

RF EXPOSURE REPORT



Applicant: Fresenius Medical Care AG
Hafenstr. 9, 97424 Schweinfurt, Germany
Manufacturer: Fresenius Medical Care Deutschland GmbH
Hafenstr. 9, 97424 Schweinfurt, Germany
EUT Description Wireless module installed in 5008X Monitor with CDX without remote control
Brand Name: Bointec
Model No. DGF109A , DGF104A
Family Model No.: Marketing Different
FCC Host Model: F50015749
FCC ID 2BK5J-DGF109FME
Date of EUT Received: Apr. 08, 2025
Issue Date: May 28, 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
TESA2504000314ES	00	Original	May 20, 2025	Cindy Chou	
TESA2504000314ES	01	Modify comment	May 28, 2025	Cindy Chou	*

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

EUT Description	Wireless module installed in 5008X Monitor with CDX without remote control
Brand Name:	Bointec
Model No.:	DGF109A, DGF104A
Model Difference:	Marketing Different
FCC Host Model:	F50015749

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:

WLAN 2.4GHz

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Dipole	Cortec	NB1363-B310BX	2.4GHz	3.62

WLAN 5GHz

Antenna Type	Supplier	Antenna Part No.
Dipole	Cortec	NB1363-B310BX

Operating Frequency (MHz)	Ant 1 Peak Gain (dBi)	Ant 2 Peak Gain (dBi)
5150.0 ~ 5250.0	1.69	1.69
5250.0 ~ 5350.0	1.69	1.69
5470.0 ~ 5725.0	1.68	1.68
5725.0 ~ 5850.0	1.68	1.68

Note: Antenna information is provided by the applicant.

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1.4 Rated Power

WLAN 2.4GHz

Mode	Freq. Range (MHz)	Channels	Max Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 2.4GHz	2412-2462	11	26.33	3.62	29.95	V
BR+EDR+BLE	2402-2480	79	6.98	3.62	10.60	

WLAN 5GHz

Mode	Freq. Range (MHz)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 5GHz	5150~5250	23.62	1.69	25.31	V
	5250~5350	23.62	1.69	25.31	V
	5470~5725	23.62	1.68	25.30	
	5725~5850	23.62	1.68	25.30	

Note: PG information is provided by the applicant.

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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 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)

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
BT	2480.00	20	6.98	3.62	11.48	0.0023	1.000	Pass	0.002	V
WLAN 2.4G	2442.00	20	26.33	3.62	988.55	0.197	1.000	Pass	0.197	V
WLAN 5G	5180.00	20	23.62	1.69	339.63	0.068	1.000	Pass	0.068	V

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

2.2.1 Collocated Power Density Calculation

Operation Mode	Σ (Power Density / Limit)
WLAN 2.4G + BT	0.199
WLAN 2.4G + WLAN 2.4G	0.394
WLAN 5G + WLAN 5G + BT	0.137

Note:

1. Σ (Power Density / 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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