



FCC TEST REPORT

FCC ID: 2BM5I-CERISE4U

Product	:	CERISE CRMX TRANSMITER
Model Name	:	CERISE 4U PRO WIRED, 1U, - 2U PRO, - 2U PRO WIRED, - 4U PRO, - 4U PRO WIRED
Brand	:	N/A
Report No.	:	PTC24053014001E-FC02
Prepared for		
Frame the space		
128 rue la Boetie, 75008 PARIS		
Prepared by		
Precise Testing & Certification Co., Ltd.		
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Report No.: PTC24053014001E-FC02

TEST RESULT CERTIFICATION

Applicant's name : Frame the space

Address : 128 rue la Boetie, 75008 PARIS

Manufacture's name : Frame the space

Address : 128 rue la Boetie, 75008 PARIS

Product name : CERISE CRMX TRANSMITER

Model name : CERISE 4U PRO WIRED, 1U, - 2U PRO, - 2U PRO WIRED, - 4U PRO, - 4U PRO WIRED

Test procedure : FCC CFR47 Part 1.1307(b)(1)

Test Date : Dec. 1, 2024 to Dec. 16, 2024

Date of Issue : Dec. 16, 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	:	CERISE CRMX TRANSMITER
Model Name	:	CERISE 4U PRO WIRED
Additional model	:	1U, - 2U PRO, - 2U PRO WIRED, - 4U PRO, - 4U PRO WIRED
Specification	:	Bluetooth BDR+EDR
Operation Frequency	:	2400-2480MHz for BT
Number of Channel	:	79 channels for BDR+EDR
Type of Modulation	:	GFSK, $\pi/4$ -DQPSK, 8DPSK For DSS
Antenna installation	:	External antenna
Antenna Gain	:	2.74 dBi
Power supply	:	USB 5V 2A PoE 36-57V 10W
Hardware Version	:	N/A
Software Version	:	N/A



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

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

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

$$P_d = \frac{30 \times P \times G}{377 \times d^2} \theta \phi$$

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	Frequency(MHz)	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
3DH5_ Ant1	2480	1.88	18.97	18.97±1	99.3116	0.037130	1	Pass
3DH5_ Ant2	2480	1.88	18.07	18.07±1	80.7235	0.030181	1	Pass
3DH5_ Ant3	2480	1.88	18.39	18.39±1	86.8960	0.032489	1	Pass
2DH5_ Ant4	2480	1.88	18.37	18.37±1	86.4968	0.032339	1	Pass



4.5 simultaneous MPE Result

3DH5_Ant1 MPE ratio	3DH5_Ant2 MPE ratio	3DH5_Ant3 MPE ratio	2DH5_Ant4 MPE ratio	simultaneous MPE ratio	MPE Limits ratio	Test result
0.037130	0.030181	0.032489	0.032339	0.132139	1	PASS

Conclusion:

Both of the 3DH5_Ant1, 3DH5_Ant2, 3DH5_Ant3, 2DH5_Ant4 can transmit simultaneously, the formula of calculated the exposure is:

$$(CPD1/LPD1) + (CPD2/LPD2) + \dots \text{etc.} < 1$$

CPD=Calculation Power Density; LPD= Limit of Power Density

Therefore, the calculation of this situation is $(0.03713/1) + (0.030181/1) + (0.032489/1) + (0.032339/1) = 0.132139$.

which is less than the "1" limit.

Conclusion:

1. Calculate in the worst-case mode.
2. Max. Tune Up Power is declared by manufacturer, and used to calculate.

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