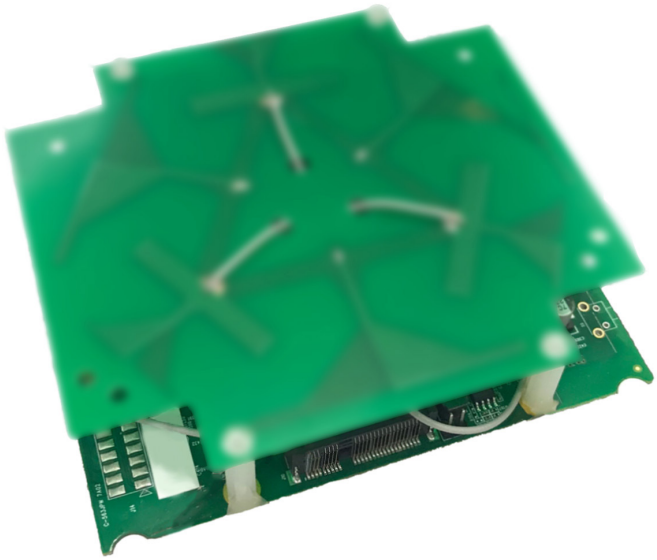
Flat Antenna for 3x3 MIMO on 2.4GHz and 5GHz



Model: Flatant-3x3-dualband-6dBi

KEY FEATURES

- Flat structure
- 6x antenna elements

APPLICATIONS

- Indoor high diversity MIMO communications
- Point-to-MultiPoint (PtMP) AP
- Indoor Mesh AP

Antenna Specifications

Antenna Elements	3 elements for 2.4 GHz band and 3 elements for 5 GHz band
Size	117 mm x 105 mm
Connectors	6x U.FL antenna connectors
Frequency Range	2.40 ~ 2.48 GHz, 5.15 ~ 5.95 GHz
Gain	6~7 dBi for 2.4 GHz band and 6~7 dBi for 5 GHz band, consistent across both bands
Radiation	Omnidirectional when combined in horizontal plane
Polarization	Horizontal polarization in each direction if antenna plane is facing upwards
Isolation	> 25 dB for 2.4 GHz band and > 40 dB for 5 GHz band
VSWR	< 2.0:1
Input Impedence	50 ohm

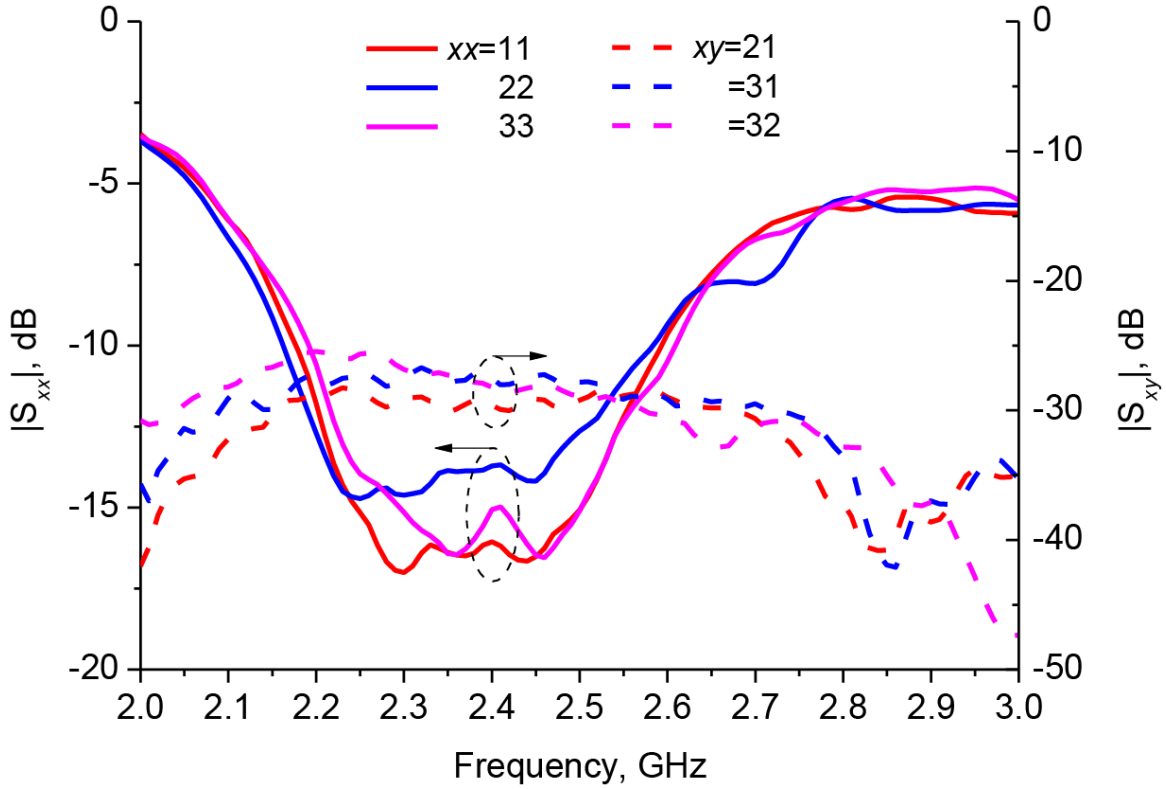
Ordering Information

Item Code	Antenna
FLATANT-6DBI-3X3-6UFL	Flatant-3x3-dualband-6dBi with 6pcs U.FL cable

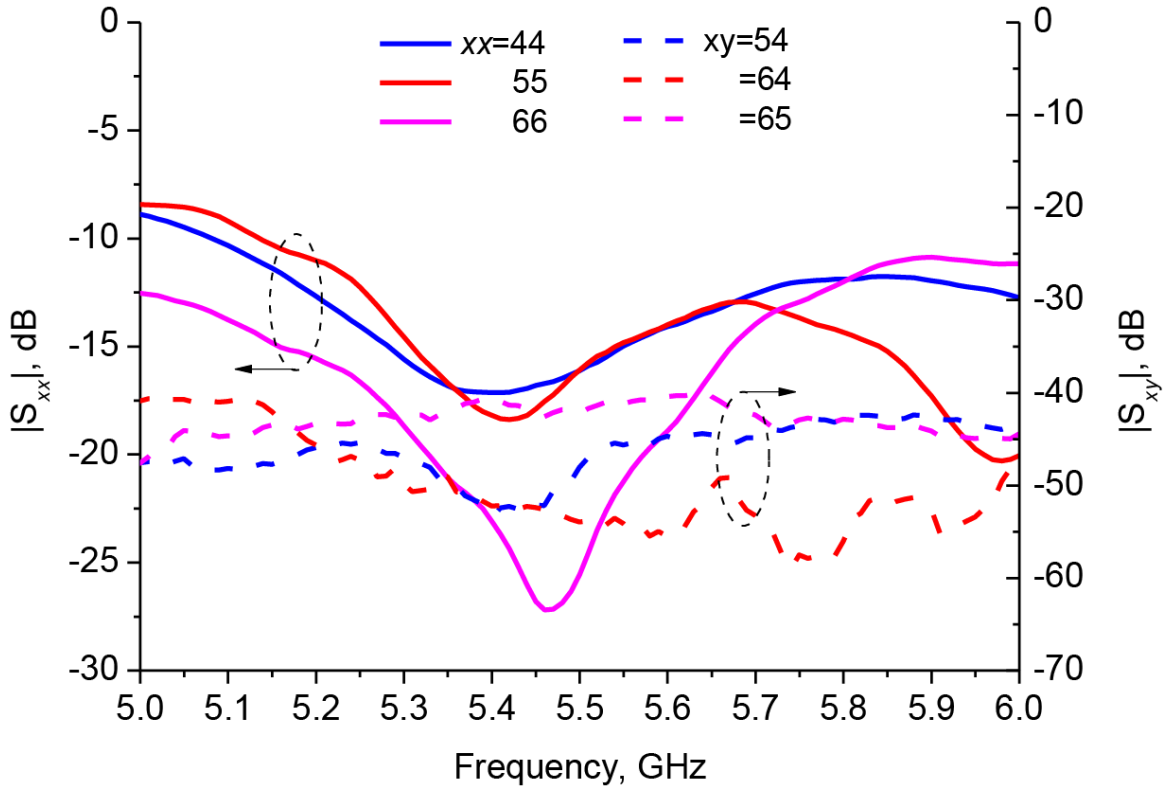
Last Updated: 05/04/18

Antenna S-Parameters

Return Loss and Mutual Coupling of the 2.4 GHz Elements

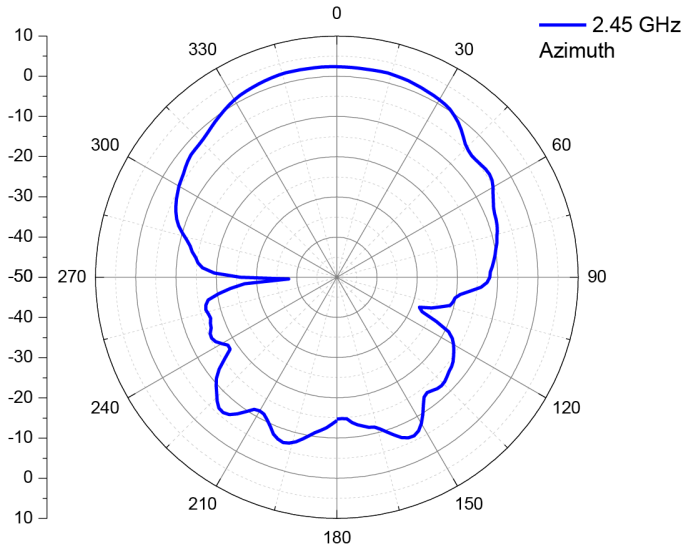


Return Loss and Mutual Coupling of the 5 GHz Elements

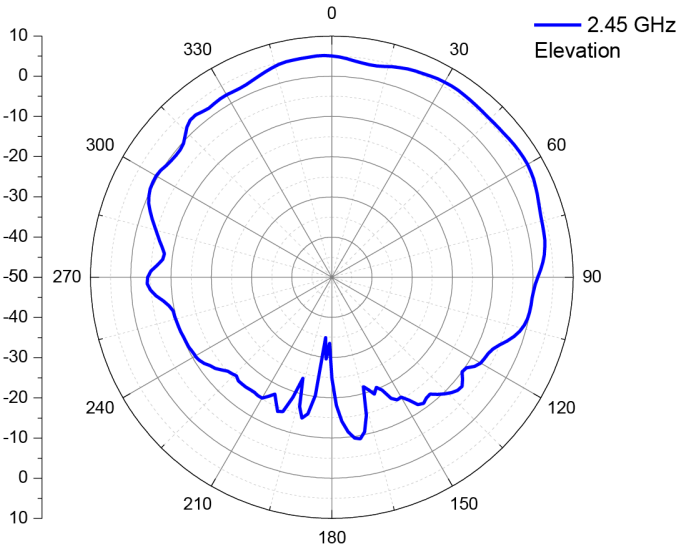


Gain at 2.4 GHz

Polar Plots of the Gain of Each Element at 2.45 GHz



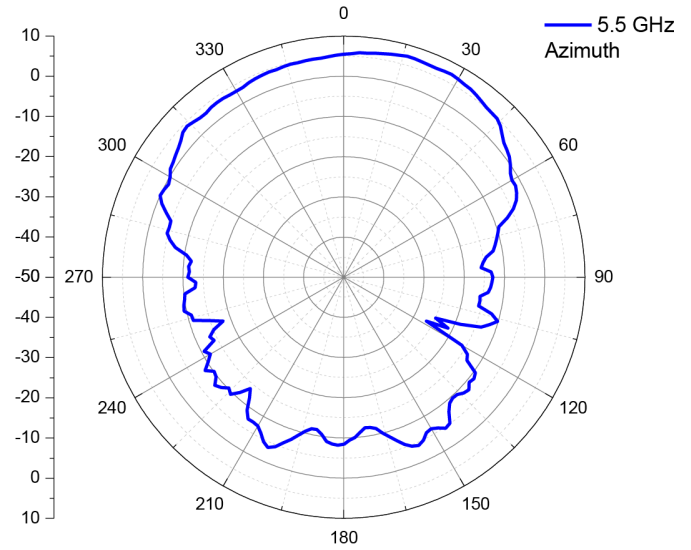
In the Horizontal Plane



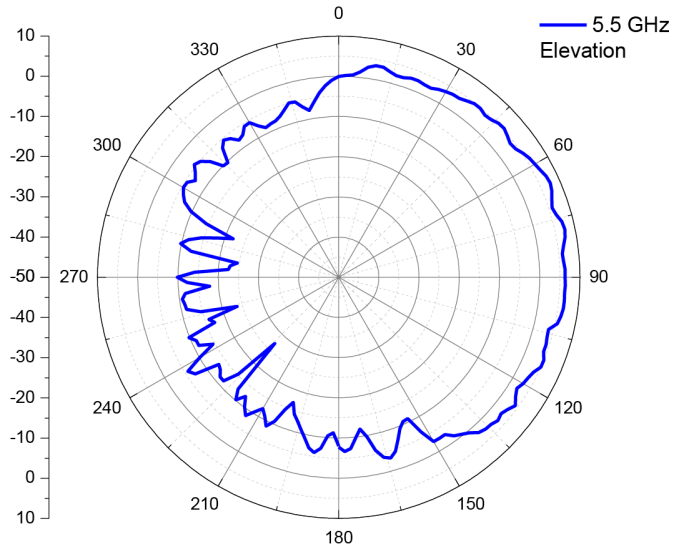
In the Vertical Plane at 0° Azimuth

Gain at 5 GHz

Polar Plots of the Gain of Each Element at 5.5 GHz



In the Horizontal Plane

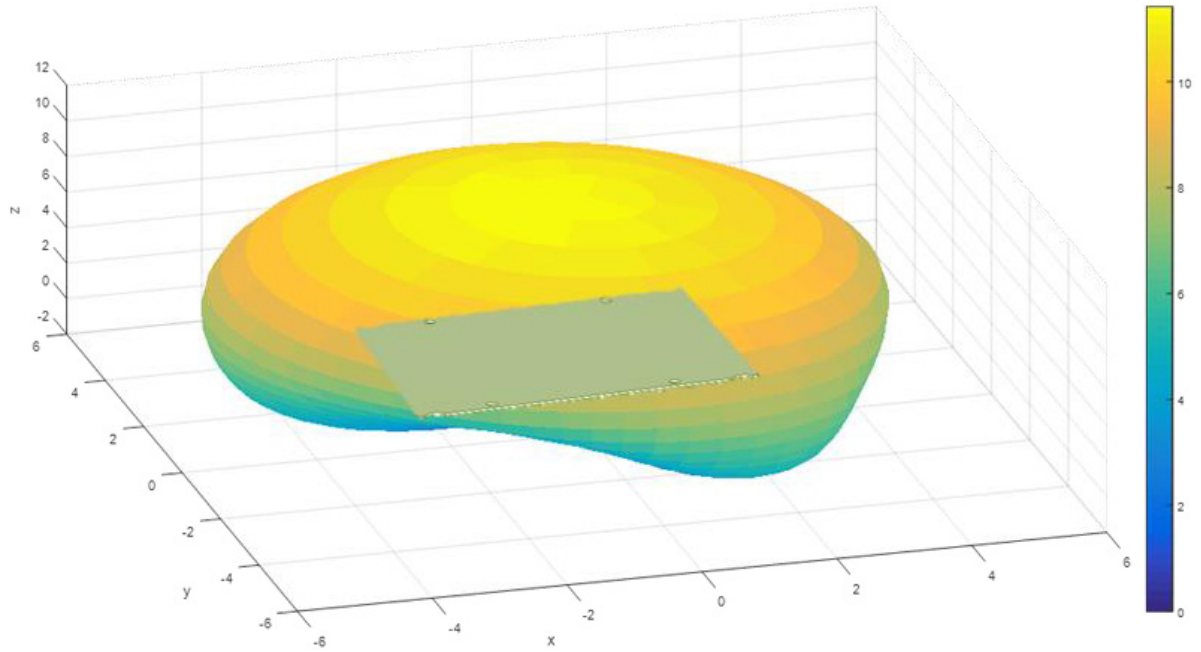


In the Vertical Plane at 0° Azimuth

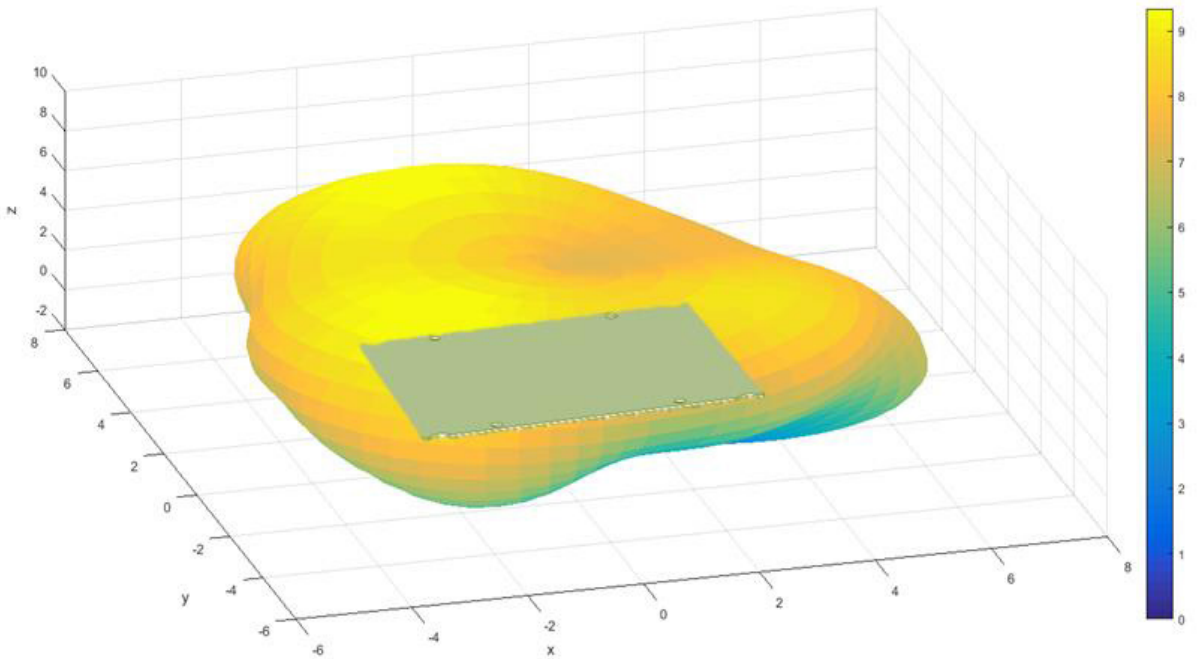
* Note: The antenna plane is facing upwards. The gain of each element is expected to be highest at about 0° Azimuth and 45° Elevation.

3D Radiation Patterns

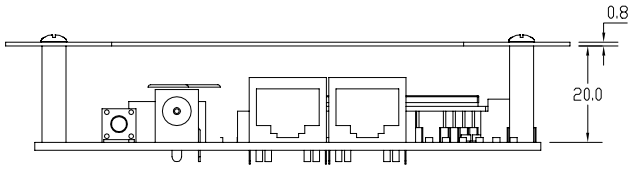
Simulated 3D Combined Pattern for 2.4 GHz Elements

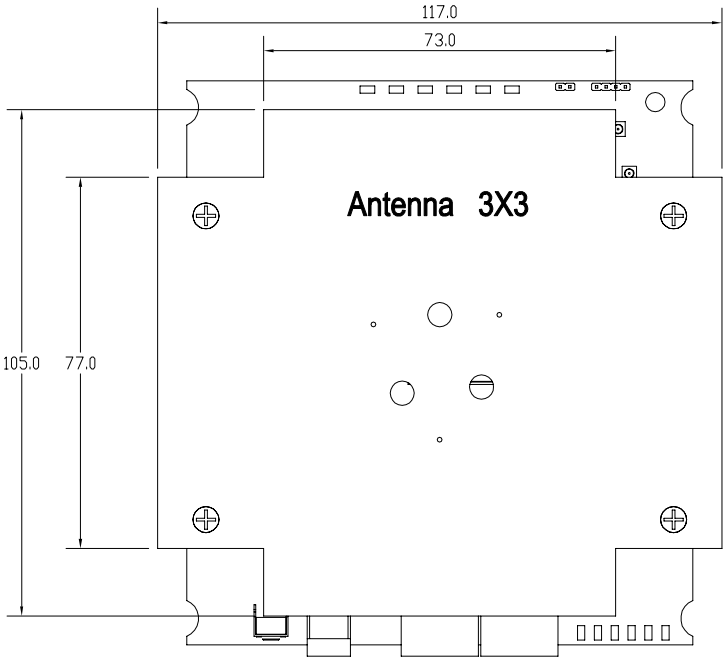


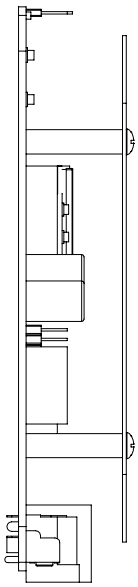
Simulated 3D Combined Pattern for 5 GHz Elements

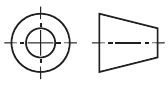


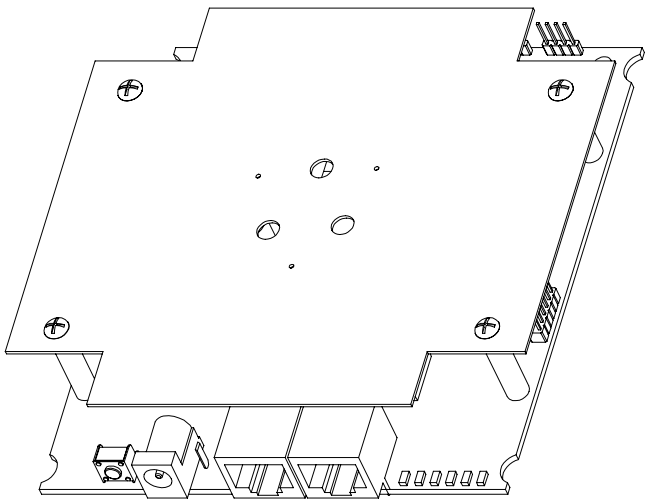
Recommended Assembly and Clearance between Antenna and Embedded Board*











** The antenna is designed to ride over a host board, which acts as a reflector, as shown in the assembly drawing.*