



MPE Report

Report No.:STS2512476H01

Issued for

IntelliCart LLC

5626 C.Thomas Rd.#605 Wildwood, Florida 34785 United States

Product Name: Kraken Touchscreen product

Brand Name:



Model Name: K5000

Series Model(s): K5001,K5002,K5003,K5004

FCC ID: 2BTDX-KRAKENK5000

Test Standard: FCC 47CFR §2.1091

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.

**TEST REPORT****Applicant's Name** IntelliCart LLC

Address 5626 C.Thomas Rd.#605 Wildwood, Florida 34785 United States

Manufacturer's Name IntelliCart LLC

Address 5626 C.Thomas Rd.#605 Wildwood, Florida 34785 United States

Product Description

Product Name Kraken Touchscreen product

Brand Name 

Model Name K5000

Series Model(s) K5001,K5002,K5003,K5004

Test Standards FCC 47CFR §2.1091
447498 D01 Interim General RF Exposure Guidance v06

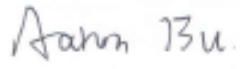
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Date of Test

Date of receipt of test item 2025-11-12

Date (s) of performance of tests 2025-11-12 to 2025-12-03

Date of Issue 2025-12-22

Test Result **Pass**Testing Engineer : 

(Aaron Bu)

Technical Manager : 

(Skylar Li)

Authorized Signatory : 

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	2025-12-22	STS2512476H01	ALL	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Kraken Touchscreen product	
Brand Name		
Model Name	K5000	
Series Model(s)	K5001,K5002,K5003,K5004	
Model Difference	The main model and subsequent models tested in this test differ only in naming and color. All other aspects, including materials, other manufacturing processes, circuit design, and manufacturers, are exactly the same. We finally decided on the K5000 as the test model.	
Product Description	The EUT is Smart Camera	
	Operation Frequency:	2402~2480 MHz
	Radio Technology:	BR+EDR
	Bluetooth Configuration:	GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8DPSK(3Mbps)
	Number Of Channel:	40
	Antenna Type:	Internal antenna
	Antenna Gain (dBi)	2.36
	Operation Frequency:	802.11b/g/n 20: 2412~2462 MHz 802.11n40:2422~2452MHz
	Modulation Type:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM
	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): 65/58.5/52/39/26/19.5/13/6.5Mbps 802.11n(40MHz): 135/121.5/108/81/54/40.5/37/13.5Mbps
	Number of Channel:	802.11b/g/n20: 11CH 802.11n 40: 7CH
	Antenna Type:	Internal antenna
	Antenna Gain (dBi)	2.36
Power Rating	DC 12V	
Adapter	N/A	
Battery	N/A	
Hardware Version	N/A	
Software Version	N/A	



1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
3.0-30	1842/f	4.89/f	*(900/f ²)
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1.34-30	824/f	2.19/f	*(180f ²)
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.



2.3 TEST RESULT

Tune up

Mode	Detector	Tune up Power
BT	PK	7±1dBm
2.4GWIFI	PK	16±1dBm

Protocol	Separati on distance (cm)	Max Tune up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/ cm ²)	Ratio	Result
2.4GWIFI	20	17	2.36	19.36	86.30	0.0295	1	0.0295	Pass
BT	20	8	2.36	10.36	10.86	0.0037	1	0.0037	Pass

Multiple transmission:

$$2.4GWIFI+BT = 0.0295+0.0037=0.0332 < 1$$

Note: 1. The Maximum power is less than the limit, complies with the exemption requirements.

2. The Bluetooth and WLAN can't simultaneous transmission at the same time.

3. ERP = EIRP - 2.15

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