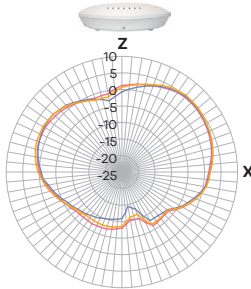
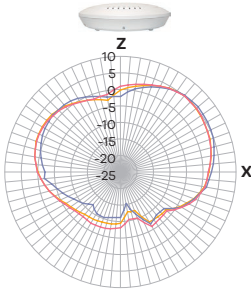
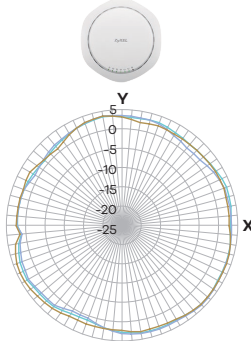
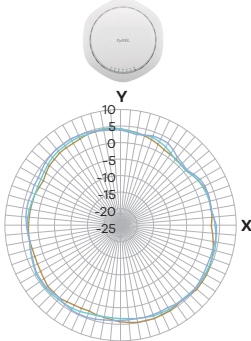
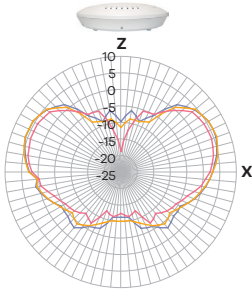
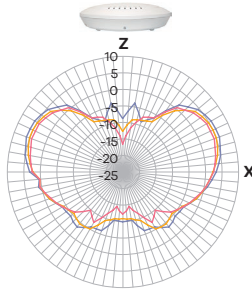
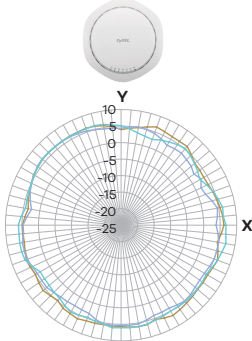
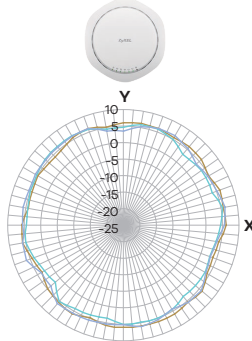


Antenna Specification Matrix

Zyxel dedicates itself to antenna design optimization for deliver fast and reliable WiFi service. As antennas are the major component of Wireless LAN access points, it's imperative to pay attention to patterns optimal for different deployment scenarios. Most Zyxel Wireless LAN APs are designed for ceiling-mount typically at heights of 3 to 5 meters; if this is not allowed due to environment

restrictions, wall-mount installation is recommended for better performance. Please refer to the tables below for patterns of internal and bundled detachable antennas of Zyxel access points as a tool for planning the best wireless LAN deployments – especially when you have to cope with strong interference or deploy in high-density venues.

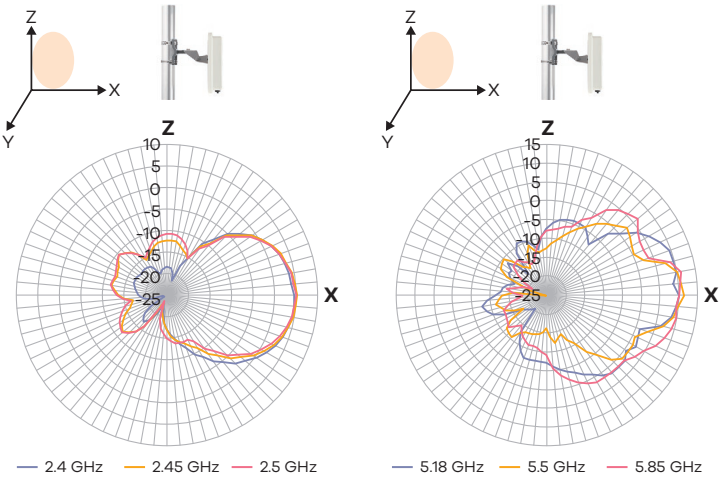
Model	WAC6502D-S		WAC6503D-S/NAP303	
Product photo				
Space	Embedded	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	5150 - 5825	2400 - 2500	5150 - 5825
Gain	4 dBi	6 dBi	4 dBi	6 dBi
VSWR	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Vertical	Vertical	Vertical	Vertical
XZ-Plane E-Plane (Side view)				
	Smart Antenna — 2.4 GHz — 2.45 GHz — 2.5 GHz		Smart Antenna — 2.4 GHz — 2.45 GHz — 2.5 GHz	
XY-Plane H-Plane (Top view)				
	Smart Antenna — 2.4 GHz — 2.45 GHz — 2.5 GHz		Smart Antenna — 2.4 GHz — 2.45 GHz — 2.5 GHz	
				
	Smart Antenna — 5.15 GHz — 5.45 GHz — 5.875 GHz		Smart Antenna — 5.15 GHz — 5.45 GHz — 5.875 GHz	
				
	Smart Antenna — 5.15 GHz — 5.45 GHz — 5.875 GHz		Smart Antenna — 5.15 GHz — 5.45 GHz — 5.875 GHz	

Product photo

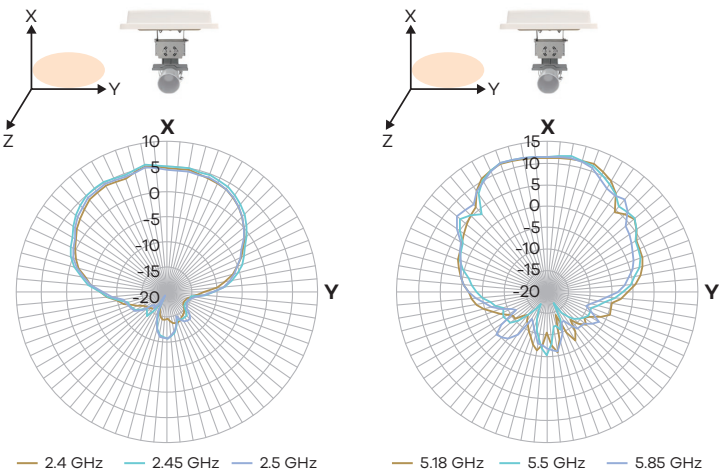


Space	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	5150 - 5825
Gain	5 dBi	10 dBi
VSWR	2.0:1 Max.	2.0:1 Max.
Polarization	Vertical	Vertical

XZ-Plane
E-Plane
(Side view)



XY-Plane
H-Plane
(Top view)

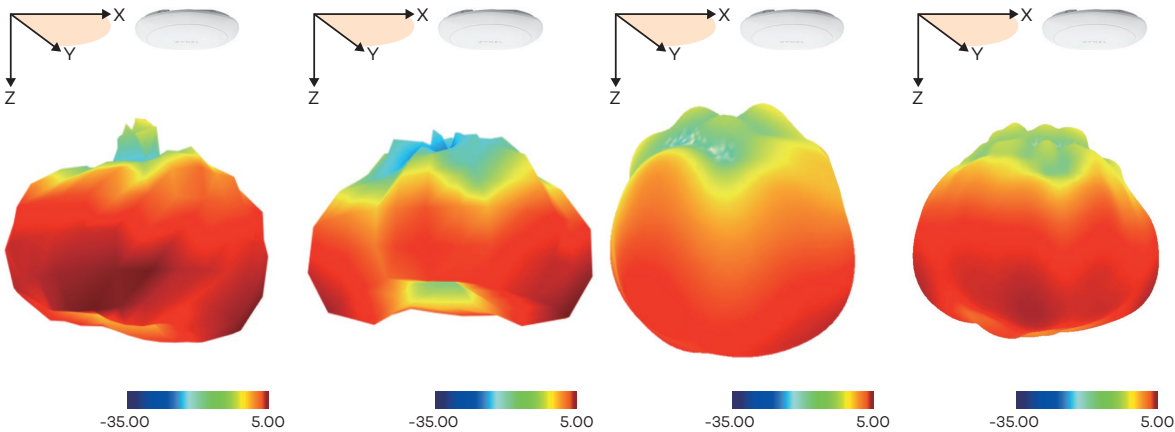


Product photo

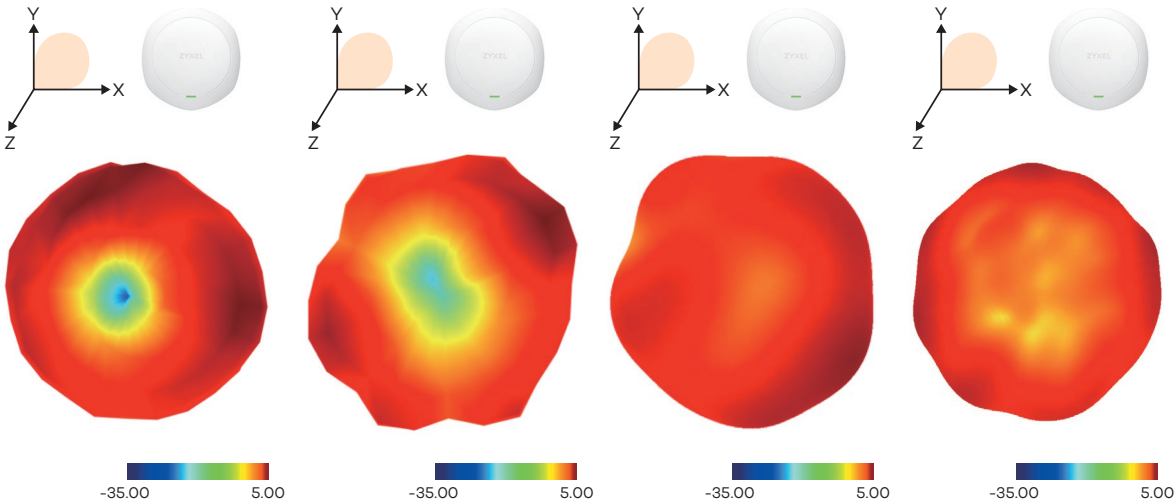


Space	Embedded	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	5150 - 5825	2400 - 2500	5150 - 5825
Gain	3 dBi	4 dBi	3 dBi	3 dBi
VSWR	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Vertical	Vertical	Vertical	Vertical

XZ-Plane
E-Plane
(Side view)



XY-Plane
H-Plane
(Top view)

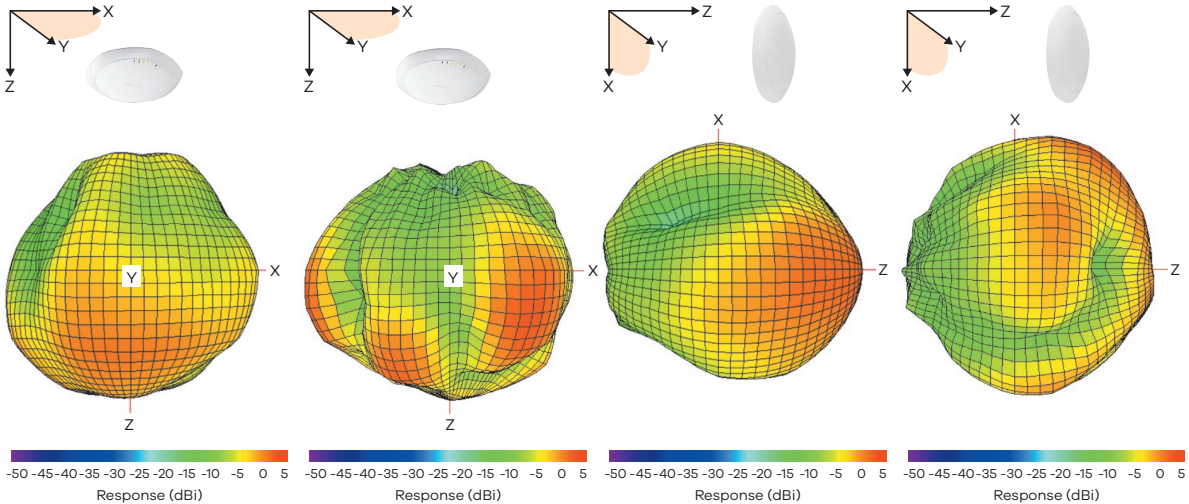


Product photo

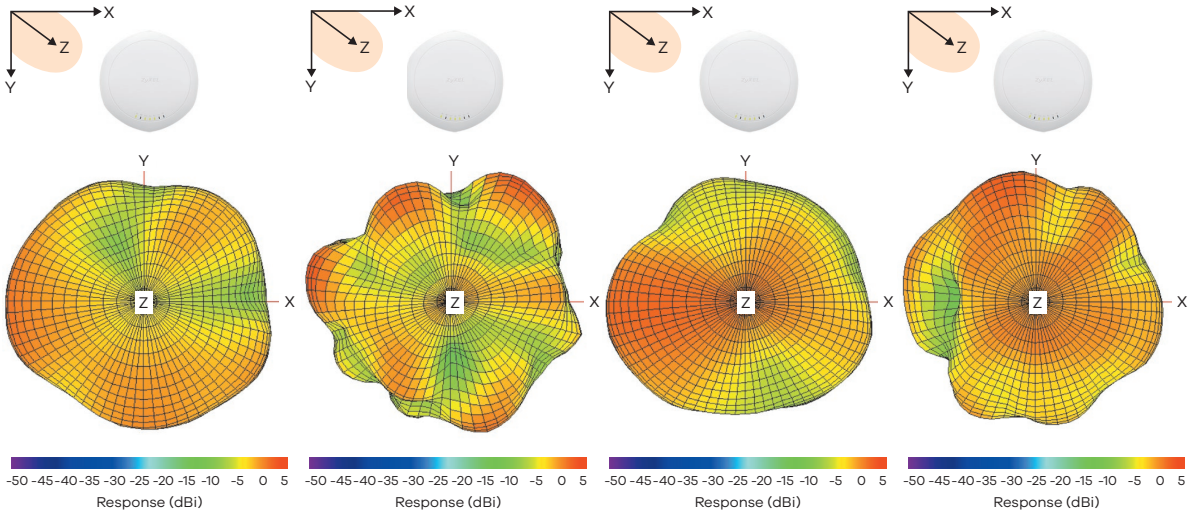


Space	Embedded	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	5150 - 5825	2400 - 2500	5150 - 5825
Mounting option	Ceiling-mount	Ceiling-mount	Wall-mount	Wall-mount
Gain	3 dBi	4 dBi	4 dBi	5 dBi
VSWR	3.5:1 Max.	2.9:1 Max.	2.3:1 Max.	2.9:1 Max.
Polarization	Vertical	Vertical	Vertical	Vertical

XZ-Plane
E-Plane
(Side view)



XY-Plane
H-Plane
(Top view)



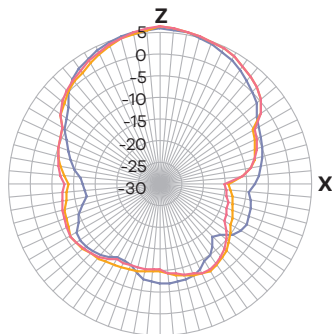
Model	NWA5121-NI	NWA5123-AC/NAP102/NWA1123-ACv2	
-------	------------	--------------------------------	--

Product photo



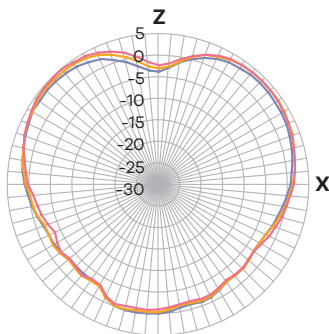
Space	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	2400 - 2500	5150 - 5825
Gain	7 dBi	3 dBi	4 dBi
VSWR	1.92:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Linear, vertical	Linear, vertical	Linear, vertical

XZ-Plane
E-Plane
(Side view)



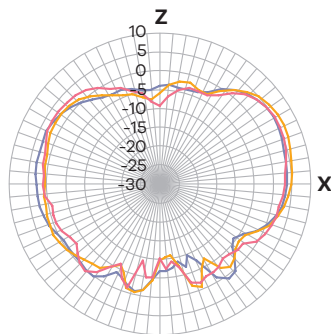
Dipole

- 2.4 GHz
- 2.45 GHz
- 2.5 GHz



Folded Monopole Directional

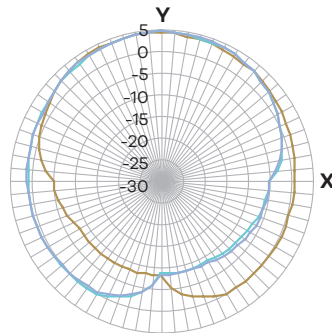
- 2.4 GHz
- 2.45 GHz
- 2.5 GHz



Folded Monopole Directional

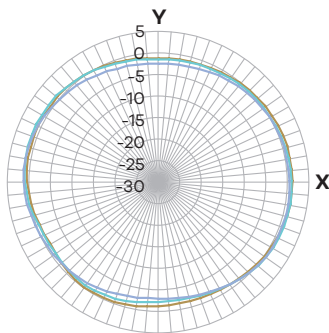
- 5.15 GHz
- 5.45 GHz
- 5.875 GHz

XY-Plane
H-Plane
(Top view)



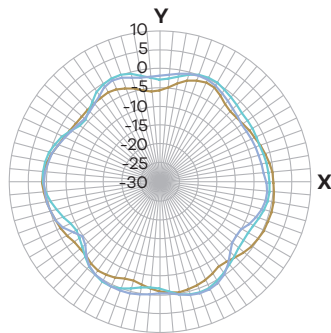
Dipole

- 2.4 GHz
- 2.45 GHz
- 2.5 GHz



Folded Monopole Directional

- 2.4 GHz
- 2.45 GHz
- 2.5 GHz



Folded Monopole Directional

- 5.15 GHz
- 5.45 GHz
- 5.875 GHz

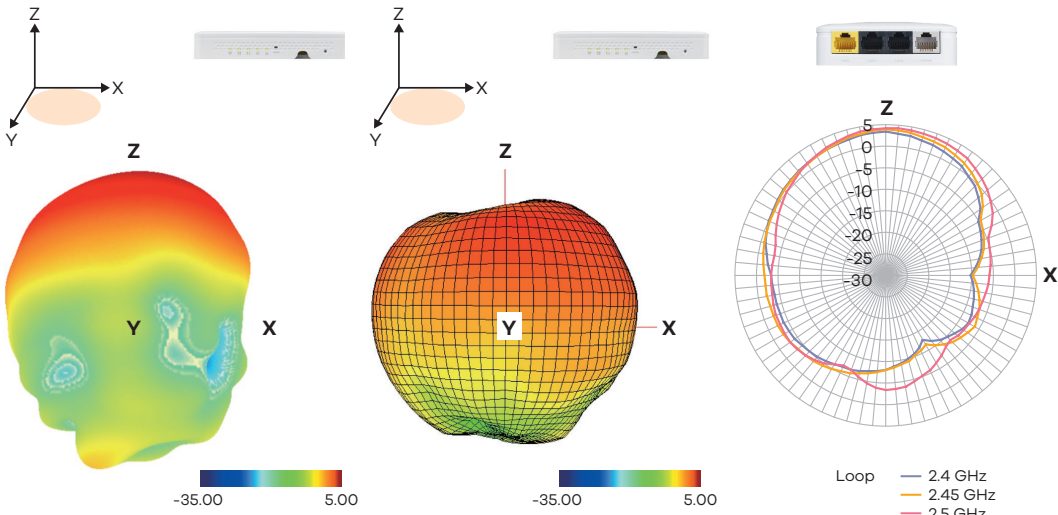
Model	WAC5302D-S/NWA1302-AC		NWA5301-NJ
-------	-----------------------	--	------------

Product photo

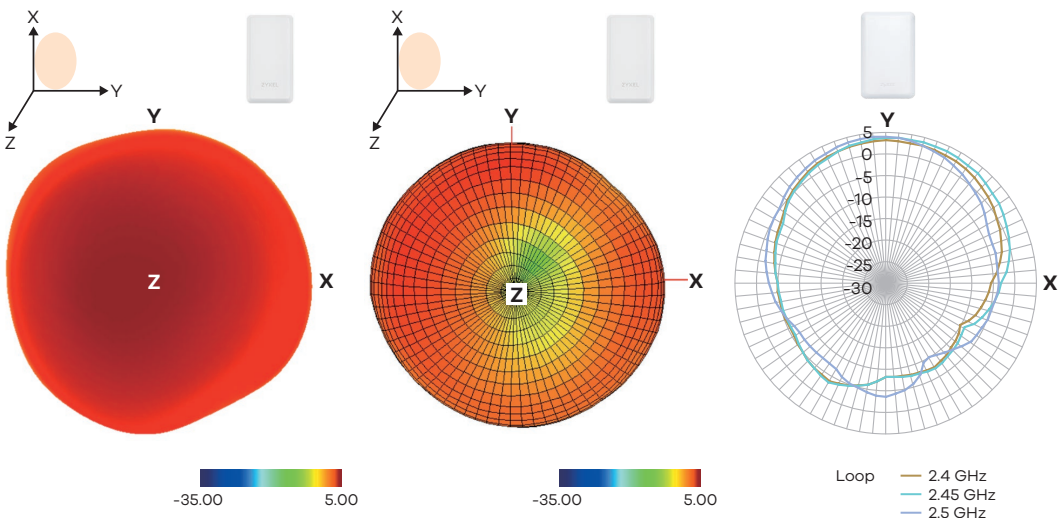


Space	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	5150 - 5825	2400 - 2500
Gain	5 dBi	5 dBi	5 dBi
VSWR	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Vertical, horizontal	Horizontal	Linear

XZ-Plane
E-Plane
(Side view)



XY-Plane
H-Plane
(Top view)

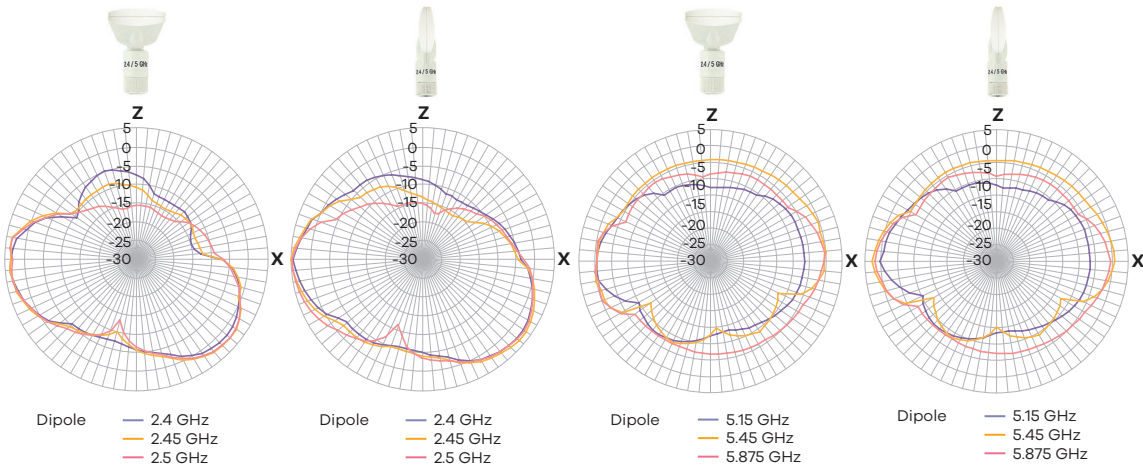


Product photo

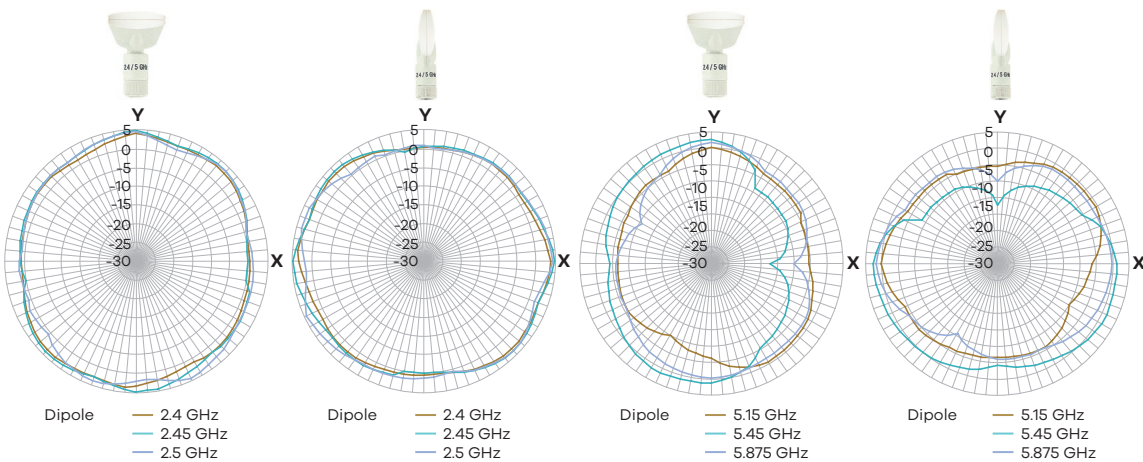


Space	External antenna	
Frequency band (MHz)	2400 - 2500	5150 - 5850
Gain	5 dBi	7 dBi
VSWR	2.0:1 Max.	2.6:1 Max.
Polarization	Linear	Linear

XZ-Plane
E-Plane
(Side view)



XY-Plane
H-Plane
(Top view)



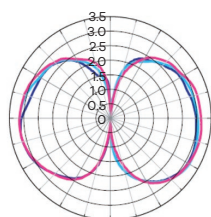
HPBW/Horizontal	360°	360°
HPBW/Vertical	120°	60°
Front to back ratio	9.28 dBi	1.81 dBi
Impedance	50 Ω	50 Ω
Connector	RP-SMA plug	RP-SMA plug
Survival wind speed	-	-
Temperature	-10°C to 80°C/14°F to 176°F	-10°C to 80°C/14°F to 176°F
Humidity	10% to 95%	10% to 95%
Radome color	White	White
Radome material	RO Bard	RO Bard
Dimensions (WxDxH) (mm/in.)	234 x 22.2 x 13.2/9.21 x 0.87 x 0.52	234 x 22.2 x 13.2/9.21 x 0.87 x 0.52
Weight (g/lb.)	27/0.06	27/0.06

Model	NWA5121-N
Product photo	



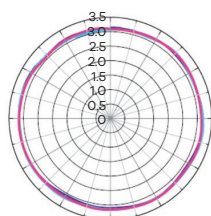
Space	External antenna
Frequency band (MHz)	2400 - 2500
Gain	3.0 dBi
VSWR	2.0:1 Max.
Polarization	Linear, vertical

**XZ-Plane
E-Plane
(Side view)**



— 2.4 GHz — 2.45 GHz — 2.5 GHz

**XY-Plane
H-Plane
(Top view)**



— 2.4 GHz — 2.45 GHz — 2.5 GHz

HPBW/Horizontal	● 360°
HPBW/Vertical	► 80°
Front to back ratio	-
Impedance	50 Ω
Connector	RP-SMA plug
Survival wind speed	-
Temperature	-20°C to 65°C/-4°F to 149°F
Humidity	95% @ 40°C (104°F)
Radome color	White
Radome material	TPEE/PC/PBT
Dimensions (WxDxH)(mm/in.)	137 x 12.5 x 12.5/5.40 x 0.49 x 0.49
Weight (g/lb.)	13/0.03

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

Copyright © 2018 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.

