



RADIO EXPOSURE TEST REPORT

FCC ID : L4B-RTBN9X00
Equipment : WiFi8 Quad-band Gaming Router
Brand Name : ASUS
Model Name : GT-BN98 Pro, GT-BN98, GT-BN30000
Applicant : Asus Computer International
48720 Kato Road, Fremont, CA 94538, United States
Standard : 47 CFR Part 2.1091

The product was received on Dec. 16, 2025, and testing was started from Dec. 24, 2025 and completed on May 28, 2026. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 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. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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Photographs of EUT v01



History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A1_1 Ver1.1

Page Number : 3 of 11
Issued Date : Sep. 10, 2026
Report Version : 01



Summary of Test Result

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

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: **Sam Chen**

Report Producer: **Wendy Pan**



1 General Description

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, 1024QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM) 802.11bn: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5250 5250-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM) 802.11bn: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
6GHz WLAN	5925-6425 6525-7125	5955-6415 6595-7095	802.11a: OFDM-BPSK, QPSK, 16QAM, 64QAM 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM) 802.11bn: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)



1.2 Antenna Information

Ant.	Port			Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	2.4GHz	5GHz	6GHz					
1	4	1	-	Whayu	C660-510680-A	Dipole	I-PEX	Note 1
2	1	4	-	Whayu	C660-510681-A	Dipole	I-PEX	
3	2	3	-	Whayu	C660-510682-A	Dipole	I-PEX	
4	3	2	-	Whayu	C660-510683-A	Dipole	I-PEX	
5	-	-	1	Whayu	C660-510676-A	Dipole	I-PEX	
6	-	-	2	Whayu	C660-510677-A	Dipole	I-PEX	
7	-	-	3	Whayu	C660-510678-A	Dipole	I-PEX	
8	-	-	4	Whayu	C660-510679-A	Dipole	I-PEX	
9	-	-	1	Whayu	C660-510676-A	Dipole	I-PEX	
10	-	-	2	Whayu	C660-510677-A	Dipole	I-PEX	
11	-	-	3	Whayu	C660-510678-A	Dipole	I-PEX	
12	-	-	4	Whayu	C660-510679-A	Dipole	I-PEX	

Note 1:

Ant.	Port			WLAN 2.4GHz (dBi)	WLAN 5GHz (dBi)				WLAN 6GHz (dBi)		
	2.4GHz	5GHz	6GHz		UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 5	UNII 7	UNII 8
1	4	1	-	2.83	2.7	3.61	2.7	2.59	-	-	-
2	1	4	-	2.15	3.19	3.3	3.19	3.57	-	-	-
3	2	3	-	2.06	3.97	3.52	3.63	2.63	-	-	-
4	3	2	-	1.53	2.52	3.55	2.31	2.81	-	-	-
5	-	-	1	-	-	-	-	-	2.37	-	-
6	-	-	2	-	-	-	-	-	2.43	-	-
7	-	-	3	-	-	-	-	-	2.78	-	-
8	-	-	4	-	-	-	-	-	3.81	-	-
9	-	-	1	-	-	-	-	-	-	2.32	2.65
10	-	-	2	-	-	-	-	-	-	2.98	2.82
11	-	-	3	-	-	-	-	-	-	3.89	3.18
12	-	-	4	-	-	-	-	-	-	2.6	2.38



Directional Gain (dBi)															
WLAN 2.4GHz		WLAN 5GHz UNII 1		WLAN 5GHz UNII 2A		WLAN 5GHz UNII 2C		WLAN 5GHz UNII 3		WLAN 6GHz UNII 5		WLAN 6GHz UNII 7		WLAN 6GHz UNII 8	
4T1S	4T2S	4T1S	4T2S	4T1S	4T2S	4T1S	4T2S	4T1S	4T2S	4T1S	4T2S	4T1S	4T2S	4T1S	4T2S
5.39	2.83	5.58	3.97	5.49	3.61	6.3	3.63	6.15	3.57	5.74	3.81	5.91	3.89	5.69	3.18

Note 2: The antenna gain and directional gain are measured which follow the procedure of KDB 662911 D03.

<For 2.4GHz function>

For IEEE 802.11b/g/n/VHT/ax/be/bn (4TX/4RX):

Port 1~Port 4 can be used as transmitting/receiving antenna.

Port 1~Port 4 could transmit/receive simultaneously.

<For 5GHz function>

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

Port 1~Port 4 can be used as transmitting/receiving antenna.

Port 1~Port 4 could transmit/receive simultaneously.

<For 6GHz function>

For IEEE 802.11a/ax/be/bn (4TX/4RX):

Port 1~Port 4 can be used as transmitting/receiving antenna.

Port 1~Port 4 could transmit/receive simultaneously.

1.3 Table for EUT Supports Function

Function	Support Type
AP Router	Master
Bridge	Client without radar detection
Extender	Master
Mesh	Master

Note 1: From the above, after evaluating, AP Router was selected to test and record in the report.

Note 2: The above information was declared by manufacturer.

1.4 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
GT-BN98 Pro	All the models are identical, the difference model served as marketing strategy.
GT-BN98	
GT-BN30000	

Note 1: From the above models, model: GT-BN98 Pro was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.



1.5 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	ASUS	MU60B3120500-A1	INPUT: 100-240V ~ 50/60Hz, 1.5A OUTPUT: 12.0V, 5.0A
Other			
RJ-45 cable*1: Shielded, 1.5m			

1.6 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
Test site Designation No. TW3787 with FCC.	
Conformity Assessment Body Identifier (CABID) TW3787 with ISED.	



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

2.2 MPE Calculation Method

The MPE was calculated at 29 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

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
2.4G;D1D	5.39	29.93	35.32	0.50	35.82	29	0.36140	1.00000	0.3614
5.2G;D1D	5.58	29.93	35.51	0.48	35.99	29	0.37583	1.00000	0.37583
5.3G;D1D	5.49	23.96	29.45	0.50	29.95	29	0.09354	1.00000	0.09354
5.6G;D1D	6.30	23.66	29.96	0.01	29.97	29	0.09397	1.00000	0.09397
5.8G;D1D	6.15	29.81	35.96	0.03	35.99	29	0.37583	1.00000	0.37583
6.2G;D1D (6ID)	-	-	28.82	0.50	29.32	29	0.08091	1.00000	0.08091
6.7G;D1D (6ID)	-	-	27.91	0.50	28.41	29	0.06561	1.00000	0.06561
7.0G;D1D (6ID)	-	-	24.42	0.50	24.92	29	0.02938	1.00000	0.02938
Band12;G7D	-	-	24.00	0.50	24.50	29	0.02667	0.46600	0.05723

**Simultaneous Transmission Analysis Mode:**

Mode 1: WLAN 2.4GHz + WLAN 5GHz + 6GHz UNII5 + 6GHz UNII7~8 + WWAN

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
2.4G;D1D	5.39	29.93	35.32	0.50	35.82	29	0.36140	1.00000	0.3614
5.8G;D1D	6.15	29.81	35.96	0.03	35.99	29	0.37583	1.00000	0.37583
6.2G;D1D	-	-	28.82	0.50	29.32	29	0.08091	1.00000	0.08091
6.7G;D1D	-	-	27.91	0.50	28.41	29	0.06561	1.00000	0.06561
Band12;G7D	-	-	24.00	0.50	24.50	29	0.02667	0.46600	0.05723
								Sum Ratio	0.94098
								Ratio Limit	1

Mode 2: WLAN 2.4GHz + WLAN 5GHz + 6GHz UNII5 + 6GHz UNII7~8

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
2.4G;D1D	5.39	29.93	35.32	0.50	35.82	29	0.36140	1.00000	0.3614
5.8G;D1D	6.15	29.81	35.96	0.03	35.99	29	0.37583	1.00000	0.37583
6.2G;D1D	-	-	28.82	0.50	29.32	29	0.08091	1.00000	0.08091
6.7G;D1D	-	-	27.91	0.50	28.41	29	0.06561	1.00000	0.06561
								Sum Ratio	0.88375
								Ratio Limit	1

————THE END————