



No.:
FCCSZ2025-0043-H

TEST REPORT

FCC ID : 2BPWEX100

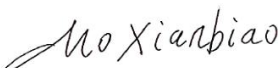
NAME OF SAMPLE : Car Infotainment System

APPLICANT : Tongxingzhe CyberAuto (Shenzhen) Co.,Ltd.

CLASSIFICATION OF TEST : N/A

CVC Testing Technology (Shenzhen) Co., Ltd.



Applicant	Name: Tongxingzhe CyberAuto (Shenzhen) Co.,Ltd. Address: National Engineering Laboratory Building A-13F, Shenzhen, 518000 Guangdong, China		
Manufacturer	Name: Tongxingzhe CyberAuto (Shenzhen) Co.,Ltd. Address: National Engineering Laboratory Building A-13F, Shenzhen, 518000 Guangdong, China		
Equipment Under Test	Product Name: Car Infotainment System Model Name: X100 Additional Model Name: N/A Brand Name: Auraai Serial NO.: N/A Sample NO.: 202505222034-5		
Date of Receipt.	May. 22, 2025	Date of Testing	May. 22, 2025 ~ Jul. 18, 2025
Test Specification		Test Result	
FCC Part 2 (Section 2.1091) KDB 447498 D04 v01 IEEE C95.1		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. Seal of CVC Issue Date: Jul. 18, 2025		
Compiled by:  Zhu Yulin Name Signature	Reviewed by:  Mo Xianbiao Name Signature	Approved by:  Dong Sanbi Name Signature	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCCSZ2025-0043-H	Original release	Jul. 18, 2025



1. GENERAL PRODUCT INFORMATION

PRODUCT NAME	Car Infotainment System	
BRAND NAME	Auraai	
MODEL NAME	X100	
ADDITIONAL MODEL NAME	N/A	
POWER SUPPLY	DC 12V	
MODULATION TYPE	BT-BR/EDR	GFSK, $\pi/4$ DQPSK, 8DPSK for FHSS
	BT-LE	GFSK for DTS
	WiFi	CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
	GSM	GMSK, 8PSK
	WCDMA	BPSK, QPSK
	LTE	QPSK, 16QAM
OPERATING FREQUENCY	See Section 4	
ANTENNA TYPE (Remark 4/5)	See Section 4	
HARDWARE VERSION:	L880A_VER_G_210503_FR4	
SOFTWARE VERSION:	V2.1.03	
I/O PORTS	Refer to User's Manual	
CABLE SUPPLIED	N/A	
Remark: 1. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report. 3. EUT photo refer to the report (Report NO.: FCCSZ2024-0030-EUT). 4. Please refer to the antenna report. 5. Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.		



2. RF EXPOSURE LIMIT

(Option B) According to FCC Part2.1091 and FCC Part1.1307b, the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where:

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz;

and

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

(Option C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to §1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source Frequency (MHz)	Threshold ERP (W)
0.3 - 1.34	$1920R^2$
1.34 - 30	$3450R^2 / f^2$
30 - 300	$3.38R^2$
300 - 1500	$0.0128R^2 / f^2$
1500 - 100000	$19.2R^2$



For multiple RF sources: Multiple RF sources are exempt if:

- The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(i)(A).
- in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for Pth, including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

Pi = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

Pth,i = the exemption threshold power (Pth) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i.

ERPj = the ERP of fixed, mobile, or portable RF source j.

ERPth,j = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least λ/2π according to the applicable formula of paragraph (b)(3)(i)(C) of this section.

Evaluatedk = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limitk = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from § 1.1310 of this chapter.

3. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



4. ANTENNA GAIN AND TYPE

The antennas provided to the EUT, please refer to the following table:

Mode	Frequency (MHz)	Antenna Type	Maximum Conducted Power (dBm)		Peak Gain (dBi)
BT-BR/EDR	2402 ~ 2480	External Antenna	8.10		3.74
BT-LE	2402 ~ 2480	External Antenna	0.88		3.74
WiFi 2.4G	2412 ~ 2462	External Antenna	11.46		3.74
WiFi 5G	5180 ~ 5240	External Antenna	15.35		3.82
	5260 ~ 5320	External Antenna	15.82		3.82
	5500 ~ 5700	External Antenna	14.14		3.82
	5745 ~ 5825	External Antenna	12.05		3.82
GSM 850 (1 Tx slot)	824 ~ 849	External Antenna	Peak: 32.52	AV: 23.49*	2.18
GSM 1900 (1 Tx slot)	1850 ~ 1910	External Antenna	Peak: 28.70	AV: 19.67*	-1.00
WCDMA B2	1850 ~ 1910	External Antenna	28.16		-1.00
WCDMA B5	824 ~ 849	External Antenna	27.15		2.18
LTE B2	1850 ~ 1910	External Antenna	22.59		-1.00
LTE B5	824 ~ 849	External Antenna	23.49		2.18
LTE B7	2500 ~ 2570	External Antenna	20.81		-0.16
LTE B38	2570 ~ 2620	External Antenna	22.96		-0.09
LTE B40	2305 ~ 2315	External Antenna	22.66		-1.25
	2350 ~ 2360	External Antenna	22.75		-1.25
LTE B41	2496 ~ 2690	External Antenna	21.12		-0.09
Note*: AV Power (1 Tx slot) = Peak Power - [10*log(0.125)]					



5. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

Option	Mode	Frequency (MHz)	Maximum Conducted Power (dBm)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
B	BT-BR/EDR	2402 ~ 2480	8.10	8	+1	7	9
	BT-LE	2402 ~ 2480	0.88	1	+1	0	2
	WiFi 2.4G	2412 ~ 2462	11.46	20	+1	19	21
	WiFi 5G	5180 ~ 5240	15.35	15	+1	14	16
		5260 ~ 5320	15.82	16	+1	15	17
		5500 ~ 5700	14.14	14	+1	13	15
		5745 ~ 5825	12.05	12	+1	11	13
	GSM 850* (1 Tx slot)	824 ~ 849	23.49	24	+1	23	25
	GSM 1900* (1 Tx slot)	1850 ~ 1910	19.67	20	+1	19	21
	WCDMA B2	1850 ~ 1910	28.16	29	+1	28	30
	WCDMA B5	824 ~ 849	27.15	27	+1	26	28
	LTE B2	1850 ~ 1910	22.59	23	+1	22	24
	LTE B5	824 ~ 849	23.49	24	+1	23	25
	LTE B7	2500 ~ 2570	20.81	21	+1	20	22
	LTE B38	2570 ~ 2620	22.96	23	+1	22	24
	LTE B40	2305 ~ 2315	22.66	23	+1	22	24
		2350 ~ 2360	22.75	23	+1	22	24
	LTE B41	2496 ~ 2690	21.12	21	+1	20	22



Option	Mode	Maximum tune up power(dBm)	Maximum Antenna Gain(dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Part1.1307b Threshold (mW)	Ratio	Verify
B	BT-BR/EDR	9	3.74	12.74	10.59	11.46	3060	0.004	PASS
	BT-LE	2	3.74	5.74	3.59	2.29	3060	0.001	PASS
	2.4G WiFi	21	3.74	24.74	22.59	181.55	3060	0.059	PASS
	5G WiFi	17	3.82	20.82	18.67	73.62	3060	0.024	PASS
	GSM850	25	2.18	27.18	25.03	318.42	1680.96	0.189	PASS
	GSM1900	21	-1.00	20	17.85	60.95	3060	0.020	PASS
	WCDMA B2	30	-1.00	29	26.85	484.17	3060	0.158	PASS
	WCDMA B5	28	2.18	30.18	28.03	635.33	1680.96	0.378	PASS
	LTE B2	24	-1.00	23	20.85	121.62	3060	0.040	PASS
	LTE B5	25	2.18	27.18	25.03	318.42	1680.96	0.189	PASS
	LTE B7	22	-0.16	21.84	19.69	93.11	3060	0.030	PASS
	LTE B38	24	-0.09	23.91	21.76	149.97	3060	0.049	PASS
	LTE B40	24	-1.25	22.75	20.6	114.82	3060	0.038	PASS
	LTE B41	22	-0.09	21.91	19.76	94.62	3060	0.031	PASS

Note: BT and WiFi cannot transmit simultaneously.

CALCULATION FOR SIMULTANEOUS TRANSMISSION:

BT/WiFi and WWAN can transmit simultaneously, the formula of calculated the MPE is

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Max: 2.4G WiFi + WCDMA B5 = 0.059 + 0.378 = 0.437 < 1, which is less than the “1” limit.

----- End of the Report -----



Important

- (1) The test report is invalid without the official stamp of CVC;
- (2) Any part photocopies of the test report are forbidden without the written permission from CVC;
- (3) The test report is invalid without the signatures of tester, reviewer and approver;
- (4) The test report is invalid if altered;
- (5) Objections to the test report must be submitted to CVC within 15 days;
- (6) Generally, commission test results apply to the samples as received. The sample information is provided by the customer and laboratory is not responsible for its authenticity;
- (7) As for the test result “-” or “N” means “not applicable”, “/” means “not test”, “P” means “pass” and “F” means “fail”

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