

## RF EXPOSURE REPORT



**Applicant:** Cognito Health Inc.  
9F-1, No. 3, Yuanqu St. Nangang Dist., Taipei, 115 Taiwan  
**Manufacturer:** Cognito Health Inc.  
9F-1, No. 3, Yuanqu St. Nangang Dist., Taipei, 115 Taiwan  
**Product Name:** Control Box 3.1  
**Brand Name:** Cognito Health  
**Model No.:** BA6G-32  
**FCC ID** 2A5HF-BA6GN  
**Date of EUT Received:** Nov. 04, 2024  
**Issue Date:** Jan. 08, 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 §2.1091, KDB 447498 D01 v06.

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

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## Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TESA2411000733ES	00	Original	Jan. 08, 2025	Kimmy Chiou	

**Note:**

- 1、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:	Control Box 3.1
Brand Name:	Cognito Health
Model No.:	BA6G-32

### 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, Neihu District, Taipei City, 222 Taiwan.	TW0029	23862	

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### 1.3 Antenna Information:

#### BT / WLAN 2.4GHz

Antenna Type	Supplier	Main / Aux	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Dipole	Pegatron	Main	TZ2935D	2.4GHz	2.61
		Aux	TZ2935E		2.76

#### WLAN 5GHz

Antenna Type	Supplier	Antenna Part No.	Main / Aux	Note
Dipole	Pegatron	TZ2935D	Main	Ant 1
		TZ2935E	Aux	Ant 2

Operating Frequency (MHz)	Ant 1 Peak Gain (dBi)	Ant 2 Peak Gain (dBi)
5150.0 ~ 5250.0	2.75	2.73
5250.0 ~ 5350.0	2.81	2.79
5470.0 ~ 5725.0	3.30	3.30
5725.0 ~ 5850.0	3.37	3.76

**Note:** Antenna information is provided by the applicant.

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## 1.4 Rated Power

### BT / WLAN 2.4GHz

Mode	Freq. Range (MHz)	Channels	Max Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
BR+EDR+BLE	2402-2480	79	3.68	2.76	6.44	
WLAN 2.4GHz	2412-2462	11	17.78	2.76	<b>20.54</b>	V

### WLAN 5GHz

Mode	Freq. Range (MHz)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 5GHz	5150~5250	17.89	2.75	20.64	
	5250~5350	17.99	2.81	20.80	
	5470~5725	17.90	3.30	21.20	
	5725~5850	19.28	3.76	<b>23.04</b>	V

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## 2 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 <sup>2</sup> )	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 <sup>2</sup> )	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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Pass / Fail	Power Density / Limit	Collocated MPE
NFC	13.56	20	-	-	0.0000002	0.0000	0.979	Pass	0.000	V
BT	2480.00	20	3.68	2.76	4.41	0.0009	1.000	Pass	0.001	V
WLAN 2.4G	2442.00	20	17.78	2.76	113.24	0.023	1.000	Pass	0.023	V
WLAN 5G	5800.00	20	19.28	3.76	201.37	0.040	1.000	Pass	0.040	V

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

### 2.2.1 Collocated Power Density Calculation

Operation Mode	Power Density / Limit	$\Sigma$ (Power Density / Limit)
BT	0.001	0.047
WLAN 2.4G_Ant Main	0.023	
WLAN 2.4G_Ant Aux	0.023	
NFC	0.000	

Operation Mode	Power Density / Limit	$\Sigma$ (Power Density / Limit)
BT	0.001	0.081
WLAN 5G_Ant Main	0.040	
WLAN 5G_Ant Aux	0.040	
NFC	0.000	

**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

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## 2.3 FCC NFC

Frequency (MHz)	E-FIELD dBuV/m	Test Distance (m)	EIRP (dBm)	EIRP (mW)
13.56	8.3	30	-66.85757	0.0000002

### Note:

$$\text{EIRP (dBm)} = (\text{E-FIELD(dBuV/m)} + 20\log(d(m)) - 104.7$$

~ End of Report ~

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