

RF EXPOSURE REPORT



Applicant: Sercomm Corporation
8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan,
R.O.C.

Manufacturer: Sercomm Corporation
8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan,
R.O.C.

Product Name: wireless device

Brand Name: NA

Model No.: G1NRR

FCC ID P27-G1NRR

Date of EUT Received: Jan. 23, 2025

Issue Date: Apr. 14, 2025

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 §1.1307 & KDB 447498 D04 v01.

The results of this report relate to the specific 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
TESA2501000130ES	00	Original	Feb. 24, 2025	Cindy Chou	
TESA2501000130ES	01	Modify comment	Apr. 14, 2025	Cindy Chou	

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:	wireless device
Brand Name:	NA
Model No.:	G1NRR

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 checked="" type="checkbox"/>	No. 134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, 24803, Taiwan.	TW0027	4620A	TW3702
	<input 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, Neihu District, Taipei City, 222 Taiwan.	TW0029	23862	

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SGS Taiwan Ltd. | No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號

1.3 Antenna Information:

BT / WLAN 2.4GHz

Antenna Type	Supplier	Freq. (MHz)	Peak Antenna Gain (dBi)
PIFA	SERCOMM	2.4GHz	2.83

WLAN 5GHz

Antenna Type	Supplier	Note
PIFA	SERCOMM	Ant 1

Operating Frequency (MHz)	Ant 1 Peak Gain (dBi)
5150.0 ~ 5250.0	4.52
5250.0 ~ 5350.0	4.52
5470.0 ~ 5725.0	4.52
5725.0 ~ 5850.0	4.52

Note: Antenna information is provided by the applicant.

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2 DETERMINATION OF MPE EXEMPTION

2.1 FCC

2.1.1 Single RF Source

As per §1.1307(b)(3)(i),

- (A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);
- (B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Note: when 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds.

- (C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

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**Table 1 to § 1.1307(b)(3)(i)(C) –
Single RF Sources Subject to Routine Environmental Evaluation**

RF Source frequency (MHz)		Minimum Distance			Threshold ERP (W)	
fL		fH	$\lambda L / 2\pi$		$\lambda H / 2\pi$	
0.3	-	1.34	159m	-	35.6m	1920 R ²
1.34	-	30	35.6m	-	1.6m	3450 R ² /f ²
30	-	300	1.6m	-	159mm	3.83 R ²
300	-	1500	159mm	-	31.8mm	0.0128 R ² f
1500	-	100000	31.8mm	-	0.5mm	19.2R ²

R= minimum separation distance in meter

f = frequency in MHz

2.1.2 Multiple RF Sources

In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

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2.1.3 Single RF Source Evaluation Results

Mode	Frequency (MHz)	Max. tune-up power (dBm)	Peak gain (dBi)	ERP (dBm)	ERP (W)	Permissible Minimum separation distance ($\lambda/2\pi$) (m)	R = actual Minimum separation distance(m)	ERP _{th} (W)	ERP/ERP _{th}
BLE 1M	2402	7	2.83	7.68	0.006	0.0199	0.200	0.768	0.008
WLAN 2.4GHz	2447	20	2.83	20.68	0.117	0.0195	0.200	0.768	0.152
WLAN 5.2GHz	5240	19	4.52	21.37	0.137	0.0091	0.200	0.768	0.178
WLAN 5.3GHz	5300	19	4.52	21.37	0.137	0.0090	0.200	0.768	0.178
WLAN 5.6GHz	5580	19	4.52	21.37	0.137	0.0086	0.200	0.768	0.178
WLAN 5.8GHz	5745	19	4.52	21.37	0.137	0.0083	0.200	0.768	0.178

Conclusion: Source-base time average power is below Exemption Criteria and/or Routine Evaluation MPE thresholds, therefore the device is compliant FCC RF exposure requirement.

~ End of Report ~

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