SH1001
Antenna Report

Report No.:SH1001_Ant_Rev1
Date: July 13, 2022

Antenna Report

ARLO SH1001
Device S/N: AB5Y227GA016D
SubGHz, 2.4 GHz WiFi

	Name	Date
Approved by:	Jorg Yen Manager, Antennna	July 13, 2022
Signature:		
Reviewed by:	Todd Van Cleave Director, Hard	July 13, 2022
Signature:		

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1   Measurement System Information

1.1   General Information

Measurements are performed in a Satimo Starlab with the Agilent Technologies N5230A as source/receiver. The Starlab has 15 probe anteinnas 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.
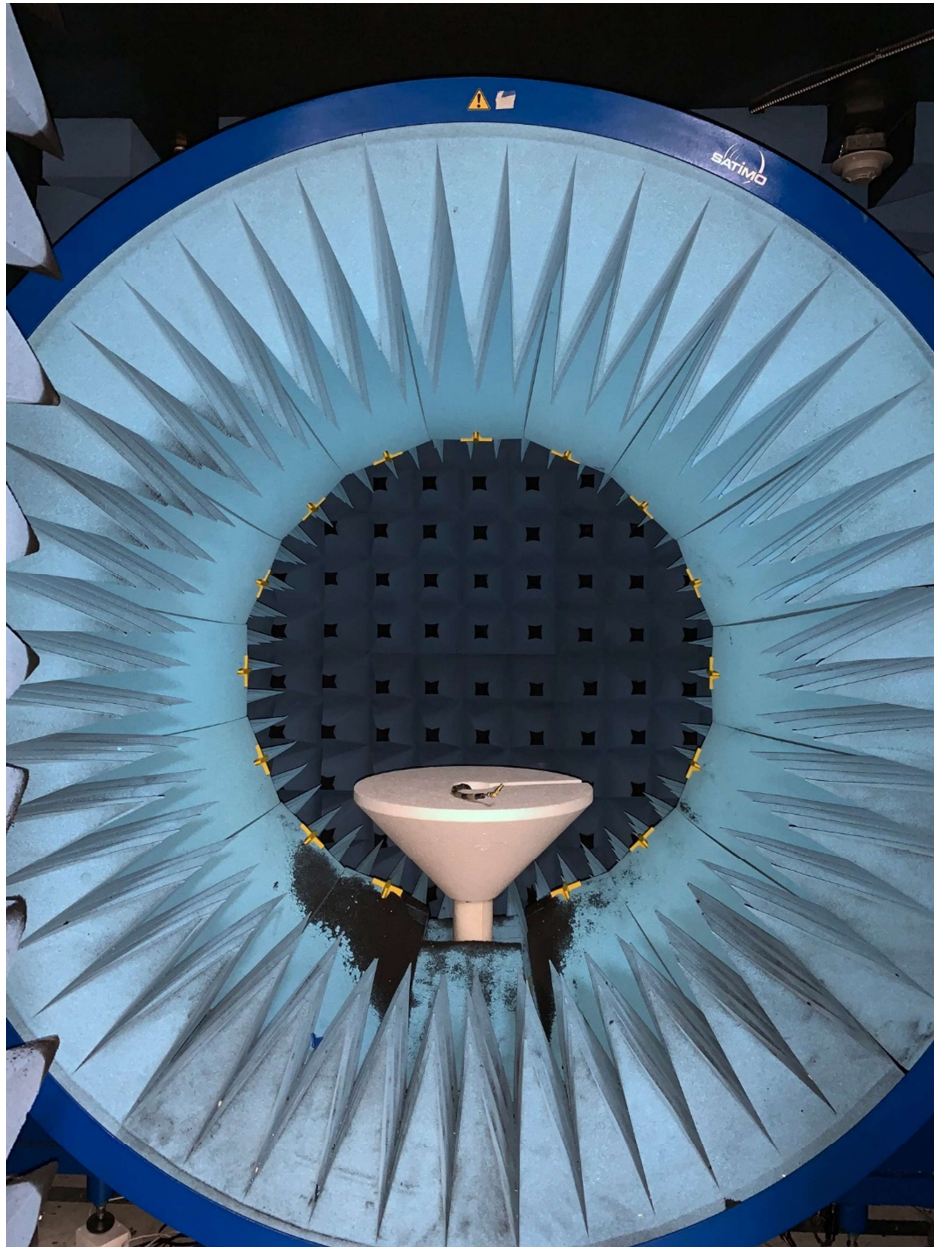
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1.2 List of Equipment

Equipment	Model	Current Calibration Date	Next Calibration Date
OTA Measurement Software	Satimo – SATENV Satimo – SPM 1.9	Not Required	Not Required
Starlab Probe Array	Satimo – Starlab Standard	July 2022	July 2023
Starlab TX and RX Amplification Unit	Satimo – Starlab	July 2022	July 2023
Starlab Power and Control Unit	Satimo – Starlab	July 2022	July 2023
Network Analyzer	Agilent Technologies N5230A	Reference	Reference
Dual Ridge Horn Antenna & Sleeve Dipole	Satimo – SH800 – SD740	Not Required	Not Required
Anechoic Chamber	Reymond EMC	Not Required	Not Required

1.3 Gain Calibration (Substitution)

Passive Gain calibration is performed in order to determine the system losses and gains so that they may be normalized out of the EUT measurement data. A calibrated horn antenna [Satimo SH800] and dipole [Satimo SD740] is used as the EUT, and a network analyzer is used as the source, and receiver.

## 1.4 Laboratory Environmental Conditions

Testing was performed in an environmentally controlled laboratory and the temperature did not vary by more than +/- 5.0 degrees ˚C. This was accounted for in the measurement uncertainty.

2 Summation Test Report

2.1 EUT Information

Date of Measurements:	July 13, 2022
Device Manufacturer:	ARLO Technologies
Device Model:	SH1001
Device Description:	Security Hub
Device S/N:	AB5Y227GA016D
Device Bands:	WiFi 2.4GHz, SubGHz
Device Hardware Revision:	DV4.10
Device Software Revision:	N/A
IMEI:	N/A
FCC ID:	N/A
Antenna Description:	Printed PCB Antennas
Configuration of Primary Mechanical Mode	Device is configured in the preferred mode per manufacturer instructions
Comments:	1. Separate printed PCB antenna for SubGHz and WiFi operation. 2. DUT centered in the test plane.

2.2 Internal Antenna Pictures

SubG Antenna   WiFi Antenna
ARLO Technologies SH1001
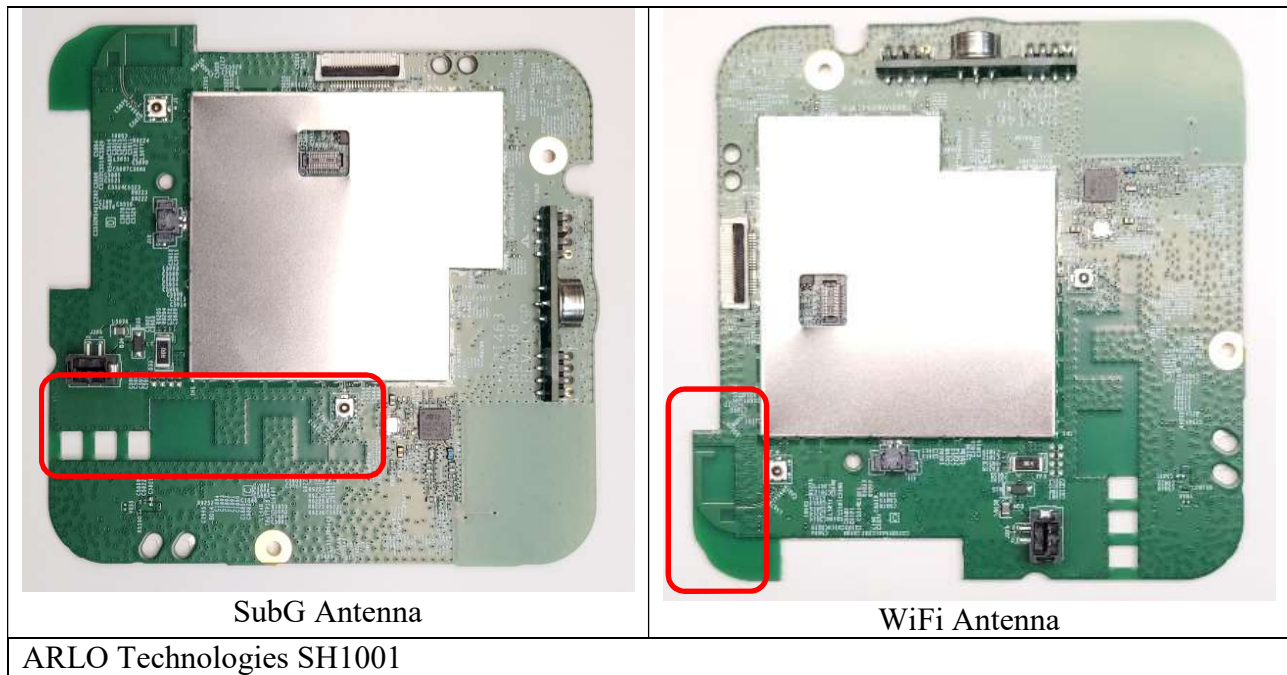
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3   Antenna Gain Results

Note:
- *Free Space – Internal Antenna*

3.1   SubGHz Gain [dBi]

Free Space

Frequency (MHz)	900-930
Gain (dBi)	1.6

3.2   WiFi 2.4 GHz Gain [dBi]

Free Space

Frequency (MHz)	2400-2500
Gain (dBi)	2.8

3.3   SubGHz THETA 90°
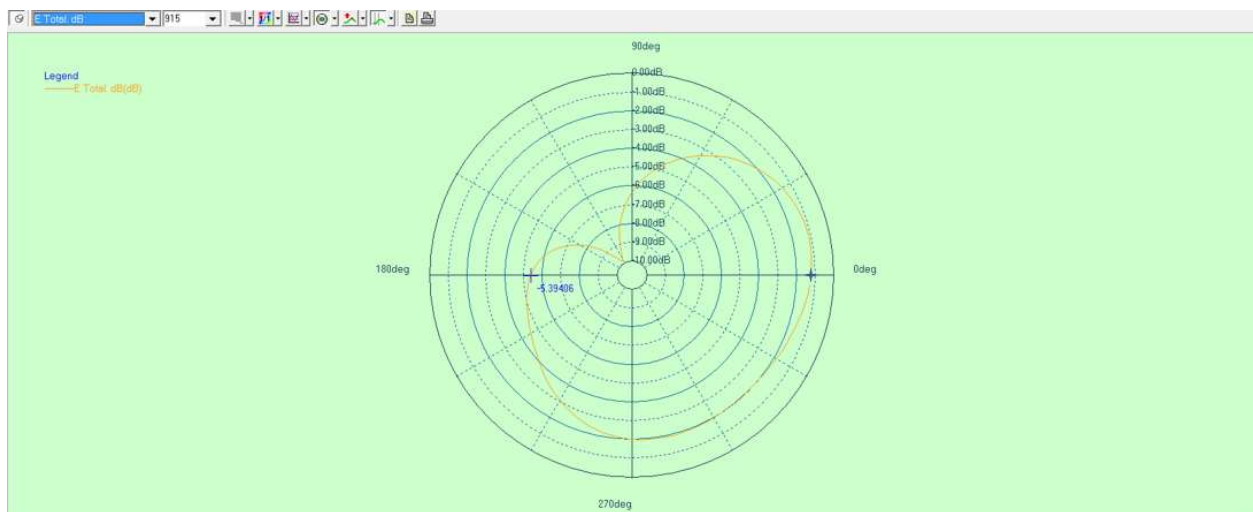
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3.4 WiFi 2.4 GHz THETA 90°

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4 Report Modifications

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<tr><td>**Issue**</td><td>**Date**</td><td>**Modifications/Pages changed**</td></tr>
<tr><td>1.0</td><td>7/13/2022</td><td>Arlo initial release</td></tr>
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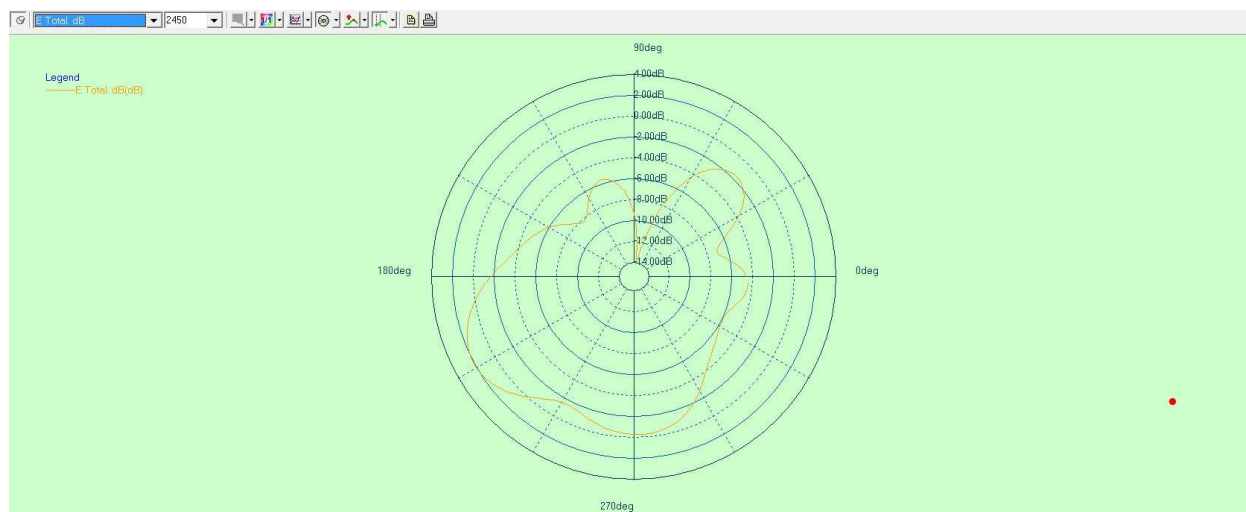<tr><td></td><td></td><td></td></tr>
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End of Report

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