VMC4060
Antenna Report

Report No.:VMC4060_Ant_Rev1
Date: July 8, 2022

Antenna Report

ARLO VMC4060
Device S/N: A9M1267TA0135
SubGHz, 2.4 GHz, 5GHz

	Name	Date
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Reviewed by: Signature:	Todd Van Cleave Director, Hard 	July 8, 2022

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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 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.

Refer to the Appendix A: Antenna Pictures

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 8, 2022
Device Manufacturer:	ARLO Technologies
Device Model:	VMC4060
Device Description:	WIFI Camera
Device S/N:	A9M1267TA0135
Device Bands:	WiFi 2.4 and 5.0 GHz , SubGHz
Device Hardware Revision:	DV3.3 H3
Device Software Revision:	N/A
IMEI:	N/A
FCC ID:	N/A
Antenna Description:	Internal, Single
Configuration of Primary Mechanical Mode	Device is configured in the preferred mode per manufacturer instructions
Comments:	1. Single antenna for SubGHz and WiFi operation. 2. DUT centered in the test plane.

2.2 Internal Antenna Pictures

Refer to the Appendix A: Antenna Pictures

3 Antenna Gain Results

Note:

- *Free Space – Antenna Fixed Internal*

3.1 SubGHz Gain [dBi]

Free Space

Frequency [MHz]	900-940
Gain [dBi]	-2.40

3.2 Wifi 2.4 GHz Gain [dBi]

Free Space

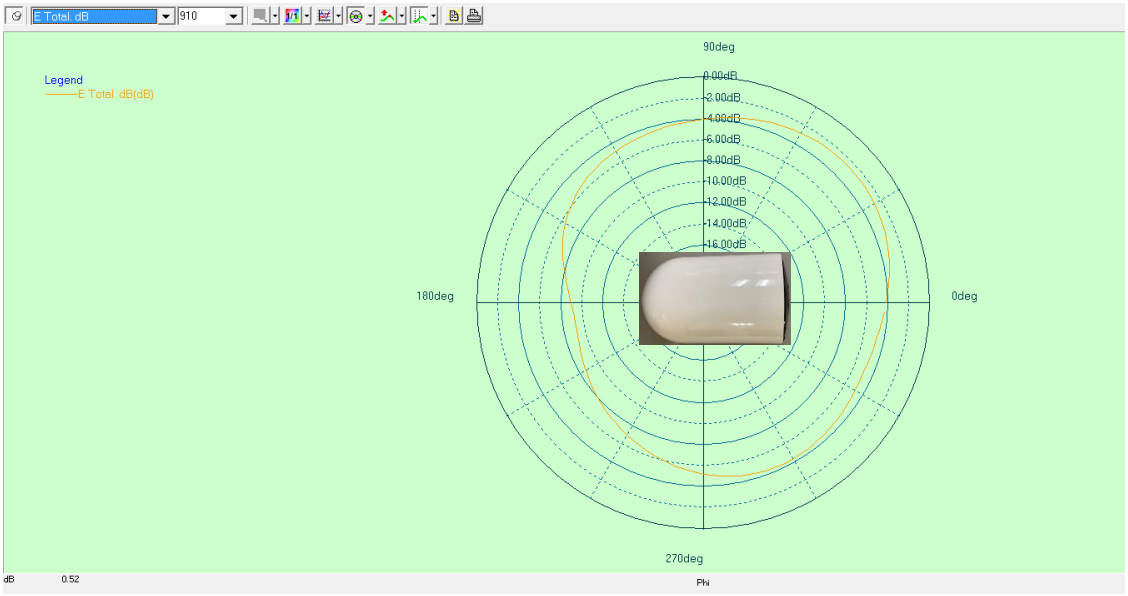
Frequency [MHz]	2400-2500
Gain [dBi]	2.10

3.3 WiFi 5.0 GHz Gain [dBi]

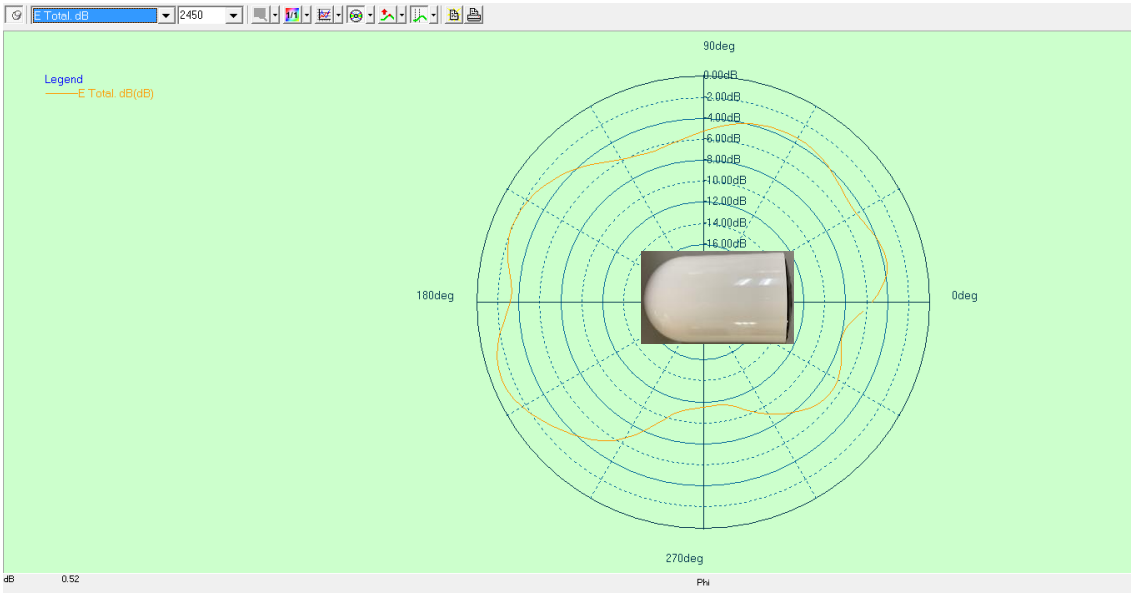
Free Space

Frequency [MHz]	(5150-5250MHz)	(5250-5350MHz)	(5470-5725MHz)	(5725-5850MHz)
	@5200MHz	@5320MHz	@5500, 5700MHz	@5785, 5805MHz
Gain [dBi]	4.5	3.8	3.4	3.9

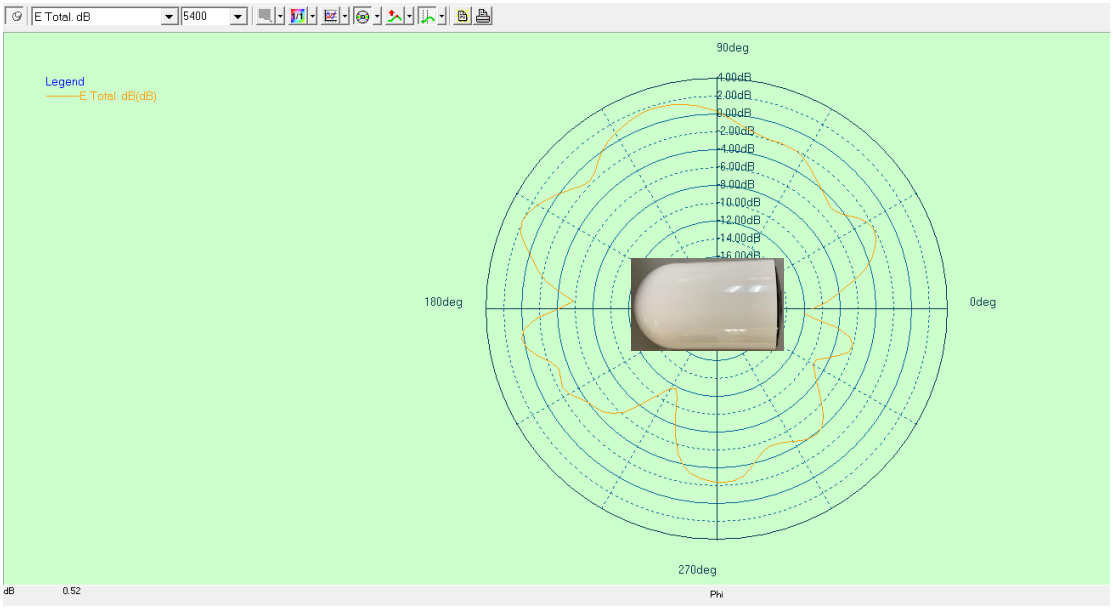
3.4 SubGHz THETA 90°



3.5 WiFi 2.4 GHz THETA 90°



3.6 WiFi 5.0 GHz THETA 90°



4 Report Modifications

Record of Modification		
Issue	**Date**	**Modifications/Pages changed**
1.0	7/7/2022	Arlo initial release

End of Report