

TEST REPORT

EUT Description	Convertible PC
Brand Name	DELL
Model Name	P175G
FCC ID	PD9AX211D2
IC ID	1000M-AX211D2
Date of Test Start/End	2023-01-04 / 2023-01-04
Features	IEEE 802.11a/b/g/n/ac/ax

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Test Report identification	221206-05.TR06
Revision Control	Rev. 00 This test report replaces any previous versions of this test report (see Section 2)

Table of Contents

1. Table of Contents	
2. Document Revision History	3
3. Test Setup.....	3
4. Test Sample.....	4
5. Test Equipment List.....	4
6. Test Results.....	4
6.1. TX POWER TABLE SUMMARY	4
6.2. TRIGGER LID ANGLE DETECTION AND POWER VERIFICATION 2.4GHZ	5
6.3. TRIGGER LID ANGLE DETECTION AND POWER VERIFICATION 5GHZ	7

2. Document Revision History

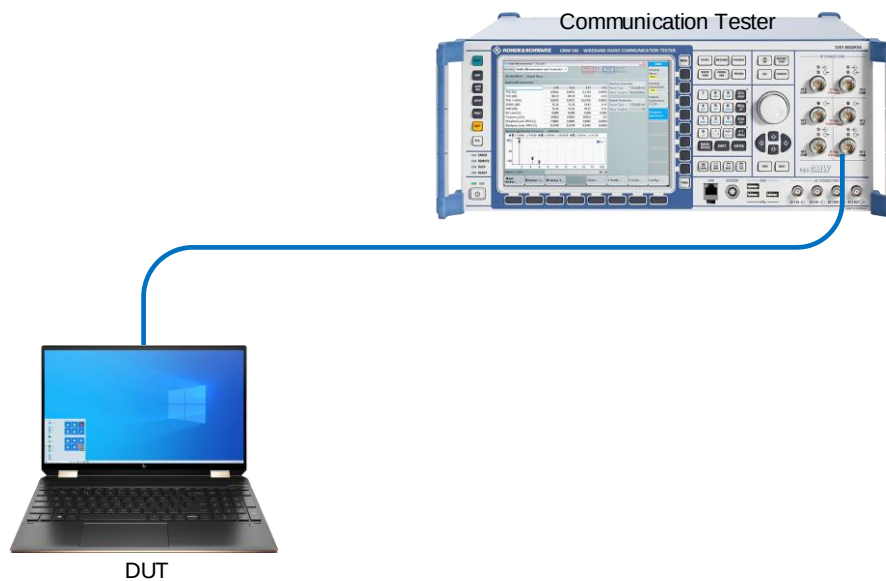
Revision #	Date	Modified by	Revision Details
Rev.00	2023-01-04	Cheiel.I	First Issue

3. Test Setup

The conducted power measurement test setup is described in the following and illustrated in Figure 1.

- The DUT which AX211D2W module is installed inside convertible PC from Dell model P175G.
- A control PC is used to configure the Call Box as an access point to manage the uplink and downlink data traffic.
- Uplink signal power is measured with the Call Box.
- Path loss in the power measurement setup from the AX211D2W antenna port to the Call Box.

Figure.1 – Validation using conducted power measurement test setup.



4. Test Sample

Sample	ID #	Description	Model	Serial #	Note
#1	221206-05.S05	Convertible PC	P175G	7491567100054	-

5. Test Equipment List

Equipment and accessories used for the conducted power measurement test setup are listed below. The Test Platform (DUT), test setup and associated equipment are shown in section 3.

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
125-000	Communication Tester	CMW500	129337	Rohde & Schwartz	2021-04-12	2023-04-12
022-003 022-004	RF path (RF cable + Adapters)	-	-	-	RF path loss was verified before usage	

6. Test Results

6.1. Tx Power Table Summary

Device Mode	Lid Angle	LCD Direction	2.4Ghz-Ch6				5Ghz-Ch40			
			Target Power (dBm)		Measured Power (dBm)		Target Power (dBm)		Measured Power (dBm)	
			Antenna AUX	Antenna MAIN	Antenna AUX	Antenna MAIN	Antenna AUX	Antenna MAIN	Antenna AUX	Antenna MAIN
Lid Close	0°	0°	14.00	14.00	13.89	13.92	12.00	12.00	11.93	11.44
Notebook	0° - 190°	0°	14.00	14.00	13.89	13.92	12.00	12.00	11.93	11.44
Tablet	190° - 360°	0°	15.50	15.50	15.34	15.23	10.50	10.50	10.41	9.92

6.2. Trigger lid angle detection and power verification 2.4GHz

The lid is rotating from 0 to 360. The screen is vertical, LCD direction is 0 degree.

Mode	Angle (degrees)	Power measured 2.4GHz-Ch6 (dBm)	
		AUX	MAIN
Lid close	0	13.89	13.92
Notebook	10	13.89	13.92
Notebook	5	13.89	13.92
Lid close	0	13.89	13.92
Notebook	1	13.89	13.92
	2	13.89	13.92
	3	13.89	13.92
	4	13.89	13.92
	5	13.89	13.92
	10	13.89	13.92
	20	13.89	13.92
	30	13.89	13.92
	40	13.89	13.92
	50	13.89	13.92
	60	13.89	13.92
	70	13.89	13.92
	80	13.89	13.92
	90	13.89	13.92
	100	13.89	13.92
	110	13.89	13.92
	120	13.89	13.92
	130	13.89	13.92
	140	13.89	13.92
	150	13.89	13.92
	160	13.89	13.92
	170	13.89	13.92
	180	13.89	13.92
Tablet	190	15.34	15.23

Mode	Angle (degrees)	Power measured 2.4GHz-Ch6 (dBm)	
		AUX	MAIN
Tablet	190	15.34	15.23
Notebook	185	13.89	13.92
	186	13.89	13.92
	187	13.89	13.92
	188	13.89	13.92
	189	13.89	13.92
Tablet	190	15.34	15.23
	191	15.34	15.23
	192	15.34	15.23
	193	15.34	15.23
	194	15.34	15.23
	195	15.34	15.23
	200	15.34	15.23
	210	15.34	15.23
	220	15.34	15.23
	230	15.34	15.23
	240	15.34	15.23
	260	15.34	15.23
	270	15.34	15.23
	280	15.34	15.23
	290	15.34	15.23
	300	15.34	15.23
	310	15.34	15.23
	320	15.34	15.23
	330	15.34	15.23
	340	15.34	15.23
	350	15.34	15.23
	360	15.34	15.23

The lid is rotating from 360 degrees to 0 degree. The screen is vertical, LCD direction to 0 degree.

Mode	Angle (degrees)	Power measured 2.4GHz-Ch6 (dBm)	
		AUX	MAIN
Tablet	360	15.34	15.23
	350	15.34	15.23
	340	15.34	15.23
	330	15.34	15.23
	320	15.34	15.23
	310	15.34	15.23
	300	15.34	15.23
	290	15.34	15.23
	280	15.34	15.23
	270	15.34	15.23
	260	15.34	15.23
	240	15.34	15.23
	230	15.34	15.23
	220	15.34	15.23
	210	15.34	15.23
	200	15.34	15.23
	190	15.34	15.23
	180	13.89	13.92
	185	13.89	13.92
	190	15.34	15.23
Notebook	189	13.89	13.92
	188	13.89	13.92
	187	13.89	13.92
	186	13.89	13.92
	185	13.89	13.92
	184	13.89	13.92
	183	13.89	13.92
	182	13.89	13.92
	181	13.89	13.92
	180	13.89	13.92

Mode	Angle (degrees)	Power measured 2.4GHz-Ch6 (dBm)	
		AUX	MAIN
Notebook	180	13.89	13.92
	170	13.89	13.92
	160	13.89	13.92
	150	13.89	13.92
	140	13.89	13.92
	130	13.89	13.92
	120	13.89	13.92
	110	13.89	13.92
	100	13.89	13.92
	90	13.89	13.92
	80	13.89	13.92
	70	13.89	13.92
	60	13.89	13.92
	50	13.89	13.92
	40	13.89	13.92
	30	13.89	13.92
	20	13.89	13.92
	10	13.89	13.92
	0	13.89	13.92
	5	13.89	13.92
	4	13.89	13.92
Notebook	3	13.89	13.92
	2	13.89	13.92
	1	13.89	13.92
	0	13.89	13.92

6.3. Trigger lid angle detection and power verification 5GHz

The lid is rotating from 0 to 360. The screen is vertical, LCD direction is 0 degree.

Mode	Angle (degrees)	Power measured 5GHz-Ch40 (dBm)	
		AUX	MAIN
Lid close	0	11.93	11.44
Notebook	10	11.93	11.44
Notebook	5	11.93	11.44
Lid close	0	11.93	11.44
Notebook	1	11.93	11.44
	2	11.93	11.44
	3	11.93	11.44
	4	11.93	11.44
	5	11.93	11.44
	10	11.93	11.44
	20	11.93	11.44
	30	11.93	11.44
	40	11.93	11.44
	50	11.93	11.44
	60	11.93	11.44
	70	11.93	11.44
	80	11.93	11.44
	90	11.93	11.44
	100	11.93	11.44
	110	11.93	11.44
	120	11.93	11.44
	130	11.93	11.44
	140	11.93	11.44
	150	11.93	11.44
	160	11.93	11.44
	170	11.93	11.44
	180	11.93	11.44
Tablet	190	10.41	9.92

Mode	Angle (degrees)	Power measured 5GHz-Ch40 (dBm)	
		AUX	MAIN
Tablet	190	10.41	9.92
Notebook	185	11.93	11.44
	186	11.93	11.44
	187	11.93	11.44
	188	11.93	11.44
	189	11.93	11.44
Tablet	190	10.41	9.92
	191	10.41	9.92
	192	10.41	9.92
	193	10.41	9.92
	194	10.41	9.92
	195	10.41	9.92
	200	10.41	9.92
	210	10.41	9.92
	220	10.41	9.92
	230	10.41	9.92
	240	10.41	9.92
	260	10.41	9.92
	270	10.41	9.92
	280	10.41	9.92
	290	10.41	9.92
	300	10.41	9.92
	310	10.41	9.92
	320	10.41	9.92
	330	10.41	9.92
	340	10.41	9.92
	350	10.41	9.92
	360	10.41	9.92

The lid is rotating from 360 degrees to 0 degree. The screen is vertical, LCD direction to 0 degree.

Mode	Angle (degrees)	Power measured 5GHz-Ch40 (dBm)	
		AUX	MAIN
Tablet	360	10.41	9.92
	350	10.41	9.92
	340	10.41	9.92
	330	10.41	9.92
	320	10.41	9.92
	310	10.41	9.92
	300	10.41	9.92
	290	10.41	9.92
	280	10.41	9.92
	270	10.41	9.92
	260	10.41	9.92
	240	10.41	9.92
	230	10.41	9.92
	220	10.41	9.92
	210	10.41	9.92
	200	10.41	9.92
	190	10.41	9.92
	180	11.93	11.44
Notebook	185	11.93	11.44
Tablet	190	10.41	9.92
Notebook	189	11.93	11.44
	188	11.93	11.44
	187	11.93	11.44
	186	11.93	11.44
	185	11.93	11.44
	184	11.93	11.44
	183	11.93	11.44
	182	11.93	11.44
	181	11.93	11.44
	180	11.93	11.44

Mode	Angle (degrees)	Power measured 5GHz-Ch40 (dBm)	
		AUX	MAIN
Notebook	180	11.93	11.44
	170	11.93	11.44
	160	11.93	11.44
	150	11.93	11.44
	140	11.93	11.44
	130	11.93	11.44
	120	11.93	11.44
	110	11.93	11.44
	100	11.93	11.44
	90	11.93	11.44
	80	11.93	11.44
	70	11.93	11.44
	60	11.93	11.44
	50	11.93	11.44
	40	11.93	11.44
	30	11.93	11.44
	20	11.93	11.44
	10	11.93	11.44
Lid close	0	11.93	11.44
Notebook	5	11.93	11.44
	4	11.93	11.44
	3	11.93	11.44
	2	11.93	11.44
	1	11.93	11.44
Lid close	0	11.93	11.44