UIB Antenna Report

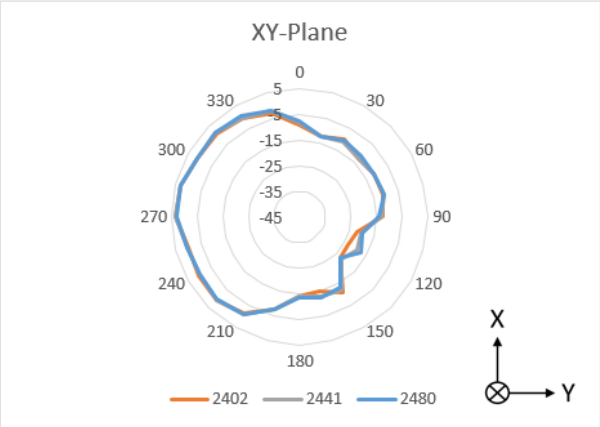
Quanta
Product Design Center

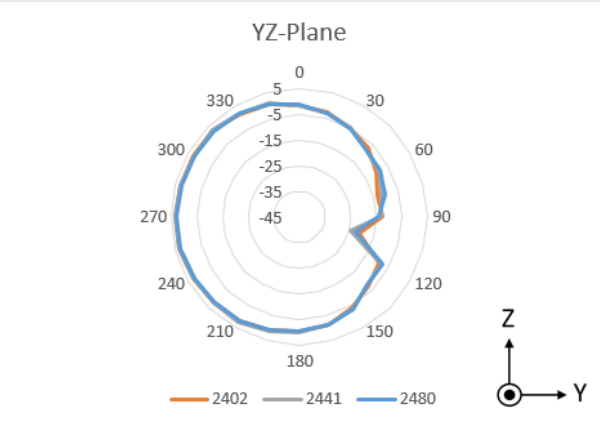
Antenna Spec

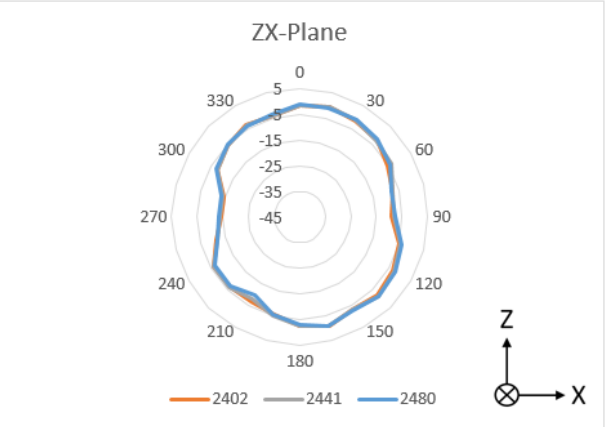
Antenna	Brand	Model	Antenna peak Gain (dBi)	Frequency range	Antenna Type	Connector Type
WLAN0	AWAN	DQ610000800	3.44	2402~2480MHz	Dipole	MHF 20351-112R-37
			2.13	5180~5859MHz		
WLAN1	AWAN	DQ610000302	3.54	2402~2480MHz	Dipole	MHF 20351-112R-37
			2.47	5180~5859MHz		
BT	AWAN	DQ610000700	3.37	2402~2480MHz	Dipole	MHF 20351-112R-37

WLAN0 Antenna Radiation Pattern

2400-2500 MHz radiation characteristic



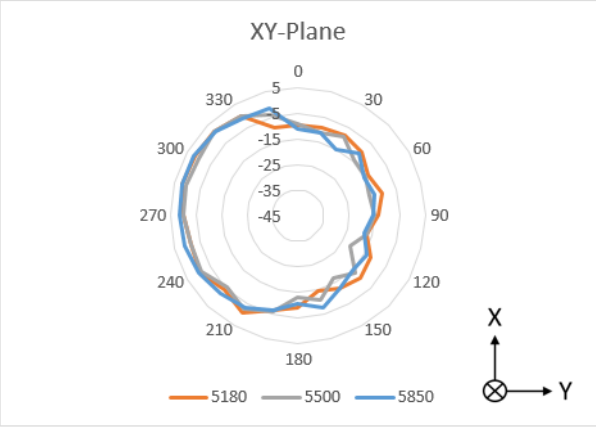


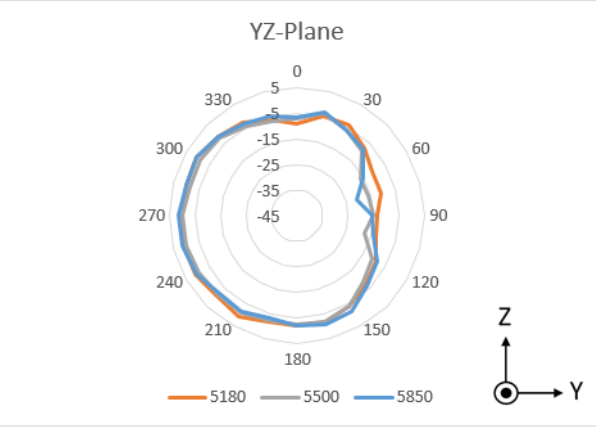


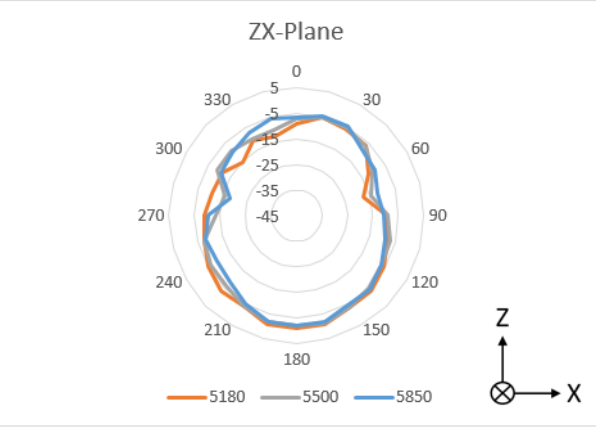
Center Frequency	2402 MHz	2442 MHz	2480 MHz
Horizontal (dBi) peak	-5.73	-6.23	-6.35
Vertical (dBi) peak	3.11	3.29	2.89
Total (dBi) peak	3.42	3.44	3.05

WLAN0 Antenna Radiation Pattern

5150-5850 MHz radiation characteristic



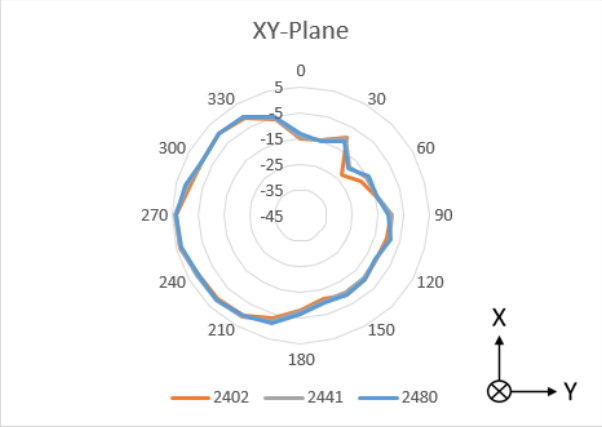


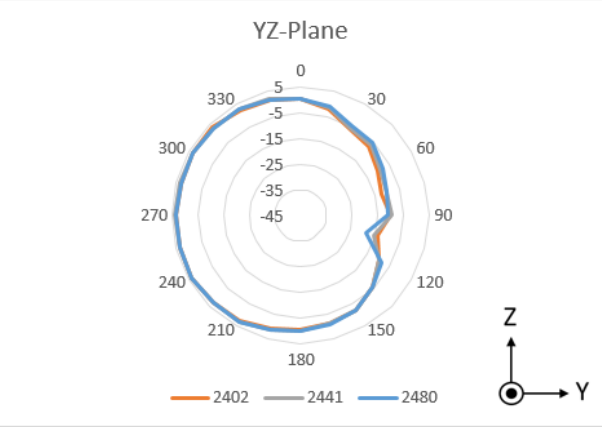


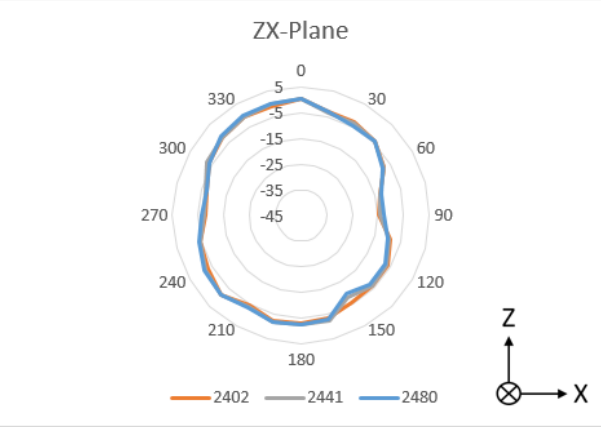
Center Frequency	5180 MHz	5500 MHz	5850 MHz
Horizontal (dBi) peak	-5.84	-6.25	-4.59
Vertical (dBi) peak	1.38	1.21	1.81
Total (dBi) peak	2.13	1.37	2.13

WLAN1 Antenna Radiation Pattern

2400-2500 MHz radiation characteristic



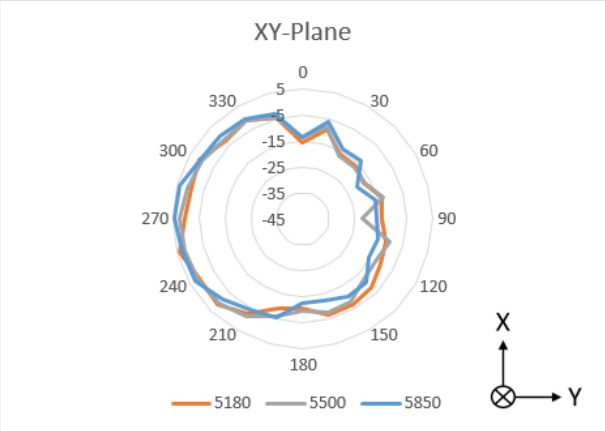


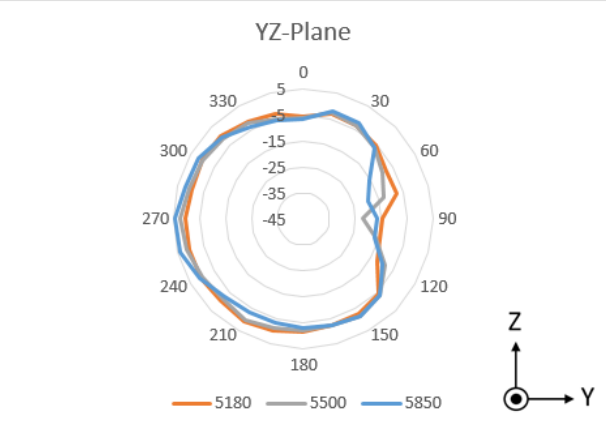


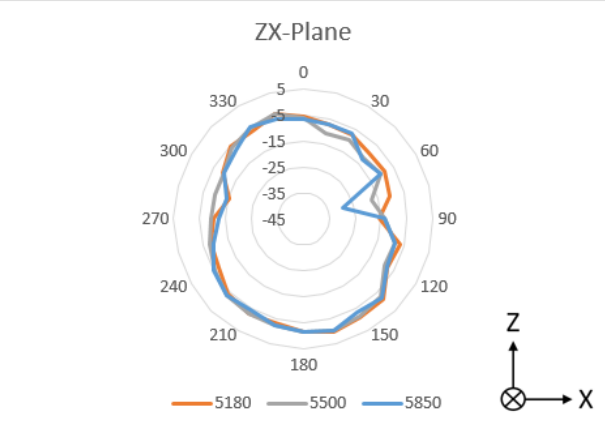
Center Frequency	2402 MHz	2442 MHz	2480 MHz
Horizontal (dBi) peak	-5.92	-6.43	-7.35
Vertical (dBi) peak	3.33	3.34	3.06
Total (dBi) peak	3.48	3.54	3.31

WLAN1 Antenna Radiation Pattern

5150-5850 MHz radiation characteristic



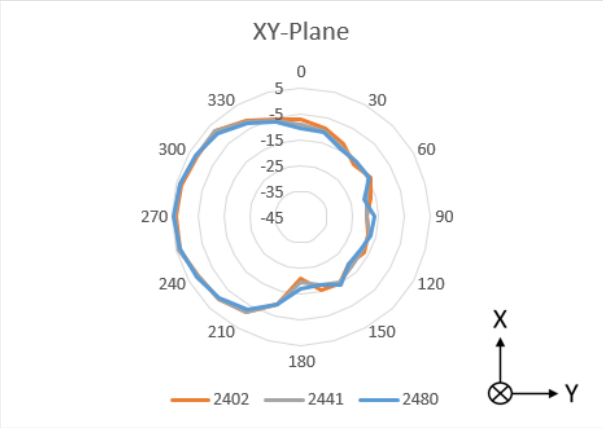


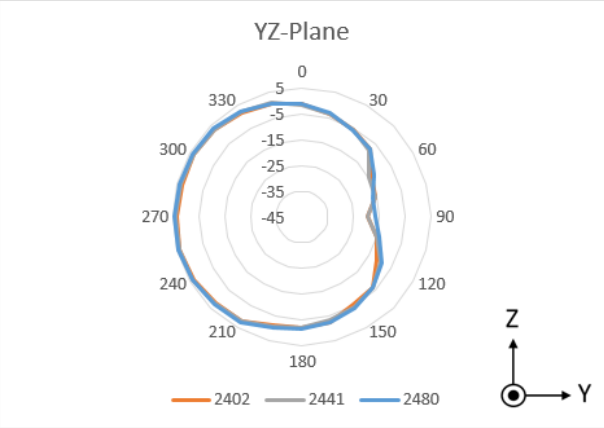


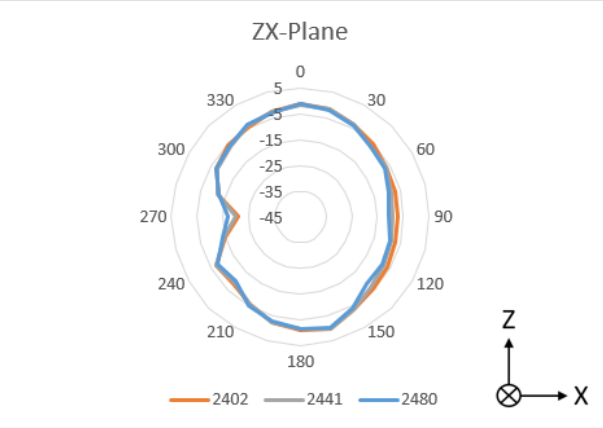
Center Frequency	5180 MHz	5500 MHz	5850 MHz
Horizontal (dBi) peak	-5.17	-5.8	-5.04
Vertical (dBi) peak	1.85	1.91	1.97
Total (dBi) peak	2.47	2.41	2.39

BT Antenna Radiation Pattern

2400-2500 MHz radiation characteristic







Center Frequency	2402 MHz	2442 MHz	2480 MHz
Horizontal (dBi) peak	-7.24	-7.12	-7.31
Vertical (dBi) peak	3.03	3.09	3.01
Total (dBi) peak	3.25	3.37	3.28

Test Information

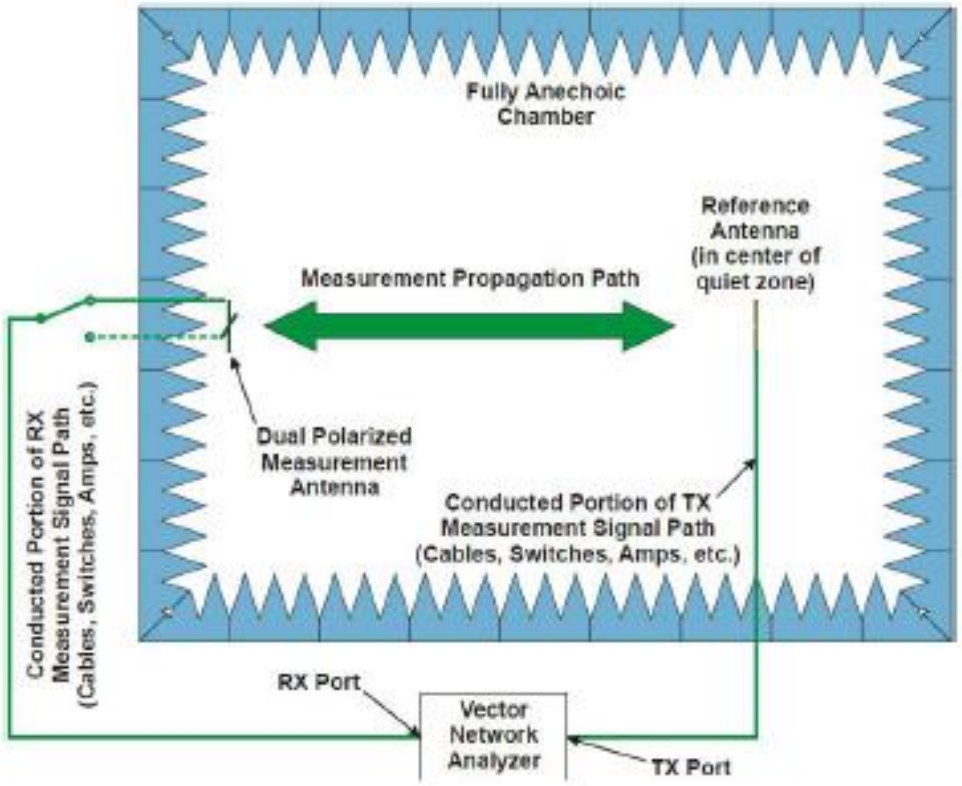
Item	Description
Model Name	UIB
Test condition	Passive Measurement
Test Engineer	Ryan Chen
Company	Quanta Computer Inc.
Company Address	NO.188, Wenhua 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C.)
Test Environment	ETS-Lindgren AMS-8923 Antenna Measurement System
Test Software	ETS-Lindgren EMQuest Data Acquisition and Analysis Software
Test Date	Sep. 12 2023 ~ Sep. 15 2023

Test setup and Procedure

1. Fix the DUT on the dielectric support structure and connect the feeding cable to the antenna used for test.
2. Set measurement paraments such as frequency range and sample angle.
3. Perform test and then get far-field data. (radiation pattern, gain, efficiency)
4. Repeat test procedure for other antenna.

Test equipment & Calibration

Network analyzer and reference antennas are used for calibration. Path loss and cable loss for different frequency bands can be checked and calculated.



Test equipment & Calibration

Equipment Description	Manufacture	Model No.	Calibrated Date	Calibrated Until
Network Analyzer	Agilent	E5080B	2022/11/05	2023/11/05
Base Station Simulators	Anritsu	8820C	2022/10/30	2023/10/30
Base Station Simulators	Agilent	8960	2022/10/30	2023/10/30
Spectrum analyzer	Agilent	N9020B	2022/10/30	2023/10/30
Switch	Agilent	3499	N/A	N/A
MAPS Controller	ETS-Lindgren	EMCO 2090	N/A	N/A
Receive Antenna	ETS-Lindgren	EMCO 3164	N/A	N/A
Anechoic Chamber	ETS-Lindgren	AMS-8500	N/A	N/A