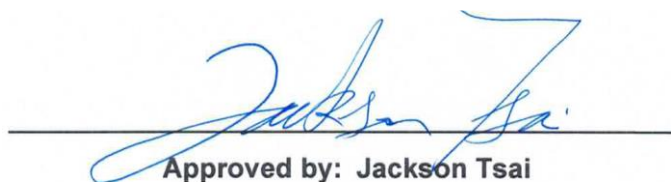


Radio Exposure Evaluation Report

Contains FCC ID : H8NNMQ2210-D187
FCC ID : H8NCBE1V1K
Equipment : WiFi 7 Router with Backup
Model Name : CBE1V1K
Applicant : ASKEY COMPUTER CORPORATION
10F, No.119, Jiankang Rd., Zhonghe Dist.,
New Taipei City, Taiwan
Manufacturer : ASKEY COMPUTER CORPORATION
10F, No.119, Jiankang Rd., Zhonghe Dist.,
New Taipei City, Taiwan
Standard : 47 CFR FCC Part 2 Subpart J, section 2.1091

The product was received on Feb. 26, 2025, and testing was started from Mar. 04, 2025 and completed on Aug. 01, 2024. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR FCC Part 2 Subpart J, section 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory
No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



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Photographs of EUT V01

History of this test report

[illegible]



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

None

Reviewed by: Ryan Hsiao
Report Producer: Debby Hung

1 General Description

1.1 Information

1.1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) VHT: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5240 5260-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
6GHz WLAN	5925-7125	5955-7115	802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
Bluetooth	2400-2483.5	2402-2480	LE: DSSS (GFSK)
Thread	2400-2483.5	2405-2480	DSSS (O-QPSK)
LTE	B2: 1850-1910 B4: 1710-1755 B5: 824-849 B12: 699-716 B13: 777-787 B14: 788-798 B30: 2305-2315 B41: 2496-2690 B48: 3550-3700 B66: 1710-1780 B71: 663-698	1850.7-1909.3 1710.7-1754.3 824.7-848.3 699.7-715.5 779.5-784.5 790.5-795.5 2307.5-2312.5 2498.5-2687.5 3552.5-3625 1710.7-1779.3 665.5-695.5	QPSK/16/64/256QAM



RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
NR	n2:1850-1910	1852.5-1907.5	QPSK/16/64/256QAM
	n5:824-849	826.5-846.5	
	n12:699-716	701.5-713.5	
	n14:788-798	790.5-795.5	
	n25:1850-1915	1852.5-1912.5	
	n30:2305-2315	2307.5-2312.5	
	n41:2496-2690	2506.02-2679.99	
	n48:3550-3700	3555-3694.98	
	n66:1710-1780	1712.5-1777.5	
	n70:1695-1710	1697.5-1707.5	
	n71:663-698	665.5-695.5	
	n77: 3450-3550;3700-3980	3455.01-3544.98	

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	NA	N01AKCGA-PK1-LB150U	PCB	I-Pex	BT+Thread	Radio 3
2	NA	N03AKCGB-PK1-LE150U	PCB	I-Pex	2.4G+5G	Radio 1_2.4G Radio 2_5G
3	NA	N03AKCGC-PK1-LG210U	PCB	I-Pex	2.4G+5G	Radio 1_2.4G Radio 2_5G
4	NA	N03AKCGD-PK1-LB210U	PCB	I-Pex	2.4G+5G	Radio 1_2.4G Radio 2_5G
5	NA	N03AKCGE-PK1-LW180U	PCB	I-Pex	2.4G+5G	Radio 1_2.4G Radio 2_5G
6	NA	N06AKCGF-PK1-LK90U	PCB	I-Pex	6G	Radio 2
7	NA	N06AKCGG-PK1-LA70U	PCB	I-Pex	6G	Radio 2
8	NA	N06AKCGH-PK1-LY180U	PCB	I-Pex	6G	Radio 2
9	NA	N06AKCGJ-PK1-LR180U	PCB	I-Pex	6G	Radio 2

Ant.	Port	Gain (dBi)									BT+ Thread
		2.4G	5.2G	5.3G	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G	
1	1	-	-	-	-	-	-	-	-	-	2.5
2	1	2.9	2.22	2.66	2.37	2.98	-	-	-	-	-
3	2	3.72	2.79	2.84	2.77	2.64	-	-	-	-	-
4	3	3.72	3.09	3.04	2.82	3.28	-	-	-	-	-
5	4	2.79	2.33	2.96	3.13	2.59	-	-	-	-	-
6	1	-	-	-	-	-	4.8	5	4.8	5.3	-
7	2	-	-	-	-	-	4.9	5.1	4.7	5	-
8	3	-	-	-	-	-	4.2	4.3	4.6	5.4	-
9	4	-	-	-	-	-	5.8	4.8	5	5.1	-



Composite Gain (dBi)					
	2.4G	5.2G	5.3G	5.6G	5.785G
DG [1SS]	5.96	4.25	3.34	4.11	4.58
DG [2SS]	3.72	3.09	3.04	3.13	3.28
DG [4SS]	3.72	3.09	3.04	3.13	3.28

Note 1: The EUT has nine antennas.

Note 2: The composite gain is derived as KDB 662911 D03 v02 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP471712.

For 2.4GHz function:

For IEEE 802.11 b/g/n/ax/be mode (4TX/4RX)

Ant. 2 (port 1), Ant. 3 (port 2), Ant. 4 (port 3) and Ant. 5 (port 4) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode (4TX/4RX)

Ant. 2 (port 1), Ant. 3 (port 2), Ant. 4 (port 3) and Ant. 5 (port 4) could transmit/receive simultaneously.

For 6GHz function:

For IEEE 802.11 ax/be mode (4TX/4RX)

Ant. 6 (port 1), Ant. 7 (port 2), Ant. 8 (port 3) and Ant. 9 (port 4) could transmit/receive simultaneously.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive.

For Thread function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive.

1.1.3 Accessories

Accessories				
AC Adapter (US Plug)	Brand Name	Spectrum	Model Name	S042PAU1200350
	Power Rating	I/P: 100-120 Vac, 1.0 A, O/P: 12.0 Vdc, 3.5 A		
	Power Cord	1.8 meter, non-shielded cable, w/o ferrite core		
RJ45 Cable	1.75 meter, non-shielded cable, w/o ferrite core			
Battery Backup	Brand Name	Spectrum	Model Name	BBS8V1T
	Power Rating	I/P: 11.5 - 12.5 Vac, 3.5 A O/P: Battery Mode: 5.9 - 8.4 Vdc, 5.8 A Line Mode: 11.2 - 12.5 Vdc, 3.5 A		

Reminder: Regarding to more detail and other information, please refer to user manual.

1.2 Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory		
☒	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)
		TEL: 886-3-327-3456 FAX: 886-3-327-0973
Conformity Assessment Body Identifier (CABID) TW3785		
☐	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)
		TEL: 886-3-318-0787 FAX: 886-3-318-0287
Conformity Assessment Body Identifier (CABID) TW3785		

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	F/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	F/1500	30
1500-100,000	-	-	1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

Multiple Transmitters Condition

Co-location as simultaneously transmitting (co-transmitting) and the evaluation shall be consider that simultaneous transmissions from co-located devices the individual transmitters are evaluated separately. After sum of the individual value (basic restriction / reference level) are measured/calculated also have to under basic restriction / reference level.

Co-transmitting mode: Bluetooth+WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz +Thread+WWAN

2.2 MPE Calculation Method

The MPE was calculated at 26 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Non-Beamforming_WLAN 2.4GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
2.4G;G1D	3.72	29.69	33.41	0	33.91	26	0.25813	1.00000	0.25813
2.4G;D1D	3.72	29.91	33.63	0	34.13	26	0.27155	1.00000	0.27155

Beamforming_WLAN 2.4GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
2.4G;D1D	5.96	29.69	35.65	0	35.65	26	0.43236	1.00000	0.43236

Non-Beamforming_WLAN 5GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
5.2G;D1D	3.09	29.95	33.04	0	33.04	26	0.23705	1.00000	0.23705
5.3G;D1D	3.04	23.70	26.74	0	26.74	26	0.05557	1.00000	0.05557
5.6G;D1D	3.13	23.95	27.08	0	27.08	26	0.06010	1.00000	0.06010
5.8G;D1D	3.28	29.92	33.20	0	33.20	26	0.24595	1.00000	0.24595

Beamforming_WLAN 5GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
5.2G;D1D	4.25	27.57	31.82	0	31.26	26	0.17900	1.00000	0.17900
5.3G;D1D	3.34	23.37	26.71	0	26.85	26	0.05519	1.00000	0.05519
5.6G;D1D	4.11	23.87	27.98	0	28.06	26	0.07393	1.00000	0.07393
5.8G;D1D	4.58	27.31	31.89	0	31.34	26	0.18190	1.00000	0.18190

Non-Beamforming WLAN 6GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
6.2G;D1D	-	26.28	26.28	0	26.28	26	0.04999	1.00000	0.04999
6.4G;D1D	-	25.02	25.02	0	25.02	26	0.03740	1.00000	0.03740
6.7G;D1D	-	24.58	24.58	0	24.58	26	0.03379	1.00000	0.03379
7.0G;D1D	-	22.55	22.55	0	22.55	26	0.02118	1.00000	0.02118

Beamforming WLAN 6GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
6.2G;D1D	-	26.28	26.28	0	26.28	26	0.04999	1.00000	0.04999
6.4G;D1D	-	25.02	25.02	0	25.02	26	0.03740	1.00000	0.03740
6.7G;D1D	-	24.58	24.58	0	24.58	26	0.03379	1.00000	0.03379
7.0G;D1D	-	22.55	22.55	0	22.55	26	0.02118	1.00000	0.02118

Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
2.4G;BT-LE	2.50	18.57	21.07	0	21.07	26	0.01506	1.00000	0.01506

Thread

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
2.4G;D1D	2.50	18.58	21.08	0	21.08	26	0.01510	0.20000	0.07548

**LTE**

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
B2	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
B4	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
B5	0.93	25.00	25.93	0	25.93	26	0.04612	0.54933	0.08395
B12	0.93	25.00	25.93	0	25.93	26	0.04612	0.46600	0.09896
B13	0.93	25.00	25.93	0	25.93	26	0.04612	0.51800	0.08903
B14	0.93	25.00	25.93	0	25.93	26	0.04612	0.52533	0.08778
B30	0.06	25.00	25.06	0	25.06	26	0.03774	1.00000	0.03774
B41	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
B48	-1.29	25.00	23.71	0	23.71	26	0.02766	1.00000	0.02766
B66	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
B71	0.93	25.00	25.93	0	25.93	26	0.04612	1.00000	0.04612

5GNR

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
n2	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
n5	0.93	25.00	25.93	0	25.93	26	0.04612	0.54933	0.08395
n12	0.93	25.00	25.93	0	25.93	26	0.04612	0.46600	0.09896
n14	0.93	25.00	25.93	0	25.93	26	0.04612	0.52533	0.08778
n25	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
n30	0.06	25.00	25.06	0	25.06	26	0.03774	1.00000	0.03774
n41	2.71	28.00	30.71	0	30.71	26	0.13863	1.00000	0.13863
n48	-1.29	25.00	23.71	0	23.71	26	0.02766	1.00000	0.02766
n66	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
n70	2.71	25.00	27.71	0	27.71	26	0.06948	1.00000	0.06948
n71	0.93	25.00	25.93	0	25.93	26	0.04612	0.44200	0.10433
n77	-0.5	28.00	27.50	0	27.50	26	0.06620	1.00000	0.06620



Bluetooth+WLAN 2.4GHz+WLAN 5GHz+ WLAN 6GHz +Thread+WWAN

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	T-EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	TL Ratio
2.4G;D1D	5.96	29.69	35.65	0	35.65	26	0.43236	1.00000	0.43236
5.8G;D1D	3.28	29.92	33.20	0	33.20	26	0.24595	1.00000	0.24595
6.2G;D1D	-	28.21	28.21	0	28.21	26	0.07795	1.00000	0.07795
2.4G;BT-LE	2.50	18.57	21.07	0	21.07	26	0.01506	1.00000	0.01506
2.4G;D1D	2.50	18.58	21.08	0	21.08	26	0.01510	1.00000	0.01510
n41	2.71	28.00	30.71	0	30.71	26	0.13863	1.00000	0.13863
								Sum Ratio	0.92505
								Ratio Limit	1

—THE END—