

# ANTENNA INFORMATION

FCC ID : A3LNP940XMA

Model: NP940XMA, NP944XMA

OEM	Samsung
ODM	
Platform model name	
Intel platform (ex: Yes, No or NA)	
Platform type (ex: regular NB, convertible PC, AIO...etc)	
SAR minimum separation (mm)	

Antenna manufacturer	Galtronics	
Address	#B214, Innoplex Bldg.,306, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 Korea	
Antenna Part number	Main: BA42-00782A	Aux: BA42-00782A
Antenna type (ex: PIFA, Dipole...etc)	PIFA	

Antenna Peak gain w/ cable loss (dBi)*										
	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	-1.71	0.29	0.5	0.21	0.6	0.59	0.55	0.02	-0.56	-1.65
Aux	-1.98	-0.47	-0.85	-0.09	0.14	-0.30	-0.74	0.36	-0.44	-1.62

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	02112610-08045 Main Cable	232.90	1.13	50 ohm Coaxial	MHF4L(IPEX)
Aux	02112610-08045 Aux Cable	296.30	1.13	50 ohm Coaxial	MHF4L(IPEX)

\* 3D Antenna Peak Gain required being test in system basis.

# Table of Contents

<b>Cover page</b> .....	<b>1</b>
<b>1. Intel Reference Gain and Type</b> .....	<b>3</b>
<b>2. Document Revision History</b> .....	<b>3</b>
<b>3. Test &amp; System Description</b>	
3.1 Measurement Method and System.....	4
3.2 Test setup.....	4
3.3 Equipment list.....	5
<b>4. Radiation characteristics of antenna loaded in Host Platform</b> .....	<b>6</b>
<b>Annex A. Photographs</b>	
A.1 Setup Photo.....	16
A.2 Test sample.....	17
<b>Annex B. Antenna Location</b>	
B.1 Antenna Host Platform Location Information.....	19
B.2 Antenna dimensional information for SAR evaluation.....	20

## 1. Gain and Type

\*Continued on page 6~15

## 2. Document Revision History

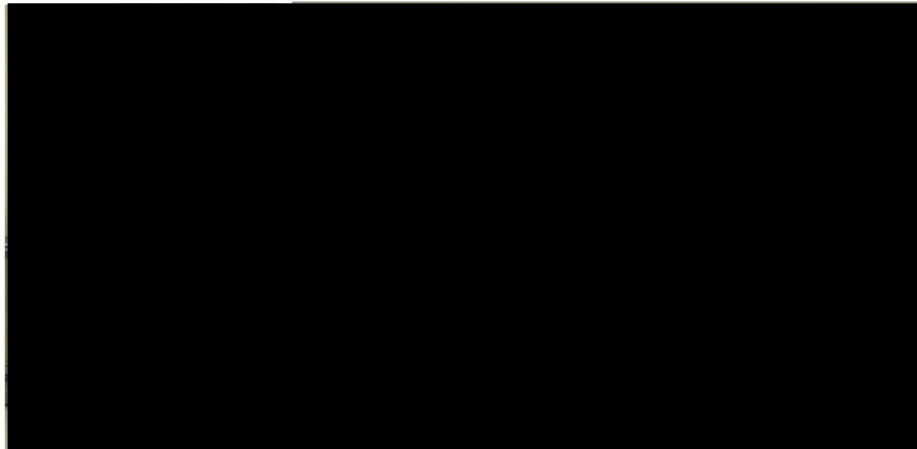
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2024.05.03

### 3. Test & System Description

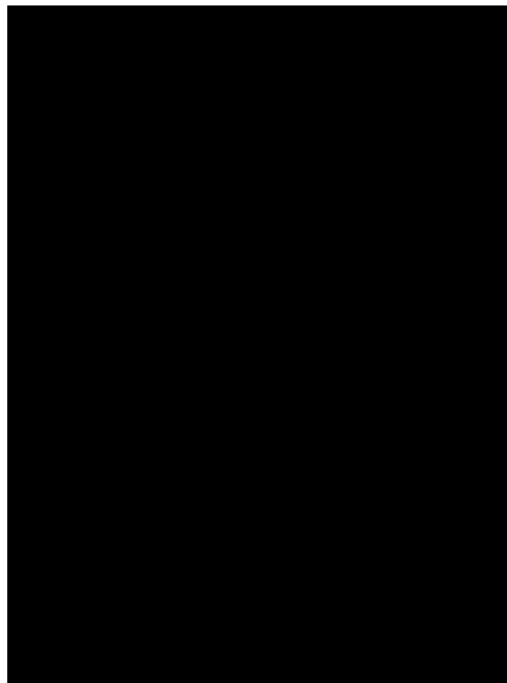
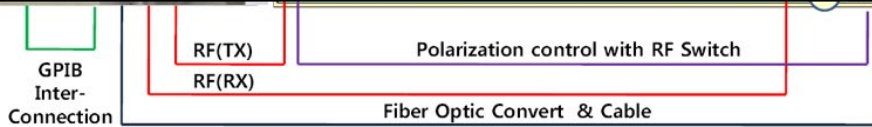
#### 3.1 Measurement Method and System

This test report is prepared for host antenna testing under a Full Anechoic Chamber.  
(Galtronics MTG)

#### 3.2 Test setup



No	Description
FA1	Anechoic Chamber
EQ1	Network Analyzer
EQ2	Wireless Communications Test Set
EQ3	System Controller
EQ4	System Monitor
N1	Azimuth Positioner
N2	Turn-Table & Linear Slide
N3	3D Transparent Positioner
N4	Positioner Controller
AN1	Dual Polarized Transmit Antenna
EUT	AUT



### 3.3 Equipment list

Device	Type/Model	Manufacturer	SW	Cal. Date	Cal. Due Date
Anechoic Chamber	SSR-M08	MTG	-	2024-02-20	2025-02-20
Horn Antenna	HA-07M18G-NF	MTG	-	2024-02-20	2025-02-20
Network Analyzer	N230A	AGILENT	-	2024-02-20	2025-02-20
Dual-Ridged Horn Antenna	DRH-020-180 2~18GHz	MTG	-	2024-02-20	2025-02-20
Horn Antenna	BBHA 9120 LF(A) 290 650MHz~6GHz	MTG	-	2024-02-20	2025-02-20
Measurement SW	VWM	MTG	2.1	N/A	N/A
Positioner Controller	PC-510-4	MTG	-	N/A	N/A
Turn-table & Linear Slide	AP-6508-H40	MTG	-	N/A	N/A
3D Transparent EUT Positioner	AP-6917-H	MTG	-	2024-02-20	2025-02-20
Low Loss RF Cable	RCBL-M03 DC~18GHz	MTG	-	2024-02-20	2025-02-20

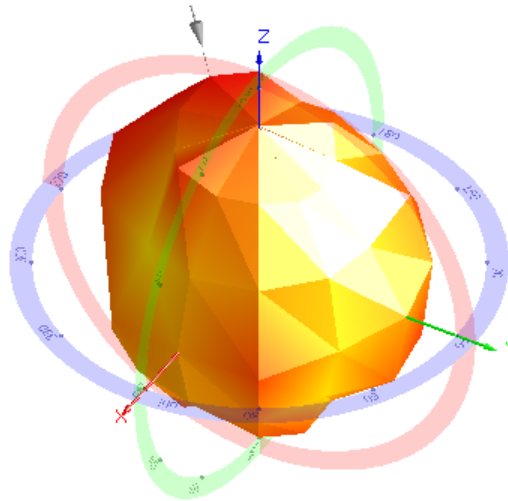
Rev.	Measurement	Measurement Data	Sign
3.8.05 Rev00	Galtronics	2024-03-29	<i>Duke</i>

#### 4. Radiation characteristics of antenna loaded in Host Platform

##### Main Antenna

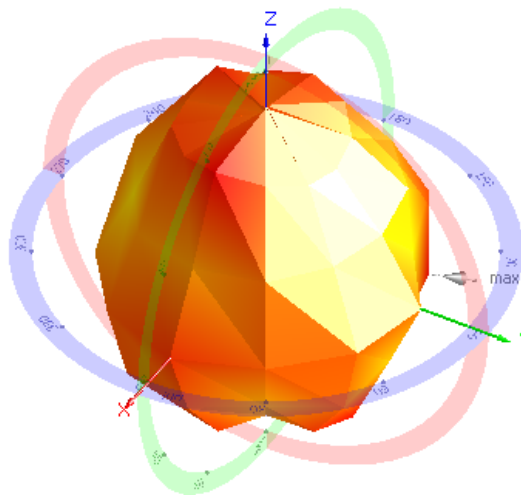
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-1.71



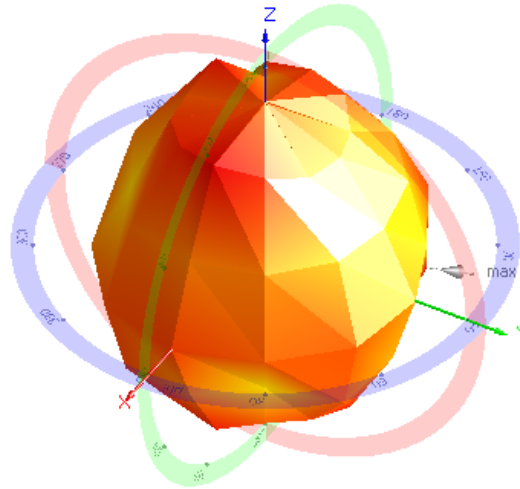
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	0.29



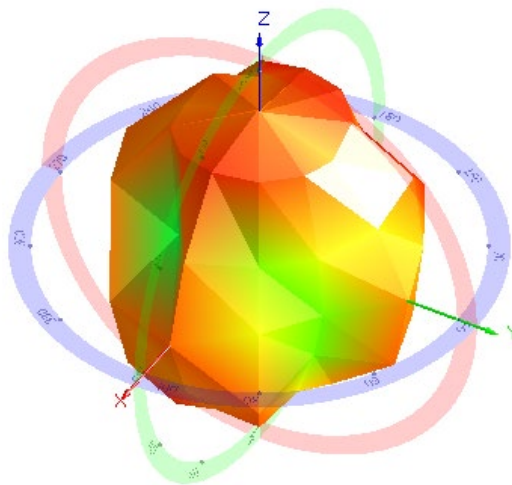
## Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	0.5



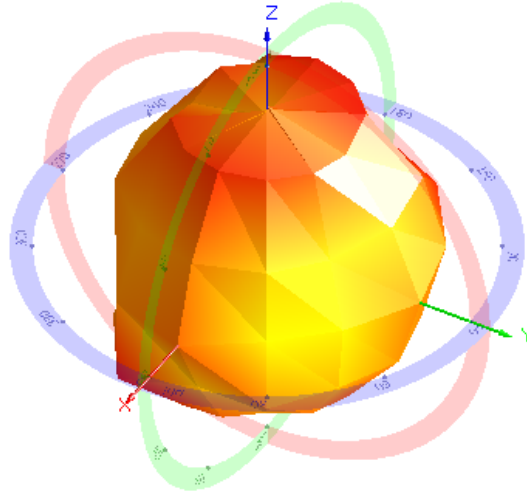
## Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	0.21



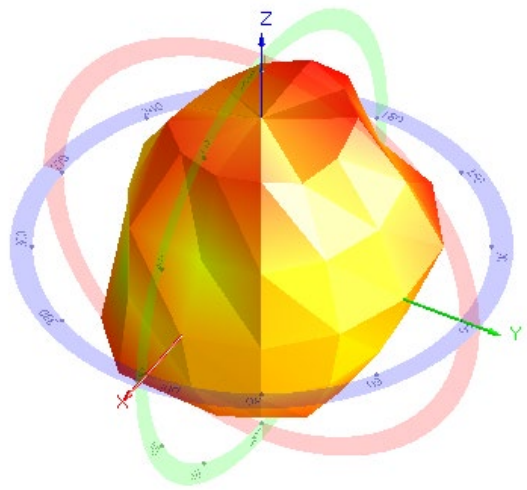
## Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	0.6



## Max Antenna 3D Radiation Pattern 5850-5895 MHz

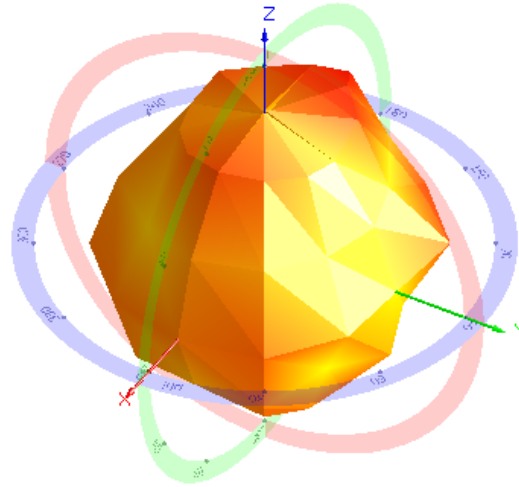
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	0.59





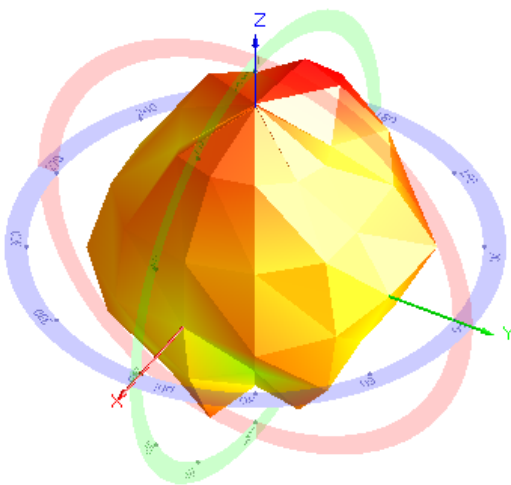
## Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	0.55



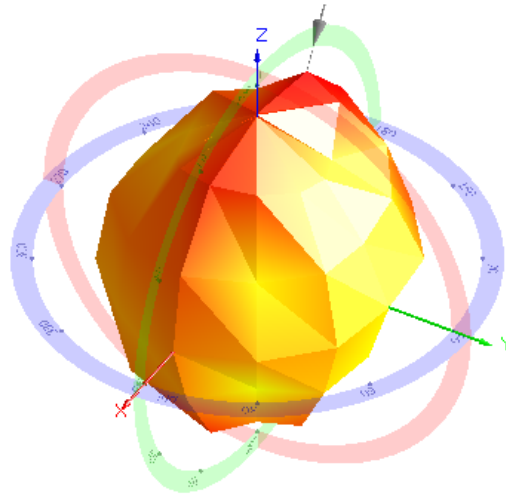
## Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	0.02



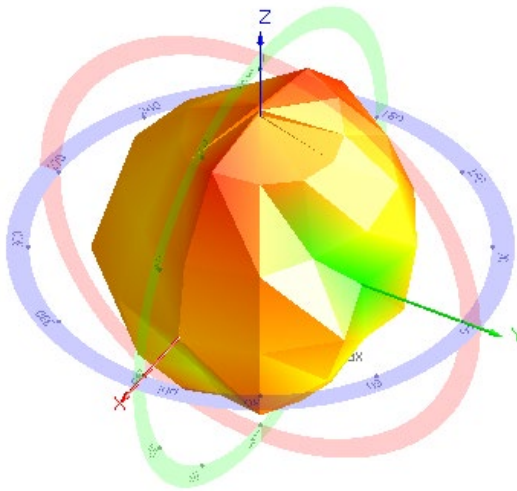
## Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	-0.56



## Max Antenna 3D Radiation Pattern 6875-7125 MHz

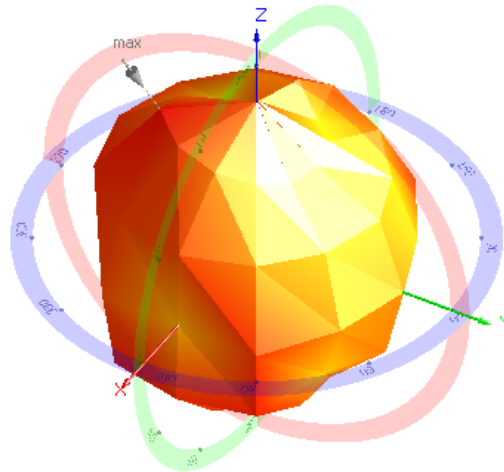
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	-1.65



## Auxiliary Antenna

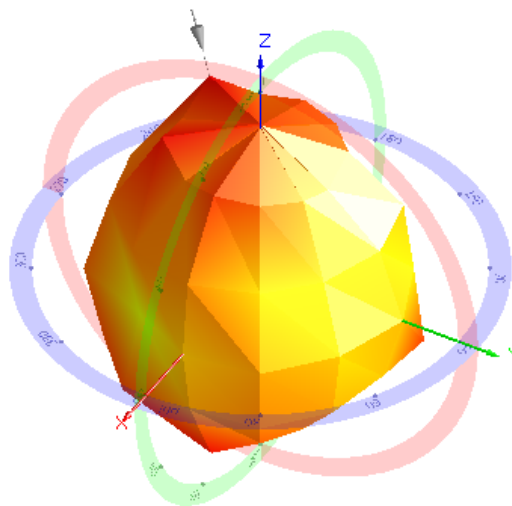
### Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-1.98



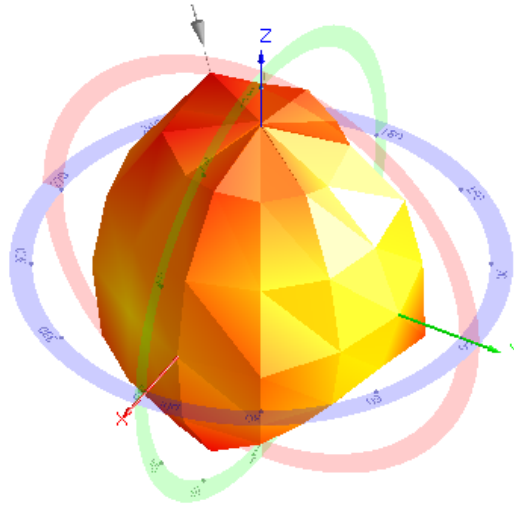
### Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	-0.47



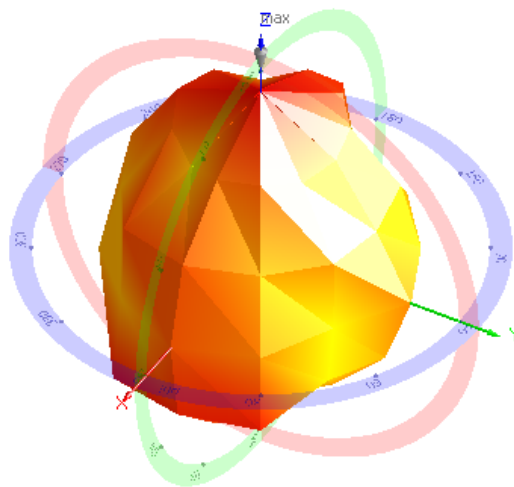
## Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	-0.85



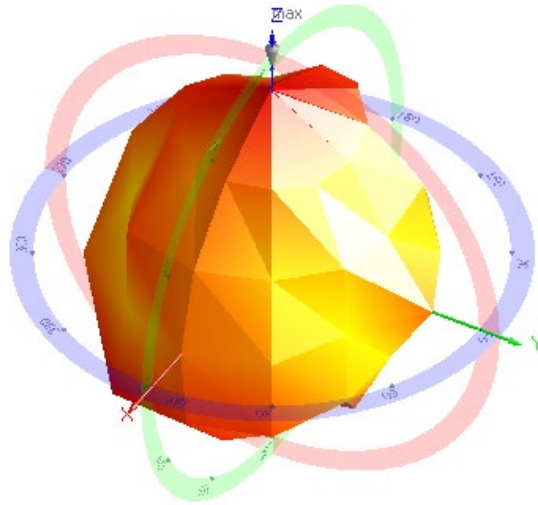
## Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	-0.09



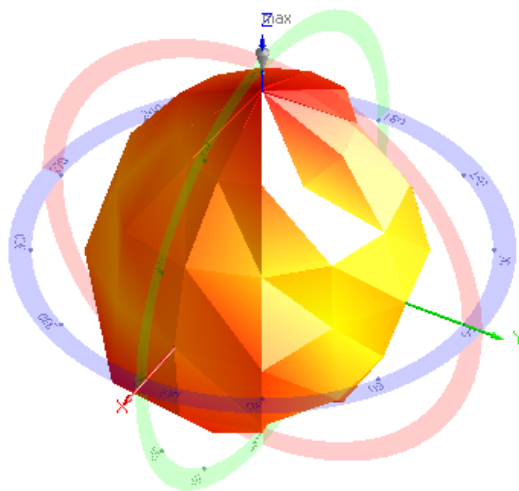
## Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	0.14



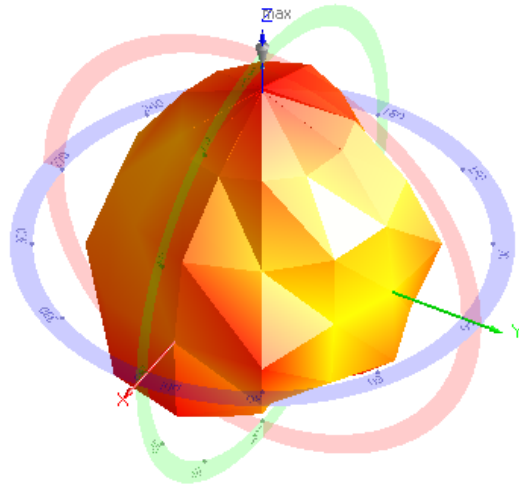
## Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	-0.30



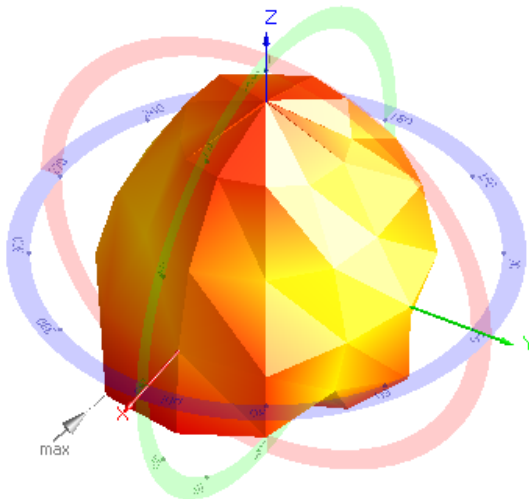
## Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	-0.74



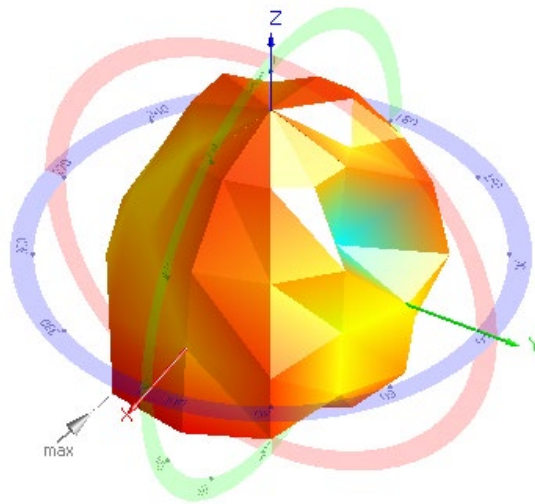
## Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	0.36



## Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	-0.44



## Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	-1.62

