ANTENNA INFORMATION

OEM		Acer
ODM		Quanta
Platform model name		Cello_ARU (Z9Z)
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)	
	ISED (1g)	
	ISED (10g)	

Antenna manufacturer	Company name	Galtronics Corporation
	Address	#B214, Innoplex Bldg.,306, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 Korea
Test location	Company name	Galtronics Corporation
	Address	#B214, Innoplex Bldg.,306, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 Korea
Test Personnel	Name(Full name)	Martin.Kim(BUMJIN-KIM)
	E-mail	martin.kim@galtronics.com
	Tel/Mobile	+82-01-4016-5392
Testing date		November 18th, 2024

Antenna Part number	Main & Aux	2116610-08144
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	0.58	2.08	1.78	2.22	2.41	2.64	1.77	2.73	2.61	2.52
Aux	2.02	1.49	2.44	1.42	2.47	2.26	2.65	2.12	2.29	2.65

Cable Assembly Part Number and Information

	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	SY113/50-001	442	1.13	50	MHF-B13L-N-01
Aux	SY113/50-021	252	1.13	50	MHF-B13L-N-01

* 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

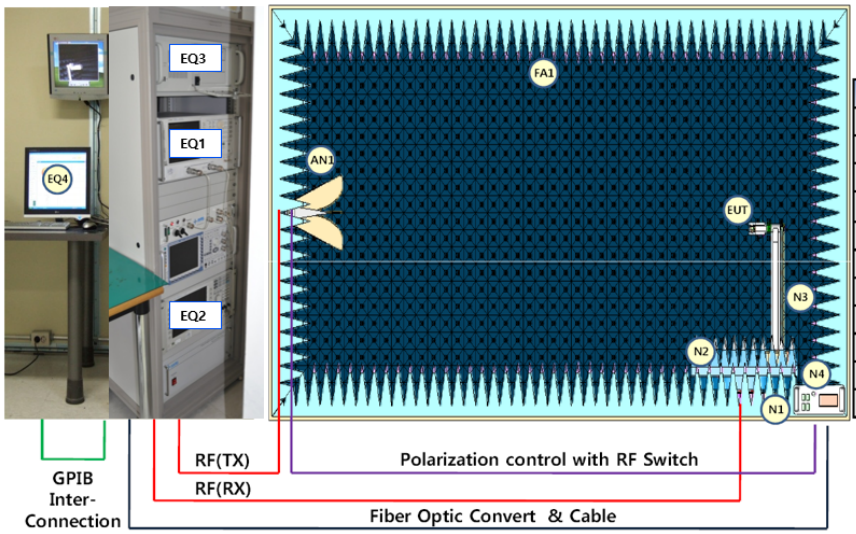
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2024.11.18

3. Test & System Description

3.1 Measurement Method and System

This test report is prepared for Travel Mate Cello_ARU (Z9Z) 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	-	2024-11-01	2025-11-01
Horn Antenna	HA-07M18G-NF	MTG	-	2024-02-11	2025-02-11
Network Analyzer	N5230A	AGILENT	-	2024-02-11	2025-02-11
Dual-Ridged Horn Antenna	DRH-020-180 2~18GHz	MTG	-	2024-02-11	2025-02-11
Horn Antenna	BBHA 9120 LF(A) 290 650MHz~6GHz	MTG	-	2024-02-11	2025-02-11
Measurement SW	-	MTG	VWM2.1	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	-	2024-02-11	2025-02-11
Low Loss RF Cable	RCBL-M03 DC~18GHz	MTG	-	2024-11-01	2025-01-01

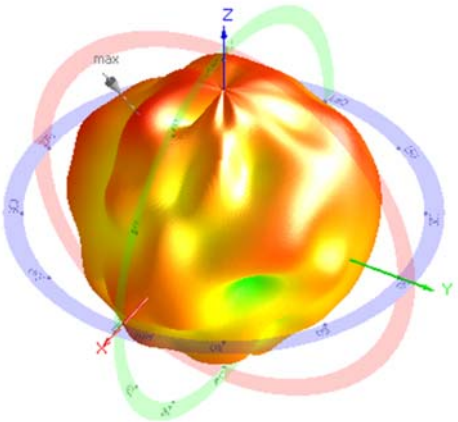
Rev.	Measurement	Measurement Data	Sign
3.8.05 Rev02	Galtronics	2024-11-18	

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

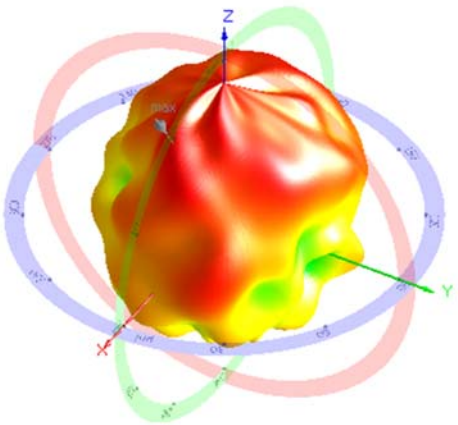
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	0.58



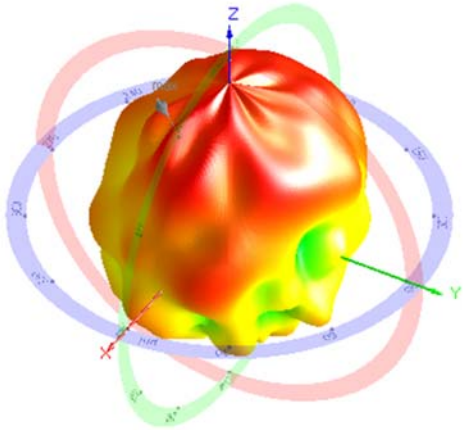
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.08



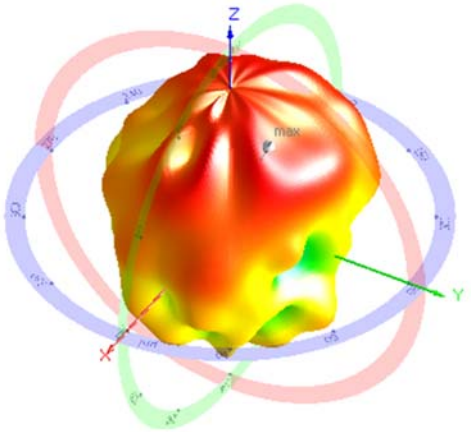
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.78



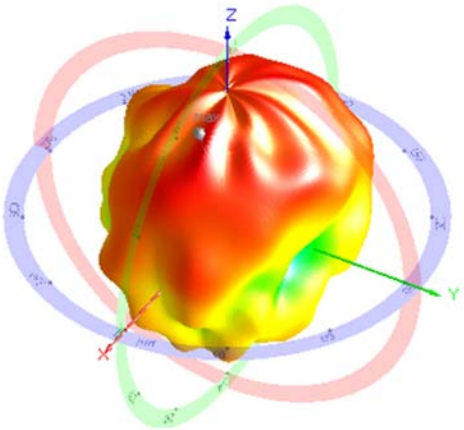
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.22



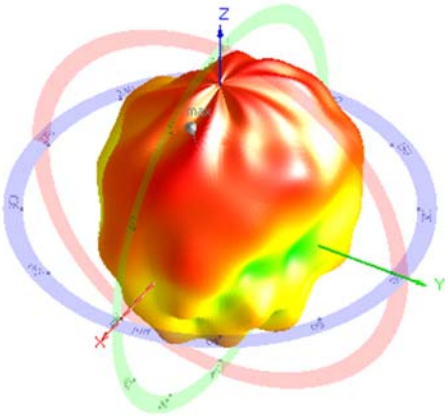
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.41



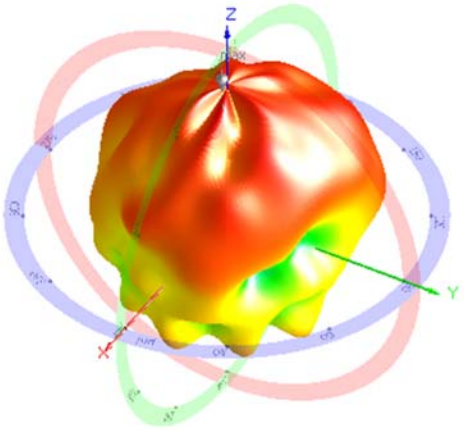
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.64



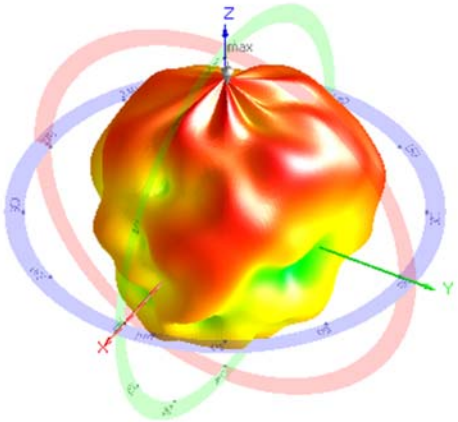
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	1.77



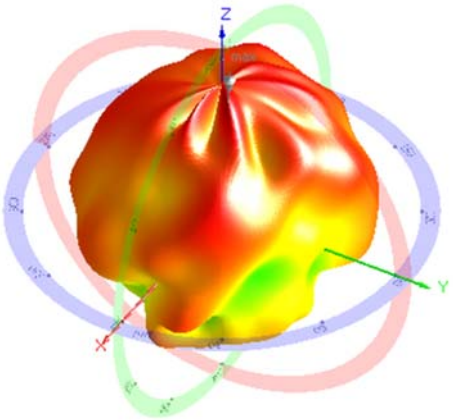
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	2.73



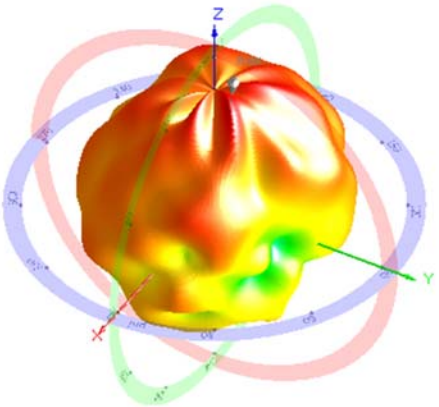
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	2.61



Max Antenna 3D Radiation Pattern 6875-7125 MHz

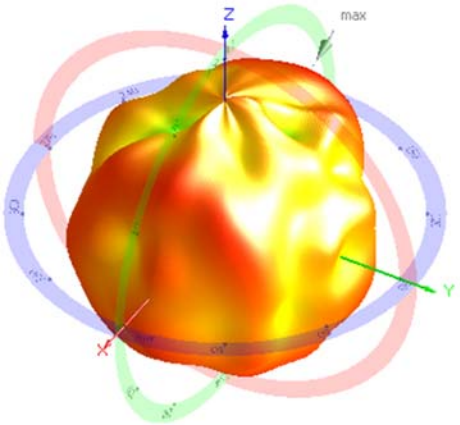
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.52



Auxiliary Antenna

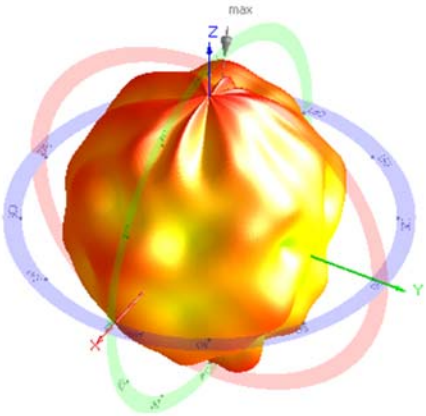
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.02



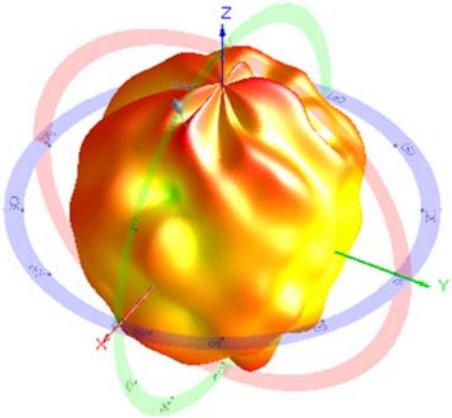
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.49



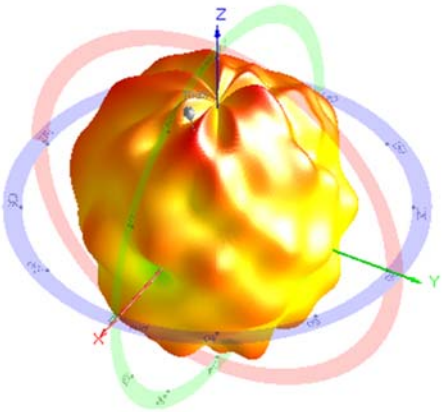
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.44



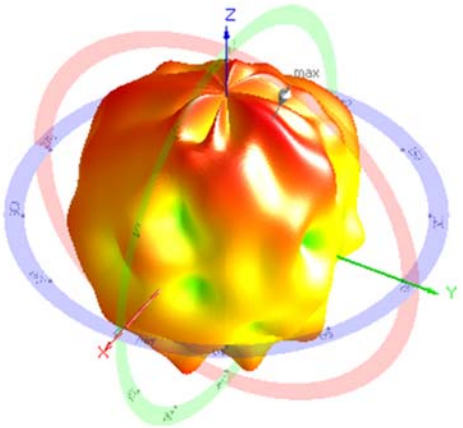
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	1.42



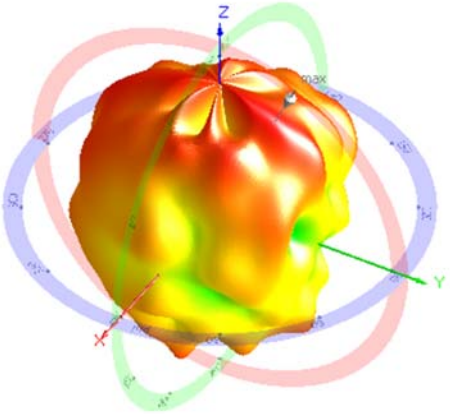
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.47



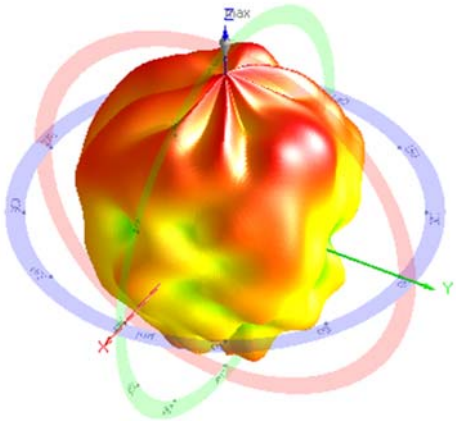
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.26



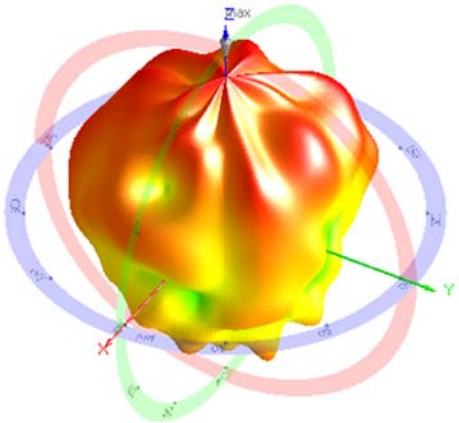
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	2.65



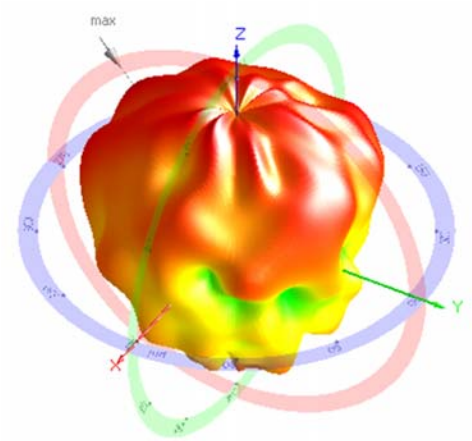
Max Antenna 3D Radiation Pattern 6425-6525 MHz

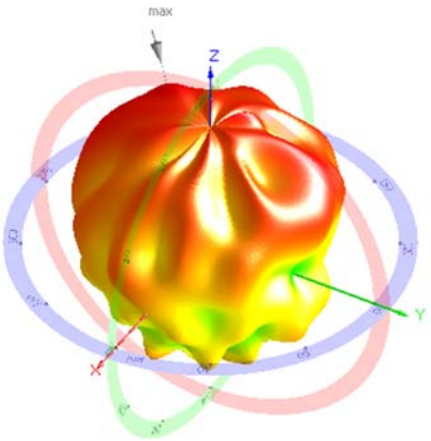
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	2.12



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	2.29



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.65