




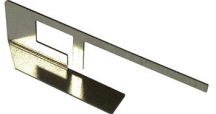


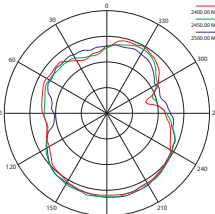
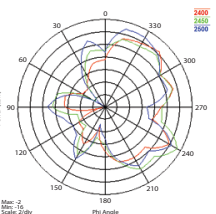
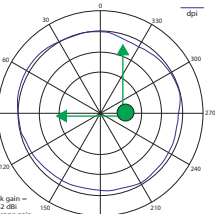
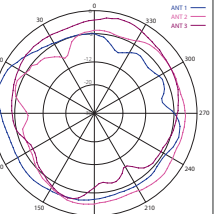
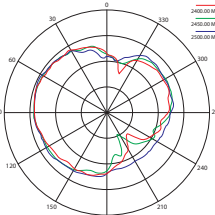
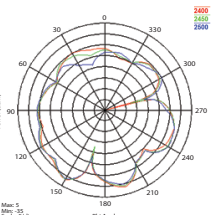
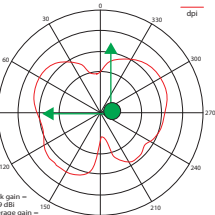
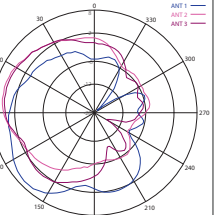
Technical Document



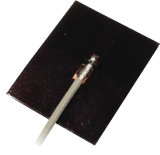
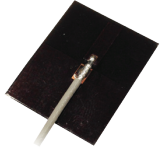
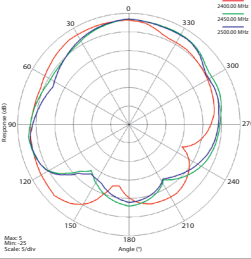
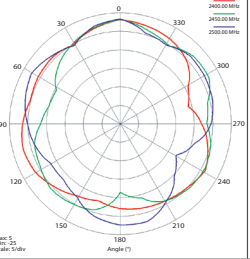
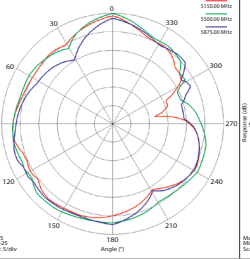
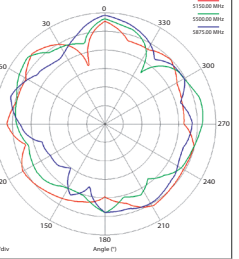
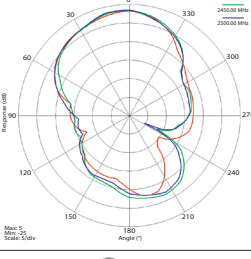
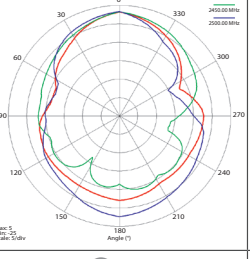
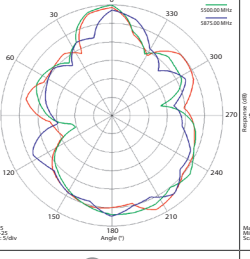
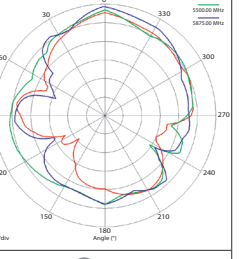
Antenna Specification Matrix




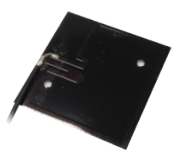

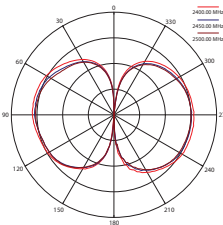
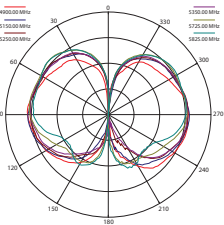
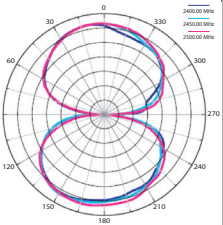
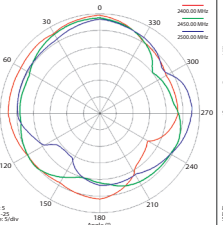
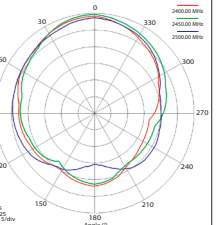
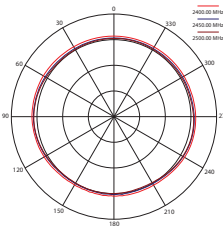
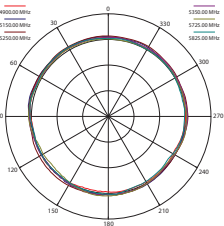
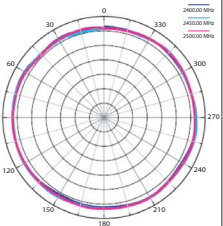
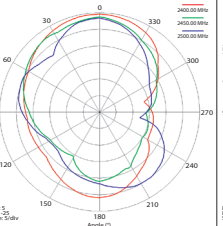
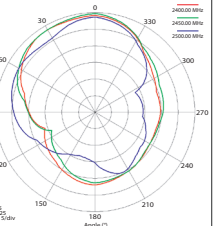
For internal and detachable antennas provided with ZyXEL access points

Antenna Intro

ZyXEL offers a wide range of antennas to support different deployment scenarios. Its diverse models of 2.4 GHz or 5 GHz, internal and external antennas fulfill needs of all environments with high performance and superior coverage. As a major component of Wireless LAN AP, different types of antennas from ZyXEL offer their respective advantages and signal levels. To optimize the overall performance of a ZyXEL wireless LAN, it is important to understand the appropriate antenna selection and placement technique for the maximum radio coverage. This antenna matrix has been designed to help customers to learn more about the access point purchased as well as in-depth information about the internal and detachable antennas provided with ZyXEL access points.

Model	NWA1121-NI NWA5121-NI	NWA1123-NI NWA5123-NI	NWA1300-NJ	NWA5160-N
Product photo				
Space	Embedded	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	2400 - 2500	2400 - 2500	2400 - 2500/5150 - 5900
Gain	4.4 dBi	2.0 dBi	2.0 dBi	6.0 dBi @2440 MHz/ 5.1 dBi @5200 MHz/ 8.0 dBi @5800 MHz
VSWR	1.92:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Linear, vertical	Linear, vertical	Linear	Linear
Radiation pattern: H-plane				
Radiation pattern: V-plane				
HPBW/Horizontal	-	-	-	-
HPBW/Vertical	-	-	-	-
Front to back ratio	-	-	-	-
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Connector	IPEX	IPEX	IPEX	IPEX
Survival wind speed	-	-	-	-
Temperature	-10°C to 60°C/ 14°F to 140°F	-20°C to 55°C/ -4°F to 131°F	-20°C to 55°C/ -4°F to 131°F	-40°C to 85°C/ -40°F to 185°F
Humidity	-	95% at 40°C/104°F	95% at 40°C/104°F	30% to 70%
Radome color	-	-	-	-
Radome material	-	-	-	-
Dimensions (WxDxH)(mm/in.)	38.4 x 10.4 x 0.6/ 1.512 x 0.409 x 0.0197	35.5 x 10 x 4.7/ 1.40 x 0.39 x 0.19	19 x 6 x 0.6/ 0.75 x 0.24 x 0.023	5.2 x 2.0 x 1.1/ 0.205 x 0.079 x 0.043
Weight (g/lb.)	0.78/0.002	1.5/0.003	0.8/0.002	19/0.042

Model	NWA1123-AC			
Product photo				
Space	Embedded	Embedded	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	2400 - 2500	5150 - 5875	5150 - 5875
Gain	≤3.5 dBi	≤3.5 dBi	≤5 dBi	≤5 dBi
VSWR	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.	2.0:1 Max.
Polarization	Linear	Linear	Linear	Linear
Radiation pattern: H-plane				
Radiation pattern: V-plane				
HPBW/Horizontal	360°	360°	360°	360°
HPBW/Vertical	60°	60°	60°	60°
Front to back ratio	6 dBi	0.5 dBi	2 dBi	6 dBi
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Connector	IPEX	IPEX	IPEX	IPEX
Survival wind speed	-	-	-	-
Temperature	-10°C to 60°C/14°F to 140°F	-20°C to 65°C/-4°F to 149°F	-10°C to 60°C/14°F to 140°F	-20°C to 65°C/-4°F to 149°F
Humidity	95% @ 40°C (104°F)	95% @ 40°C (104°F)	95% @ 40°C (104°F)	95% @ 40°C (104°F)
Radome color	Black	Black	Black	Black
Radome material	PCB	PCB	PCB	PCB
Dimensions (WxDxH)(mm/in.)	54.7 x 14.8 x 0.6/ 2.15 x 0.58 x 0.02	33.5 x 8 x 0.2/ 1.32 x 0.31 x 0.01	21.0 x 16.6 x 0.2/ 0.83 x 0.65 x 0.01	21.0 x 16.6 x 0.2/ 0.83 x 0.65 x 0.01
Weight (g/lb.)	0.9/0.002	0.75/0.002	0.8/0.002	0.8/0.002

Model	NWA3160-N/NWA3560-N		NWA5121-N	NWA5301-NJ	
Product photo					
Space	External Antenna		External Antenna	Embedded	Embedded
Frequency band (MHz)	2400 - 2500	4900 - 5825	2400 - 2500	2400 - 2500	2400 - 2500
Gain	2.0 dBi	3.0 dBi	3.0 dBi	4.5 dBi	4.5 dBi
VSWR	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	Linear
Radiation pattern: H-plane					
Radiation pattern: V-plane					
HPBW/Horizontal	360°	360°	360°	80°	72°
HPBW/Vertical	80°	80°	80°	79°	73°
Front to back ratio	-	-	-	1	1
Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Connector	SMA	SMA	SMA	IPEX	IPEX
Survival wind speed	-	-	-	-	-
Temperature	-10°C to 60°C/ 14°F to 140°F	-10°C to 60°C/ 14°F to 140°F	-20°C to 65°C/ -4°F to 149°F	-20°C to 55°C/ -4°F to 131°F	-20°C to 55°C/ -4°F to 131°F
Humidity	95% @ 40°C (104°F)	95% @ 40°C (104°F)	95% @ 40°C (104°F)	95% @ 40°C (104°F)	95% @ 40°C (104°F)
Radome color	White	White	White	Black	Black
Radome material	TPEE/PC/PBT	TPEE/PC/PBT	TPEE/PC/PBT	PCB	PCB
Dimensions (WxDxH)(mm/in.)	155 x 13 x 13/ 6.10 x 0.51 x 0.51	155 x 13 x 13/ 6.10 x 0.51 x 0.51	137 x 12.5 x 12.5/ 5.40 x 0.49 x 0.49	26.8 x 26.8 x 0.6/ 1.06 x 1.06 x 0.02	26.8 x 26.8 x 0.6/ 1.06 x 1.06 x 0.02
Weight (g/lb.)	13/0.03	13/0.03	13/0.03	1.30/0.003	1.30/0.003

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



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