

PEGATRON 和碩聯合科技

Kangaroo Antenna Report

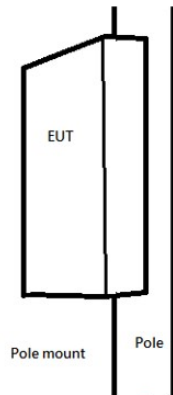
2024-07-05



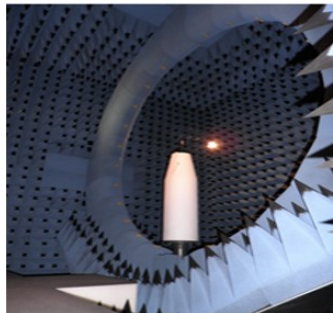
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Introduction

- ❖ This report provides Passive Measurement results .(return loss ,Isolation, Gain, Radiation Pattern)
 - The return loss and isolation are measured by Agilent E5071C.
 - The radiation pattern, antenna gain by Pegatron's SATIMO SG24 chamber as below picture.
 - The equipment calibration data : 2023.12.13



Measurement Structure



Pegatron's SATIMO SG24 chamber



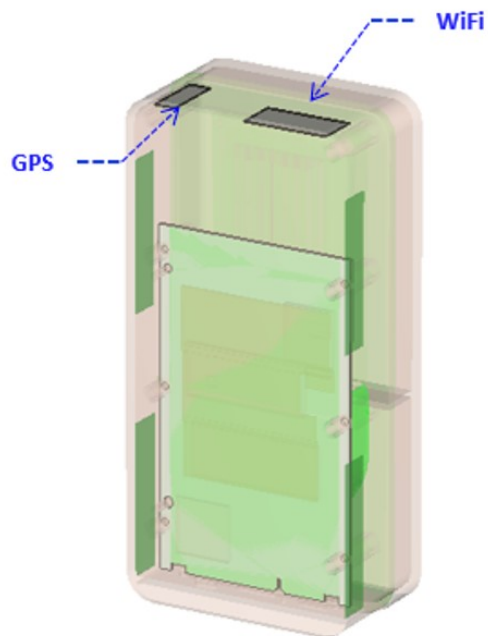
E5071C

Kangaroo Vander information

Manufacturer	Address	Model Name	Peak Gain
INPAQ TECHNOLOGY CO., LTD.	1F., No. 106, Ligong St., Beitou Dist., Taipei City 112019 , Taiwan (R.O.C.)	WiFi WA-P-LA-11-004(1415-0AQ4000) GPS WA-P-GX-15-001(1415-0AQ1000)	WIFI 2G : 4.81dBi GPS : 3.86dBi

Antenna Placement and Support Band

Top View :



GPS & Wi-Fi Antenna

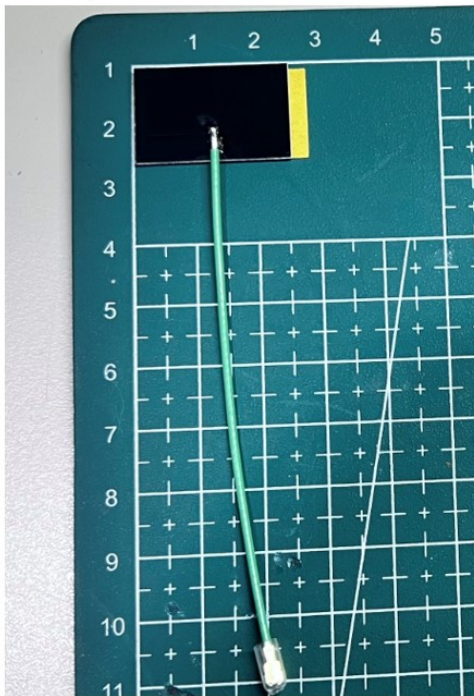
Support Band:

	Freq. (MHz)	Band support
WiFi PIFA	2400 ~ 2500	TRX0
GSP Dipole	1.560 ~ 1.603	TRX0

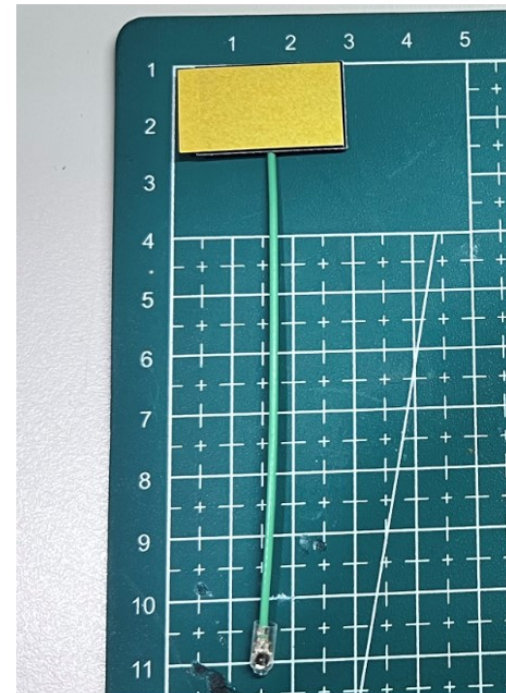
Antenna Photo

➤ WiFi

Top View :



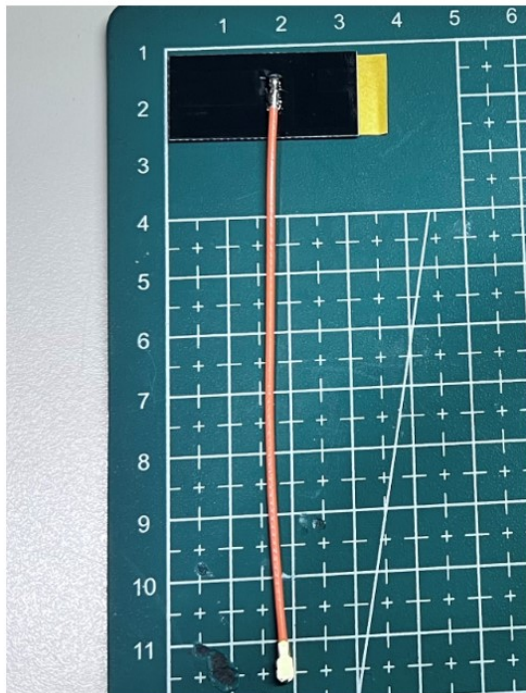
Back View:



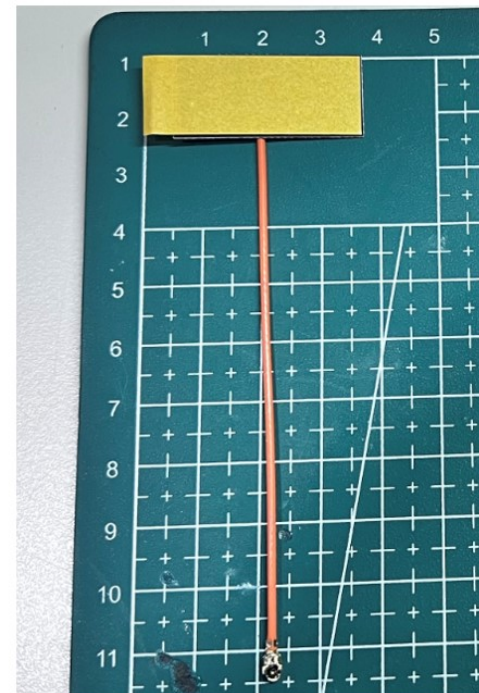
Antenna Photo

➤ GPS

Top View :

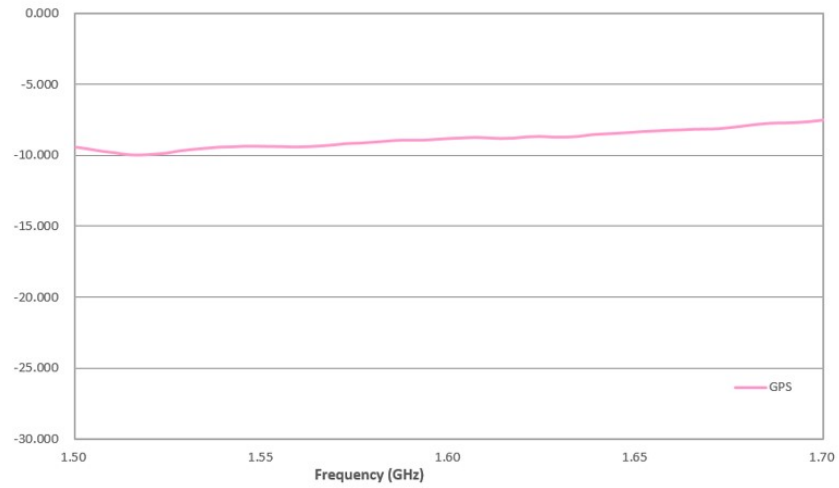


Back View:

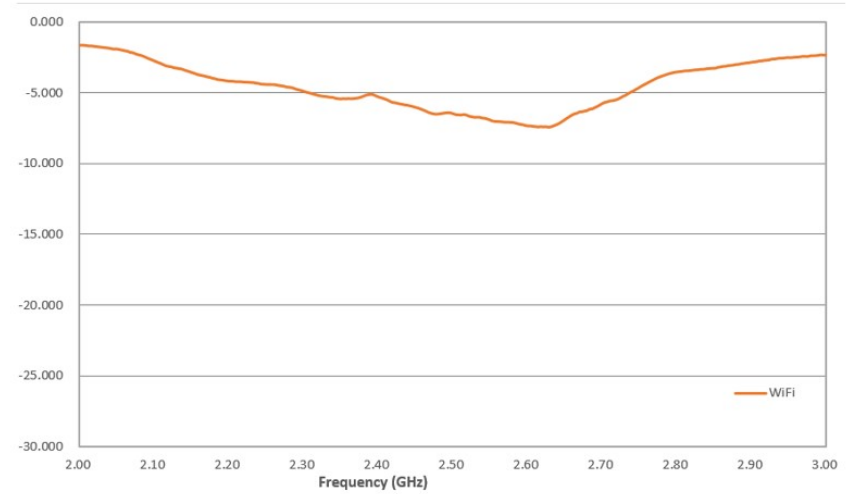


Return Loss

➤ Ant GPS S11



➤ Ant WiFi S11



Antenna Gain

❖ Gain table: WiFi & GPS

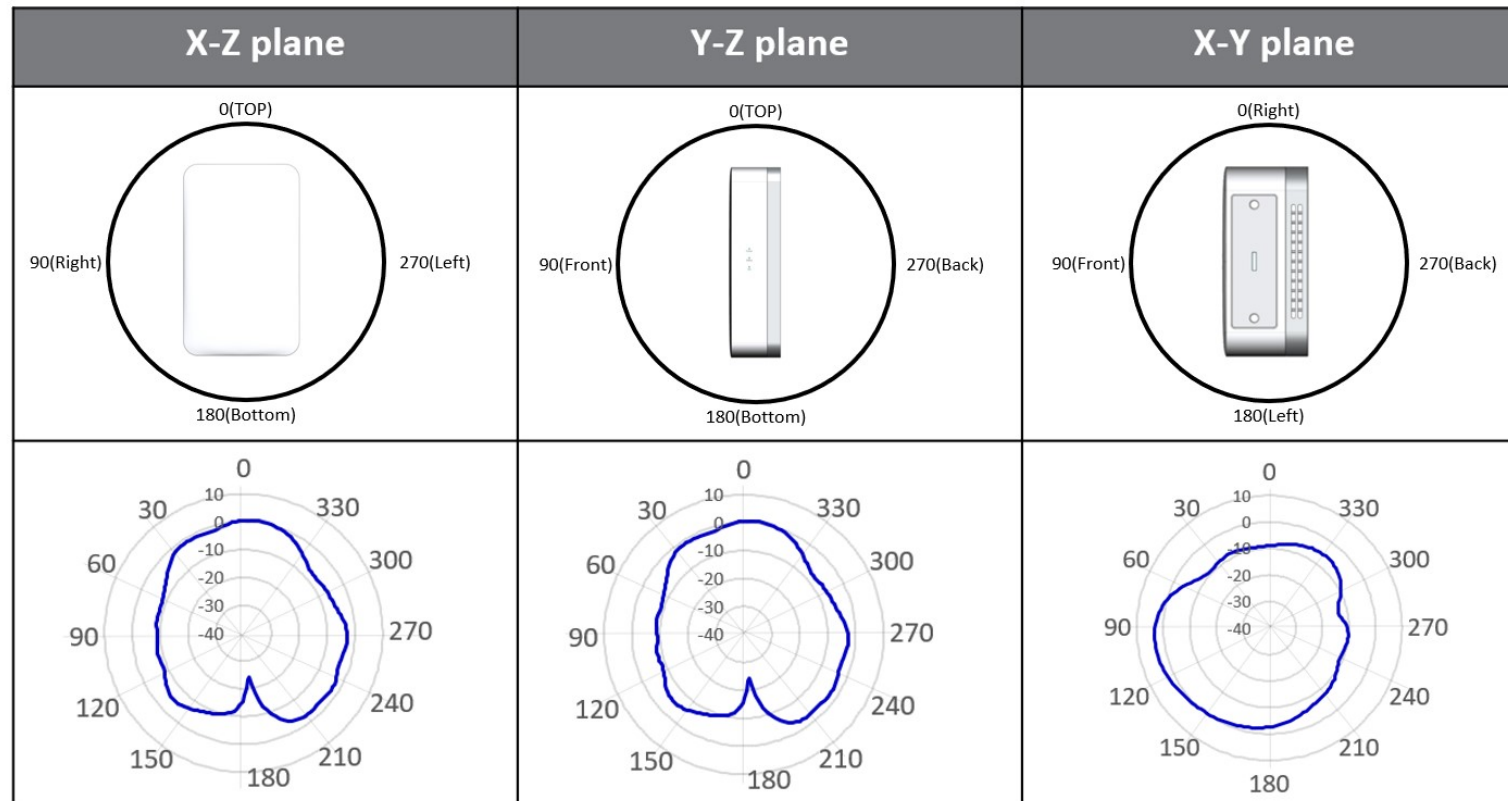
GPS		
Frequency	E-total(dBi)	Efficiency(%)
1550	3.36	49%
1555	3.47	50%
1560	3.86	56%
1565	3.78	58%
1570	3.5	56%
1575	3.38	57%
1580	3.55	60%
1585	3.23	59%
1590	2.93	54%
1595	2.77	54%
1600	3.09	56%
1605	3.11	55%
1610	3.25	58%

WiFi		
Frequency	E-total(dBi)	Efficiency(%)
2300	3.83	52%
2350	3.19	51%
2400	2.84	46%
2450	4.45	55%
2500	4.46	53%
2550	4.81	56%
2600	4.73	55%

Unit : dB

Wi-Fi 2D Pattern

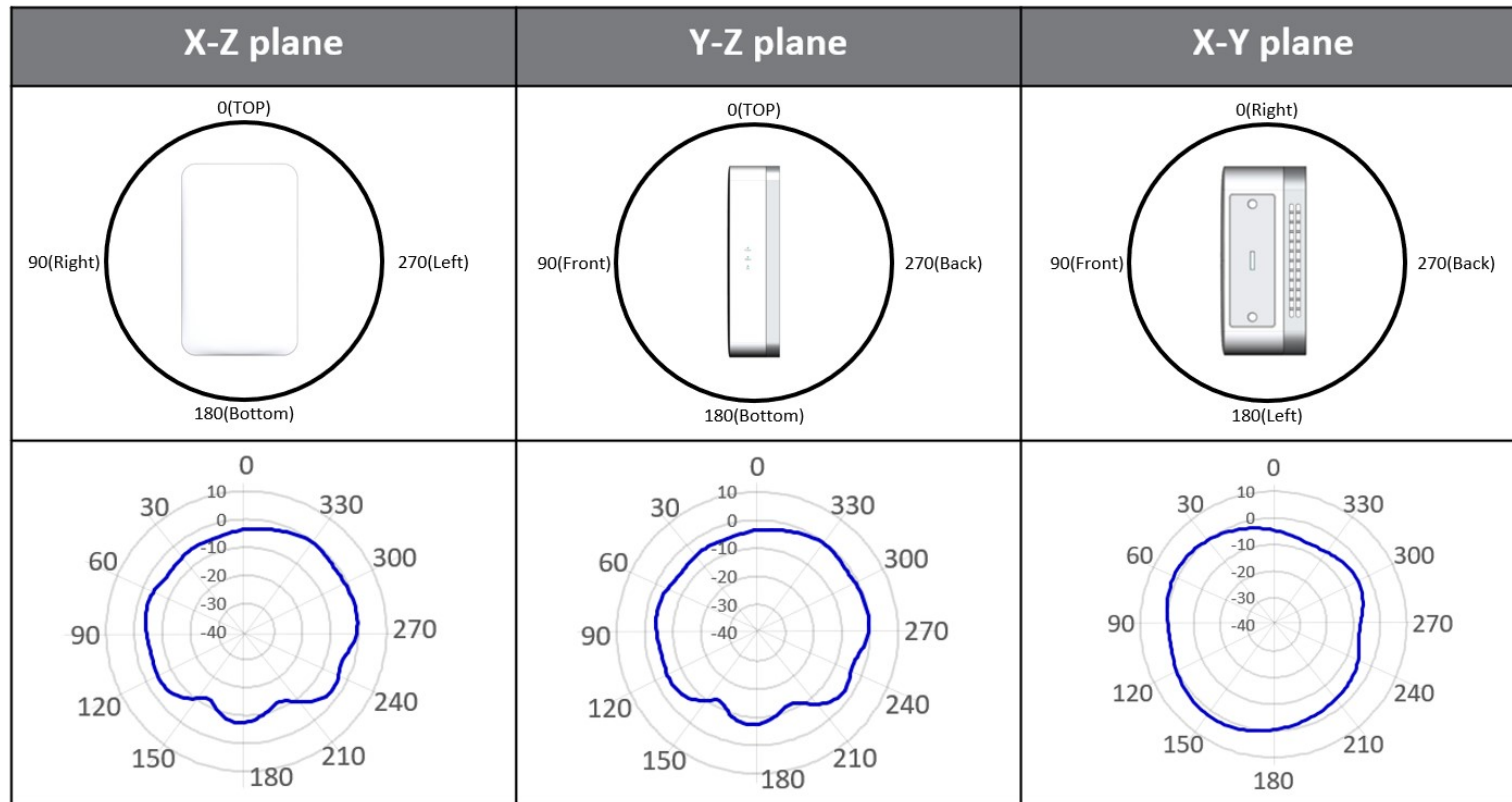
Radiation pattern – WiFi 2.45G



WiFi

GPS 2D Pattern

Radiation pattern – GPS 1.575G



GPS