

ANTENNA INFORMATION

OEM	ASUS	
ODM	Quanta	
Platform model name	S3607C / S3607V	
Intel platform (ex: Yes, No or NA)	Yes	
Platform type (ex: regular NB, convertible PC, AIO...etc)	Regular NB	
SAR minimum separation (mm)	FCC (1g)	7.0
	ISED (1g)	7.0
	ISED (10g)	1.9

Antenna manufacturer	Company name	INPAQ
	Address	No.5,Chunqiu Road, Panyang Industrial Park Huangdai Town, Xiangcheng Zone, Suzhou
Test location	Company name	INPAQ
	Address	1F., No. 106-1, Ligong St., Beitou Dist., Taipei City 112019, Taiwan (R.O.C.)
Test Personnel	Name(Full name)	Ivan Chang
	E-mail	ivanchang@inpaq.com.tw
	Tel/Mobile	0917-035903
Testing date	2024/12/23	

Antenna Part number	Main	WA-P-LE-02-370
	Aux	WA-P-LE-01-096
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	1.83	2.56	2.61	3.20	3.58	3.58	3.67	3.40	3.72	3.72
Aux	2.08	2.65	2.73	2.98	3.43	3.48	3.74	3.00	3.06	3.14

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	SY113/50-105	225	1.13	50	I-PEX NGFF
Aux	SY113/50-128	473	1.13	50	I-PEX NGFF

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

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1. Intel Reference Gain and Type

Antenna Peak gain w/ cable loss (dBi)											
Band/Frequency		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
Design	EU/UK	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFA	For WiFi 6E and earlier	3.24	3.64	3.73	4.77	4.97	4.72	4.83	4.30	5.37	5.59
	From WiFi 7	2.95	5.11	4.55	5.15	5.13	4.45	5.02	5.02	4.96	4.96
Dipole	For WiFi 6E and earlier	2.89	2.92	3.19	4.41	4.22	4.22	4.83	4.30	4.49	5.34
	From WiFi 7	2.95	4.03	4.11	5.15	5.13	4.45	5.02	4.71	4.49	4.96
Monopole	From WiFi 7	2.83	4.57	4.44	4.95	4.95	4.43	4.87	4.91	4.91	4.79

3D Peak Antenna gain should be equal or greater than -2 dBi

If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

2. Document Revision History

Revision #	Revision Details	Issued Date
Rev. 00	First Issue	

3. Test & System Description

3-1 Measurement Method and System

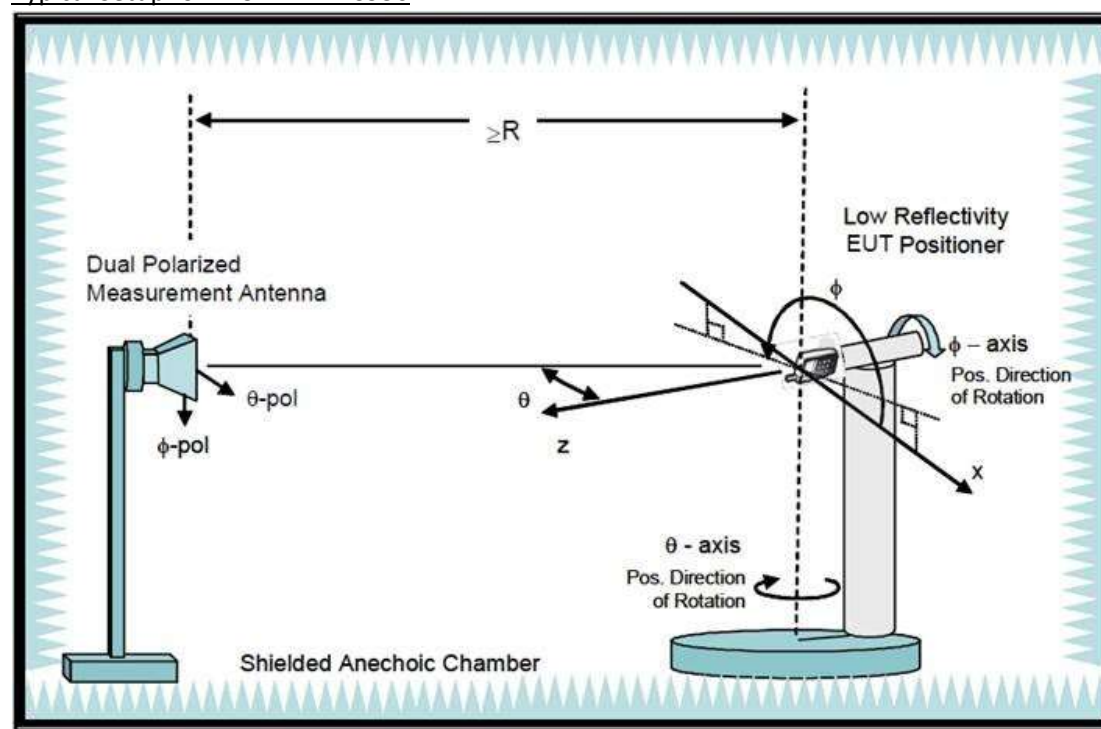
FFC-744 AMS936 system is 3D fully anechoic chamber, it is applied to the "Conical Cut test method", the detail description is described as below.

The Conical Cut method requires the ability of the Measurement Antenna to be physically rotated in the theta plane (overhead) of the EUT for implementations using a single Measurement Antenna. Eleven conical cuts are required to capture data at every 15 degrees from the EUT, with the top (0 degrees) and bottom (180 degrees) cuts not being measured. Typically, the EUT will remain affixed to a turntable during the entire measurement process. The Measurement Antenna will be positioned at a starting theta angle. The EUT will then be rotated around the full 360 degrees of phi rotation. The Measurement Antenna will then be positioned at the next theta angle, and the process repeated.

		θ -Axis	Φ -Axis
Passive	Step size	15°~165° step: 15°	0°~345° step: 15°
	N / M (Points)	12	24

3-2 Test setup

Typical Setup for FFC-744 AMS936



3-3 Equipment list

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Network analyzer	Agilent	E5071C	2024/07/31	2025/07/31
Measurement software	WiSPEC	WDA/WPA	2024/07/27	2025/07/27
Multi axis positioning system (Theta)	WiSPEC	FFC-744-Theta	2024/07/27	2025/07/27
Multi axis positioning system (Phi)	WiSPEC	FFC-744-Phi	2024/07/27	2025/07/27
Positioning controller	WiSPEC	ARC-2020	2024/07/27	2025/07/27
Horn antenna	WiSPEC	DRH-0408	2024/07/27	2025/07/27
Cable 30cm 18 GHz	Mini-Circuit	141-12NM+	2024/07/27	2025/07/27
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Cable 30cm 18 GHz	Mini-Circuit	141-12NM+	2024/07/27	2025/07/27
Jump cable 40 cm 18 GHz	Huber+Suhner, Inc.	Mini-Band R16	2024/07/27	2025/07/27
Cable 1.2m 18 GHz	Micro-Coax	UFB197C-1-0480-000000	2024/07/27	2025/07/27
Cable 2.7m 18 GHz	Micro-Coax	UFA147B-0-1080-380300	2024/07/27	2025/07/27
Cable 6m 18 GHz	Micro-Coax	UFB197C-1-2400-000000	2024/07/27	2025/07/27
Cable 2m 18 GHz	Micro-Coax	UFA210B-2-0800-70U70U	2024/07/27	2025/07/27

Antenna Information

1A Antenna Part Number	1B Manufacturer	1C Antenna Type	1D Cable Assembly Part Number and Information	Freq Range MHz	1E * Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G Max VSWR	1H Cable Loss (dB)
(P/N: WA-P-LE-02-370) Main Antenna	INPAQ	PIFA	50 ohm Coaxial length: 225 mm diameter: 1.13 mm LLS Cable Connector : I-PEX-4L	2400-2483.5	1.83	2.45	3.00	0.62
				5150-5250	2.56	3.49	3.00	0.93
				5250-5350	2.61	3.55	3.00	0.94
				5470-5725	3.20	4.16	3.00	0.96
				5725-5850	3.58	4.55	3.00	0.97
				5850-5895	3.58	4.56	3.00	0.98
				5925-6425	3.67	4.69	3.00	1.02
				6425-6525	3.40	4.44	3.00	1.04
				6525-6875	3.72	4.79	3.00	1.07
				6875-7125	3.72	4.82	3.00	1.10
(P/N: WA-P-LE-01-096) Aux Antenna	INPAQ	PIFA	50 ohm Coaxial length: 473 mm diameter: 1.13 mm LLS Cable Connector : I-PEX-4L	2400-2483.5	2.08	3.39	3.00	1.31
				5150-5250	2.65	4.61	3.00	1.96
				5250-5350	2.73	4.70	3.00	1.97
				5470-5725	2.98	4.99	3.00	2.01
				5725-5850	3.43	5.48	3.00	2.05
				5850-5895	3.48	5.54	3.00	2.06
				5925-6425	3.74	5.89	3.00	2.15
				6425-6525	3.00	5.19	3.00	2.19
				6525-6875	3.06	5.30	3.00	2.24
				6875-7125	3.14	5.45	3.00	2.31

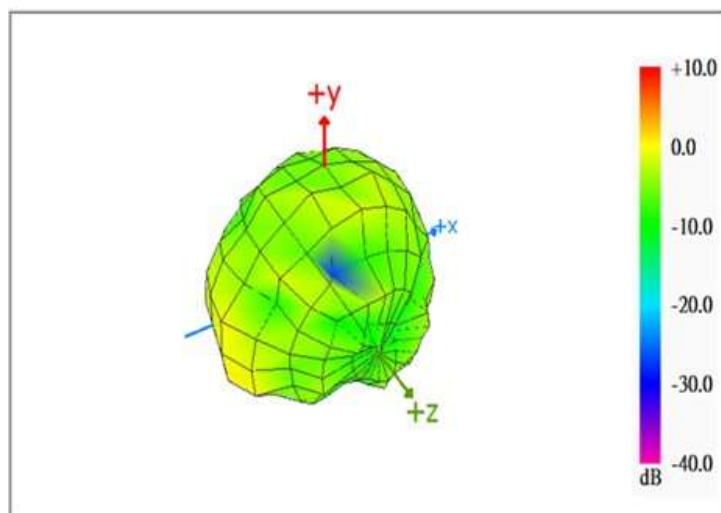
- 3D Antenna Peak Gain required being test in system basis.

4 Radiation characteristics of antenna loaded in Host Platform

Main Antenna

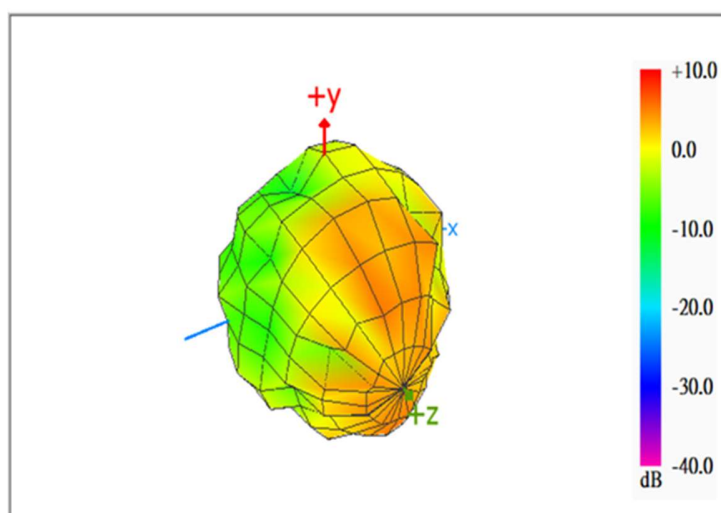
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.83



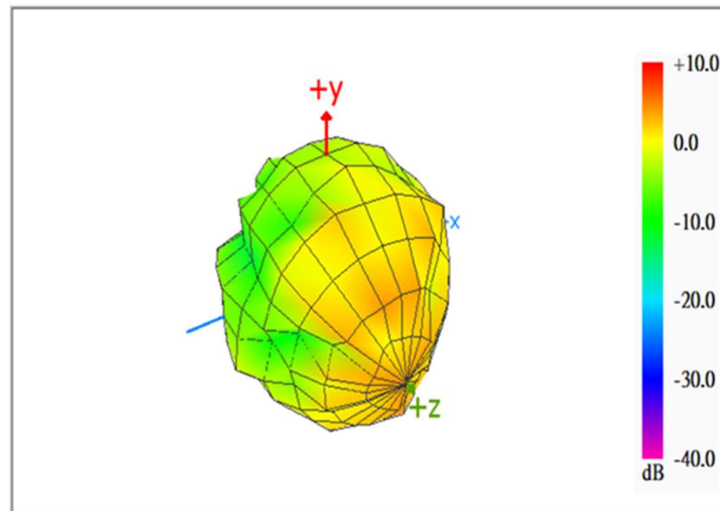
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.56



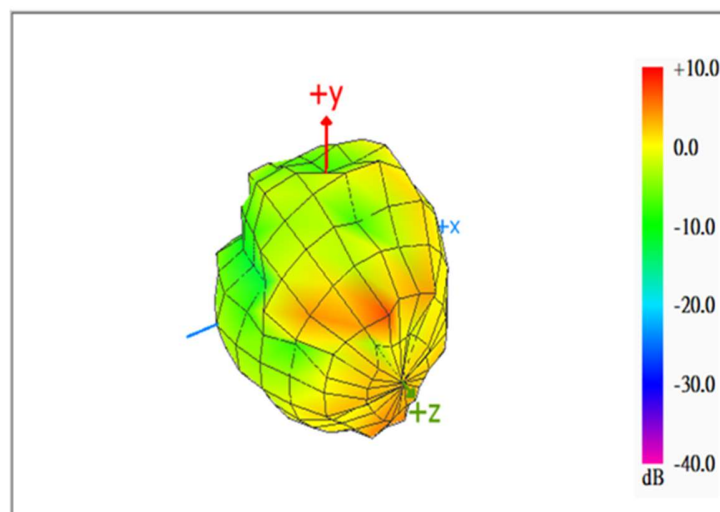
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.61



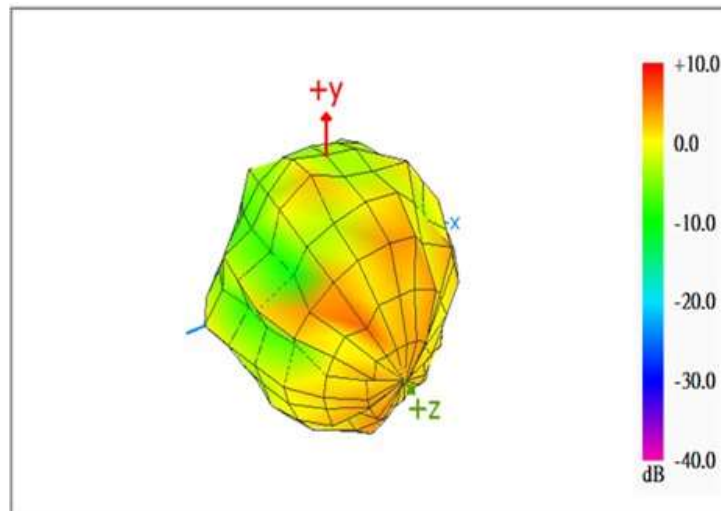
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.20



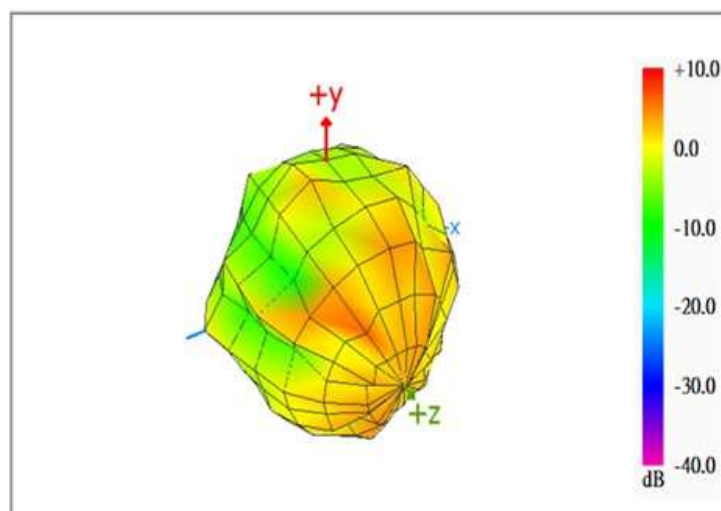
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.58



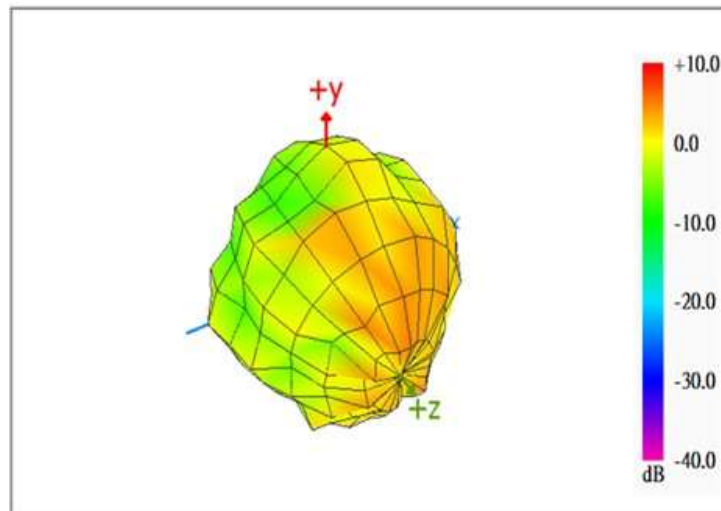
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.58



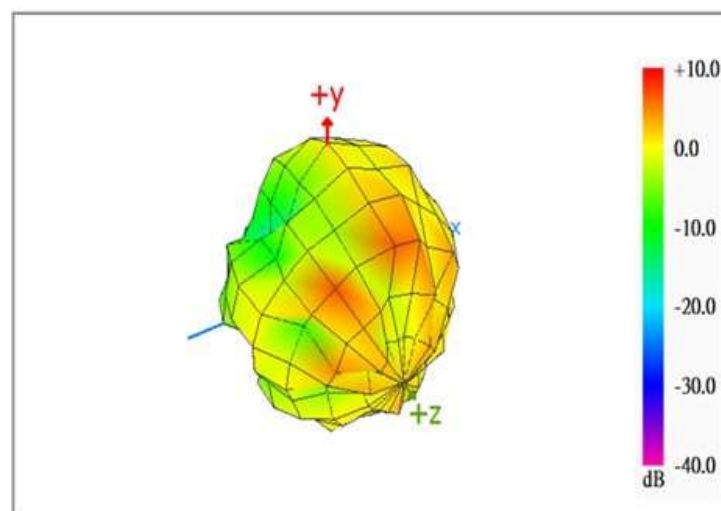
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.67



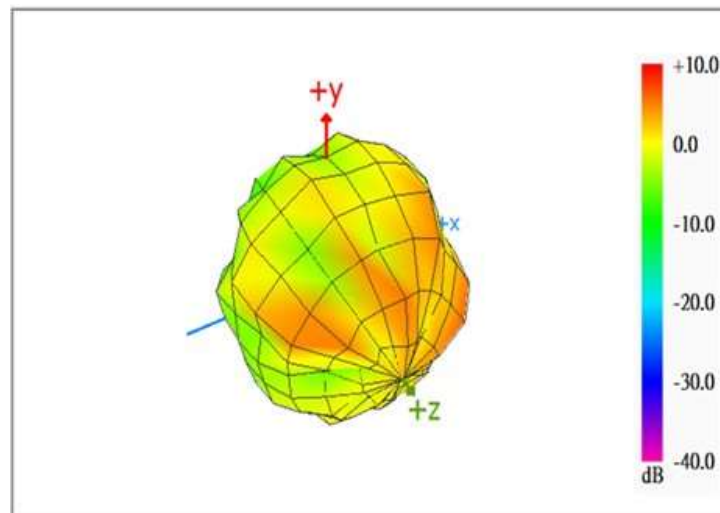
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.40



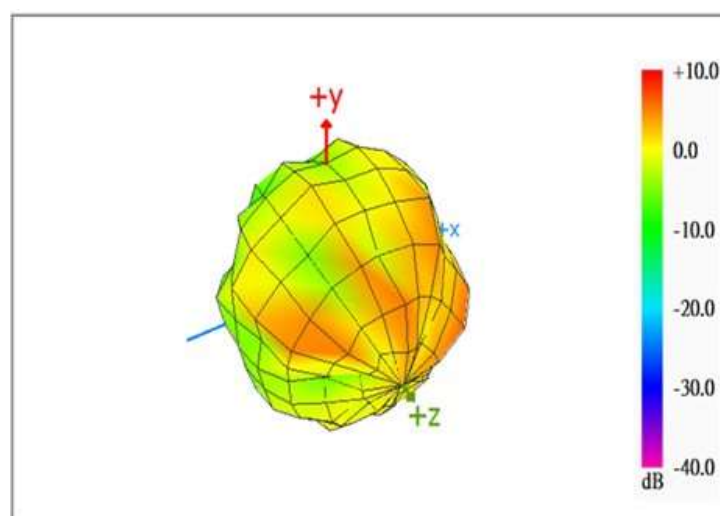
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.72



Max Antenna 3D Radiation Pattern 6875-7125 MHz

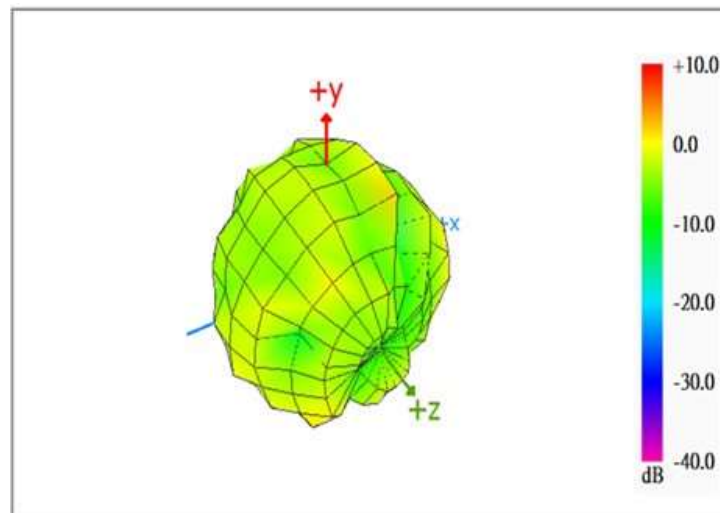
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.72



Auxiliary Antenna

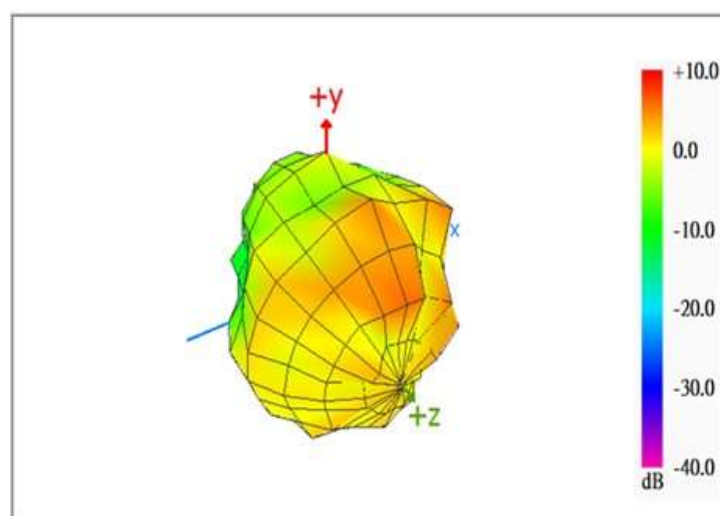
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.08



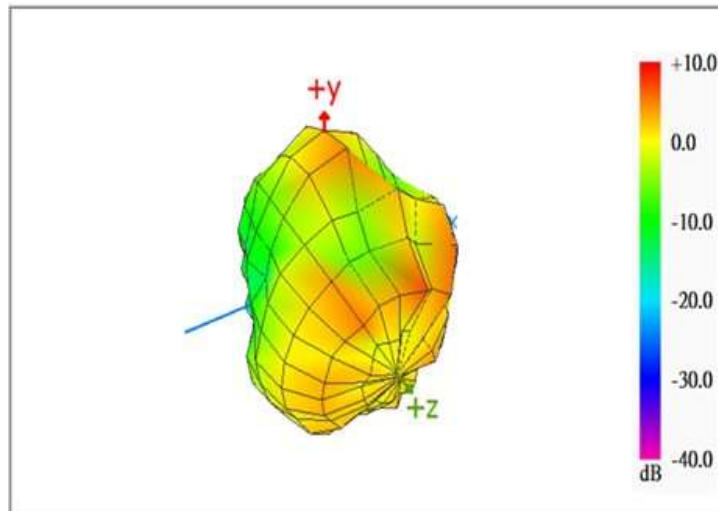
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.65



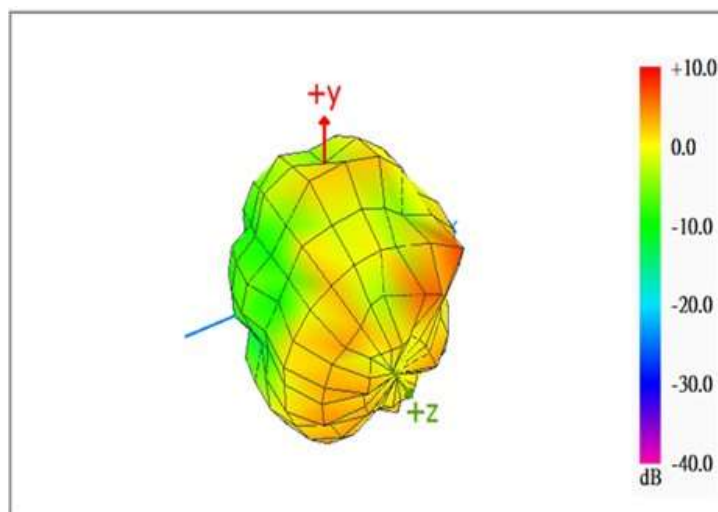
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.73



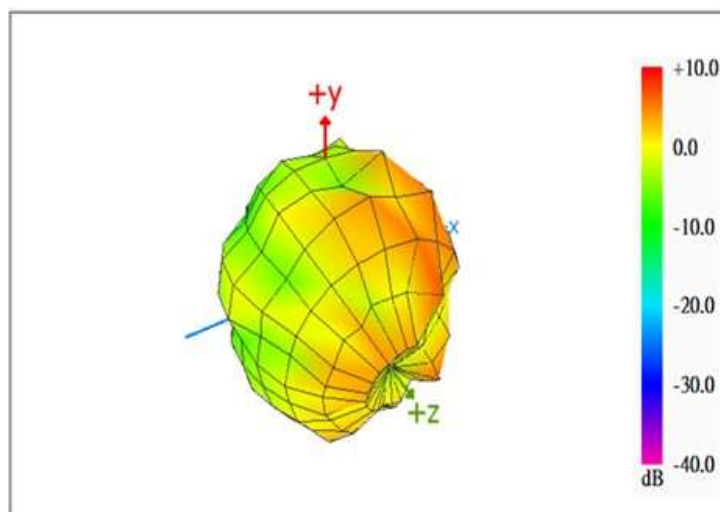
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.98



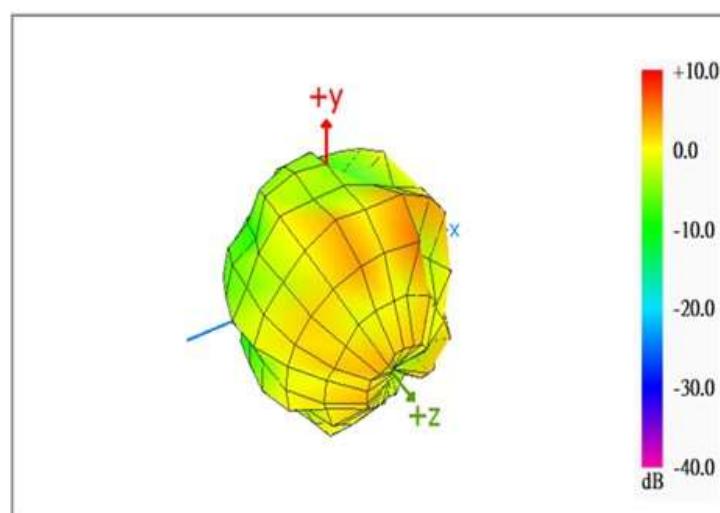
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.43



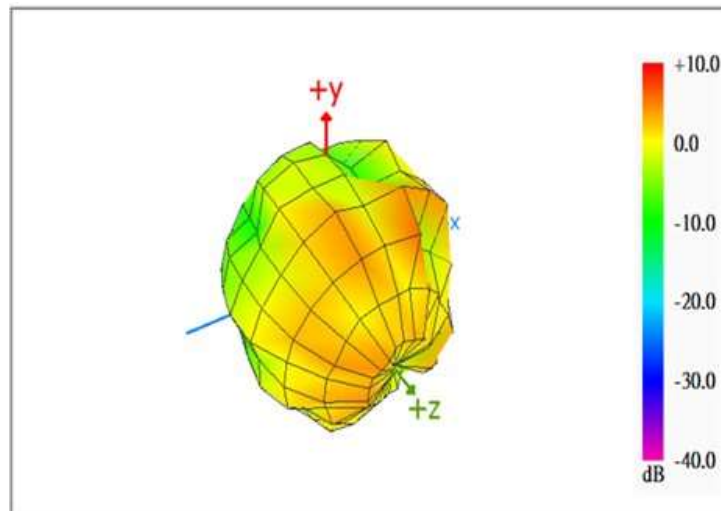
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.48



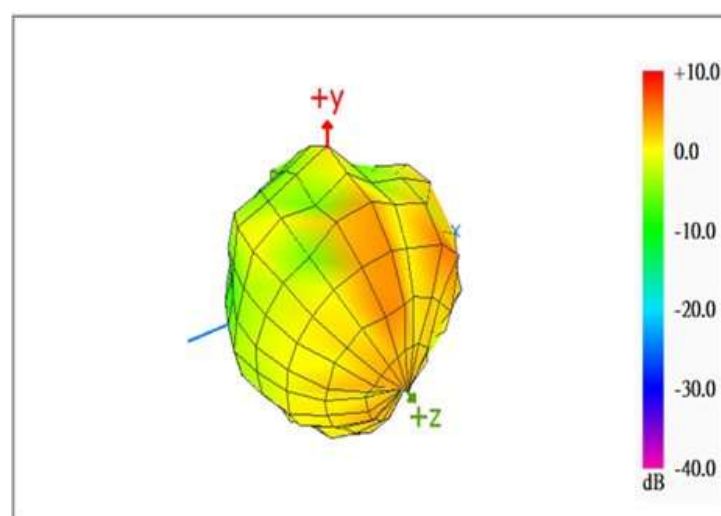
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.74



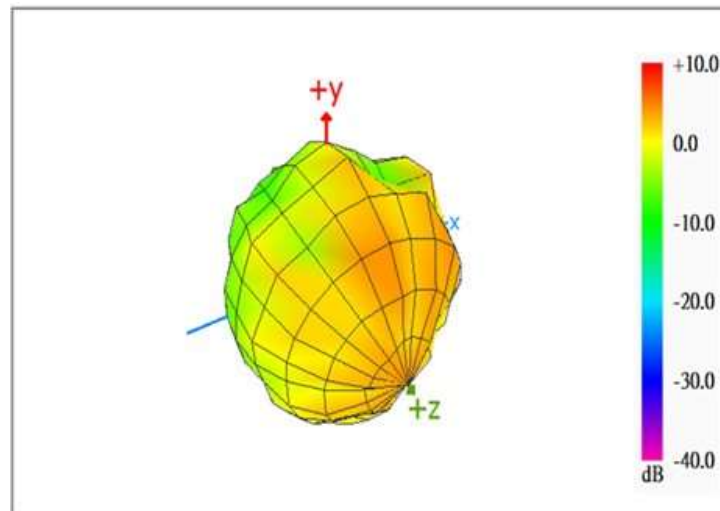
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.00



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.06



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.14

