

Antenna Test Report

Report No.: TEOT2312000836E4

Applicant Name: ZEROPLUS
Manufacturer Name: ZEROPLUS

Product Name: C21052
Model Number: Doubles Pocket Egg 4th Edition

Measurements performed at
SGS Taiwan Ltd.
Hwaya District, Taiwan

Issued Date: January 03, 2024

	Name	Date & Signature	Distribution
Prepared by:	Nandi Chen Sr. Engineer	<i>Nandi Chen</i> January 03, 2024	
Approved by:	Shawn Yen Supervisor	<i>Shawn Yen</i> January 03, 2024	

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Revision Version

Report Number	Revision	Date	Memo
TEOT2312000836E4	00	2024/01/03	Initial creation of test report.

This test report contains a reference to the previous version test report that it replaces.

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Measurement System Information

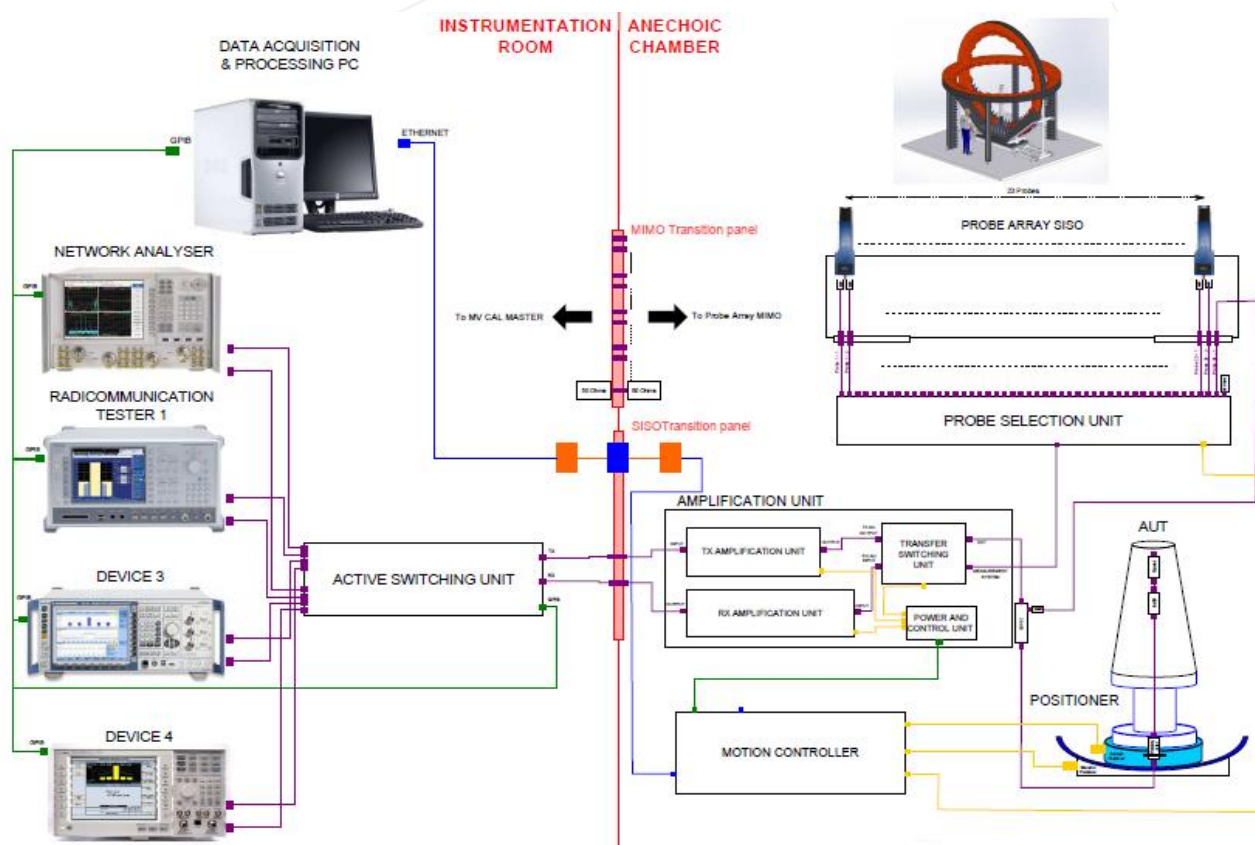
General Information

Testing Condition:

- Temperature: $22 \pm 3^\circ\text{C}$
- Humidity: $< 80\%$

Measurement Facility:

- Measurement Chamber: MVG 3D fully anechoic chamber and its measuring system (Stargate-24-L)
- Base Station Simulator: Anritsu MT8820C (or R&S CMU200)
- Network Analyzer: Agilent E5071C

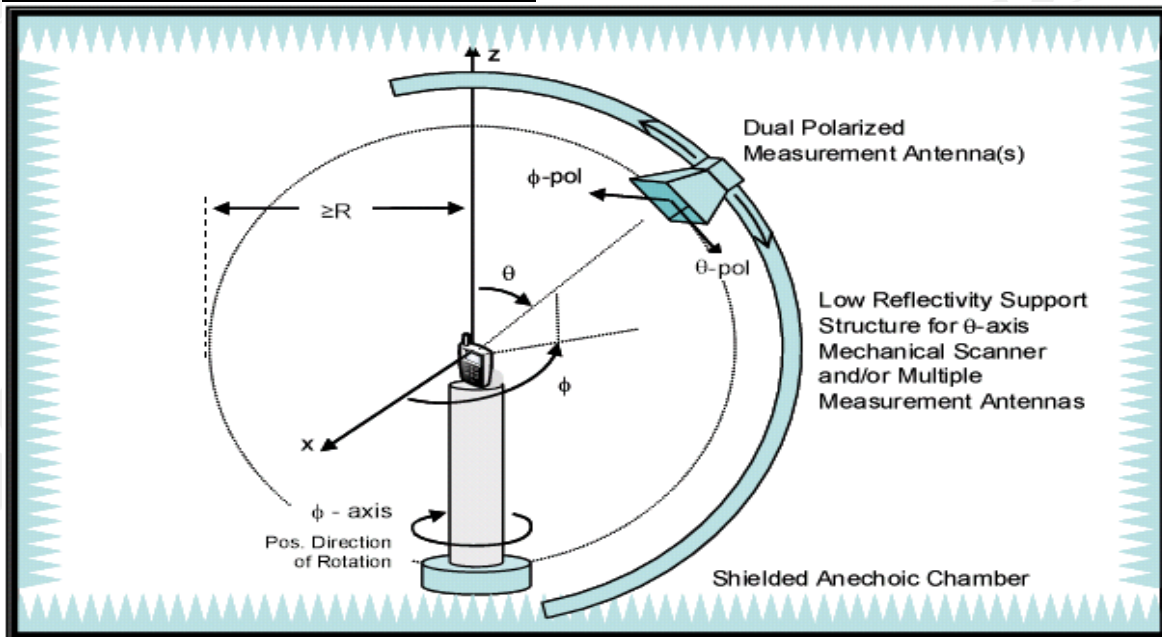


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Measurements are performed in a MVG **Stargate-24-L** with the StarAct interface for a base station simulator. The **Stargate-24-L** has 23 probe antennas mounted with equal spacing on a circular arch. Electronic switching of the probe antennas provides outstanding measurement speed. The geometry of the setup, with only a Styrofoam column within 1.6 meters of the EUT, ensures minimum interference and low ripple on the measured radiation patterns. The DUT is placed on top of the pedestal, in the center of the system.

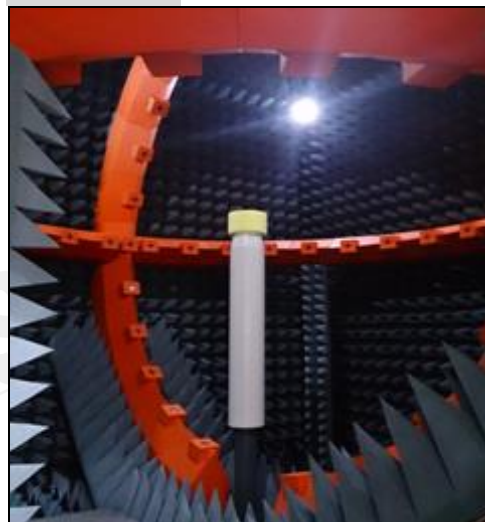
Typical Setup for MVG Stargate-24-L:



Instruments View



Inside View



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Testing Laboratory: Identification of the Responsible Test Laboratory.● **OTA Laboratory:****SGS Taiwan Ltd. Wireless Laboratory**

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803.

Telephone: +886 2 2299 3279

Fax: +886 2 2298 0488

Internet: <http://www.tw.sgs.com>

● **Testing Location:**

No. 2, Keji 1st Rd., Hwaya Technology Park, Guishan District, Taoyuan City, Taiwan 33383.

Details of Applicant:

Applicant's name:	ZEROPLUS
Applicant's address:	3F, No.121, Jian 8th Rd, Chung Ho District
Contact person:	Joe
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Fax:	N/A
E-mail:	joecheng0815@zeroplus.com.tw

Details of Manufacturer:

Applicant's name:	ZEROPLUS
Applicant's address:	3F, No.121, Jian 8th Rd, Chung Ho District
Contact person:	Joe
Telephone:	+886-2-66202225 Ext.309
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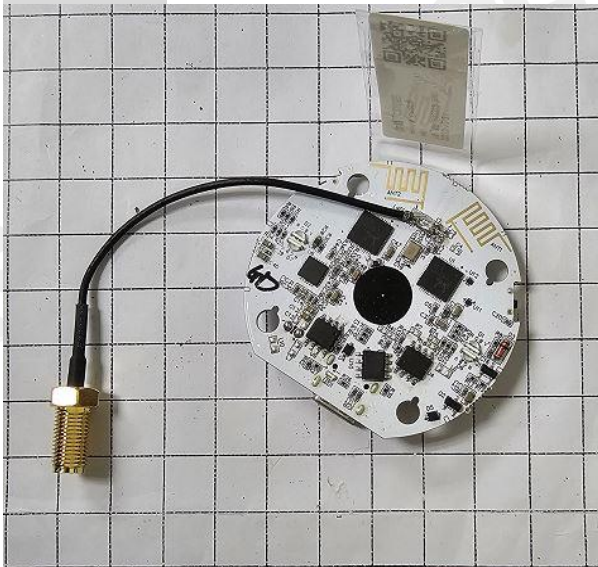
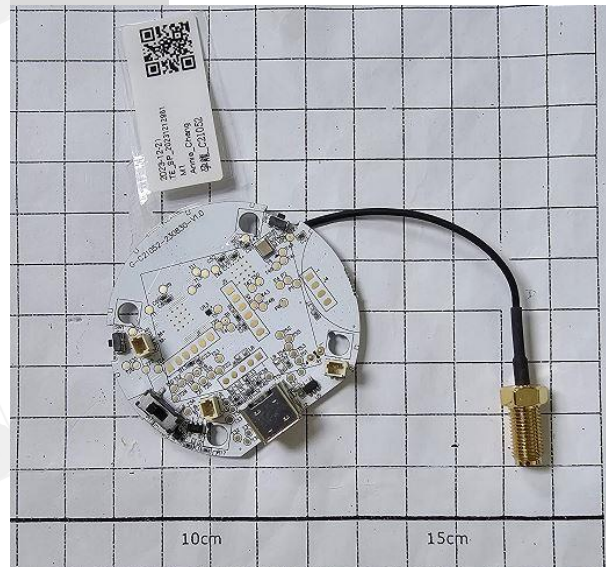
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Details of EUT:

Device Description:	C21052
Device Manufacturer:	ZEROPLUS
Device Model:	Doubles Pocket Egg 4th Edition
Hardware Version:	N/A
Software Version:	N/A
Frequency Range:	2400MHz ~ 2500MHz Step size: 10MHz
Antenna Type:	PCB

Duration of Tests:

Sample Receive Date:	2023-12-21
Test Starting Date:	2023-12-27
Test Ending Date:	2023-12-27
Report Issued Date:	2024-01-03

Photographs of EUT:**Front View****Back View**

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List of Equipment

Equipment Summary Sheet

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Universal Radio Communication tester	Anritsu	MT8820C	2023/10/18	2024/10/17
Network Analyzer	Agilent	E5071C	2023/01/16	2024/01/15
Sleeve Dipole	MVG	SD740	2022/01/07	2025/01/06
Dual Ridge Horn	MVG	SH800	2023/12/14	2024/12/13
Stargate-24-L probe array	MVG	Stargate-24-L	2023/08/16	2024/08/15
Measurement software	MVG	SPM V1.9	N/A	N/A

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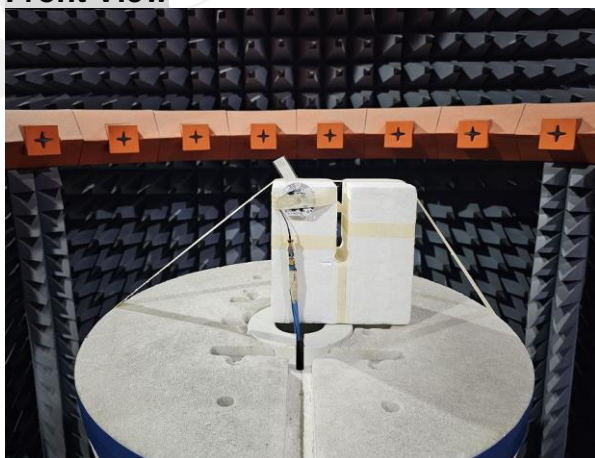
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Antenna Gain and Efficiency

Doubles Pocket Egg 4th Edition			
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)	Average Gain (dBi)
2400.00	-3.25	23.92%	-6.21
2410.00	-3.05	24.70%	-6.07
2420.00	-3.14	23.92%	-6.21
2430.00	-2.89	25.35%	-5.96
2440.00	-3.02	24.85%	-6.05
2450.00	-2.69	25.50%	-5.93
2460.00	-2.87	23.76%	-6.24
2470.00	-2.85	23.76%	-6.24
2480.00	-3.04	22.24%	-6.53
2490.00	-2.90	21.97%	-6.58
2500.00	-3.39	19.58%	-7.08

Test Setup

Front View



Side View

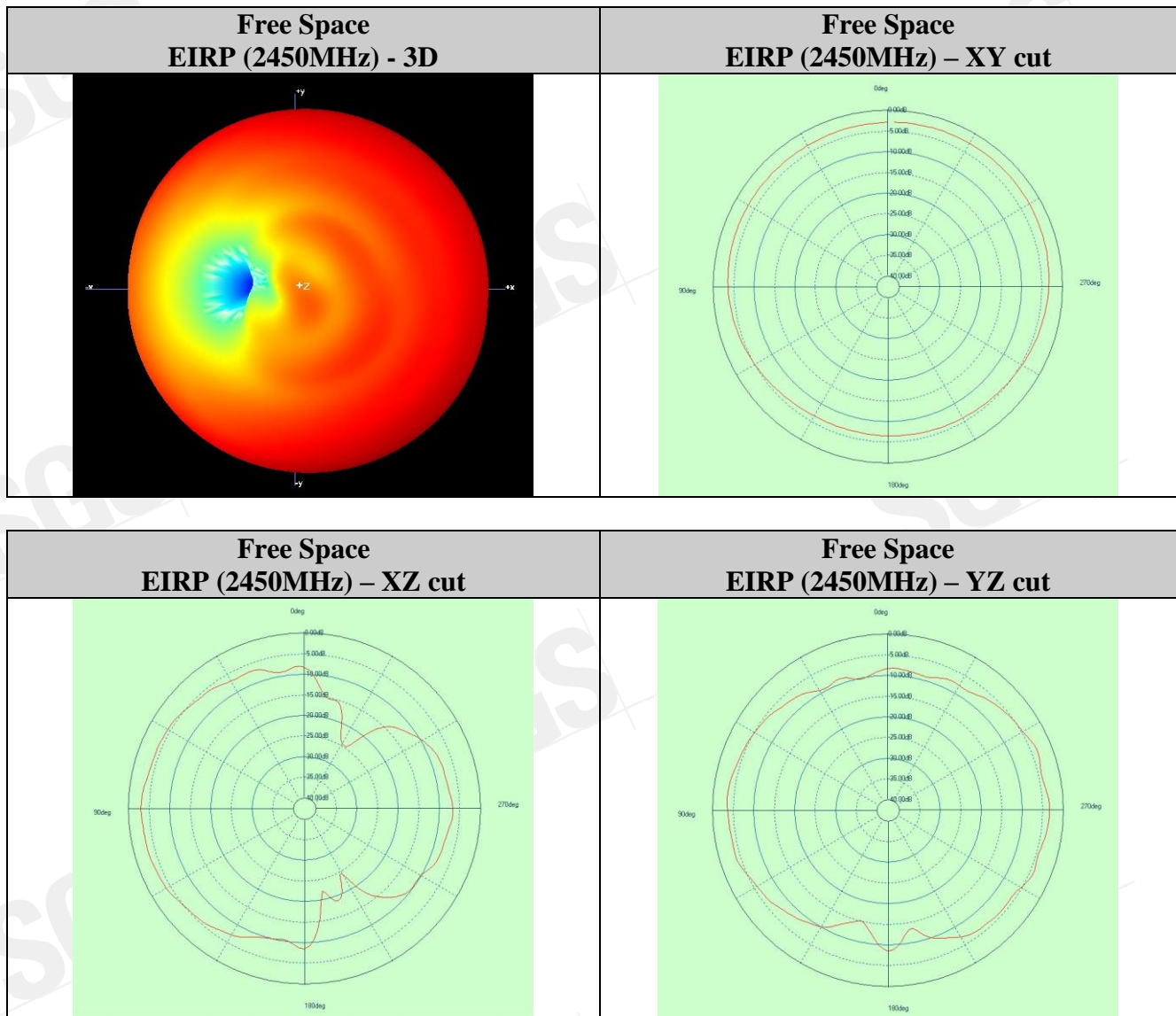


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Antenna 3D Plot Matrix

All plots in this section show the total EIRP ($EIRP_{\theta} + EIRP_{\phi}$) with the +x-axis pointing right, +y-axis up, and +z-axis pointing out of the page.



End of Report

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