

Logitech

Antenna Under Test (AUT)

Report

Model Name: RFFPA363615EMLB401

Equipment Type: Video Conference Camera

Manufacturer: Logitech Far East LTD.

Test Location: #2, Creation Rd. 4, Science-based Ind. Park Hsinchu
Taiwan, R.O.C

Antenna Manufacturer: INPAQ TECHNOLOGY CO., LTD

Location: No. 90, Keyi St., Zhunan Township, Miaoli County 350, Taiwan
(R.O.C.)

Tested by: Wen

Report Date: 20260721

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1. EUT Antenna Information

- 1) Antenna Material : FPC
- 2) Antenna Type : PIFA
- 3) Antenna Dimension: 36 x 36.5 mm
- 4) Operating Frequency : 2.4 GHz - 2.5 GHz; 5.18 GHz- 5.825 GHz
- 5) Input Impedance : 50 Ω
- 6) Standing-Wave Ratio : 2:1

2. Measured Values and Calculation of Antenna Gains

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

Frequency	X-Y Plane $\phi=0\sim360^\circ, \theta=90^\circ$		X-Z Plane $\phi=0^\circ, \theta=0\sim360^\circ$		Y-Z Plane $\phi=90^\circ, \theta=0\sim360^\circ$		Antenna Peak Gain (dBi)
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	
2400	3.22	-1.78	2.37	-2.8	-0.89	-4.99	3.22
2450	2.38	-2.26	2.24	-3.13	-0.47	-4.84	2.38
2500	1.61	-2.34	2.24	-3.14	-0.75	-5	2.24

Frequency	X-Y Plane $\phi=0\sim360^\circ, \theta=90^\circ$		X-Z Plane $\phi=0^\circ, \theta=0\sim360^\circ$		Y-Z Plane $\phi=90^\circ, \theta=0\sim360^\circ$		Antenna Peak Gain (dBi)
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	
5150	2.98	-2	3.16	-3.28	-1.11	-5.34	3.16
5500	3.3	-1.54	2.47	-4.3	0.66	-4.69	3.3
5850	3.04	-1.07	4.68	-3.17	0.92	-4.92	4.68

Test Date: 20260717

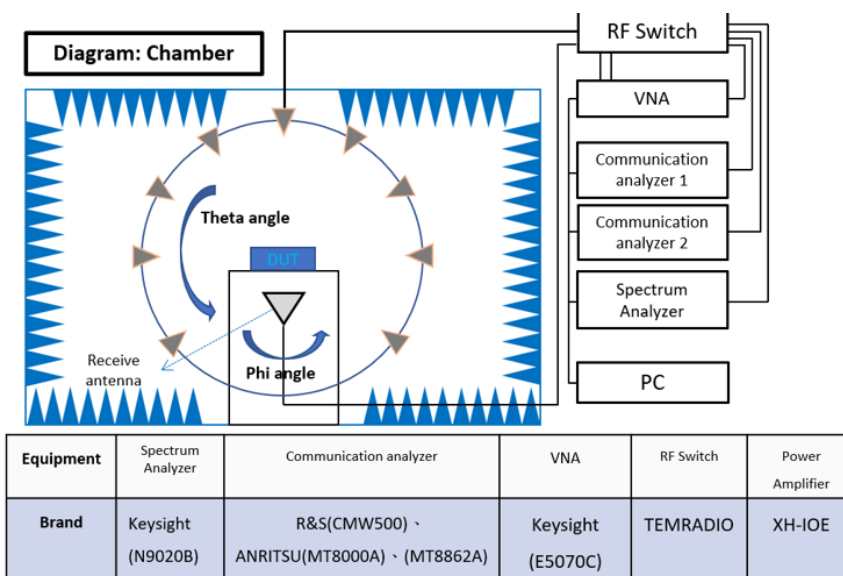
3. 2D Radiation Pattern Measurement

3.1 Test Location

2D radiation pattern measurement in the anechoic chamber

3.2 Description of the anechoic chamber

Length: 4.3 m
Width: 4.3 m
Height: 4.2 m
Turntable height: 1.5 m
Measurement antenna height: 1.5 m



3.3 Test Instruments

Description	Model No.	Serial No.	Last Calibration
Spectrum Analyzer Keysight	N9020B	MY59050565	2026/01/15
Horn Antenna	Multi Probe	NA	2025/11/25
Software	XINGHANG OTA	NA	2025/10/21
Chamber	MPS-4842	XH230503	2025/10/21
Rotator Controller	XH-IOE	NA	NA
Switch	TEMRADIO	NA	NA
WLAN Tester/ Radio Communication Analyzer	R&S_CMW500 MT8000A MT8862A	1201.0002k50 6272368783 6262115497	2026-03-13 2026-03-13 2026-3-24
VNA	E5070C	NA	2026/04/22

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

3.4 Test Procedure

- i. Fasten the EUT in the center of the turntable, record the coordinates and take pictures.
- ii. Setup the channel power function by spectrum analyzer.
- iii. Read the channel power level on the spectrum analyzer and record in the following positions.
 1. The turntable 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.
- iv. Rotate the EUT with 90 degrees and repeat step f.1 and step f.2 until all 3 planes(X-Y,X-Z,Y-Z) were measured.
- v. According to substitution techniques, a substitution horn antenna is substituted for EUT at the same position and the signal generator exports the CW signal to the substitution antenna via a TX cable. Rotated the turntable and moved the receiving antenna to find the maximum radiation

power. Adjust output power level of S.G to get a value of spectrum reading equal to "Raw Value" gotten from step vii. Record the power level of S.G.

$$EIRP = P_{SigGen} + G_T - L_C$$

where:

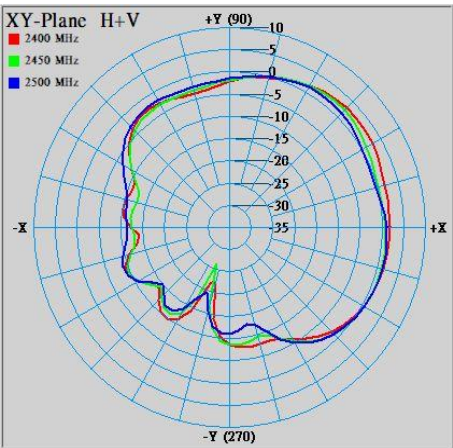
P_{SigGen} = power setting of the signal generator that produces the same received power reading as the DUT, in dBm;

G_T = gain of the substitute antenna, in dBd (ERP) or dBi (EIRP);

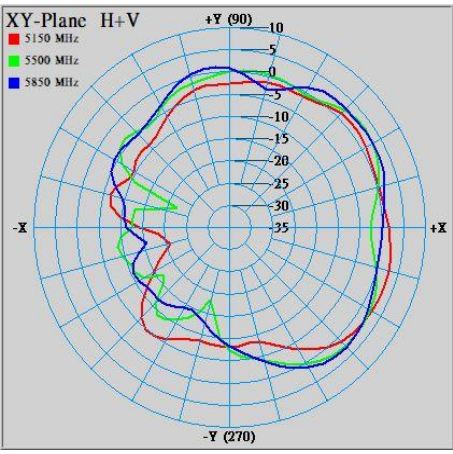
L_C = signal loss in the cable connecting the signal generator to the substitute antenna, in dB

3.6 2D Pattern Test Plot

X-Y Plane: Horizontal and Vertical

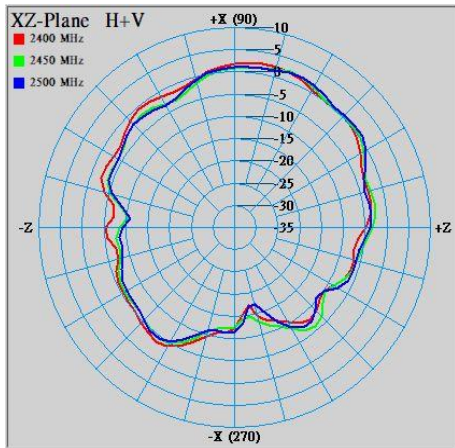


Frequency	X-Y Plane $\phi=0\sim360^\circ, \theta=90^\circ$	
	Max Value [dBi]	Average [dBi]
2400	3.22	-1.78
2450	2.38	-2.26
2500	1.61	-2.34

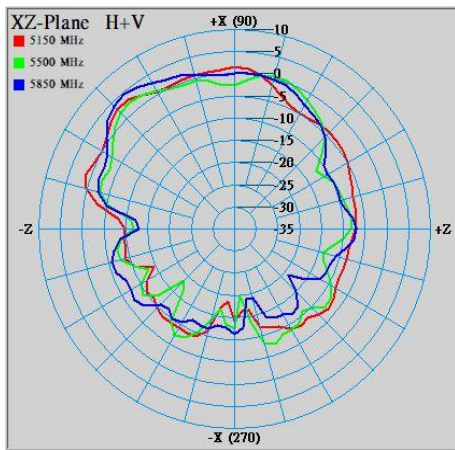


Frequency	X-Y Plane $\phi=0\sim360^\circ, \theta=90^\circ$	
	Max Value [dBi]	Average [dBi]
5150	2.98	-2
5500	3.3	-1.54
5850	3.04	-1.07

X-Z Plane: Horizontal and Vertical

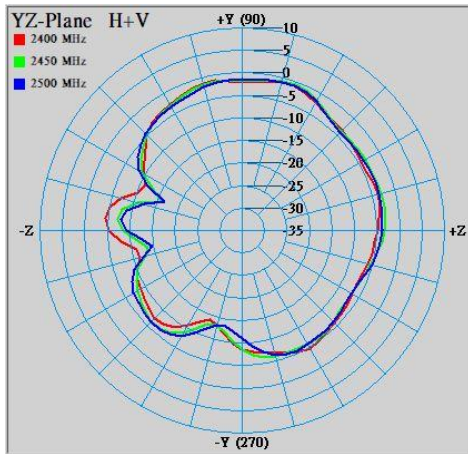


Frequency	X-Z Plane $\phi=0^\circ$, $\theta=0\sim360^\circ$	
	Max Value [dBi]	Average [dBi]
2400	2.37	-2.8
2450	2.24	-3.13
2500	2.24	-3.14

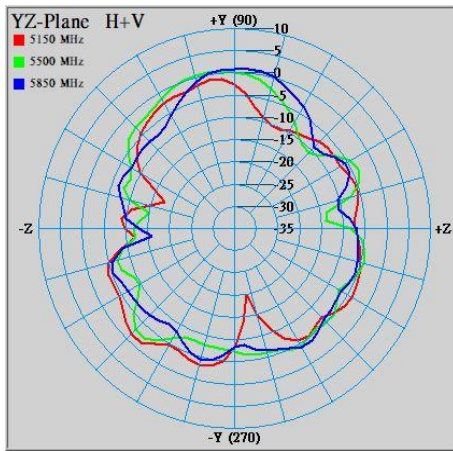


Frequency	X-Z Plane $\phi=0^\circ$, $\theta=0\sim360^\circ$	
	Max Value [dBi]	Average [dBi]
5150	3.16	-3.28
5500	2.47	-4.3
5850	4.68	-3.17

Y-Z Plane: Horizontal and Vertical



Frequency	Y-Z Plane $\phi=90^\circ, \theta=0\sim360^\circ$	
	Max Value [dBi]	Average [dBi]
2400	-0.89	-4.99
2450	-0.47	-4.84
2500	-0.75	-5



Frequency	Y-Z Plane $\phi=90^\circ, \theta=0\sim360^\circ$	
	Max Value [dBi]	Average [dBi]
5150	-1.11	-5.34
5500	0.66	-4.69
5850	0.92	-4.92