

Antenna Test Report

Report No.: EO/2013/70029

Test Plan: Non-compliance with ISO17025

Applicant Name: ARESON Technology Corp.

Manufacturer Name: Dongguan Hong Sheng Electronic Corp.

Product Name: 2.4GHz Wireless mouse

Model Number: Meadline type antenna 9

Measurements performed at

SGS Taiwan Ltd.

Taipei, Taiwan

Issued Date: July 22, 2013

	Name	Date & Signature	Distribution
Prepared by:	Dragon Wu Supervisor	<i>Dragon Wu</i> July 22, 2013	
Approved by:	Nick Hsu Asst. Manager	<i>Nick Hsu</i> July 22, 2013	

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Measurement System Information

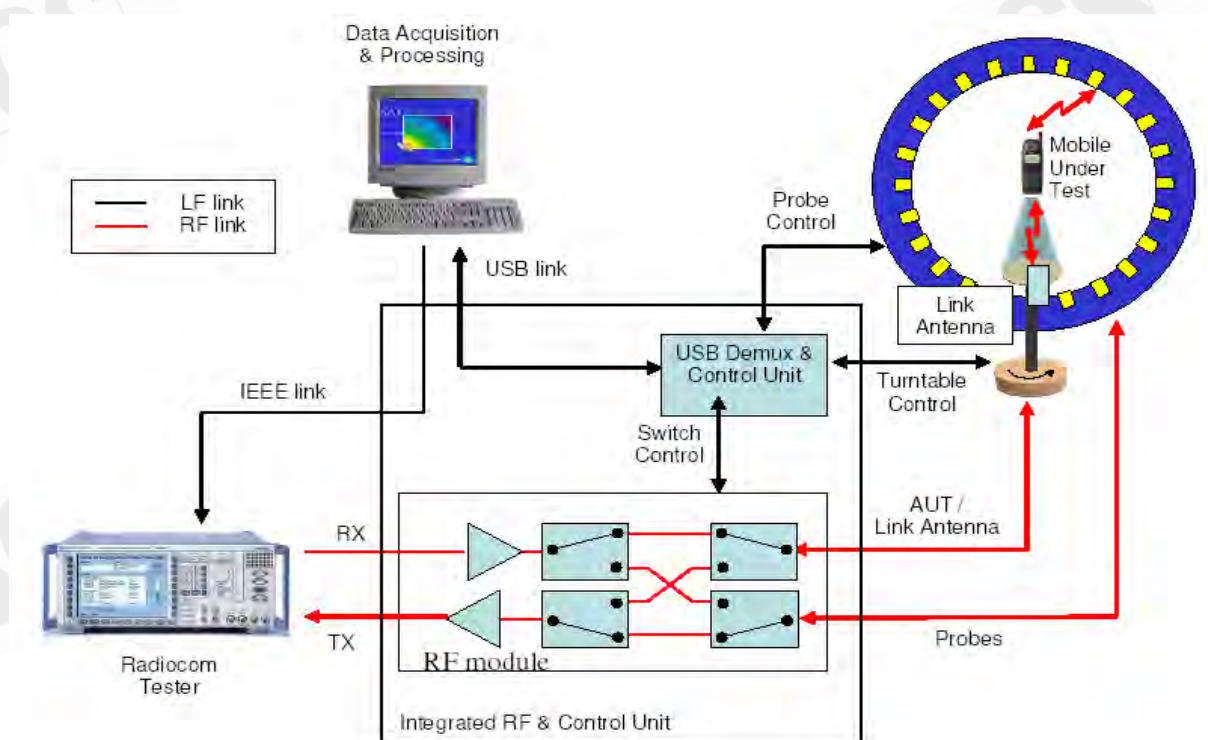
General Information

Testing Condition:

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

Measurement Facility:

- Measurement Chamber: Satimo 3D fully anechoic chamber and its measuring system (Stargate-24)
- Base Station Simulator: CMU200 (or Agilent E5515C)
- Network Analyzer: Agilent E5071C



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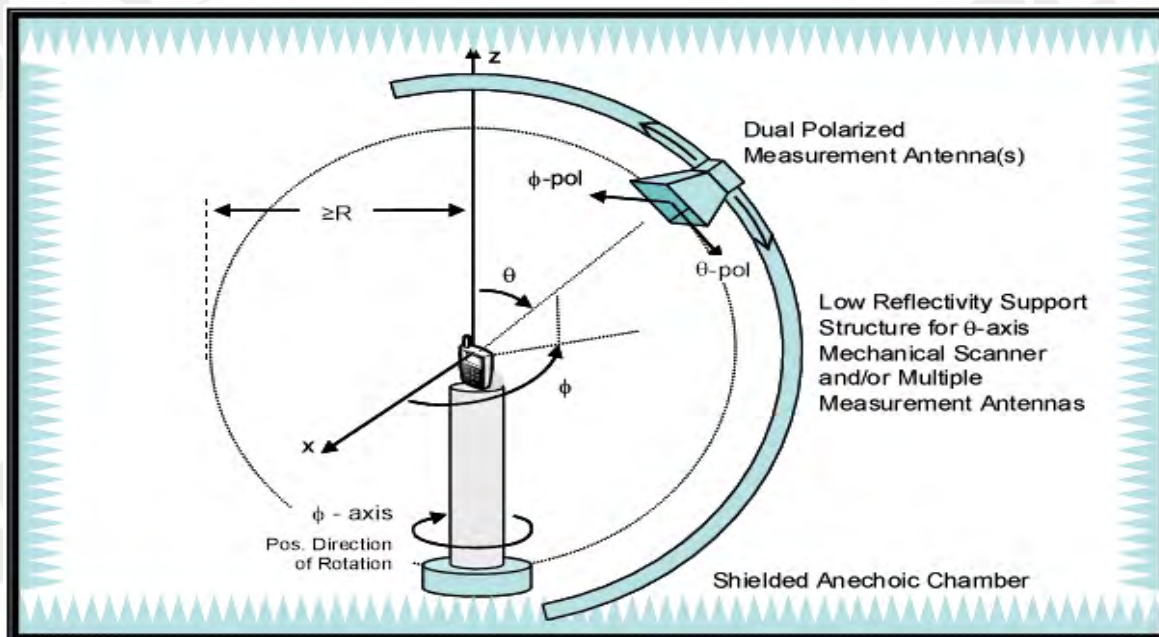
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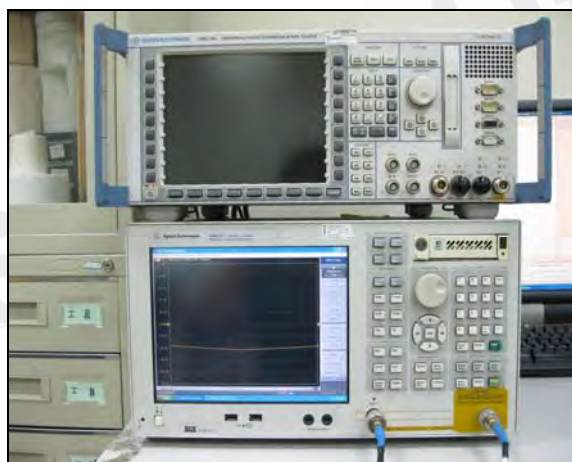
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Measurements are performed in a Satimo **Stargate-24** with the StarAct interface for a base station simulator. The **Stargate-24** has 23 probe antennas mounted with equal spacing on a circular arch. Electronic switching of the probe antennas provides outstanding measurement speed. The geometry of the setup, with only a Styrofoam column within 1.2 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.

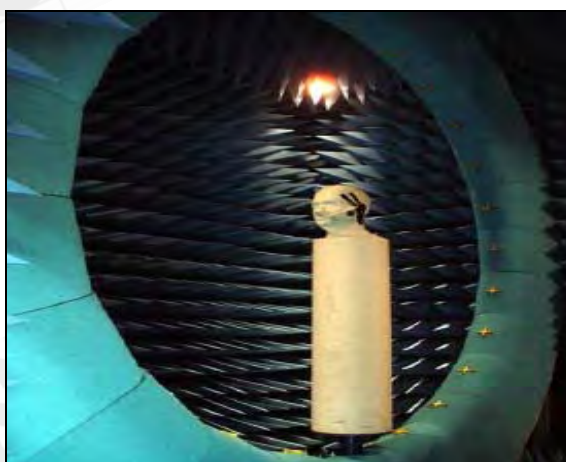
Typical Setup for Satimo Stargate-24:



Instruments View



Inside View



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Testing Laboratory: Identification of the Responsible Test Laboratory.

- OTA Laboratory:**
SGS Taiwan Ltd. Electronics & Communication 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.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803.

Details of Applicant:

Applicant's name:	ARESON Technology Corp.
Applicant's address:	11F, No. 646, Sec. 5, Chongxin Rd., Sanchung Dist., New Taipei City 241, Taiwan (R.O.C.)
Contact person:	Kevin 許寶樹
Telephone:	2999-0505#321
Fax:	2999-0606
E-mail:	kevin@areson.com.tw

Details of Manufacturer:

Manufacturer's name:	Dongguan Hong Sheng Electronic Corp.
Manufacturer's address:	No.28, Sha-Wu S.Ave., Sha-Wu, Tang-Xia, Dong-Guan, Guan-Dong China 523725
Contact person:	Kevin 許寶樹
Telephone:	2999-0505
Fax:	2999-0606
E-mail:	kevin@areson.com.tw

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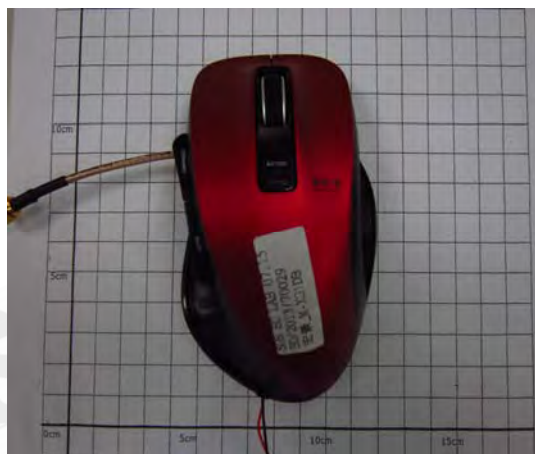
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Details of EUT:

Device Description:	2.4GHz Wireless mouse
Device Manufacturer:	ARESON Technology Corp.
Device Model:	Meadline type antenna 9
Hardware Version:	01
Software Version:	MA430D
IMEI:	N/A
FCC ID:	N/A
Frequency Range:	2400MHz ~ 2500MHz Step size: 10MHz
Antenna Type:	Internal antenna

Duration of Tests:

Sample Receive Date:	2013-07-15
Test Starting Date:	2013-07-17
Test Ending Date:	2013-07-17
Report Issued Date:	2013-07-22

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	Rohde & Schwarz	CMU200	2013/04/10	2014/04/10
Network Analyzer	Agilent	E5071C	2013/05/20	2014/05/20
Dual Ridge Horn	Satimo	SH800	2013/06/25	2014/06/25
Stargate-24 probe array	Satimo	Stargate-24	2012/09/22	2013/09/22
Measurement software	Satimo	SPM 1.3.2.1	N/A	N/A

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Antenna Gain and Efficiency

Meadline type antenna 9

Frequency	Peak. dBi	Efficiency	Average . dBi
2400000000	0.19	28.56%	-5.44
2410000000	-0.88	24.64%	-6.08
2420000000	-0.97	24.87%	-6.04
2430000000	0.38	29.11%	-5.36
2440000000	0.61	28.68%	-5.42
2450000000	0.10	26.04%	-5.84
2460000000	-0.33	27.85%	-5.55
2470000000	0.49	32.30%	-4.91
2480000000	0.45	31.24%	-5.05
2490000000	0.21	28.38%	-5.47
2500000000	0.22	30.92%	-5.10

Test Setup

Free Space - Front View



Free Space - Side View



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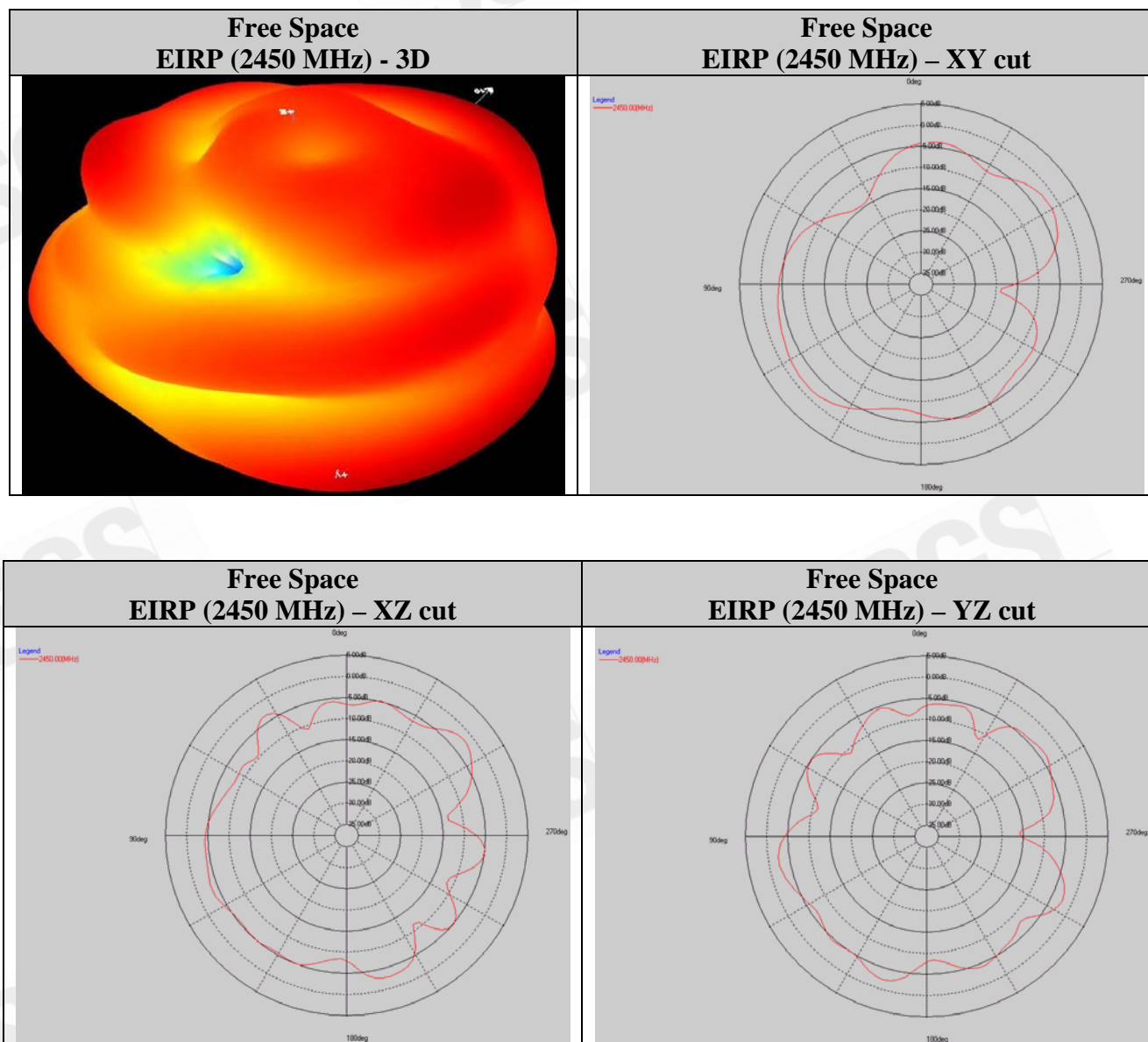
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Antenna 3D Plot Matrix

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



End of Report

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