



RF Exposure Evaluation Declaration

Report No.: S2025021260650108

Issue Date: 08-07-2025

Applicant: Neusoft Group (Dalian) Co., Ltd
Address: No.901-7 Huangpu Road. Ganjingzi District, Dalian City, Liaoning Province, China
FCC ID: 2AZAXCUSP000D00
Application Type: Certification
Product: Cockpit domain controller
Model No.: CUSP000D00
Trade Mark: /
FCC Rule Part(s): CFR 47, FCC Part 2.1091 Radio frequency radiation exposure evaluation: mobile devices.
Item Receipt date: Feb.12, 2025
Test Date: Mar.18,2025 ~ Mar.21,2025

Compiled By

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Approved By

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The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

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Revision History

Report No.	Version	Description	Issue Date
S2025021260650108	Rev. 01	/	08-07-2025

Note:1. The test results of maximum power and antenna gain test items please refer to the module FCC test report (Report No.: JCF241024031-005, FCC ID:2BMJZ-P13A01H4) which issued on 2025/3/7 by Guangzhou Jingce Testing Technology Co., Ltd..

CONTENTS

Description	Page
1. Product Information	5
1.1. Equipment Description.....	5
1.2. Product Specification Subjective to this Report.....	5
2. RF Exposure Evaluation	7
2.1. Limits	7
2.2. Calculation Method	8

§2.1033 General Information

Applicant:	Neusoft Group (Dalian) Co., Ltd
Applicant Address:	No.901-7 Huangpu Road. Ganjingzi District, Dalian City, Liaoning Province, China
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FCC Rule Part(s):	FCC Part 2.1091
FCC ID:	2AZAXCUSP000D00
Test Device Serial No.:	S/N.: / <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering

1. Product Information

1.1. Equipment Description

Product Name:	Cockpit domain controller
Model Name:	CUSP000D00
Additional Model:	/
Model Description:	/
Trade Mark:	/
Input Voltage Range:	DC 12V
EUT sample number:	S20250212606501-1-1(Radiated)

Note: This information is provided by the Customer and its authenticity is the responsibility of the Customer.

1.2. Product Specification Subjective to this Report

Frequency Band:	Bluetooth: 2402MHz-2480MHz IEEE802.11b/g/n/a/ac: 2412MHz-2462MHz, 5180MHz-5825MHz GPRS850: Uplink:824-849MHz, Downlink:869-964MHz GPRS1900: Uplink:1850-1910MHz, Downlink:1930-1990MHz WCDMABand2:Uplink:1850-1910MHz,Downlink:1930-1990MHz WCDMABand4:Uplink:1710-1755MHz,Downlink:2110-2155MHz WCDMABand5:Uplink:824-849MHz,Downlink:869-894MHz LTEBand2:Uplink:1850-1910MHz,Downlink:1930-1990MHz LTEBand4:Uplink:1710-1755MHz,Downlink:2110-2155MHz LTEBand5:Uplink:824-849MHz,Downlink:869-894MHz LTEBand7:Uplink:2500-2570MHz,Downlink:2620-2690MHz LTEBand38:Uplink:2570-2620MHz,Downlink:2570-2620MHz LTEBand41:Uplink:2496-2690MHz, Downlink:2496-2690MHz
Modulation Type:	Bluetooth:GFSK, $\pi/4$ -DQPSK, 8DPSK IEEE802.11b:DSSS(CCK,QPSK,BPSK) IEEE802.11g:OFDM(64QAM,16QAM,QPSK,BPSK) IEEE802.11nHT20,HT40:OFDM(64QAM,16QAM,QPSK,BPSK) IEEE802.11a:OFDM(64QAM,16QAM,QPSK,BPSK) IEEE 802.11ac (HT20/40/80): OFDM (256QAM, 64QAM, 16QAM, QPSK,BPSK) GPRS:GMSK

	WCDMA:QPSK LTE:QPSK/16QAM
Antenna Specification:	BT: Internal antenna with 4.86 dBi gain (Max); BLE: Internal antenna with 4.86 dBi gain (Max); 2.4G WiFi: Internal antenna 1 with 4.86dBi (Max.), Internal antenna 2 with 3.49dBi (Max.); 5G WiFi: Internal antenna 1 with 5.29dBi antenna gain(max), Internal antenna 2 with 5.37dBi antenna gain(max); GPRS850: Internal antenna with 1.66dBi gain(max), GPRS1900: Internal antenna with 3.33dBi gain(max), WCDMA Band2: Internal antenna with 3.33dBi gain(max), WCDMA Band4: Internal antenna with 4.07dBi gain(max), WCDMA Band5: Internal antenna with 1.66dBi gain(max), LTE Band2: Internal antenna with 3.33dBi gain(max), LTE Band4: Internal antenna with 4.07dBi gain(max), LTE Band5: Internal antenna with 1.66dBi gain(max), LTE Band7: Internal antenna with 3.01dBi gain(max), LTE Band38: Internal antenna with 3.01dBi gain(max), LTE Band41: Internal antenna with 3.97dBi gain(max)
Temperature Range:	-40°C ~ +85°C
Hardware Version:	HWA.0.3
Software Version:	SWA.0.20241226a
Note:	The EUT antenna gain is provided by the applicant. This report is made solely on the basis of such data and/or information. We accept no responsibility for the authenticity and completeness of the above data and information and the validity of the results and/or conclusions.

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

For simultaneous transmission exposure cases, calculation formula is:

$$\sum_{k=1}^c \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

2.2. Calculation Method

Predication of MPE limit at a given distance

EIRP(dBm)=Maximum Tune-up Output power (dBm) + Maximum antenna gain(dBi)

ERP(dBm)=EIRP(dBm) - 2.15

R=minimum distance to the center of radiation of the antenna

From the EUT RF output power, the minimum mobile separation distance, d=20cm, as well as the maximum gain of the used as following information, the RF power ERP can be obtained.

Table 1 Antenna Specification

Mode	Antenna type	Internal Identification	Maximum antenna gain
BT &BLE	Internal antenna	Antenna 1	4.86dBi
2.4G WiFi	Internal antenna	Antenna 1	4.86dBi
	Internal antenna	Antenna 2	3.49dBi
5G WiFi	Internal antenna	Antenna 1	5.29dBi
	Internal antenna	Antenna 2	5.37dBi
GSM 850	Internal antenna	Main	1.66dBi
PCS 1900	Internal antenna	Main	3.33dBi
UMTS Band 2	Internal antenna	Main	3.33dBi
UMTS Band 4	Internal antenna	Main	4.07dBi
UMTS Band 5	Internal antenna	Main	1.66dBi
LTE Band 2	Internal antenna	Main	3.33dBi
LTE Band 4	Internal antenna	Main	4.07dBi
LTE Band 5	Internal antenna	Main	1.66dBi
LTE Band 7	Internal antenna	Main	3.01dBi
LTE Band 38	Internal antenna	Main	3.01dBi
LTE Band 41	Internal antenna	Main	3.97dBi

Table 2 Transmit Power

Mode	Maximum Output Power (dBm)	Maximum Tune-up Output power (dBm)
BT& BLE	-1.08	-1.00±1.00
2.4G WiFi	21.55	21.00±1.00
5GWIFI	14.62	14.00±1.00
GPRS 850 (GMSK,4 Slot)	25.79	25.00±1.00
GPRS 1900 (GMSK,4 Slot)	22.91	22.00±1.00
WCDMA Band 2	20.51	20.00±2.00
WCDMA Band 4	19.59	19.00±1.00
WCDMA Band 5	18.56	18.00±1.00
LTE Band 2	22.37	21.50±1.00
LTE Band 4	22.81	22.00±1.00
LTE Band 5	22.69	22.00±1.00
LTE Band 7	22.09	21.50±1.00
LTE Band 38	22.31	21.50±1.00
LTE Band 41	20.58	20.00±1.00

Note:

The Maximum Output Power and **Maximum Tune-up Output power** refer to report (Report No.:JCF241024031-005, FCC ID:2BMJZ-P13A01H4) which issued on 2025/3/7 by Guangzhou Jingce Testing Technology Co., Ltd..

Other configurations of GPRS are considered as secondary modes. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:

The duty cycle “x” of different time slots as below:

1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8

Based on the calculation formula:

Frame-averaged power = Burst averaged power + 10 log (x), So,

Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot) – 9.19

Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots) – 6.13

Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots) – 4.42

Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.18

STANDALONE MPE

Mode	Frequency (MHz)	Maximum Tune-up Output power (dBm)	Antenna Gain (dBi)	Maximum Tune-up EIRP (dBm)	ERP (dBm)	Maximum Tune-up ERP (W)	Threshold ERP(W)
BT&BLE	2402-2480	0.00	4.86	4.86	2.71	0.0019	0.768
2.4G WiFi Antenna 1	2412-2462	22.00	4.86	26.86	24.71	0.2958	0.768
GPRS 850 (GMSK,4 Slot)	824-849	26.00	1.66	24.48	22.33	0.1710	0.422
GPRS 1900 (GMSK,4 Slot)	1850-1910	23.00	3.33	23.15	21.00	0.1259	0.768
WCDMA Band 2	1850-1910	21.00	3.33	24.33	22.18	0.1652	0.768
WCDMA Band 4	1710-1755	20.00	4.07	24.07	21.92	0.1556	0.768
WCDMA Band 5	824-849	19.00	1.66	20.66	18.51	0.0710	0.422
LTE Band 2	1850-1910	22.50	3.33	25.83	23.68	0.2333	0.768
LTE Band 4	1710-1755	23.00	4.07	27.07	24.92	0.3105	0.768
LTE Band 5	824-849	23.00	1.66	24.66	22.51	0.1782	0.422
LTE Band 7	2500-2570	22.50	3.01	25.51	23.36	0.2168	0.768
LTE Band 38	2570-2620	22.50	3.01	25.51	23.36	0.2168	0.768
LTE Band 41	2496-2690	21.00	3.97	24.97	22.82	0.1914	0.768
5GHz WiFi antenna 2	5180-5825	15.00	5.37	20.37	18.22	0.0664	0.768

Remark:

1. RF Exposure use distance is 20cm from manufacturer declaration of user manual.
2. For 1.5G-100GHz Threshold ERP(W)= $19.2R^2$ (W)= $19.2*0.2*0.2(W)=0.768(W)$. For 300MHz-1.5GHz Threshold ERP(W)= $0.0128 R^2 f$.
3. $ERP(dBm)=EIRP(dBm)-2.15$.

Maximum Simultaneous transmission MPE Ratio for BT, BLE, 2.4G WiFi, 5G WiFi, GSM, WCDMA, LTE:

Maximum MPE ratio BT	Maximum MPE ratio 2.4G wifi-antenna 1	Maximum MPE ratio 5G WiFi-antenna 2	Maximum MPE ratio GSM	Σ MPE ratios	Limit	Results
0.002	0.385	0.086	0.405	0.878	1.000	Pass

Remark:

According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission

operations;
 \sum of MPE ratios ≤ 1.0

Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

Statement

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