

RF EXPOSURE REPORT



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

Product Name: 5G NR Sub 6 WiFi 7 Router

Brand Name: Verizon

Model No.: ASK-NCM1100E

Model Difference: N/A

Report Number: TESA2310000583ES

FCC ID H8N-ASK-NCM1100E

Date of EUT Received: October 4, 2023

Issue Date: December 13, 2023

Approved By _____

John Yeh

We hereby certify that:

The above equipment was evaluated by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1091.

The results of this report relate only to the sample identified in this report.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TESA2310000583ES	00	Original.	December 13, 2023	Susan Lin	

Note:

- The remark "*" indicates modification of the report upon requests from certification body.

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	5G NR Sub 6 WiFi 7 Router
Brand Name:	Verizon
Model No.:	ASK-NCM1100E
Model Difference:	N/A
Hardware Version:	Rev4
Firmware Version:	SDK 2.0.6
EUT Series No.:	ACC33200089
Power Supply:	12V

1.2 Evaluation site

Laboratory		Site Address	FCC Designation number	ISED Company Number	CAB Identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	<input type="checkbox"/>	No. 134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, 24803, Taiwan.	TW0027	4620A	TW3702
	<input checked="" type="checkbox"/>	No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 333 Taiwan.	TW0028	4620E	
	<input type="checkbox"/>	1F, No. 8, Alley 15, Lane 120, Sec. 1, Nei Hu Road, Nei Hu District, Taipei City, 222 Taiwan.	TW0029	23862	

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2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
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
1500-100000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.2 Power Density Calculation (Worst Case)

FCC Standalone MPE

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	Max. EIRP (mW)	Power Density (PD) (mW/cm ²)	Limit (mW/cm ²)	Pass / Fail	Power Density / Limit	Collocated MPE
WLAN 2.4G	2442	36	30.00	5.81	3810.66	0.234	1.000	Pass	0.234	V
WLAN 5.2G	5250	36	30	6.00	3981.07	0.245	1.000	Pass	0.245	V
WLAN 5.3G	5350	36	23.98	6.42	1096.48	0.067	1.000	Pass	0.067	
WLAN 5.6G	5725	36	23.98	6.99	1250.26	0.077	1.000	Pass	0.077	
WLAN 5.8G	5850	36	29	6.30	3388.44	0.208	1.000	Pass	0.208	
WLAN 6G	7125	36	-	-	520.00	0.032	1.000	Pass	0.032	V
LTE-Band 2	1850	36	25	3.80	758.58	0.047	1.000	Pass	0.047	
LTE-Band 5	825	36	25	3.40	691.83	0.043	0.550	Pass	0.078	
LTE-Band 13	780	36	25	4.00	794.33	0.049	0.520	Pass	0.094	V
LTE-Band 48	3553	36	25	5.90	1230.27	0.076	1.000	Pass	0.076	
LTE-Band 66	1710	36	25	3.80	758.58	0.047	1.000	Pass	0.047	
5G NR n2	1850	36	25	3.80	758.58	0.047	1.000	Pass	0.047	
5G NR n5	824	36	25	3.40	691.83	0.043	0.549	Pass	0.078	
5G NR n48	3550	36	25.5	5.90	1380.38	0.085	1.000	Pass	0.085	
5G NR n66	1710	36	25	3.80	758.58	0.047	1.000	Pass	0.047	
5G NR n77	3300	36	28.5	5.90	2754.23	0.169	1.000	Pass	0.169	V

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.

2.3 Collocated Power Density Calculation

FCC Collocated MPE (worst case)

Operation Mode	Σ (Power Density / Limit)
2.4G+5G+6G	0.511
2.4G+5G+6G+LTE+5G NR	0.774
CA_n77C	0.338
ENDC_13A_n77A	0.263

Note:

1. $\Sigma(\text{Power Density} / \text{Limit})$: This is a summation of [(Power Density for each transmitter/antenna included in the simultaneous transmission) / (corresponding MPE limit)].
2. Considering the collocated transmitters, the aggregated (Power Density / limit) is smaller than 1, and MPE of collocated transmitters is compliant

~ End of Report ~

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