC6303D-S



NWA5123-AC HD



WAC6503D-S  
WAC6502D-S



WAC6103D-I



WAC6552D-S



WAC6553D-E

**NebulaFlex Pro AP Series**



NAP353



NAP303



NAP203



NAP102



**Nebula AP Series**

Large

Small

Large

# Wireless LAN Controller Quick Finder

Segment			Model	
<b>Medium-Sized Business to Enterprise</b>	• Centralized WLAN Management	• Wireless LAN Controller	NXC5500	
	• User/Application Management			
<b>Small- to Medium-Sized Business</b>	• Centralized WLAN Management	• Wireless LAN Controller	NXC2500	
	• User/Application Management			

\*: Zyxel wireless controller solutions include not only NXC series but USG series; please find AP Controller Technology Solution Brief for more details.

# Wireless LAN Access Point Quick Finder




Segment	Series	Management	Model	
<b>Medium-Sized Business to Enterprise</b>	Unified Pro/ NebulaFlex Pro	<ul style="list-style-type: none"> <li>• Controller managed</li> <li>• Cloud managed</li> <li>• Standalone</li> </ul>	WAC6503D-S	
			WAC6502D-S	
			WAC6552D-S	
			WAC6553D-E	
			WAC6303D-S	

# Key Features

Model	Key Features	License
NXC5500	<ul style="list-style-type: none"> <li>• Auto provisioning and centralized management of up to 1024* APs</li> <li>• Advanced ZyMesh technology for simplified AP deployment and WLAN extension</li> <li>• Enhanced RF management with auto healing</li> <li>• Flexible traffic forwarding with tunnel and distributed modes</li> <li>• Comprehensive guest network management and granular access control</li> </ul>	<ul style="list-style-type: none"> <li>• Managed up to 1024 APs</li> <li>• ZyMesh</li> </ul>
NXC2500	<ul style="list-style-type: none"> <li>• Auto provisioning and centralized management of up to 64 APs</li> <li>• Zyxel Wireless Optimizer for easily planning, deployment and maintenance</li> <li>• Advanced ZyMesh technology for simplified AP deployment and WLAN extension</li> <li>• Enhanced RF management with auto healing</li> <li>• Flexible traffic forwarding with tunnel and distributed modes</li> <li>• Comprehensive guest network management and granular access control</li> </ul>	<ul style="list-style-type: none"> <li>• Managed up to 64 APs</li> <li>• ZyMesh</li> </ul>

# Key Features

Main Design	Key Features
<ul style="list-style-type: none"> <li>• 802.11ac dual radio concurrent 2.4 and 5 GHz support</li> <li>• Smart antenna technology</li> <li>• 3 spatial streams</li> </ul>	<ul style="list-style-type: none"> <li>• NebulaFlex Pro enables the deployment flexibility to be standalone, controller managed or cloud managed mode</li> <li>• Zyxel smart antenna provides premium performance anywhere</li> <li>• Advanced IEEE 802.11ac offers up to 1.75 Gbps combined data rates</li> <li>• Dynamic Channel Selection, Load Balancing and Smart Client Steering ensure optimal wireless experience in high density environments</li> <li>• APFlex™ and tool-less bracket design ease deployment</li> <li>• Unified Pro AP with high scalability to convert from standalone to managed mode</li> <li>• Outdoor AP are designed for harsh outdoor environments with up to IP67 industrial-grade weather proofing</li> <li>• Enterprise-grade security for the wireless network edge</li> <li>• Streamlined network initialization, troubleshooting and configuration by supporting ZON utility, Zyxel Smart Connect and ZAC</li> <li>• Simplified WiFi planning, deployment and management by supporting ZWO</li> <li>• Plenum rated housing</li> </ul>
<ul style="list-style-type: none"> <li>• 802.11ac dual radio concurrent 2.4 and 5 GHz support</li> <li>• Smart antenna technology</li> <li>• 2 spatial streams</li> </ul>	
<ul style="list-style-type: none"> <li>• 802.11ac dual radio concurrent 2.4 and 5 GHz support</li> <li>• Smart antenna technology</li> <li>• Outdoor coverage</li> <li>• IP67 weather protection</li> </ul>	
<ul style="list-style-type: none"> <li>• 802.11ac dual radio concurrent 2.4 and 5 GHz support</li> <li>• Outdoor coverage</li> <li>• 3 spatial streams</li> <li>• IP66 weather protection</li> </ul>	
<ul style="list-style-type: none"> <li>• 802.11ac Wave 2 MU-MIMO dual radio concurrent 2.4 and 5 GHz support</li> <li>• Smart antenna technology</li> <li>• 3 spatial streams</li> </ul>	
<ul style="list-style-type: none"> <li>• 802.11ac Wave 2 MU-MIMO dual radio concurrent 2.4 and 5 GHz support</li> <li>• Smart antenna technology</li> <li>• 3 spatial streams</li> </ul>	<ul style="list-style-type: none"> <li>• NebulaFlex Pro enables the deployment flexibility to be standalone, controller managed or cloud managed mode</li> <li>• Enterprise-class 802.11ac Wave 2 access point with 3x3: 3SS supporting 3 streams MU-MIMO for high-density deployments</li> <li>• Next generation beamforming and smart antenna technology deliver excellent WiFi experience</li> <li>• Unbeatable coverage from maximized sensitivity</li> <li>• Advanced Cellular Coexistence minimizes interference from 3G/4G cellular networks</li> <li>• ZON Utility and APFlex™ make deployment simple and fast</li> </ul>

Segment	Series	Management	Model
Medium-Sized Business to Enterprise	Unified Pro/ NebulaFlex Pro	<ul style="list-style-type: none"> <li>• Controller managed</li> <li>• Cloud managed</li> <li>• Standalone</li> </ul>	WAC6103D-I  
	Unified/ NebulaFlex Pro	<ul style="list-style-type: none"> <li>• Controller managed</li> <li>• Cloud managed</li> <li>• Standalone</li> </ul>	NWA5123-AC HD  
	Unified series	<ul style="list-style-type: none"> <li>• Controller managed</li> <li>• Standalone</li> </ul>	NWA5123-AC  
			NWA5121-NI  
			WAC5302D-S  
		NWA5301-NJ  	

## Main Design

## Key Features

- 802.11ac dual radio concurrent 2.4 and 5 GHz support
- Dual-optimized antenna
- 3 spatial streams

- NebulaFlex Pro enables the deployment flexibility to be standalone, controller managed or cloud managed mode
- Enterprise class 3x3 802.11ac AP supports combined data rates of up to 1.75 Gbps
- "Dual-optimized antenna" allows pattern optimization adapting to wall- or ceiling-mount installations
- Dynamic Channel Selection, Load Balancing and Smart Client Steering ensure optimal wireless experience in medium to high density environments
- Stylish, ultra-slim ID design as the 32 mm height blends perfectly into modern interior decorations
- APFlex™ and Zyxel one networking utilities make deployment simple and fast

- 802.11ac Wave 2 MU-MIMO dual radio concurrent 2.4 and 5 GHz support
- Embedded antenna

- NebulaFlex Pro enables the deployment flexibility to be standalone, controller managed or cloud managed mode
- Achieve reliable connectivity, support for more connected clients and better wireless coverage with the latest Wave 2 WiFi standard
- Unified AP with high scalability to convert from standalone to managed mode
- Achieve reliable connectivity, support for more connected clients and better wireless coverage with the latest Wave 2 WiFi standard
- Ceiling- and wall-mount design with optimized RF performance
- Enterprise grade security
- APFlex™ and Zyxel One Network utilities make deployment simple and fast

- 802.11ac Dual radio 2.4 and 5 GHz support
- Embedded antenna

- Unified AP with high scalability to convert from standalone to managed mode
- Ceiling- and wall-mount design with optimized RF performance
- Enterprise grade security
- APFlex™ and Zyxel One Network utilities make deployment simple and fast










- Single radio 2.4 GHz support
- Embedded antenna

- Dual radio 2.4 and 5 GHz support
- Smart antenna technology

- Clever wired and wireless network solution for individual hotel guest rooms
- The world's first wall-plate AP design that can be mounted on wall plates or directly in any corner
- Enterprise-class 2x2 802.11ac AP with smart antenna supporting combined data rates of up to 1.2 Gbps
- Three downlink Gigabit Ethernet ports, including one with PoE to power for VoIP phones or other devices

- Single radio 2.4 GHz support
- Embedded antenna

- Unique back panel design that fits the majority of outlet boxes in the world
- 2.4 GHz 802.11n technology providing data rates of up to 300 Mbps
- High-gain antenna that optimizes WiFi services for mobile devices
- Streamlined network initialization, troubleshooting and configuration by supporting ZON utility, Zyxel Smart Connect and ZAC
- Simplified WiFi planning, deployment and management by supporting ZWO

Segment	Series	Management	Model
<b>Small to Medium-Sized Business</b>	Nebula AP series	<ul style="list-style-type: none"> <li>• Cloud managed</li> </ul>	NAP102
			
			NAP203
			
NAP303			
			
NAP353			
			
<b>Small Business</b>	NebulaFlex series	<ul style="list-style-type: none"> <li>• Cloud managed</li> <li>• Standalone</li> <li>• SNMP management</li> </ul>	NWA1123-AC HD
			
			NWA1123-AC PRO
			
NWA1123-ACv2			
			
NWA1302-AC			
			
	Standalone AP series	<ul style="list-style-type: none"> <li>• Standalone</li> <li>• SNMP management</li> </ul>	NWA1100-NH
			



## Main Design

- 802.11ac Dual radio 2.4 and 5 GHz support
- Embedded antenna

- 802.11ac dual radio concurrent 2.4 and 5 GHz support
- Dual-optimized antenna
- 3 spatial streams

- 802.11ac dual radio concurrent 2.4 and 5 GHz support
- Smart antenna technology
- 3 spatial streams

- 802.11ac dual radio concurrent 2.4 and 5 GHz support
- Outdoor coverage
- 3 spatial streams

- 802.11ac Wave 2 MU-MIMO dual radio concurrent 2.4 and 5 GHz support
- Embedded antenna

- 802.11ac Dual radio 2.4 and 5 GHz support
- Dual-optimized antenna

- 802.11ac support
- Dual radio concurrent 2.4 and 5 GHz

- 802.11ac Dual radio 2.4 and 5 GHz support
- Smart antenna technology
- Gigabit switch and PoE supply

- 802.11n support
- Long range AP

## Key Features

- 2x2 802.11ac AP supports up to 1.2 Gbps combined data rates (NAP102)
- 3x3 802.11ac AP supports up to 1.75 Gbps combined data rates (NAP203, NAP303, NAP353)
- Dual-optimized Antenna adopts both wall- and ceiling-mount installations (NAP203)
- Smart Antenna provides breakthrough performance (NAP303)
- IP66-rated weather protection (NAP353)
- Self-configuring, zero-touch deployments
- Enterprise security and RF optimization
- DCS, load balancing and smart client steering

- NebulaFlex delivers the flexibility to switch between standalone and License Free Nebula Cloud management
- Nebula Cloud management allows easy deployment, real-time configurations and access to manage network anytime
- Achieve reliable connectivity, support for more connected clients and better wireless coverage with the latest Wave 2 WiFi standard (NWA1123-AC HD)
- Dual-optimized antenna for both wall/ceiling-mount installations (NWA1123-AC PRO)
- Provides wireless, wired and PoE connectivity with 802.11ac as well as a built-in Gigabit switch (NWA1302-AC)
- Robust build quality including solid-state capacitors and advanced heat dissipation design to ensure long life and operational reliability

- Fast 802.11n WiFi with 5 dBi antenna speeds up to 300 Mbps
- High output power of up to 28 dBm delivers extended coverage
- Flexible operating modes and IEEE 802.3af PoE support
- APFlex™ and Zyxel One Network utilities make deployment simple and fast
- Certified WPA2 Enterprise, access control management and user traffic control for strict network protection
- Streamlined network initialization and configuration by supporting ZON utility and ZAC

# Wireless LAN Feature Matrix

## Controller

Model	NXC Controller	
	NXC5500	NXC2500
<b>Port Density</b>		
10/100/1000 Mbps RJ-45 ports	6	6
USB	2	2
<b>Capacity &amp; Performance</b>		
Managed APs (default/max.)	64/1024	8/64
Throughput (Gbps)	6	1
<b>Deployment Tools</b>		
AP planning	-	Yes
Coverage detection	-	Yes
WLAN quality map	-	Yes
<b>WLAN Management</b>		
CAPWAP	Yes	Yes
Controller address assignment	Manual/Auto discovery/DHCP option/DNS	Manual/Auto discovery/DHCP option/DNS
Auto provisioning	Yes	Yes
NAT pass-through	Yes	Yes
Encrypted managed frame (DTLS)	Yes	Yes
Primary/Backup controller	Yes	Yes
Managed AP firmware auto upgrade	Yes	Yes
Scheduled firmware upgrade	Yes	Yes
Dynamic channel selection	Yes	Yes
Client RSSI threshold	Yes	Yes
Wireless multicast setting	Yes	Yes
ZyMesh*	Yes	Yes
Auto healing	Yes	Yes
Fast roaming	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v
<b>Authentication &amp; Security</b>		
Authentication protocol	802.1X, MS AD, LDAP	802.1X, MS AD, LDAP
MAC authentication	Yes	Yes
Embedded RADIUS server	Yes (4,096 users)	Yes (512 users)
Rogue AP detection	Yes	Yes
Rogue AP containment	Yes	Yes
Customizable captive portal	Yes	Yes
External captive portal	Yes	Yes
Guest account (dynamic)	Yes (1,024)	Yes (512)
Layer-2 isolation	Yes	Yes
<b>Network Features</b>		
VLAN	Yes (512)	Yes (256)
DHCP client/server/relay	Yes/Yes/Yes	Yes/Yes/Yes
NAT	Yes	Yes
Static routing	Yes	Yes
Policy routing	Yes	Yes
Firewall	Yes	Yes
<b>QoS</b>		
WMM power save	Yes	Yes
Diffserv marking	Yes	Yes
AP load balancing	Yes	Yes
Rate limiting (firewall)	Yes	Yes
Station bandwidth limit (per SSID)	Yes	Yes
Data tunneling	Yes (up to 64 APs suggested)	Yes (up to 16 APs suggested)
<b>Management Features</b>		
CLI with SSH	Yes	Yes
Web UI with SSL	Yes	Yes
SNMP	v1, v2c, v3	v1, v2c, v3
Multi-level administration roles	Yes	Yes
Remote configuration and management	Yes	Yes
Management VLAN	Yes	Yes
System log	Yes	Yes
System log save to USB drive	Yes	Yes
<b>Others</b>		
Packet capture	Yes	Yes
High availability	Primary/Secondary controller	Primary/Secondary controller
2nd controller configuration	Yes	Yes
System diagnostic tool	Yes	Yes
Band select (steering)	Yes	Yes
IPv6 host	Yes	Yes
Power supply	270 W ATX SPS; Input: 100 to 240 V @50 to 60 Hz	12 V DC, 100 to 240 V AC
MTBF (hr)	55,555	815,464
Heat dissipation (BTU/hr)	467	64.83
<b>Physical Specifications</b>		
Dimensions (WxDxH)(mm/in.)	520 x 435 x 42/20.47 x 17.13 x 1.65	242 x 175 x 35.5/9.53 x 6.89 x 1.38
Weight (g/lb.)	5,350/11.79	805/1.77
Included accessories	<ul style="list-style-type: none"> <li>• Ethernet cable</li> <li>• Console cable</li> </ul>	<ul style="list-style-type: none"> <li>• Power cord</li> <li>• Rack mounting kit</li> </ul>
		<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Rack mounting kit</li> </ul>

\*: ZyMesh can be enabled with a license upgrade. Without a license, 1 root AP is supported as a trial.

## Access Point

Model	Unified Pro/NebulaFlex Pro AP Series			
	WAC6503D-S	WAC6502D-S	WAC6303D-S	WAC6103D-I
<b>Product description</b>	802.11ac Dual-Radio Smart Antenna 3x3 Access Point	802.11ac Dual-Radio Smart Antenna 2x2 Access Point	802.11ac Wave 2 Dual-Radio Unified Pro Access Point	802.11ac Dual-Radio Dual-Optimized Antenna 3x3 Access Point
<b>Basic Design</b>				
<b>Wireless frequency</b>	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz
<b>Radio</b>	2	2	2	2
<b>RF Specifications</b>				
<b>Number of antenna</b>	6 embedded smart antenna	4 embedded smart antenna	5 embedded smart antenna	8 internal dual-optimized antenna
<b>Antenna gain</b>	4 dBi @2.4 GHz 6 dBi @5 GHz	4 dBi @2.4 GHz 6 dBi @5 GHz	3 dBi @2.4 GHz 4 dBi @5 GHz	Ceiling: 3 dBi @2.4 GHz; 4 dBi @5 GHz Wall: 4 dBi @2.4 GHz; 5 dBi @5 GHz
<b>LAN</b>				
<b>Number of 10/100/1000M LAN</b>	2	2	2	2
<b>PoE</b>	Yes	Yes	Yes	Yes
<b>PoE power draw (watt)</b>	17.04	15.12	16.2	12.48 (802.3at PoE)**
<b>WLAN Features</b>				
<b>Wireless speed</b>	1750 Mbps	1200 Mbps	1600 Mbps	1750 Mbps
<b>Mesh AP (By license)</b>	Yes	Yes	Future support	Yes
<b>Fast roaming*</b>	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v
<b>Wireless Security</b>				
<b>WPA/WPA2-PSK</b>	Yes	Yes	Yes	Yes
<b>WPA/WPA2-Enterprise</b>	Yes	Yes	Yes	Yes
<b>WMM</b>	Yes	Yes	Yes	Yes
<b>EAP types</b>	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM
<b>IEEE 802.1X</b>	Yes	Yes	Yes	Yes
<b>Number of SSID</b>	16	16	16	16
<b>Authentication* (Web/Microsoft AD/LDAP/MAC)</b>	Yes	Yes	Yes	Yes
<b>RADIUS authentication</b>	Yes	Yes	Yes	Yes
<b>MAC filtering</b>	Yes	Yes	Yes	Yes
<b>Layer-2 isolation</b>	Yes	Yes	Yes	Yes
<b>Rogue AP detection</b>	Yes	Yes	Yes	Yes
<b>Rogue AP containment</b>	Yes	Yes	-	Yes
<b>Firewall*</b>	Yes	Yes	Yes	Yes
<b>Network</b>				
<b>IPv6 host</b>	Yes	Yes	Yes	Yes
<b>VLANs</b>	Yes	Yes	Yes	Yes
<b>DHCP client</b>	Yes	Yes	Yes	Yes
<b>Management</b>				
<b>Standalone</b>	Yes	Yes	Yes	Yes
<b>Controller managed</b>	Yes	Yes	Yes	Yes
<b>Cloud managed</b>	Yes	Yes	Yes	Yes
<b>Web UI/CLI</b>	Yes	Yes	Yes	Yes
<b>SNMP</b>	Yes	Yes	Yes	Yes
<b>Others</b>				
<b>Chassis rating</b>	Plenum-rated	Plenum-rated	Plenum-rated	Plenum-rated
<b>Power supply</b>	DC input: 12 V DC 2 A; PoE: 802.3at compliant	DC input: 12 V DC 2 A; PoE: 802.3at compliant	Input: AC 100 to 240 V - 50/60 Hz Output: DC +12 V, 2 A (sold separately)	PoE12-HP
<b>MTBF (hr)</b>	1,202,489	1,407,374	3,960,217	1,005,235
<b>Heat dissipation (BTU/hr)</b>	56.6	48.17	55.3	42.58
<b>Physical Specifications</b>				
<b>Dimensions (WxDxH) (mm/in.)</b>	236 x 227 x 62/ 9.28 x 8.95 x 2.43	236 x 227 x 62/ 9.28 x 8.95 x 2.43	211 x 223 x 39/ 8.31 x 8.78 x 1.54	203.9 x 191.7 x 34.7/ 8.03 x 7.55 x 1.37
<b>Weight (g/lb.)</b>	982/2.17	961/2.12	800/1.76	445/0.98
<b>Included accessories</b>	• Ceiling mount plate • Mounting screws	• Ceiling mount plate • Mounting screws	• Wall/ceiling mount plate • Mounting screws	• Wall/ceiling mount plate

\*: Supported when working with the NXC2500 and NXC5500.

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

## Access Point

Model	Outdoor/NebulaFlex Pro AP		Wall-Plate AP	
	WAC6553D-E	WAC6552D-S	WAC5302D-S	NWA5301-NJ
<b>Product description</b>	802.11ac Dual-Radio External Antenna 3x3 Outdoor Access Point	802.11ac Dual-Radio Unified Pro Outdoor Access Point	802.11ac Wall-Plate Unified Access Point	802.11n Wall-Plate Unified Access Point
<b>Basic Design</b>				
<b>Wireless frequency</b>	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz	2.4 GHz
<b>Radio</b>	2	2	2	2
<b>RF Specifications</b>				
<b>Number of antenna</b>	6 N-type connectors**	4 embedded smart antenna	4 embedded smart antenna	2 embedded
<b>Antenna gain</b>	-	5 dBi @2.4 GHz 10 dBi @5 GHz	5 dBi @2.4 GHz 5 dBi @5 GHz	5 dBi
<b>LAN</b>				
<b>Number of 10/100/1000M LAN</b>	1	1	4 (One PoE PSE)	Uplink: 1 (10/100 M only) Downlink: 3 (10/100 M only)
<b>PoE</b>	Yes	Yes	Yes	Yes
<b>PoE power draw (watt)</b>	25	15.12	24 (Include 7 W for PoE PSE)	13 (Include 7 W for PoE PSE)
<b>WLAN Features</b>				
<b>Wireless speed</b>	1750 Mbps	1200 Mbps	1200 Mbps	300 Mbps
<b>Mesh AP (By license)</b>	Yes	Yes	-	Yes
<b>Fast roaming*</b>	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r	Pre-authentication, PMK caching and 802.11r
<b>Wireless Security</b>				
<b>WPA/WPA2-PSK</b>	Yes	Yes	Yes	Yes
<b>WPA/WPA2-Enterprise</b>	Yes	Yes	Yes	Yes
<b>WMM</b>	Yes	Yes	Yes	Yes
<b>EAP types</b>	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM
<b>IEEE 802.1X</b>	Yes	Yes	Yes	Yes
<b>Number of SSID</b>	16	16	16	8
<b>Authentication* (Web/Microsoft AD/LDAP/MAC)</b>	Yes	Yes	Yes	Yes
<b>RADIUS authentication</b>	Yes	Yes	Yes	Yes
<b>MAC filtering</b>	Yes	Yes	Yes	Yes
<b>Layer-2 isolation</b>	Yes	Yes	Yes	Yes
<b>Rogue AP detection</b>	Yes	Yes	-	Yes
<b>Rogue AP containment</b>	Yes	Yes	-	Yes
<b>Firewall*</b>	Yes	Yes	Yes	Yes
<b>Network</b>				
<b>IPv6 host</b>	Yes	Yes	Yes	Yes
<b>VLANs</b>	Yes	Yes	Yes	Yes
<b>DHCP client</b>	Yes	Yes	Yes	Yes
<b>Management</b>				
<b>Standalone</b>	Yes	Yes	Yes	Yes
<b>Controller managed</b>	Yes	Yes	Yes	Yes
<b>Cloud managed</b>	Yes	Yes	-	-
<b>Web UI/CLI</b>	Yes	Yes	Yes	Yes
<b>SNMP</b>	Yes	Yes	Yes	Yes
<b>Others</b>				
<b>Chassis rating</b>	IP66	IP67	-	-
<b>Power supply</b>	PoE only: 802.3at	PoE only: 802.3at	802.3at PoE only (No DC jack)	802.3at PoE only (No DC jack)
<b>MTBF (hr)</b>	562,413	775,977	809,263	531,785
<b>Heat dissipation (BTU/hr)</b>	85.3	51.84	81.9	17.71
<b>Physical Specifications</b>				
<b>Dimensions (WxDxH) (mm/in.)</b>	255 x 256 x 62/ 10.04 x 10.08 x 2.44	255 x 256 x 66/ 10.04 x 10.08 x 2.60	90 x 170 x 29/ 3.54 x 6.69 x 1.14	85 x 138 x 37.4/ 3.35 x 5.43 x 1.47
<b>Weight (g/lb.)</b>	1,708/3.77	1,590/3.51	320/0.71	172/0.379
<b>Included accessories</b>	<ul style="list-style-type: none"> <li>• Pole/wall mounting kits</li> <li>• PoE injector (optional)</li> <li>• Power cord (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Pole mounting kits</li> </ul>	<ul style="list-style-type: none"> <li>• Bracket</li> <li>• Multi-purpose mounting bracket with screws</li> </ul>	<ul style="list-style-type: none"> <li>• Wall/ceiling mount plate</li> </ul>

\*: Supported when working with the NXC2500 and NXC5500.

\*\*:. The antenna is not embedded and external antennas are separately sold.

## Access Point

Model	Unified AP Series		
	NWA5123-AC HD	NWA5123-AC	NWA5121-NI
<b>Product description</b>	802.11ac Wave 2 Dual-Radio Unified Access Point	802.11ac Dual-Radio Unified Access Point	802.11n Unified Access Point
<b>Basic Design</b>			
<b>Wireless frequency</b>	2.4 and 5 GHz	2.4 and 5 GHz	2.4 GHz
<b>Radio</b>	2	2	1
<b>RF Specifications</b>			
<b>Number of antenna</b>	5 embedded	4 embedded	2 embedded
<b>Antenna gain</b>	3 dBi @2.4 GHz 3 dBi @5 GHz	3 dBi @2.4 GHz 4 dBi @5 GHz	7 dBi
<b>LAN</b>			
<b>Number of 10/100/1000M LAN</b>	2	1	1
<b>PoE</b>	Yes	Yes	Yes
<b>PoE power draw (watt)</b>	15.5	9	4
<b>WLAN Features</b>			
<b>Wireless speed</b>	1600 Mbps	1200 Mbps	300 Mbps
<b>Mesh AP (By license)</b>	Future support	Yes	Yes
<b>Fast roaming*</b>	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r
<b>Wireless Security</b>			
<b>WPA/WPA2-PSK</b>	Yes	Yes	Yes
<b>WPA/WPA2-Enterprise</b>	Yes	Yes	Yes
<b>WMM</b>	Yes	Yes	Yes
<b>EAP types</b>	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM
<b>IEEE 802.1X</b>	Yes	Yes	Yes
<b>Number of SSID</b>	16	16	8
<b>Authentication* (Web/Microsoft AD/ LDAP/MAC)</b>	Yes	Yes	Yes
<b>RADIUS authentication</b>	Yes	Yes	Yes
<b>MAC filtering</b>	Yes	Yes	Yes
<b>Layer-2 isolation</b>	Yes	Yes	Yes
<b>Rogue AP detection</b>	Yes	Yes	Yes
<b>Rogue AP containment</b>	-	Yes	Yes
<b>Firewall*</b>	Yes	Yes	Yes
<b>Network</b>			
<b>IPv6 host</b>	Yes	Yes	Yes
<b>VLANs</b>	Yes	Yes	Yes
<b>DHCP client</b>	Yes	Yes	Yes
<b>Management</b>			
<b>Standalone</b>	Yes	Yes	Yes
<b>Controller managed</b>	Yes	Yes	Yes
<b>Cloud managed</b>	Yes	-	-
<b>Web UI/CLI</b>	Yes	Yes	Yes
<b>SNMP</b>	Yes	Yes	Yes
<b>Others</b>			
<b>Chassis rating</b>	Plenum-rated	Plenum-rated	Plenum-rated
<b>Power supply</b>	Input: AC 100 to 240 V - 50/60 Hz Output: DC +12 V 1.5 A (sold separately)	Input: AC 100 to 240 V - 50/60 Hz 0.3 A Output: DC +12 V 1.5 A	Input: AC 100 to 240 V - 50/60 Hz 0.3 A Output: DC +12 V 1.5 A
<b>MTBF (hr)</b>	4,134,738	1,241,824	627,152
<b>Heat dispersion (BTU/hr)</b>	52.89	30.7	13.66
<b>Physical Specifications</b>			
<b>Dimensions (WxDxH)(mm/in.)</b>	211 x 223 x 39/8.31 x 8.78 x 1.54	130 x 130 x 54.7/5.12 x 5.12 x 2.17	130 x 130 x 54.5/5.12 x 5.12 x 2.17
<b>Weight (g/lb.)</b>	750/1.653	300/0.67	230/0.51
<b>Included accessories</b>	<ul style="list-style-type: none"> <li>• Wall/ceiling mount plate</li> <li>• Mounting screws</li> </ul>	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Wall/ceiling mount plate</li> </ul>	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Wall/ceiling mount plate</li> </ul>

\*: Supported when working with the NXC2500 and NXC5500.

## Access Point

Model	Standalone/NebulaFlex AP series				Standalone AP Series
	NWA1123-AC HD	NWA1123-AC PRO	NWA1123-ACv2	NWA1302-AC	NWA1100-NH
<b>Product description</b>	802.11ac Wave 2 Dual-Radio wAccess Point	802.11ac Dual-Radio Dual-Mount PoE Access Point	802.11ac Dual-Radio Ceiling Mount PoE Access Point	802.11ac Wall-Plate PoE Access Point	802.11n Long Range PoE Access Point
<b>Basic Design</b>					
<b>Wireless frequency</b>	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz	2.4 GHz
<b>Radio</b>	2	2	2		1
<b>RF Specifications</b>					
<b>Number of antenna</b>	5 embedded	8 embedded dual-optimized antenna	2T2R MIMO	4 embedded smart antenna	2T2R MIMO
<b>Antenna gain</b>	3 dBi @2.4 GHz 3 dBi @5 GHz	Ceiling: 3 dBi @2.4 GHz 4 dBi @5 GHz Wall: 4 dBi @2.4 GHz 5 dBi @5 GHz	3 dBi @2.4 GHz 4 dBi @5 GHz	5 dBi @2.4 GHz 5 dBi @5 GHz	5 dBi
<b>LAN</b>					
<b>Number of 10/100/1000M LAN</b>	2	2	1	4 (One PoE PSE)	1
<b>PoE</b>	Yes	Yes	Yes	Yes	Yes
<b>PoE power draw (watt)</b>	15.5	12.48 (802.3at PoE)*	9	24 (Include 7 W for PoE PSE)	6
<b>WLAN Features</b>					
<b>Wireless speed</b>	1600 Mbps	1750 Mbps	1200 Mbps	1200 Mbps	300 Mbps
<b>Mesh AP**</b>	-	Yes	Yes	-	-
<b>Fast roaming**</b>	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r	-
<b>Wireless Security</b>					
<b>WPA/WPA2-PSK</b>	Yes	Yes	Yes	Yes	Yes
<b>WPA/WPA2-Enterprise</b>	Yes	Yes	Yes	Yes	Yes
<b>WMM</b>	Yes	Yes	Yes	Yes	Yes
<b>EAP types</b>	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	TLS, TTLS, PEAP, FAST, AKA and SIM	PEAP, EAP-TLS, -TTLS, -SIM, -FAST, -AKA, -MD5 and -GTC
<b>IEEE 802.1X</b>	Yes	Yes	Yes	Yes	Yes
<b>Number of SSID</b>	16	16	16	16	8
<b>RADIUS authentication</b>	Yes	Yes	Yes	Yes	Yes
<b>MAC filtering</b>	Yes	Yes	Yes	Yes	Yes
<b>Layer-2 isolation</b>	Yes	Yes	Yes	Yes	Yes
<b>Rogue AP detection</b>	Yes	Yes	-	Yes	-
<b>Rogue AP containment</b>	-	-	-	-	-
<b>Firewall</b>	-	-	-	-	-
<b>Network</b>					
<b>IPv6 host</b>	Yes	Yes	Yes	Yes	Yes
<b>VLANs</b>	Yes	Yes	Yes	Yes	Yes
<b>DHCP client</b>	Yes	Yes	Yes	Yes	Yes
<b>Management</b>					
<b>Standalone</b>	Yes	Yes	Yes	Yes	Yes
<b>Cloud managed</b>	Yes	Yes	Yes	Yes	-
<b>Web UI/CLI</b>	Yes	Yes	Yes	Yes	Yes
<b>SNMP</b>	Yes	Yes	Yes	Yes	Yes
<b>Others</b>					
<b>Chassis rating</b>	Plenum-rated	Plenum-rated	Plenum-rated	-	-
<b>Power supply</b>	Input: AC 100 to 240 V - 50/60 Hz Output: DC +12 V 2 A	802.3at PoE only (No DC jack)	Input: AC 100 to 240 V - 50/60 Hz 0.3 A Output: DC +12 V 1 A	802.3at PoE only (No DC jack)	Input: AC 100 to 240 V - 50/60 Hz 0.3 A Output: DC +12 V 1 A
<b>MTBF (hr)</b>	1,306,790	1,005,235	1,241,824	809,263	1,018,460
<b>Heat dispersion (BTU/hr)</b>	52.89	42.7	30.7	81.9	23.9
<b>Physical Specifications</b>					
<b>Dimensions (WxDxH) (mm/in.)</b>	211 x 223 x 39/ 8.31 x 8.78 x 1.54	203.9 x 191.7 x 34.7/ 8.03 x 7.55 x 1.37	130 x 130 x 54.7/ 5.12 x 5.12 x 2.17	90 x 170 x 29/ 3.54 x 6.69 x 1.14	153 x 110 x 38/ 6.02 x 4.33 x 1.5
<b>Weight (g/lb.)</b>	750/1.653	445/0.98	300/0.57	320/0.71	240/0.529
<b>Included accessories</b>	<ul style="list-style-type: none"> <li>Wall/ceiling mount plate</li> <li>12 V 2 A adapter (optional)</li> <li>Mounting screws</li> </ul>	<ul style="list-style-type: none"> <li>PoE injector (optional)</li> <li>Ethernet 45 cable (optional)</li> <li>Wall/ceiling mount plate</li> </ul>	<ul style="list-style-type: none"> <li>Power adapter</li> <li>Wall/ceiling mount plate</li> </ul>	<ul style="list-style-type: none"> <li>Bracket</li> <li>Multi-purpose mounting bracket with screws</li> </ul>	<ul style="list-style-type: none"> <li>Power adapter</li> <li>Mounting screws</li> </ul>

\*: 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.

\*\* : Features supported when working with Nebula.

# Nebula Cloud Managed Access Points

## Feature Matrix

Model	Nebula Cloud Managed Access Points			
	NAP102	NAP203	NAP303	NAP353
<b>Product description</b>	802.11ac Dual-Radio Nebula Cloud Managed Access Point	802.11ac Dual-Radio, Dual-Optimized Antenna 3x3 Nebula Cloud Managed Access Point	802.11ac Dual-Radio Smart Antenna 3x3 Nebula Cloud Managed Access Point	802.11ac Dual-Radio External Antenna 3x3 Outdoor Nebula Cloud Managed Access Point
<b>Basic Design</b>				
<b>Wireless frequency</b>	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz	2.4 and 5 GHz
<b>Radio</b>	2	2	2	2
<b>RF Specifications</b>				
<b>Number of antenna</b>	4 embedded	8 internal dual-optimized antenna	6 embedded smart antenna	6 N-type connectors*
<b>Antenna gain</b>	3 dBi @2.4 GHz 4 dBi @5 GHz	Ceiling: 2.4 GHz 3 dBi; 5 GHz 4 dBi Wall: 2.4 GHz 4 dBi; 5 GHz 5 dBi	4 dBi @2.4 GHz 6 dBi @5 GHz	-
<b>LAN</b>				
<b>Number of 10/100/1000M LAN</b>	1	2	2	1
<b>PoE</b>	Yes	Yes	Yes	Yes
<b>PoE Power draw (watt)</b>	9	12.48 (802.3at PoE)**	17.04	25
<b>WLAN Features</b>				
<b>Wireless speed</b>	1200 Mbps	1750 Mbps	1750 Mbps	1750 Mbps
<b>Mesh AP</b>	Yes	Yes	Yes	Yes
<b>Fast roaming</b>	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v	Pre-authentication, PMK caching and 802.11r/k/v
<b>Wireless Security</b>				
<b>WEP</b>	Yes	Yes	Yes	Yes
<b>WPA/WPA2-PSK</b>	Yes	Yes	Yes	Yes
<b>WPA/WPA2-Enterprise</b>	Yes	Yes	Yes	Yes
<b>WLAN access control list</b>	Yes	Yes	Yes	Yes
<b>EAP types</b>	TLS, TTLS, PEAP, FAST, AKA and SIM	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	EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, EAP-AKA and EAP-SIM
<b>IEEE 802.1X</b>	Yes	Yes	Yes	Yes
<b>Number of SSID</b>	8 (per radio)	8 (per radio)	8 (per radio)	8 (per radio)
<b>MAC filtering</b>	Yes	Yes	Yes	Yes
<b>Layer-2 isolation</b>	Yes	Yes	Yes	Yes
<b>RADIUS authentication</b>	Yes	Yes	Yes	Yes
<b>Captive portal</b>	Yes	Yes	Yes	Yes
<b>Network</b>				
<b>VLANs</b>	Yes	Yes	Yes	Yes
<b>DHCP client</b>	Yes	Yes	Yes	Yes
<b>QoS (PG)</b>				
<b>WMM</b>	Yes	Yes	Yes	Yes
<b>WMM power save</b>	Yes	Yes	Yes	Yes
<b>DiffServ marking</b>	Yes	Yes	Yes	Yes
<b>Management</b>				
<b>Cloud managed</b>	Yes	Yes	Yes	Yes
<b>ZON utility</b>	Support	Support	Support	Support
<b>Smart connect</b>	Neighbor device discovery	Neighbor device discovery	Neighbor device discovery	Neighbor device discovery
<b>Others</b>				
<b>Chassis rating</b>	Plenum-rated	Plenum-rated	Plenum-rated	IP66 (Embedded heater for harsh weather)
<b>Power supply</b>	DC input: 12 V DC 1 A; PoE: 802.3at compliant	PoE: 802.3at compliant	DC input: 12 V DC 2 A; PoE: 802.3at compliant	PoE: 802.3at compliant
<b>MTBF (hr)</b>	1,241,824	1,005,235	1,202,489	562,413
<b>Physical Specifications</b>				
<b>Item dimensions (WxDxH)(mm/in.)</b>	130 x 130 x 54.7/ 5.12 x 5.12 x 2.17	203.9 x 191.7 x 34.7/ 8.03 x 7.55 x 1.37	236 x 227 x 62/ 9.28 x 8.95 x 2.43	255 x 256 x 62/ 10.04 x 10.08 x 2.44
<b>Item weight (g/lb.)</b>	300/0.67	445/0.98	982/2.17	1,708/3.77
<b>Included accessories</b>	• Power adapter • Wall/Ceiling-mount plate	• Wall/Ceiling-mount plate	• Ceiling mount plate • Mounting screws	• Pole/wall mounting kits • PoE injector • Power cord





\* The antenna is not embedded and external antennas are separately sold.

\*\* 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.





# Antenna Series




## For Indoor and Outdoor

Model	EXT-108	EXT-109	EXT-118
Product photo			
Space	Outdoor	Outdoor	Outdoor
Type	Omni, 1 port	Directional, 1 port	Directional, 1 port
Frequency band (MHz)	2400 - 2500	2400 - 2500	2400 - 2500
Gain	8 dBi	8.5 dBi	18 dBi
VSWR	2.0:1 Max.	1.5:1 Max.	1.5:1 Max.
Polarization	Linear, vertical	Linear, vertical	Linear, vertical
HPBW/ Horizontal	● 360°	▼ 65°	↓ 15°
HPBW/ Vertical	◀ 15°	▶ 60°	—  15°
Connector	N type jack	N type jack	N type jack
Temperature	-40°C to 80°C/-40°F to 176°F	-40°C to 80°C/-40°F to 176°F	-40°C to 80°C/-40°F to 176°F
Weight (g/lb.)	340/0.75	107/0.24	1600/3.53
Dimensions (mm/in.)	80 x 78 x 520/ 3.15 x 3.07 x 20.47	114 x 114 x 40/ 4.49 x 4.49 x 1.57	360 x 360 x 16/ 14.17 x 14.17 x 0.63
Accessory kit	<ul style="list-style-type: none"> <li>• Screw kit</li> <li>• N-plug adapter</li> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Cable: N-plug, RP-SMA plug; 3 m</li> <li>• Mounting plate</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Cable: N-plug, RP-SMA plug; 3 m</li> <li>• Mounting set</li> <li>• Quick installation guide</li> </ul>



Model	ANT2206		ANT2105		ANT3108	ANT3218
Product photo						
Space	Indoor		Outdoor		Outdoor	Outdoor
Type	Directional, 1 port		Omni, 1 port		Omni, 1 port	Directional, 1 port
Frequency band (MHz)	2400 - 2500	4900 - 5875	2400 - 2483	5150 - 5875	5150 - 5875	5150 - 5875
Gain	6 dBi	8 dBi	4.5 dBi	7 dBi	8 dBi	18 dBi
VSWR	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical
HPBW/ Horizontal	▼ 65°	▼ 50°	● 360°	● 360°	● 360°	↓ 15.5°
HPBW/ Vertical	▶ 75°	▶ 50°	▶ 30°	—  15°	▶ 20°	—  15.5°
Connector	RP-SMA plug		N type plug		N type jack	N type jack
Temperature	-10°C to 55°C/14°F to 131°F		-10°C to 70°C/14°F to 158°F		-40°C to 80°C/-40°F to 176°F	-40°C to 80°C/-40°F to 176°F
Weight (g/lb.)	110/0.24		70/0.15		206/0.46	700/1.54
Dimensions (mm/in.)	76 x 86 x 118/ 2.99 x 3.39 x 4.65		ø22 x 183		ø20 x 260	210 x 210 x 73/ 8.27 x 8.27 x 2.87
Accessory kit	<ul style="list-style-type: none"> <li>• Screw kit</li> <li>• Quick installation guide</li> </ul>		-		<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>




Model	ANT1310	ANT1313	ANT1314	ANT1315
<b>Product photo</b>				
<b>Space</b>	Indoor	Outdoor	Outdoor	Outdoor
<b>Type</b>	Directional, 2x2	Directional, 2x2	Sector, 2x2	Directional, 3x3
<b>Frequency band (MHz)</b>	2300 - 2700	2400 - 2500	2400 - 2500	2400 - 2500
<b>Gain</b>	9 - 10 dBi	13 - 13.5 dBi	14±0.5 dBi	14.5 - 15 dBi
<b>VSWR</b>	1.5:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
<b>Polarization</b>	Linear/Horizontal	Cross polarization ±45°	Linear, ±45°	Linear, cross polarization
<b>HPBW/ Horizontal</b>	▼ 51°	▼ 33°	▼ 60°	▼ 39° - 48°
<b>HPBW/ Vertical</b>	▶ 66°	▶ 35°	▶ 13°	▶ 19° - 20°
<b>Side lobes level</b>	-14 dB Max.	-13 dB Max.	-	-10 dB Max.
<b>Front to back ratio</b>	-13 dB Max.	-25 dB Max.	-25 dB Max.	-19 dB Max.
<b>Connector</b>	SMA jack x 2	N type jack x 2	N type jack x 2	N type jack x 3
<b>Temperature</b>	-10°C to 55°C/14°F to 131°F	-40°C to 80°C/-40°F to 176°F	-40°C to 80°C/-40°F to 176°F	-40°C to 80°C/-40°F to 176°F
<b>Weight (g/lb.)</b>	130/0.29	800/1.76	800/1.76	1140/2.51
<b>Dimensions (mm/in.)</b>	ø133 x 42/ ø5.24 x 1.65	210 x 210 x 73/ 8.27 x 8.27 x 2.87	560 x 120 x 145/ 22.04 x 4.72 x 5.71	320 x 320 x 43/ 12.60 x 12.60 x 1.69
<b>Accessory kit</b>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>

Model	ANT3315	ANT3316	ANT3320
<b>Product photo</b>			
<b>Space</b>	Outdoor	Outdoor	Outdoor
<b>Space</b>	Sector, 2x2	Directional, 2x2	Directional, 3x3
<b>Frequency band (MHz)</b>	5150 - 5875	5150 - 5875	5150 - 5875
<b>Gain</b>	15±0.5 dBi	15 - 16 dBi	20±1 dBi
<b>VSWR</b>	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
<b>Polarization</b>	Linear, ±45°	Linear, ±90°	Linear, cross polarization
<b>HPBW/ Horizontal</b>	▼ 60°	▼ 19°	▼ 17°
<b>HPBW/ Vertical</b>	▶ 8°	▶ 21°	▶ 8°
<b>Side lobes level</b>	-5 dB Max.	-	-10 dB Max.
<b>Front to back ratio</b>	-30 dB Max.	-20 dB Max.	-35 dB Max.
<b>Connector</b>	N type jack x 2	N type jack x 2	N type jack x 3
<b>Temperature</b>	-40°C to 80°C/ -40°F to 176°F	-40°C to 80°C/ -40°F to 176°F	-40°C to 80°C/ -40°F to 176°F
<b>Weight (g/lb.)</b>	1400/3.09	800/1.76	2500/5.51
<b>Dimensions (mm/in.)</b>	560 x 120 x 145/ 22.04 x 4.72 x 5.71	210 x 210 x 73/ 8.27 x 8.27 x 2.87	371 x 371 x 165/ 14.61 x 14.61 x 6.50
<b>Accessory kit</b>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting kit</li> <li>• Quick installation guide</li> </ul>

# Cable Series

Product	LMR 200-N	LMR 400-N	EXT-300
Product Photo			
Description	RP-SMA plug to N-plug Cable length: 3 m, 9 m	N-plug to N-plug Cable length: 1 m, 9 m	RP-SMA plug, N-jack (Jumper Cable)/N-plug, N-jack (Surge Arrestor): 0.5 m

# Enclosure

Product	Weather-Proof Enclosure
Product Photo	
Description	<ul style="list-style-type: none"> <li>• Operating temperature range from 50°C to -20°C</li> <li>• IPX5 rating</li> <li>• Wall/Pole mounting (pole mount kit is sold separately)</li> </ul>
Compatible models	<ul style="list-style-type: none"> <li>• NWA1123-ACv2</li> <li>• NWA1123-AC PRO</li> <li>• NWA5121-N</li> <li>• NWA5121-NI</li> <li>• NWA5123-AC</li> <li>• NAP102</li> <li>• NAP203</li> <li>• WAC6103D-I</li> </ul>



# ZYXEL

Your Networking Ally

## Corporate Headquarters

### Zyxel Communications Corp.

Tel: +886-3-578-3942  
Fax: +886-3-578-2439  
Email: sales@zyxel.com.tw  
http://www.zyxel.com

## Europe

### Zyxel Belarus

Tel: +375 17 334 6099  
Fax: +375 17 334 5899  
Email: sales@zyxel.by  
http://www.zyxel.by

### Zyxel Norway

Tel: +47 22 80 61 80  
Fax: +47 22 80 61 81  
Email: salg@zyxel.no  
http://www.zyxel.no

### Zyxel BeNeLux

Tel: +31 23 555 3689  
Fax: +31 23 557 8492  
Email: sales@zyxel.nl  
http://www.zyxel.nl  
http://www.zyxel.be

### Zyxel Poland

Tel: +48 223 338 250  
Hotline: +48 226 521 626  
Fax: +48 223 338 251  
Email: info@pl.zyxel.com  
http://www.zyxel.pl

### Zyxel Bulgaria

(Bulgaria, Macedonia,  
Albania, Kosovo)  
Tel: +3592 4443343  
Email: info@cz.zyxel.com  
http://www.zyxel.bg

### Zyxel Romania

Tel: +40 31 0809 888  
Fax: +40 31 0809 890  
Email: info@cz.zyxel.com  
http://www.zyxel.ro

### Zyxel Czech Republic

Tel: +420 241 091 350  
Hotline: +420 241 774 665  
Fax: +420 241 091 359  
Email: sales@cz.zyxel.com  
http://www.zyxel.cz

### Zyxel Russia

Tel: +7 (495) 539-9935  
Fax: +7 (495) 542-8925  
Email: info@zyxel.ru  
http://www.zyxel.ru

### Zyxel Denmark A/S

Tel: +45 39 55 07 00  
Fax: +45 39 55 07 07  
Email: sales@zyxel.dk  
http://www.zyxel.dk

### Zyxel Slovakia

Tel: +421 220 861 847  
Hotline: +421 220 861 848  
Fax: +421 243 193 990  
Email: info@cz.zyxel.com  
http://www.zyxel.sk

### Zyxel Finland

Tel: +358 9 4780 8400  
Email: myynti@zyxel.fi  
http://www.zyxel.fi

### Zyxel Sweden A/S

Tel: +46 8 55 77 60 60  
Fax: +46 8 55 77 60 61  
Email: sales@zyxel.se  
http://www.zyxel.se

### Zyxel France

Tel: +33 (0)4 72 52 97 97  
Fax: +33 (0)4 72 52 19 20  
Email: info@zyxel.fr  
http://www.zyxel.fr

### Zyxel Switzerland

Tel: +41 (0)44 806 51 00  
Fax: +41 (0)44 806 52 00  
Email: info@zyxel.ch  
http://www.zyxel.ch

### Zyxel Germany GmbH

Tel: +49 (0) 2405-6909 0  
Fax: +49 (0) 2405-6909 99  
Email: sales@zyxel.de  
http://www.zyxel.de

### Zyxel Turkey A.S.

Tel: +90 212 314 18 00  
Fax: +90 212 220 25 26  
Email: bilgi@zyxel.com.tr  
http://www.zyxel.com.tr

### Zyxel Hungary & SEE

Tel: +36 1 848 0690  
Email: info@zyxel.hu  
http://www.zyxel.hu

### Zyxel UK Ltd.

Tel: +44 (0) 118 9121 700  
Fax: +44 (0) 118 9797 277  
Email: sales@zyxel.co.uk  
http://www.zyxel.co.uk

### Zyxel Iberia

Tel: +34 911 792 100  
Email: ventas@zyxel.es  
http://www.zyxel.es

### Zyxel Ukraine

Tel: +380 (50) 440 88 61  
Email: evelichko@zyxel.eu  
http://www.zyxel.ua

### Zyxel Italy

Tel: +39 011 2308000  
Email: info@zyxel.it  
http://www.zyxel.it

## Asia

### Zyxel China (Shanghai) China Headquarters

Tel: +86-021-61199055  
Fax: +86-021-52069033  
Email: sales@zyxel.cn  
http://www.zyxel.cn

### Zyxel China (Beijing)

Tel: +86-010-62602249  
Email: sales@zyxel.cn  
http://www.zyxel.cn

### Zyxel China (Tianjin)

Tel: +86-022-87890440  
Fax: +86-022-87892304  
Email: sales@zyxel.cn  
http://www.zyxel.cn

### Zyxel India

Tel: +91-11-4760-8800  
Fax: +91-11-4052-3393  
Email: info@zyxel.in  
http://www.zyxel.in

### Zyxel Kazakhstan

Tel: +7-727-2590-699  
Fax: +7-727-2590-689  
Email: info@zyxel.kz  
http://www.zyxel.kz

### Zyxel Korea Corp.

Tel: +82-2-890-5535  
Fax: +82-2-890-5537  
Email: sales@zyxel.kr  
http://www.zyxel.kr

### Zyxel Malaysia

Tel: +603 2282 1111  
Fax: +603 2287 2611  
Email: sales@zyxel.com.my  
http://www.zyxel.com.my

### Zyxel Middle East FZE

Tel: +971 4 372 4483  
Cell: +971 562146416  
Email: sales@zyxel-me.com  
http://www.zyxel-me.com

### Zyxel Philippine

Email: sales@zyxel.com.ph  
http://www.zyxel.com.ph

### Zyxel Singapore

Tel: +65 6339 3218  
Hotline: +65 6339 1663  
Fax: +65 6339 3318  
Email: sales@zyxel.com.sg  
http://www.zyxel.com.sg

### Zyxel Taiwan (Taipei)

Tel: +886-2-2739-9889  
Fax: +886-2-2735-3220  
Email: sales\_tw@zyxel.com.tw  
http://www.zyxel.com.tw

### Zyxel Thailand

Tel: +66-(0)-2831-5315  
Fax: +66-(0)-2831-5395  
Email: info@zyxel.co.th  
http://www.zyxel.co.th

### Zyxel Vietnam

Tel: (+848) 35202910  
Fax: (+848) 35202800  
Email: sales\_vn@zyxel.com.tw  
http://www.zyxel.com/vn/vi/

## The Americas

### Zyxel USA

North America Headquarters  
Tel: +1-714-632-0882  
Fax: +1-714-632-0858  
Email: sales@zyxel.com  
http://us.zyxel.com

### Zyxel Brazil

Tel: +55 (11) 3373-7470  
Fax: +55 (11) 3373-7510  
Email: comercial@zyxel.com.br  
http://www.zyxel.com/br/pt/

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

Copyright © 2019 Zyxel Communications Corp. All rights reserved. Zyxel, Zyxel logo are registered trademarks of Zyxel Communications Corp. All other brands, product names, or trademarks mentioned are the property of their respective owners. All specifications are subject to change without notice.

