

Regulatory WLAN Antenna Information

Platform information										
Brand	ODM	RMN	Intel platform (ex: Yes, No or NA)	Platform type (ex: regular NB, convertible PC, AIO...etc)	*SAR minimum separation (mm)					
HP Inc.	Quanta Corporation	TPN-217	Yes	Notebook PC	186.08					
Antenna information										
Vendor	Type	Antenna Part number (Main/Tx1)			Antenna Part number (Aux/Tx2)					
3	PIFA	DQ6LB020700 (WA-P-LBLB-02-070)			DQ6LB020700 (WA-P-LBLB-02-070)					
Peak gain w/ cable loss (dBi)*										
	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
Main	2.44	2.80	2.95	2.63	2.98	2.32	N/A	N/A	N/A	N/A
Aux	2.46	2.82	2.97	2.65	2.91	2.34	N/A	N/A	N/A	N/A
Module Information										
Model	Form factor and suffixes									
RTL8852BE (Cava2)	Realtek Wi-Fi 6 RTL8852BE+ BT5.2 (802.11ax 2x2, MU-MIMO supported, supporting gigabit data rate)									

1. **Applicable test methods**

ETS-Lindgren AMS-8500 system is 3D fully anechoic chamber, it is applied to the “Conical Cut test method”, the detail description is described as below.

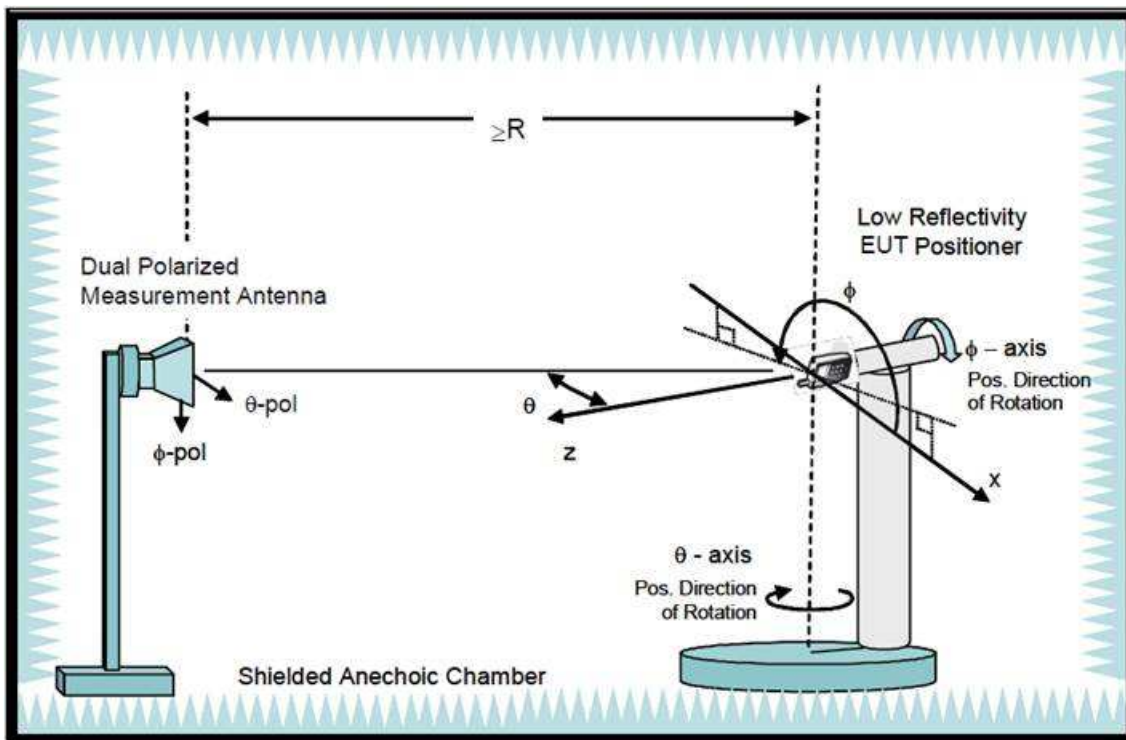
The Conical Cut method requires the ability of the Measurement Antenna to be physically rotated in the theta plane (overhead) of the EUT for implementations using a single Measurement Antenna, Eleven conical cuts are required to capture data at every 15 degrees from the EUT, with the top (0 degrees) and bottom (180 degrees) cuts not being measured. Typically, the EUT will remain affixed to a turntable during the entire measurement process. The Measurement Antenna will be positioned at a starting theta angle. The EUT will then be rotated around the full 360 degrees of phi rotation. The Measurement Antenna will then be positioned at the next theta angle, and the process repeated.

		θ -Axis	Φ -Axis
Passive	Step size	15°~165° step: 15°	0°~345° step: 15°
	N / M (Points)	12	24

2. **Test & System Description**

a. Test setup

Typical Setup for ETS-Lindgren AMS-8500:



b. Equipment list

Anechoic Chamber

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Network analyzer	Agilent	E5071C	2022/01/07	2023/01/06
Anechoic Chamber	ETS-Lindgren	AMS-8500	2022/03/03	2023/03/03
Measurement software	ETS-Lindgren	EMQuest	2022/03/03	2023/03/03
Multi axis positioning system(MAPSTM)	ETS-Lindgren	EMCO 2115	2022/03/03	2023/03/03
Multi axis positioning system(MAPSTM)	ETS-Lindgren	EMCO 2110	2022/03/03	2023/03/03
MAPSTM controller	ETS-Lindgren	EMCO 2090	2022/03/03	2023/03/03
Horn antenna	ETS-Lindgren	3164-10	2022/03/03	2023/03/03
Cable 40cm 18 GHz	Jmtt	201EH012010400	2022/04/07	2023/04/07
Cable 6m 18 GHz	Jmtt	201EH012016000	2022/04/07	2023/04/07
Cable 6m 18 GHz	Jmtt	201EH012016000	2022/04/07	2023/04/07
Cable 3.5m 18 GHz	Jmtt	201EH012013500	2022/04/07	2023/04/07
Cable 1.5m 18 GHz	Jmtt	201EH012011500	2022/04/07	2023/04/07

Note: Chamber calibration included full set of implement.

Test personnel: Lance Hsu

Test date: 2022/10/03

Antenna Information

Section 1. Antenna Assembly Specifications

1A Antenna Part Number	1B Manufacturer	1C Antenna Type	1D Cable Assembly Part Number and Information	Freq Range MHz	1E * Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G Max VSWR	1H Cable Loss (dB)
P/N: DQ6LB020700 (WA-P-LBLB-02-070) Main Tx1/ Rx1 Antenna Ant 1	3	PIFA	50 ohm Coaxial length: 295mm diameter: 1.13mm Connector Type: IPEX MHF-4L P/N: 20565-001R-13	2400-2495	2.44	3.28	3.00	0.84
				5150-5250	2.80	4.05	3.00	1.25
				5250-5350	2.95	4.21	3.00	1.26
				5470-5725	2.63	3.92	3.00	1.29
				5725-5850	2.98	4.29	3.00	1.31
				5850-5895	2.32	3.64	3.00	1.32
				5925-6425	N/A	N/A	N/A	N/A
				6425-6525	N/A	N/A	N/A	N/A
				6525-6875	N/A	N/A	N/A	N/A
6875-7125	N/A	N/A	N/A	N/A				
P/N: DQ6LB020700 (WA-P-LBLB-02-070) Aux Tx2/ Rx2 Antenna Ant 2	3	PIFA	50 ohm Coaxial length: 495mm diameter: 1.13mm Connector Type: IPEX MHF-4L P/N: 20565-001R-13	2400-2495	2.46	3.53	3.00	1.07
				5150-5250	2.82	4.42	3.00	1.6
				5250-5350	2.97	4.59	3.00	1.62
				5470-5725	2.65	4.32	3.00	1.67
				5725-5850	2.91	4.62	3.00	1.71
				5850-5895	2.34	4.07	3.00	1.73
				5925-6425	N/A	N/A	N/A	N/A
				6425-6525	N/A	N/A	N/A	N/A
				6525-6875	N/A	N/A	N/A	N/A
6875-7125	N/A	N/A	N/A	N/A				

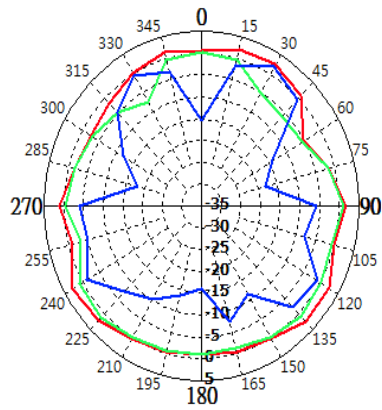
Section 2. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

Max Antenna 2D Radiation Pattern 2400 – 2495 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
2400-2495	2.44

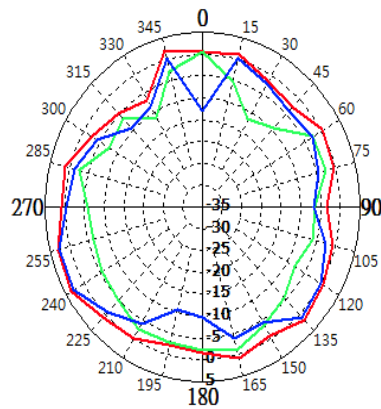
- TOTAL
- H_POL
- V_POL



Max Antenna 2D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5150-5250	2.80

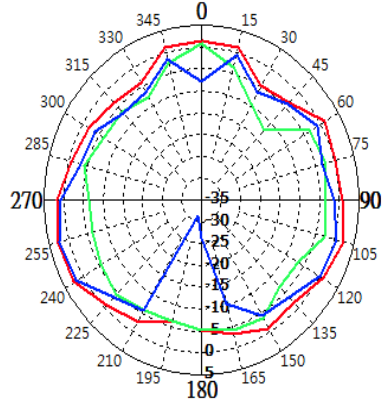
- TOTAL
- H_POL
- V_POL



Max Antenna 2D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5250-5350	2.95

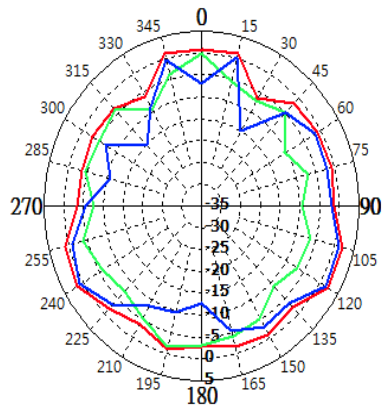
- TOTAL
- H_POL
- V_POL



Max Antenna 2D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5470-5725	2.63

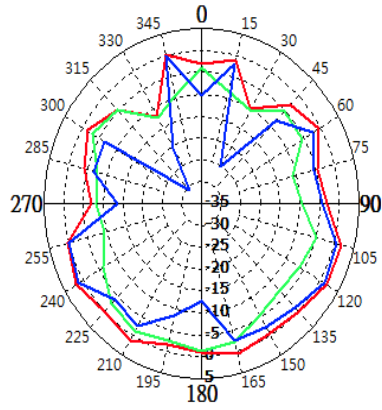
- TOTAL
- H_POL
- V_POL



Max Antenna 2D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5725-5850	2.98

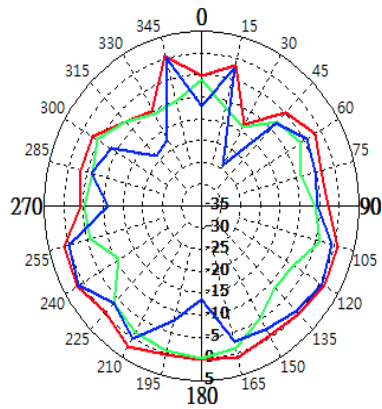
- TOTAL
- H_POL
- V_POL



Max Antenna 2D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5850-5895	2.32

- TOTAL
- H_POL
- V_POL

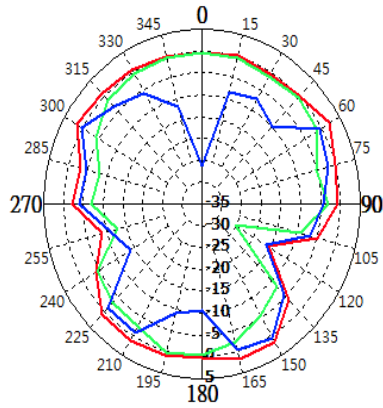


Auxiliary Antenna

Aux Antenna 2D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
2400-2483.5	2.46

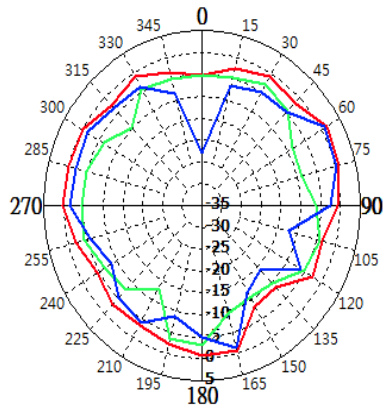
- TOTAL
- H_POL
- V_POL



Aux Antenna 2D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5150-5250	2.82

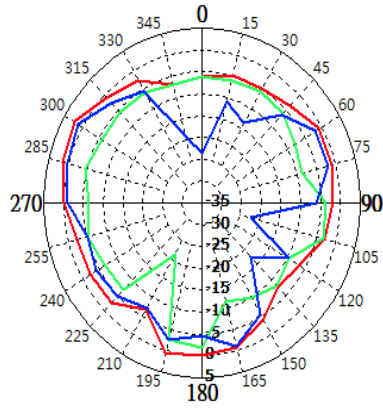
- TOTAL
- H_POL
- V_POL



Aux Antenna 2D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5250-5350	2.97

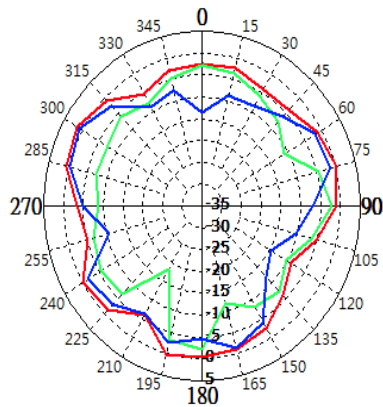
- TOTAL
- H_POL
- V_POL



Aux Antenna 2D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5470-5725	2.65

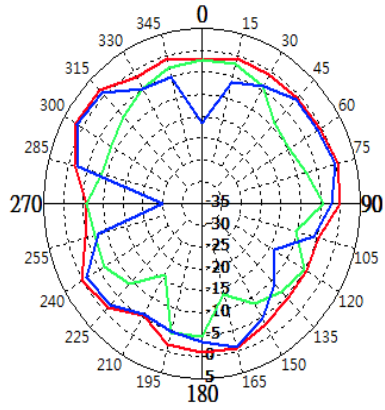
- TOTAL
- H_POL
- V_POL



Aux Antenna 2D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5725-5850	2.91

- TOTAL
- H_POL
- V_POL



Aux Antenna 2D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Horizontal+ Vertical (dBi) peak (dBi)
5850-5895	2.34

- TOTAL
- H_POL
- V_POL

