



FCC TEST REPORT

FCC ID: 2BFH2-SIN-M01

Product	:	industrial pc, panel pc, industrial all in one pc, touch screen monitor
Model Name	:	SIN-M01
Series model	:	SIN-M02, SIN-M03, SIN-M04, SIN-M05, SIN-M06, SIN-M07, SIN-M08, SIN-M09, SIN-M10, SIN-M1X, SIN-M2X, SIN-M3X, SIN-M4X, SIN-M5X, SIN-M6X, SIN-M7X, SIN-M8X, SIN-M9X
Brand	:	N/A
Report No.	:	PTC24010802601E-FC04

Prepared for

Guangdong Sinmar Electronic Science and Technology Co.,Ltd

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Prepared by

Precise Testing & Certification Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name : Guangdong Sinmar Electronic Science and Technology Co.,Ltd
Address : 302, No.8, Changsha Road, Dalong Street, Panyu District, Guangzhou
Manufacturer's name : Guangdong Sinmar Electronic Science and Technology Co.,Ltd
Address : 302, No.8, Changsha Road, Dalong Street, Panyu District, Guangzhou
Product name : industrial pc, panel pc, industrial all in one pc, touch screen monitor
Model name : SIN-M01
Series model : SIN-M02, SIN-M03, SIN-M04, SIN-M05, SIN-M06, SIN-M07, SIN-M08, SIN-M09, SIN-M10, SIN-M1X, SIN-M2X, SIN-M3X, SIN-M4X, SIN-M5X, SIN-M6X, SIN-M7X, SIN-M8X, SIN-M9X
Test procedure : FCC CFR47 Part 1.1307(b)(1)
Test Date : Jan. 26, 2024 to Mar. 15, 2024
Date of Issue : Apr. 23, 2024
Test Result : PASS

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

A handwritten signature in black ink, appearing to read "Jack Zhou".

Jack Zhou / Engineer

Technical Manager:

A handwritten signature in black ink, appearing to read "Simon Pu".

Simon Pu / Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	15.247 (i)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	industrial pc, panel pc, industrial all in one pc, touch screen monitor
Model Name	:	SIN-M01
Additional model	:	SIN-M02, SIN-M03, SIN-M04, SIN-M05, SIN-M06, SIN-M07, SIN-M08, SIN-M09, SIN-M10, SIN-M1X, SIN-M2X, SIN-M3X, SIN-M4X, SIN-M5X, SIN-M6X, SIN-M7X, SIN-M8X, SIN-M9X
Model difference	:	Different model names
Specification	:	802.11b/g/n HT20/HT40 BT BDR+EDR+BLE
Operation Frequency	:	2412-2462MHz for 802.11b/g/ n(HT20/HT40) 2402-2480MHz
Number of Channel	:	11 channels for 802.11b/g/ n(HT20/HT40) 79 channels for BDR+EDR 40 channels For DTS
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Antenna installation	:	FPC antenna
Antenna Gain	:	5.58 dBi
Rated Power Supply	:	Input: DC 12V-3A
Test Power Supply	:	Adapter:DJ-120300-SA Input: AC100-240V 50/60Hz 0.8A Max. Output: DC 12V 3A
Hardware Version	:	V1.1
Software Version	:	V11.2.20240109.123418-wxl.userdebug



4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : KDB 447498 D01 General RF Exposure Guidance v06

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density



4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2} \theta \varphi$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Mode	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
2402(EDR)	3.61	8.67	8.67±1	9.268298	0.006664	1	Pass
2402(BLE_1M)	3.61	7.42	7.42±1	6.950243	0.004997	1	Pass
2412(11N20SISO)	3.61	21.93	21.93±1	196.336028	0.141163	1	Pass

*****THE END REPORT*****