



Aruba AP-634 Antenna Test Report

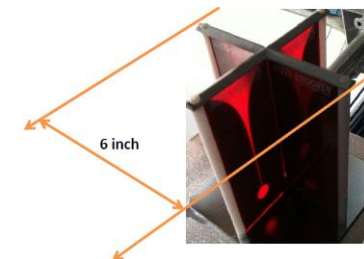
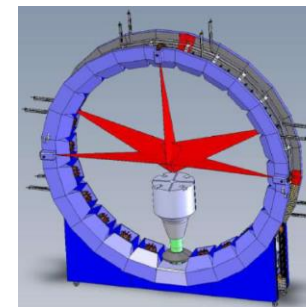
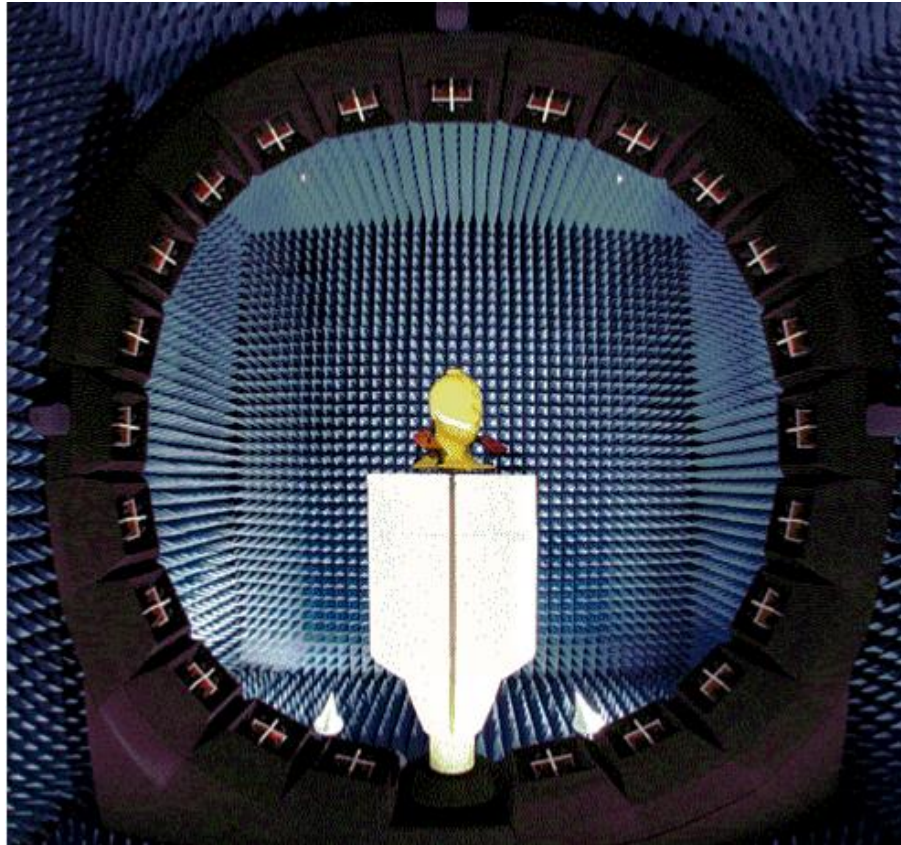
Date : Jun. 20, 2023
Prepared by Rachel Zhao

Test Information

Item	Description
Brand Name	Aruba
Equipment	Wi-Fi 11ax Tri-Band Access Point
Test Location	1F, No. 26, Xinghai Street, Suzhou Industrial Park, Jiangsu, China.
Test Condition	Radiation
Test Engineer	Rachel Zhao, Sercomm
Test Environment	ETS-Lindgren AMS8923
Test Date	Jun. 13, 2023 ~ Jun. 14, 2023

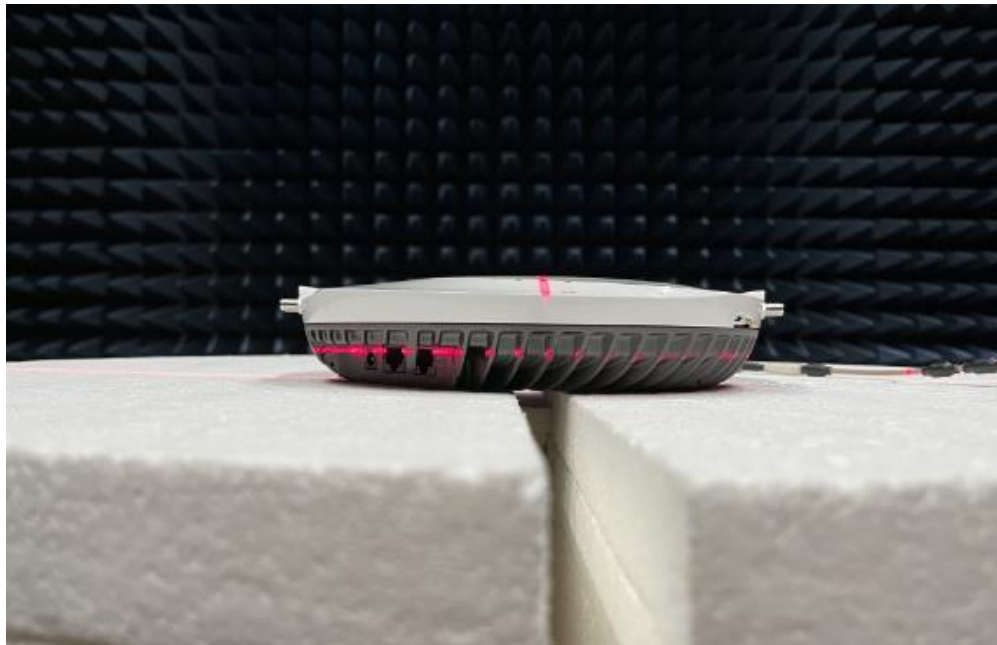
Test Configuration

ETS-Lindgren AMS8923 antenna measurement system with a size of 4.9(L) × 4.9(W) × 4.9(H) m³ is used for antenna performance test. It includes a custom multi-antenna array ring that installs a system of dual-polarized antennas. With a switch control box integrated on the ring, the test system provides fast switching between antennas for high speed testing.



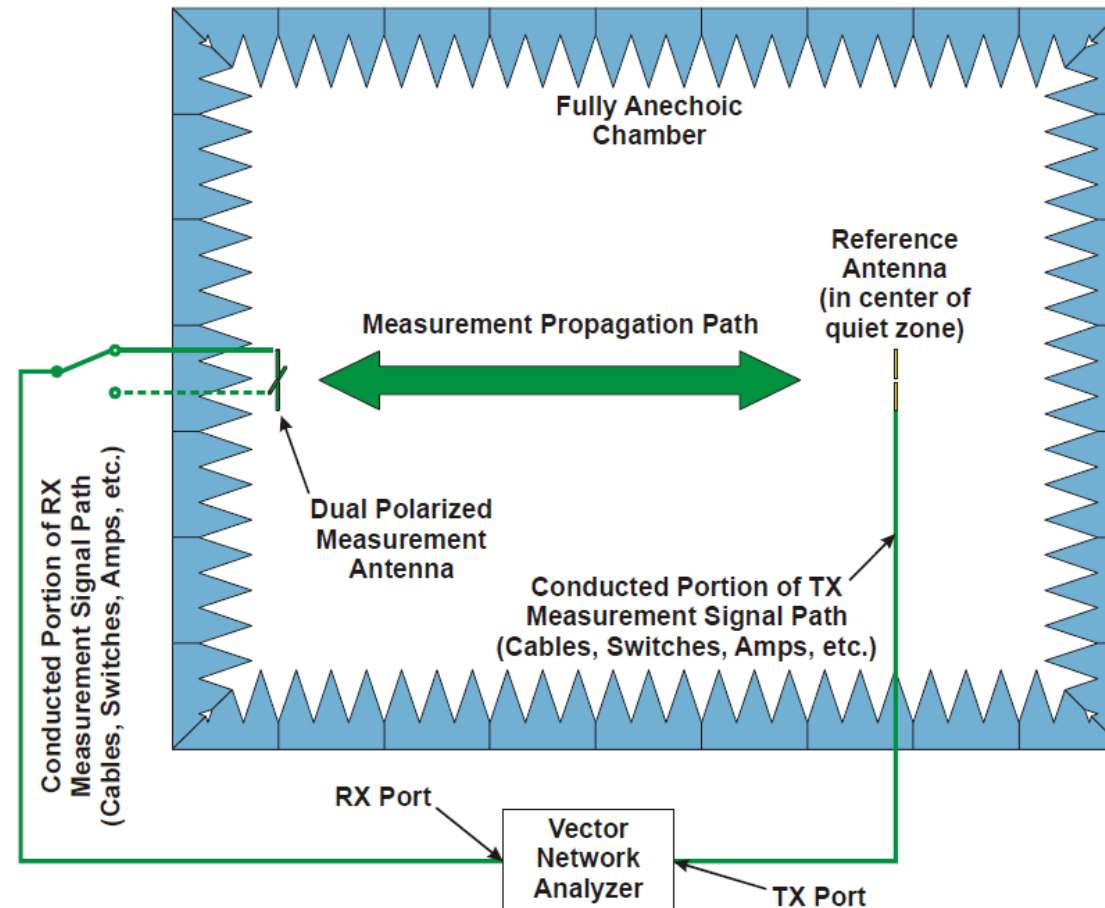
Test Setup & Procedure

1. Fix the DUT on the dielectric support structure and connect the feeding cable to the antenna used for test
2. Set measurement parameters such as frequency range and sampling angle
3. Perform test and then get far-field data (radiation pattern, gain, efficiency)
4. Repeat test procedure for other antennas



Test Equipment & Calibration

Network analyzer and reference antennas are used for calibration. Path loss and cable loss for different frequency bands can be checked and calculated.



Test Equipment & Calibration

Instrument	Brand	Characteristics	Model No.	Serial No.	Calibration Due Date
Precision Sleeve Dipole	ETS-Lindgren	700 MHz ~ 900 MHz	3126-700	00218044	Oct. 13, 2023
Precision Sleeve Dipole	ETS-Lindgren	900 MHz ~ 1000 MHz	3126-900	00218062	Oct. 13, 2023
Precision Sleeve Dipole	ETS-Lindgren	1400 MHz ~ 1700 MHz	3126-1550	00218061	Oct. 13, 2023
Precision Sleeve Dipole	ETS-Lindgren	1700 MHz ~ 2000 MHz	3126-1850	00218064	Oct. 13, 2023
Precision Sleeve Dipole	ETS-Lindgren	2000 MHz ~ 2300 MHz	3126-2150	00218068	Oct. 13, 2023
Precision Sleeve Dipole	ETS-Lindgren	2300 MHz ~ 2700 MHz	3126-2500	00218048	Oct. 13, 2023
Precision Sleeve Dipole	ETS-Lindgren	5000 MHz ~ 6000 MHz	3126-5500	00218065	Oct. 13, 2023
EMQuest Antenna Measurement Software	ETS-Lindgren	Control chamber system	EMQ-100	1596	Non-Calibration Required

Antenna Information

Ant No.	Operating Band	Type	Material	Feeding	Polarization
BLE (Ant 0)	2400 MHz ~ 2500 MHz	PIFA	Metal	Cable	Linear
GPS (Ant 1)	1575 MHz	PIFA	Metal	Cable	Linear

Result Summary - Gain & Efficiency Table

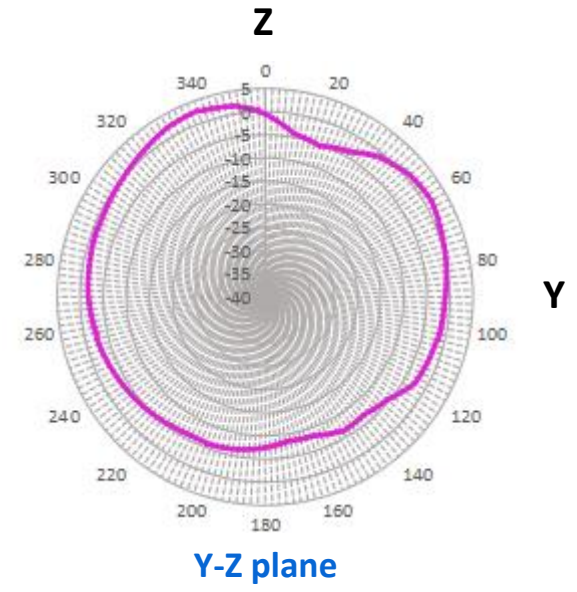
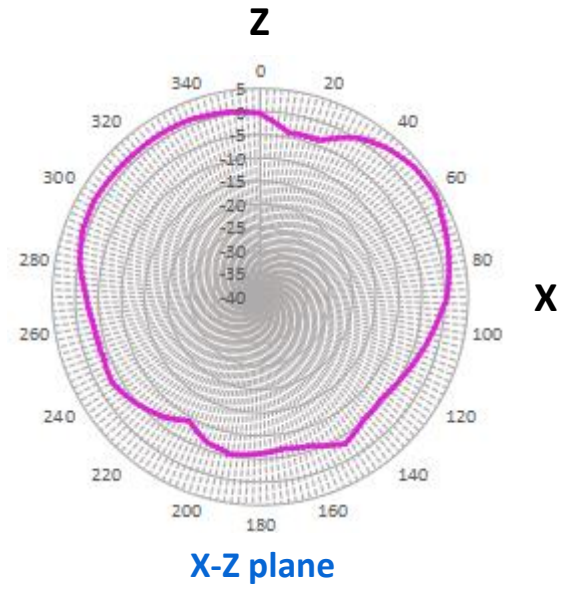
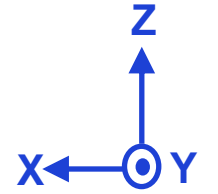
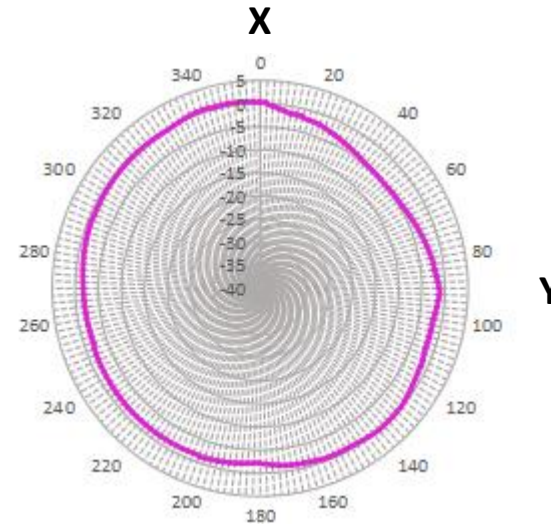
BLE_ANT0		
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	3.2	76.1
2450	3.1	79.0
2500	3.0	77.3

GPS_ANT1		
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
1560	3.1	77.6
1575	3.1	76.7
1610	3.3	76.0

Appendix

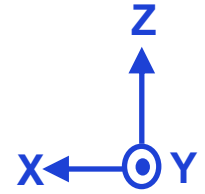
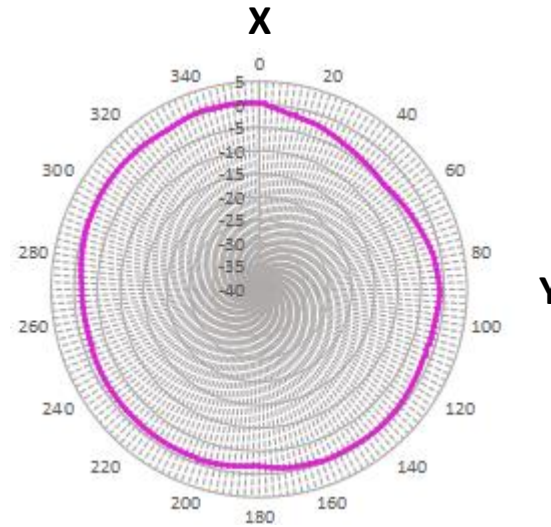
2D Radiation Pattern – BLE_ANT0 @2.4GHz

X-Y plane	
Gain Flatness (dB)	5

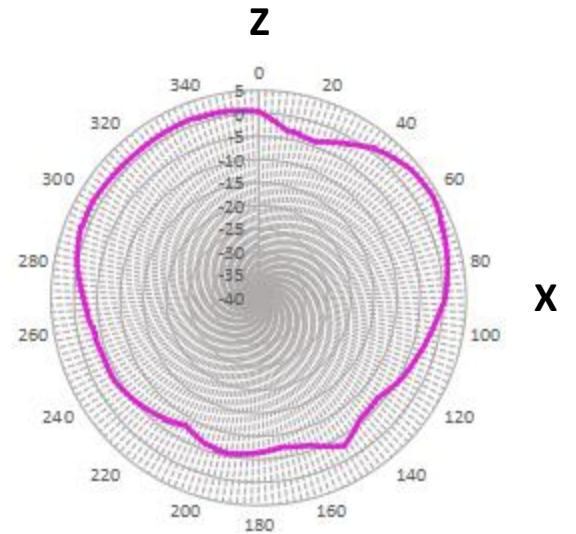


2D Radiation Pattern – BLE_ANT0 @2.45GHz

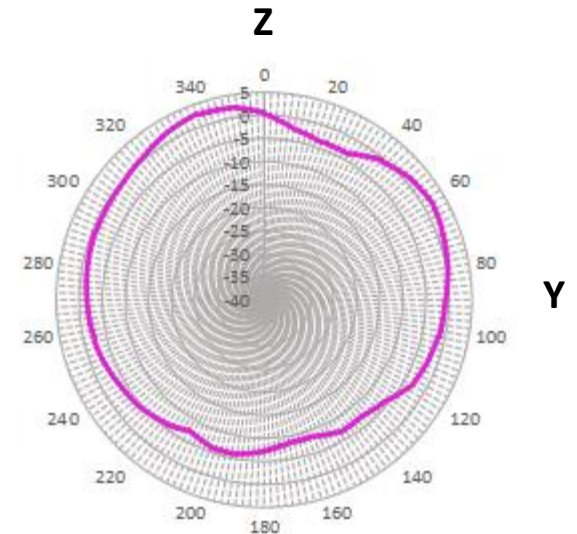
X-Y plane	
Gain Flatness (dB)	5



X-Y plane



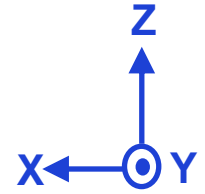
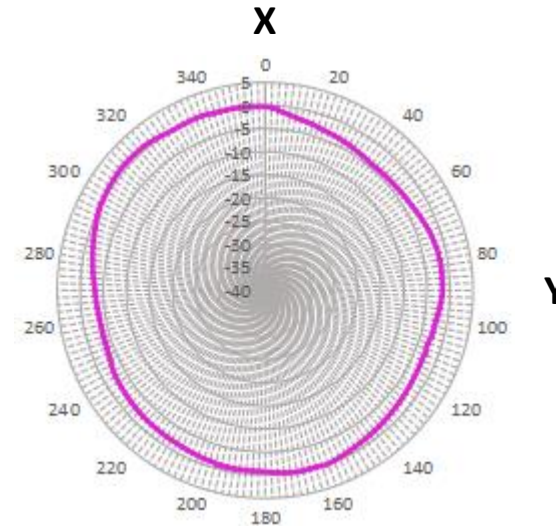
X-Z plane



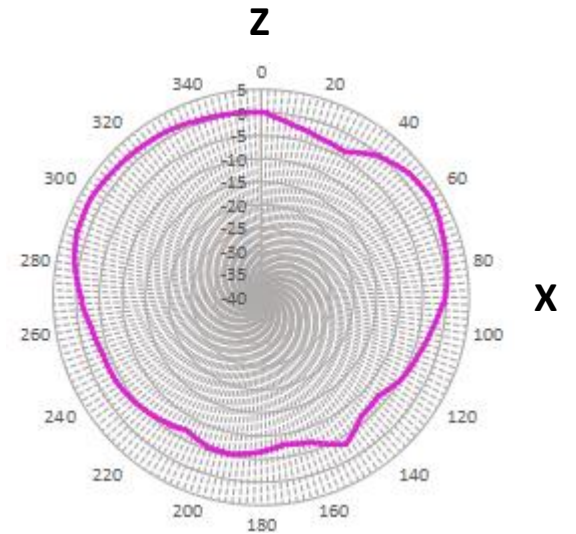
Y-Z plane

2D Radiation Pattern – BLE_ANT0 @2.5GHz

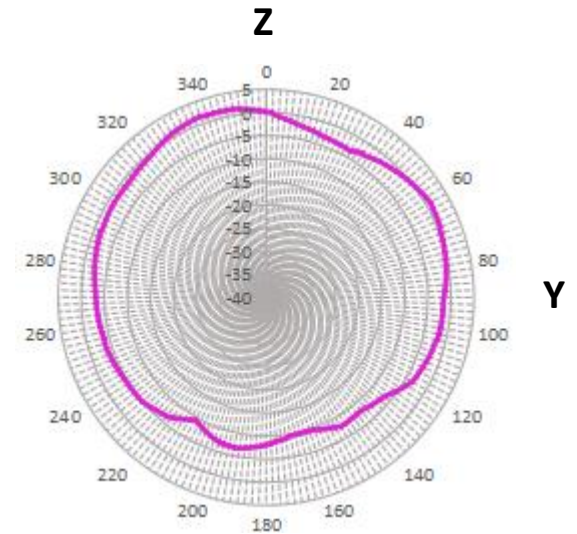
X-Y plane	
Gain Flatness (dB)	5



X-Y plane



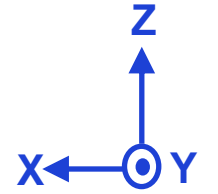
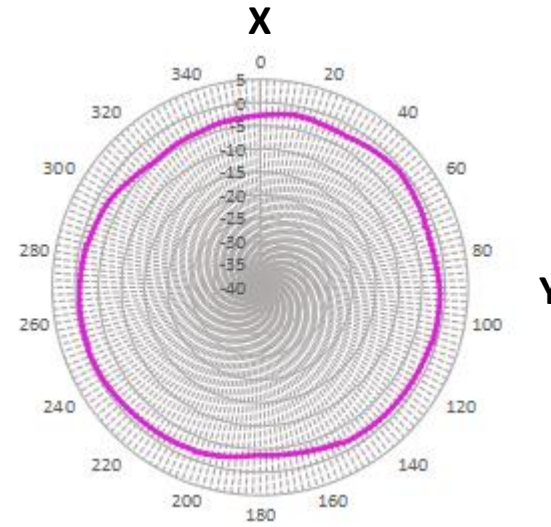
X-Z plane



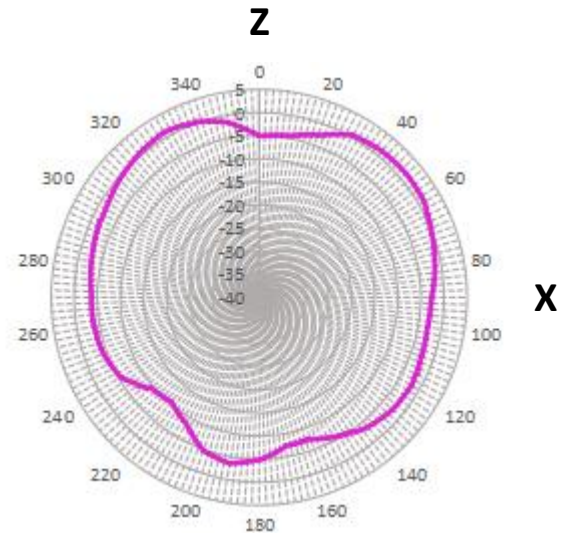
Y-Z plane

2D Radiation Pattern – GPS_ANT1 @1.56GHz

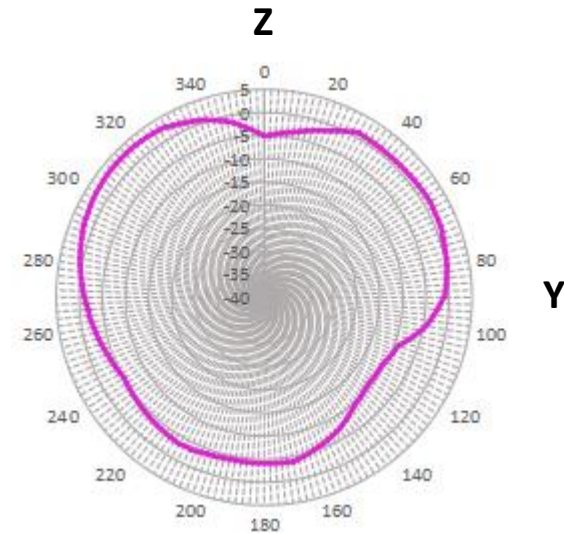
X-Y plane	
Gain Flatness (dB)	4



X-Y plane



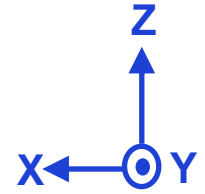
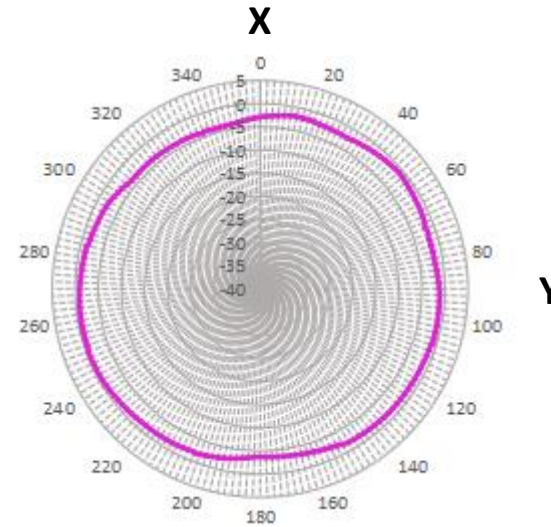
X-Z plane



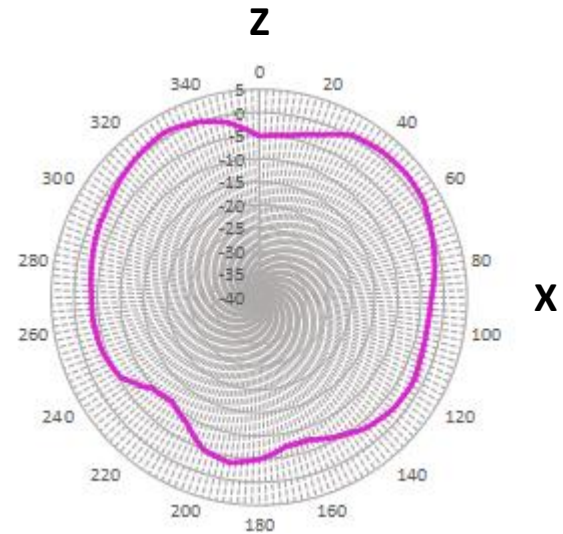
Y-Z plane

2D Radiation Pattern – GPS_ANT1 @1.575GHz

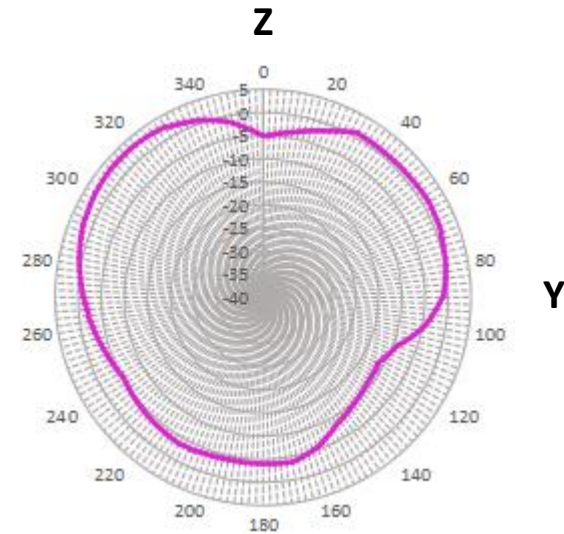
X-Y plane	
Gain Flatness (dB)	4



X-Y plane



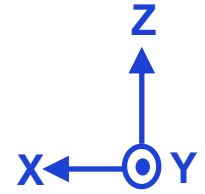
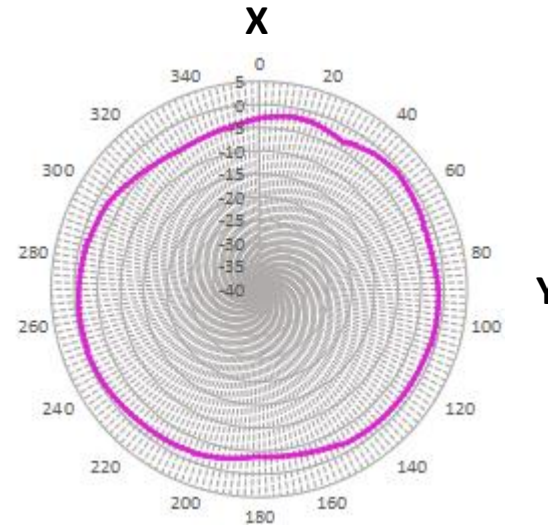
X-Z plane



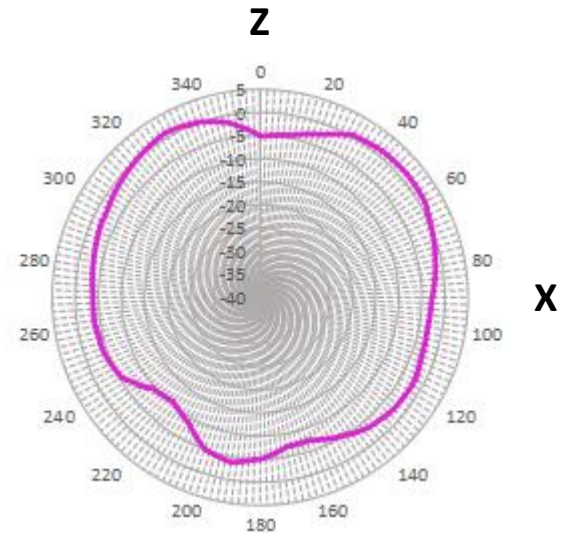
Y-Z plane

2D Radiation Pattern – GPS_ANT1 @1.61GHz

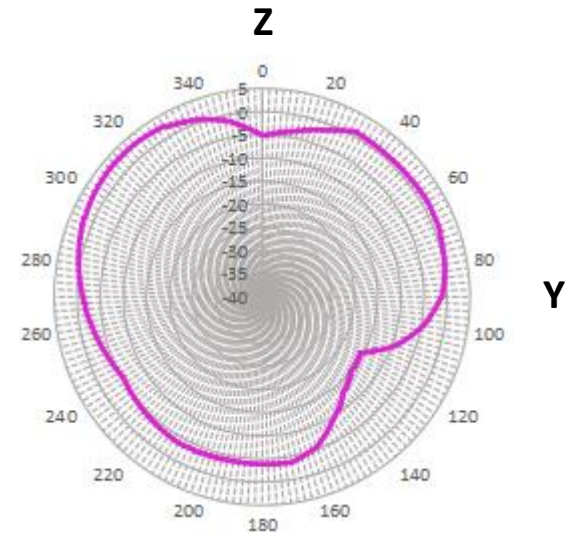
X-Y plane	
Gain Flatness (dB)	4



X-Y plane



X-Z plane



Y-Z plane

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