

WLAN Quad Band Antenna for Worldwide 802.11a/b Embedded Wireless Applications



Features

- Covers all Worldwide WLAN Bands:
 - 802.11b—2.45 GHz
 - 802.11a
 - ◆ Japan—5.0 GHz
 - North America—5.25 GHz
 - ◆ Europe—5.6 GHz
- Very Low Profile for Embedded Applications
- Optimized for Remote Cable Mounting in
 - Desktop/Laptop Applications

This quad band WLAN antenna provides exceptional performance for embedded wireless applications implementing multiple frequencies. This Meander Line Antenna provides superior efficiency and gain directivity and is the best performance solution for developers implementing a multiple frequency system in both the lower and upper WLAN bands.

Electrical Specifications	
Frequency Ranges	2390—2490 MHz 4900—5900 MHz
Efficiency	60% across low band 50% across high bands
VSWR	< 2.0:1 in the lower band < 2.0:1 in the upper bands
Polarization	Linear
Patterns	Uni directional
Feed Impedance	50 Ohms Unbalanced

Mechanical SpecificationsSize0.31 x 1.5 x 0.16 inches
7.9 x 38.0 x 4.2 mmCable/
ConnectorsCustomer to specify cable type,
cable length and
connector type

Mechanical Specifications	
Temperature Tolerance	Less than a 1 dB degradation and center frequency shift of less then 10 MHz when operated at any tem- perature in the range 0 to +65 ° C
Humidity	Less than a 1 dB degradation and center frequency shift of less then 10 MHz when operated in relative humidity of 10—95% non- condensing and a temperature of 120 degrees F
Chemical Resistance	Resists damage from wetting by water, brine, commonly used clean- ing agents and non-toxic household substances
Mechanical Durability	Maintains integrity for impacts of 4 feet or less

Typical Return Loss (Low Band)



Data shown for single element only as installed in laptop screen

5 5.05 5.1 5.15 5.2 5.25 5.3 5.35 5.4 5.45 5.5 5.5 5.6 5.65 5.7 5.75 5.8 5.85 5.9 Frequency (GHz)

4.9 4.95

Diversity Spherical Gain Contour Map at 2.39 GHz









Phi = 90 degrees

Phi = 0 degrees



Theta= 90 degrees

Diversity data shown consists of combination of a left and right mounted antenna in a laptop screen with cable and connector loss removed

Diversity Spherical Gain Contour Map at 2.45 GHz











Phi = 90 degrees



Theta= 90 degrees

Diversity data shown consists of combination of a left and right mounted antenna in a laptop screen with cable and connector loss removed.

Diversity Spherical Gain Contour Map at 5.0 GHz







Phi = 0 degrees



Phi = 90 degrees



Theta= 90 degrees

Diversity data shown consists of combination of a left and right mounted antenna in a laptop screen with cable and connector loss removed.

330

210

-10

-15

28

180

Phi = 90 degrees

300

240

270

SkyCross

Diversity Spherical Gain Contour Map at 5.25 GHz



Diversity Gain Patterns at 5.25

30

150

60

120

90



Phi = 0 degrees



Theta= 90 degrees

Diversity data shown consists of combination of a left and right mounted antenna in a laptop screen with cable and connector loss removed.

Diversity Spherical Gain Contour Map at 5.8 GHz



Diversity Gain Patterns at 5.8





Phi = 90 degrees

Phi = 0 degrees



Theta= 90 degrees

Diversity data shown consists of combination of a left and right mounted antenna in a laptop screen with cable and connector loss removed.

© 2003 SkyCross, Inc. SkyCross is a trademark of SkyCross, Inc. All rights reserved. Protected by one or more US Patents, including No. 5,790,080. Additional US and Foreign patents pending. Specification subject to change without notice.

7