

# Logitech

## Antenna Under Test (AUT)

### Report

**Model Name:** Stradale RX

**Equipment Type:** Wireless Mic Receiver

**Manufacturer:** Logitech

**Test Location:** 4700 NW Camas Meadows Drive, Camas, WA, 98671,  
USA

**Tested by:** Nikhil Nilakantan

**Report Date:** 02/09/2023

# Report Release History

Report version	Description	Date Issued
Regera AUT Report	Original release	2023/02/09

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## 1. EUT Antenna Information

- 1) Antenna Material : On board antenna
- 2) Antenna Type : IFA
- 3) Antenna Dimension: 11.96 x 4.27mm
- 4) Operating Frequency : 2.4 GHz - 2.4835 GHz
- 5) Input Impedance : 50  $\Omega$
- 6) Standing-Wave Ratio : < 1.54

## 2. Measured Values and Calculation of Antenna Gains

Measure peak horizontal/vertical EIRP on each x-y, y-z, x-z plane. The highest measured values will be used to calculate the antenna peak gain.

Antenna Peak Gain (dBi) = Max EIRP(dBm) - Conducted Power (dBm)

Antenna 1:

Frequency	3D Max Peak EIRP (dBm)	Conducted Power (dBm)	Antenna Peak Gain (dBi)
2400	17.88	16.30	1.58
2440	17.31	16.24	1.07
2480	14.86	16.04	-1.17

**Test Date: 04/04/2022**

### 3. Conducted Power Measurement

#### 3.1 Test Setup



#### 3.2 Test Instruments

Description	Model No.	Serial No.	Last Calibration
Spectrum Analyzer Keysight	E5071C	MY46102197	10-Nov-2021

Note: The calibration interval of the above test instruments is 12 months

#### 3.3 Test Procedure

A spectrum analyzer was used to perform output power measurement, setting the detector to average and configuring EUT continuously transmitting power(unmodulated CW mode).

#### 3.4 Test Result of RF conducted Power

Frequency	Conducted Power (dBm)
2402	16.30
2440	16.24
2480	16.04

**Test Date: 04/04/2022**

## 4. 3D Radiation Pattern Measurement

### 4.1 Test Location

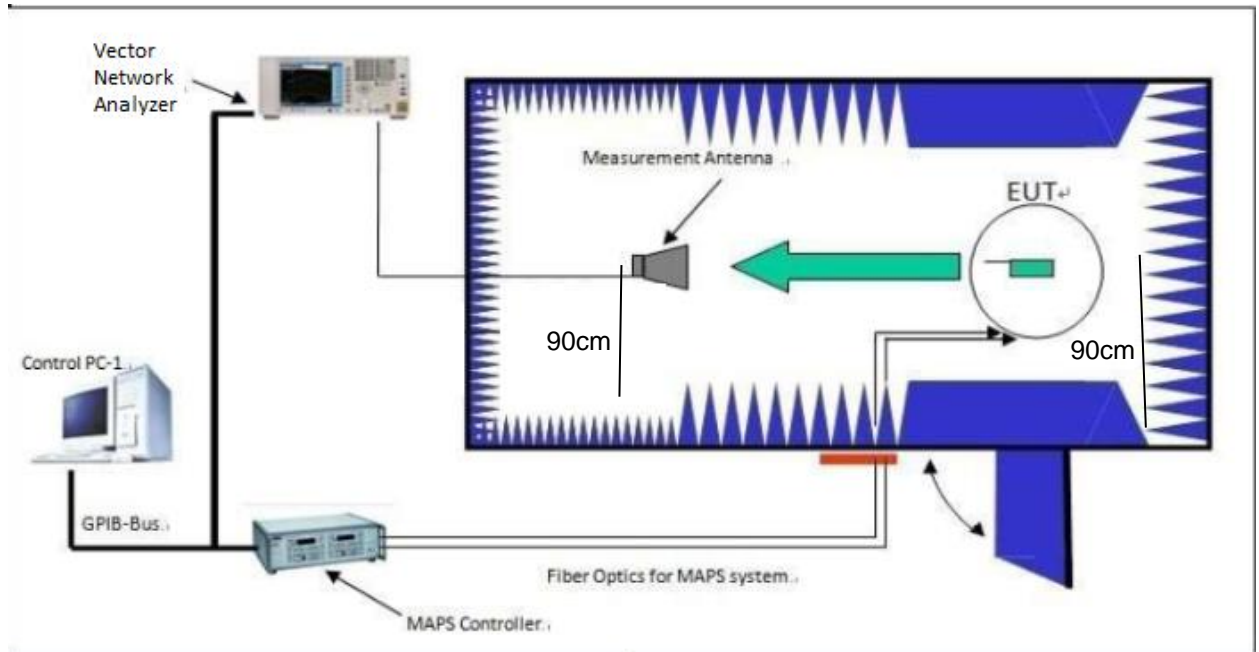
3D radiation pattern measurement in the anechoic chamber

### 4.2 Description of the anechoic chamber

Length: 2.52 m

Width: 1.42 m

Height: 1.88 m



### 4.3 Test Instruments

Description	Model No.	Serial No.	Last Calibration
Vector Network Analyzer Keysight	E5071C	MY46102197	11-10-2021
Horn Antenna ETS-Lindgren	3164-04	00060394	11-15-2021

Software ETS-Lindgren	EMQ-100	1091	N/A
Antenna Tower ETS-Lindgren	Included in AMS-8050	N/A	11-15-2021
Turntable ETS-Lindgren	Included in AMS-8050	N/A	11-15-2021
Controller ETS-Lindgren	2090	N/A	11-15-2021
Chamber ETS-Lindgren	AMS-8050	00043943	11-15-2021

Note: The calibration interval of the above test instruments is 12 months

#### 4.4 Test Procedure

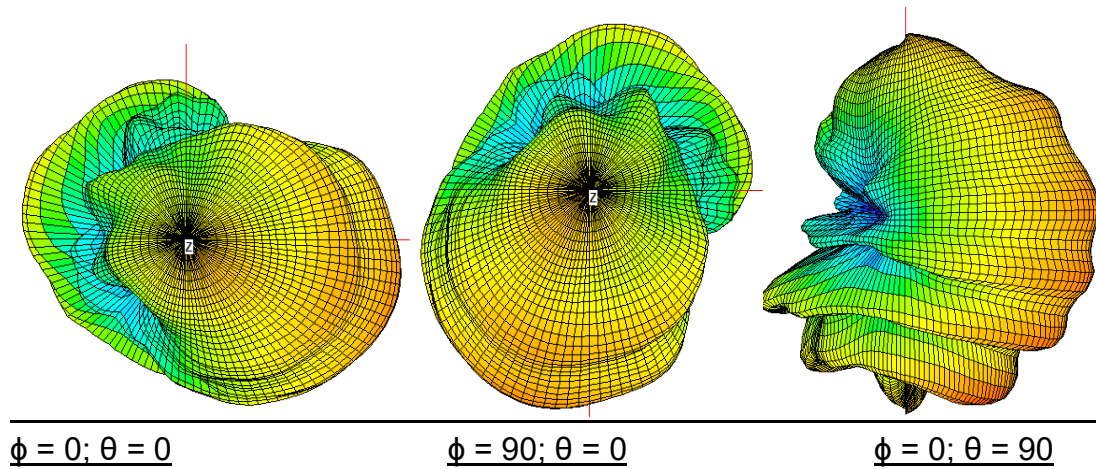
- i. Connect the EUT to Spectrum Analyzer and record the power setting of EUT and the measured conducted power.
- ii. Mount the DUT on the mast of the chamber, record the coordinates and take pictures.
- iii. Configure the EUT continuously transmitting power(unmodulated CW mode).
- iv. Make sure the transmit signal is stable and at the maximum RF power level.
- v. Read the channel power level on the Network analyzer and record in the following positions.
  1. The mast is then stepped between 0 to 360 degrees along the horizontal plane in 15-degree increments.
  2. Data is recorded using the spectrum analyzer for both theta and phi polarizations at each position.
- vi.  $\text{Antenna Peak Gain (dBi)} = \text{Max EIRP(dBm)} - \text{Conducted Power (dBm)}$

## 4.5 Test Setup photos

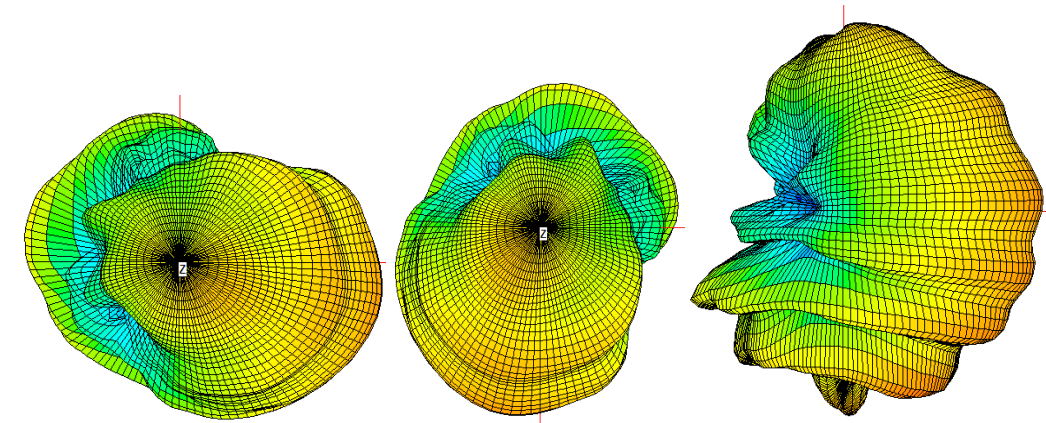
## 4.6 3D Pattern Test Plot

### ANTENNA 1:

2400MHz:



2440MHz:



$\phi = 0; \theta = 0$

$\phi = 90; \theta = 0$

$\phi = 0; \theta = 90$

2480MHz:

