

RF EXPOSURE REPORT



Applicant: Lantronix, Inc.
48 Discovery, Suite 250 Irvine, CA 92618 USA
Manufacturer: Lantronix, Inc.
48 Discovery, Suite 250 Irvine, CA 92618 USA
Product Name: Open-Q 8550CS SOM
Brand Name: LANTRONIX
Model No.: Open-Q 8550CS SOM
FCC ID R68OQ8550
Date of EUT Received: Nov. 28, 2025
Issue Date: Feb. 12, 2026

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
TESA2511000935ES	00	Original	Feb. 12, 2026	Kimmy Chiou	

Note:

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

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Contents

1	DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	4
1.1	PRODUCT DESCRIPTION	4
1.2	EVALUATION SITE	4
1.3	ANTENNA INFORMATION:	5
1.4	RATED POWER	6
2	DETERMINATION OF MPE EXEMPTION	7
2.1	FCC	7
2.2	MULTIPLE RF SOURCES EVALUATION RESULTS	9

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	Open-Q 8550CS SOM
Brand Name:	LANTRONIX
Model No.:	Open-Q 8550CS SOM

1.2 Evaluation site

Laboratory		Site Address	FCC Designation number/ Registration Number	ISED Company Number	CAB Identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	☒	No. 134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, 24803, Taiwan.	TW0027/ 891563	4620A	TW3702
	☐	No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 333 Taiwan.	TW0028/ 200037	4620E	
	☐	1F, No. 8, Alley 15, Lane 120, Sec. 1, Nei Hu Road, Nei Hu District, Taipei City, 222 Taiwan.	TW0029/ 150169	23862	

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1.3 Antenna Information:

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Dipole	TAOGLAS	FXP830.07.0100C	2.4GHz	3.46

Antenna Type	Supplier	Antenna Part No.	Note
Dipole	TAOGLAS	FXP830.07.0100C	Ant 1

Operating Frequency (MHz)	Ant 1 Peak Gain (dBi)
5150.0 ~ 5850.0	6.86

Antenna Type	Supplier	Antenna Part No.	Note
Dipole	TAOGLAS	FXP830.07.0100C	Ant 1

Operating Frequency (MHz)	Ant 1 Peak Gain (dBi)
5925.0 ~ 7125.0	8.09

Note: Antenna information is provided by the applicant.

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1.4 Rated Power

Mode	Freq. Range (MHz)	Channels	Max Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
BR+EDR+BLE	2402-2480	79	16.53	3.46	19.99	
WLAN 2.4GHz MIMO	2412-2462	11	27.26	3.46	30.72	V

Mode	Freq. Range (MHz)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 5GHz MIMO	5150~5850	19.99	6.86	26.85	V

Mode	Freq. Range (MHz)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 6GHz MIMO	5925~7125	12.14	8.09	20.23	V

Note: PG 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)	Distance (cm)	Max. tune-up power (dBm)	Max. tune-up power (mW)	Peak gain (dBi)	ERP (dBm)	ERP (mW)	x	ERP _{20cm} (mW)	P _{th} (mW)	P or ERP /P _{th}	Simultaneous transmission modes		
												1	2	3
BT	2441	20	16.53	44.978	3.46	17.84	60.814	1.901	3060.00	3060.00	0.020			
WLAN 2.4GHz MIMO	2437	20	27.26	532.108	3.46	28.57	719.449	1.901	3060.00	3060.00	0.235	V	V	
WLAN 5GHz MIMO	5745	20	19.99	99.770	6.86	24.7	295.121	2.087	3060.00	3060.00	0.096	V		V
WLAN 6GHz MIMO	6855	20	12.14	16.368	8.09	18.08	64.269	2.126	3060.00	3060.00	0.021		V	V

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.

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the minimum separation distance of that band. All the single RF source results (P or ERP) are less than their corresponding threshold (P_{th} or ERP_{th}), so they are exempt from RF exposure testing.

2.2 Multiple RF Sources Evaluation Results

Simultaneous transmission modes	Σ P or ERP /P _{th}	Criteria
WLAN 2.4G MIMO + WLAN 5G MIMO	0.332	1
WLAN 2.4G MIMO + WLAN 6G MIMO	0.256	1
WLAN 5G MIMO + WLAN 6G MIMO	0.117	1

Note:

1. $\Sigma(ERP/ERP_{th})$: This is a summation of [(ERP of RF source / exemption threshold ERP for RF source)].
Considering the collocated transmitters, the aggregated (ERP/ERP_{th}) is smaller than 1, and MPE of collocated transmitters is compliant

~ End of Report ~

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