

ANTENNA INFORMATION

OEM	
ODM	
Platform model name	M156AD
Intel platform (ex: Yes, No or NA)	Yes
Platform type (ex: regular NB, convertible PC, AIO...etc)	Tablet PC
SAR minimum separation (mm)	FCC (1g)
	ISED (1g)
	ISED (10g)

Antenna manufacturer	Company name	WINMATE INC.
	Address	No. 18, Zhongxing S. St., Sanchong Dist., New Taipei City 241017, Taiwan (R.O.C.)
Test location	Company name	DEKRA Testing and Certification Co.,Ltd
	Address	No.26,Huaya 1 st Rd.,Guishan Dist.,Taoyuan City 333411,Taiwan
Test Personnel	Name(Full name)	Saul Wang
	E-mail	Saul Wang@dekra.com
	Tel/Mobile	+886 3 275 7255
Testing date		

Antenna Part number	Main	90RF0500002M
	Aux	90RF0600002E
Antenna type (ex: PIFA, Dipole...etc)		PIFA/Monopole

Antenna Peak gain w/ cable loss (dBi)*									
	2400 MHz	2450 MHz	2483.5 MHz						
Main	3.31	3.81	3.35						
Aux	2.10	2.13	3.19						

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	94KN0000004D	25cm	0.81mm	50ohm	MHF 4
Aux	94KN0000000R	16cm	0.81mm	50ohm	MHF 4

* 3D Antenna Peak Gain required being test in system basis.

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1. Intel Reference Gain and Type

Antenna Peak gain w/ cable loss (dBi)											
Band/Frequency		2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Design	EU/UK	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFA	For WiFi 6E and earlier	3.24	3.64	3.73	4.77	4.97	4.72	4.83	4.30	5.37	5.59
	From WiFi 7	2.95	5.11	4.55	5.15	5.13	4.45	5.02	5.02	4.96	4.96
Dipole	For WiFi 6E and earlier	2.89	2.92	3.19	4.41	4.22	4.22	4.83	4.30	4.49	5.34
	From WiFi 7	2.95	4.03	4.11	5.15	5.13	4.45	5.02	4.71	4.49	4.96
Monopole	From WiFi 7	2.83	4.57	4.44	4.95	4.95	4.43	4.87	4.91	4.91	4.79

3D Peak Antenna gain should be equal or greater than -2 dBi

If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

Revision #	Revision Details	Issued Date
Rev. 00	First Issue	

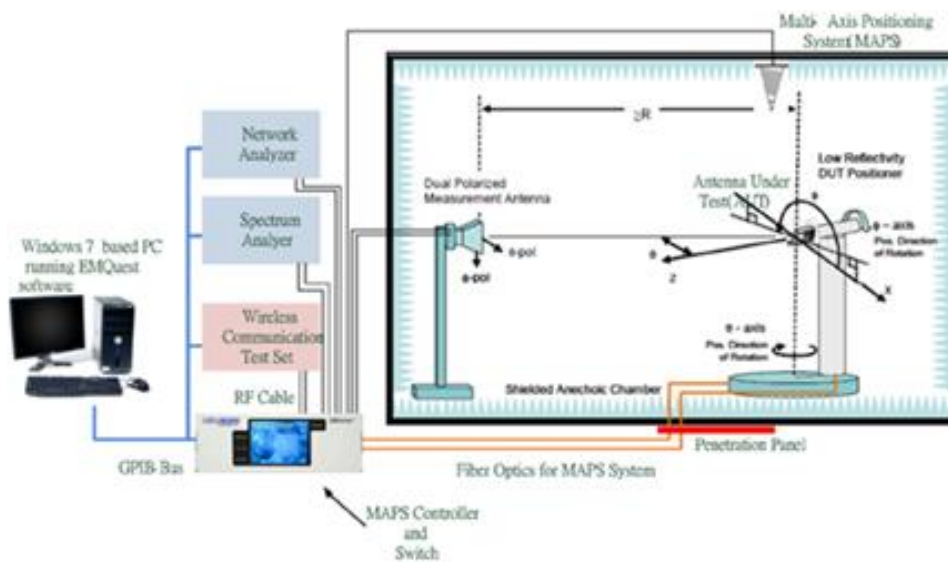
2. Document Revision History

3. Test & System Description

3.1 Measurement Method and System

This test report is prepared for host antenna testing under a Full Anechoic Chamber.

3.2 Test setup



3.3 Equipment list

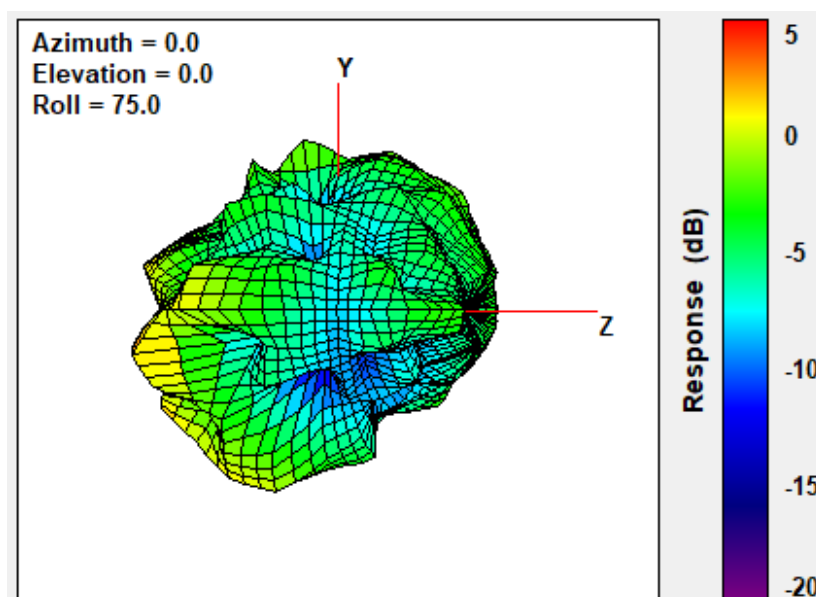
Manufacturer	Instrument Name	Model Number	Serial Number
Rohde&Schwarz	Vector Network Analyzer	ZNB8	106333

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

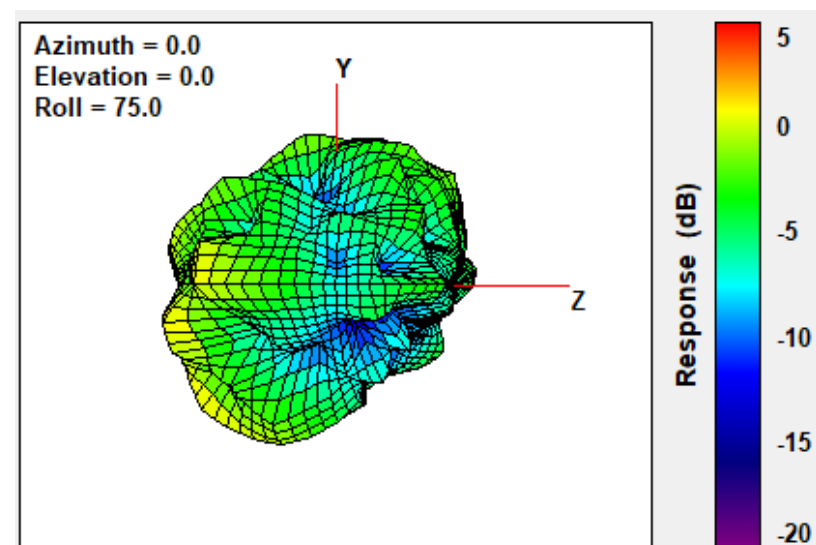
Max Antenna 3D Radiation Pattern 2400 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	3.31



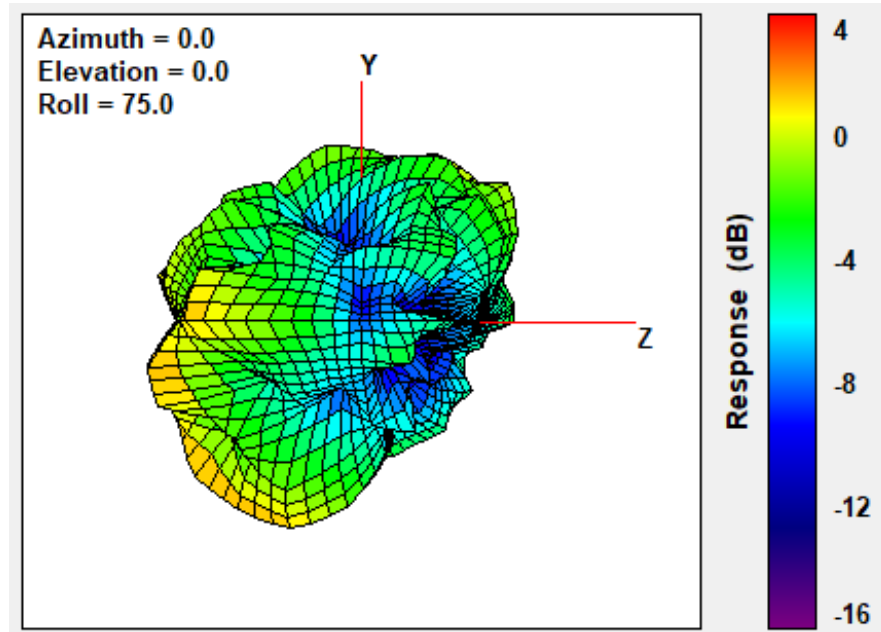
Max Antenna 3D Radiation Pattern 2450 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.81



Max Antenna 3D Radiation Pattern 2483.5 MHz

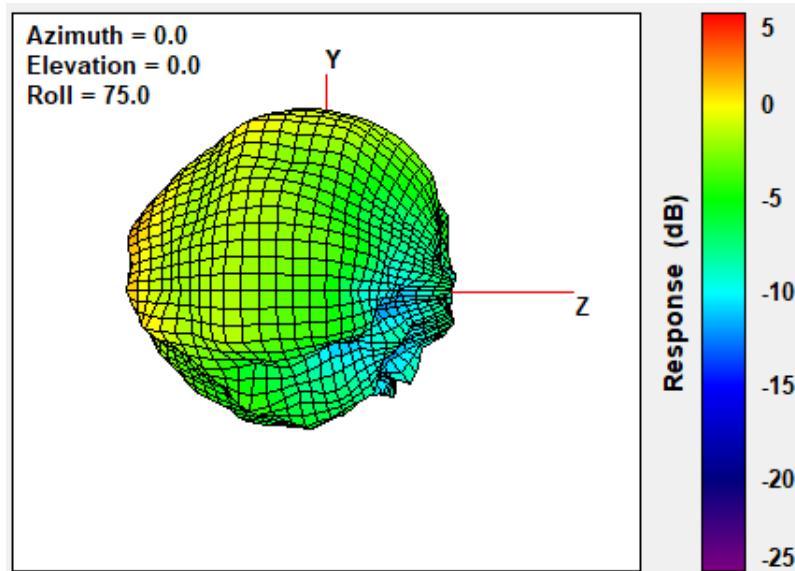
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.35



Auxiliary Antenna

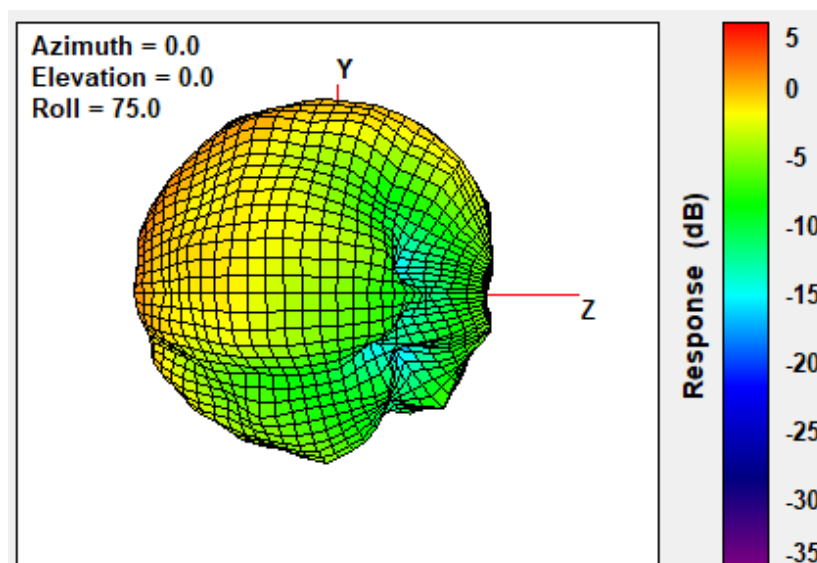
Max Antenna 3D Radiation Pattern 2400 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.10



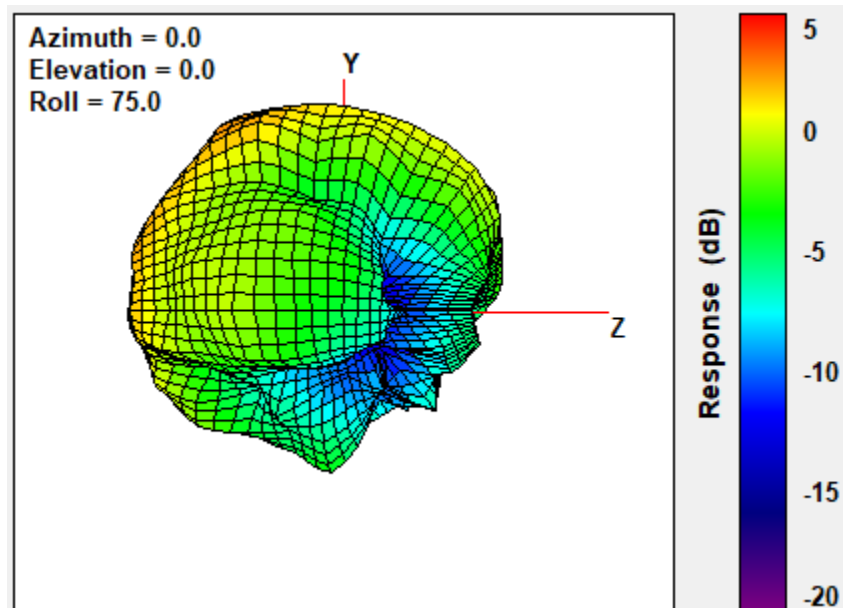
Max Antenna 3D Radiation Pattern 2450 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.13



Max Antenna 3D Radiation Pattern 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.19



Annex A. Photographs

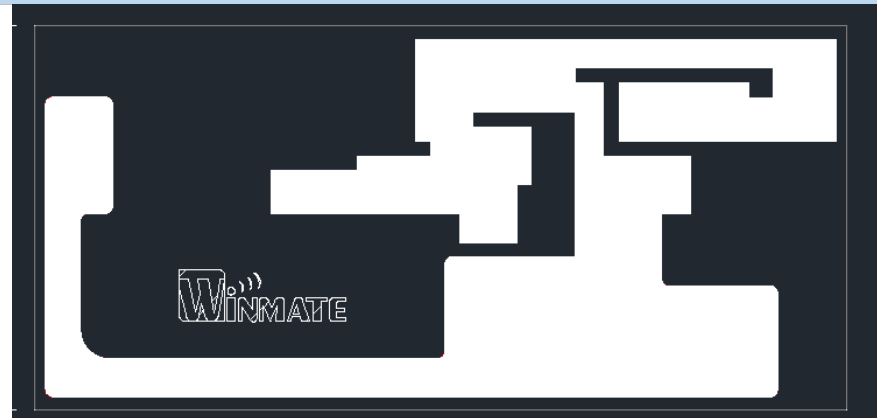
A.1 Setup Photo



A.2 Test sample

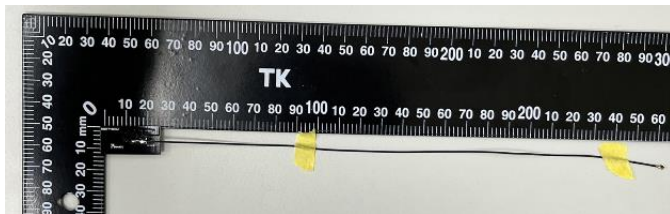
Main Antenna

Antenna Drawing

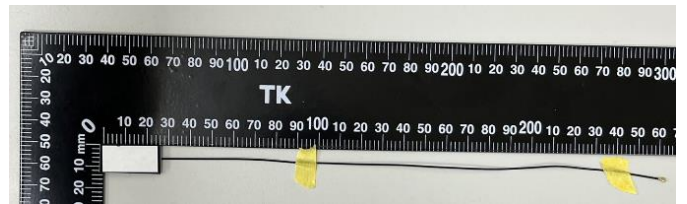


Antenna Photo

Front



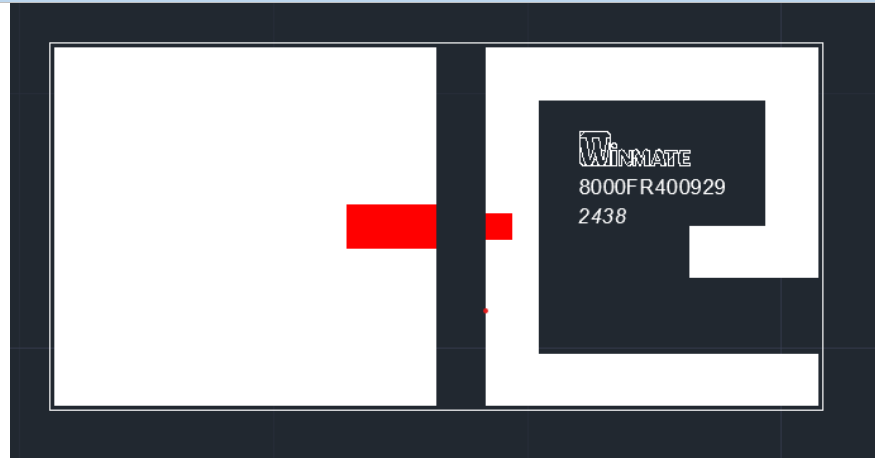
Back



Note: antenna photo should include L type ruler

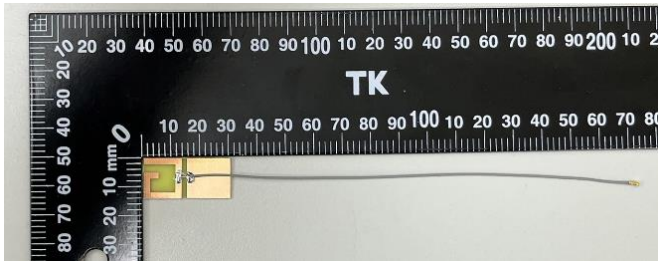
Aux Antenna

Antenna Drawing

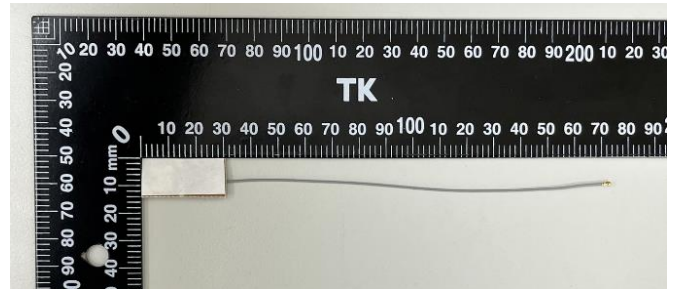


Antenna Photo

Front



Back

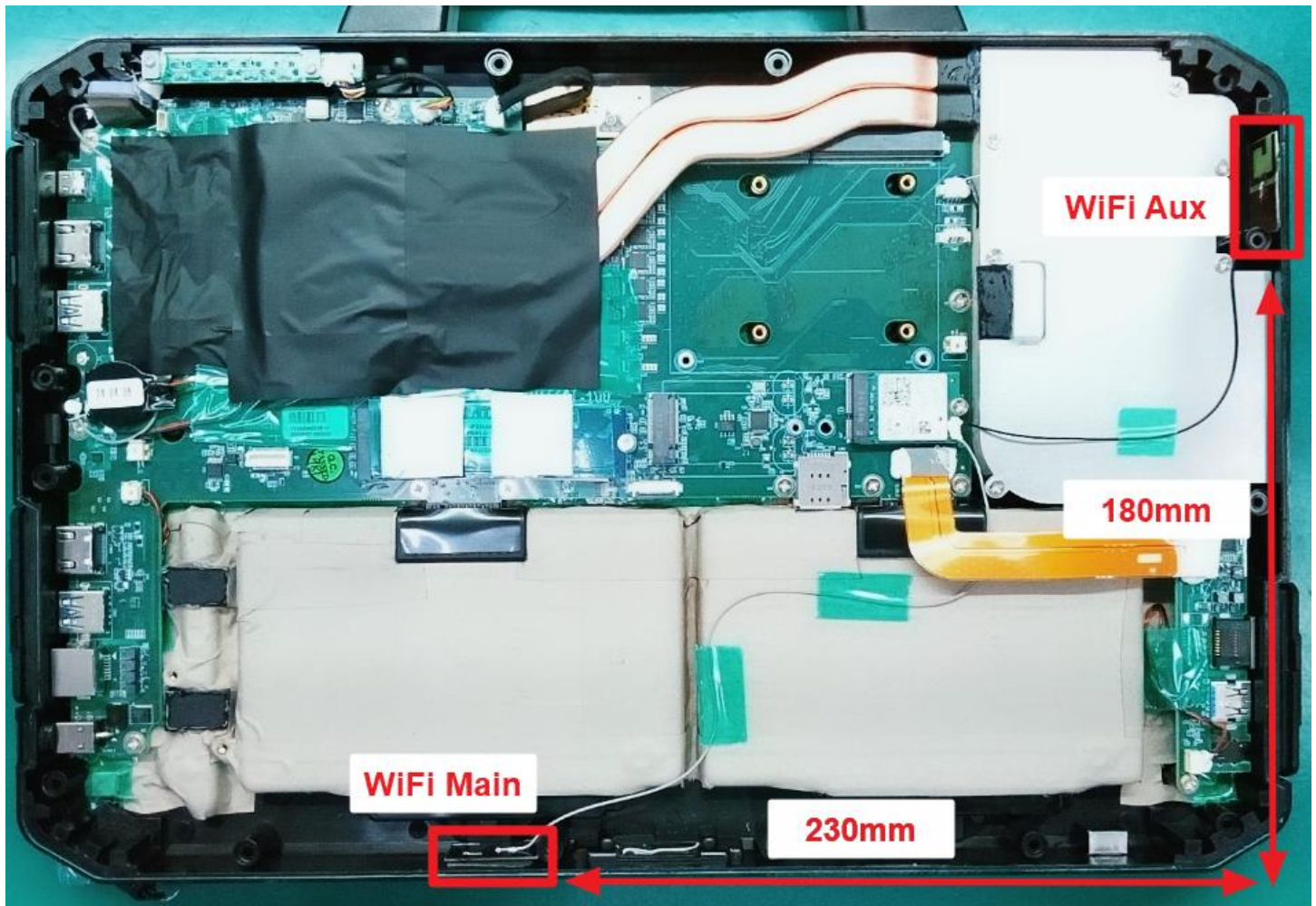


Note: antenna photo should include L type ruler

Annex B. Antenna Location

B.1 Antenna Host Platform Location Information

non-conductive plastics



B.2 Antenna dimensional information for SAR evaluation

primary& secondary portrait

Antennas on the panel section

