RF Exposure Evaluation Report

APPLICANT	**:**	**Askey Computer Corporation**
EQUIPMENT	**:**	**Android Player Card**
BRAND NAME	**:**	**ASUS**
MODEL NAME	**:**	**CA001**
FCC ID	**:**	**H8N-WHD0200**
STANDARD	**:**	**47 CFR Part 2.1091**

We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

Mark Qu

Prepared by: Mark Qu / Manager

Jones Tsai

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (KUNSHAN) INC.
No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China

Table of Contents

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA650502	Rev. 01	Initial issue of report	Jul. 28, 2016

1. Administration Data

1.1. Testing Laboratory

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958

Applicant	
Company Name	Askey Computer Corporation
Address	10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW TAIPEI CITY, TAIWAN, R.O.C.

Manufacturer	
Company Name	Askey Computer Corporation
Address	10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW TAIPEI CITY, TAIWAN, R.O.C.

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Android Player Card
Brand Name	ASUS
Model Name	CA001
FCC ID	H8N-WHD0200
Wireless Technology and Frequency Range	WLAN2.4GHz Band: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	• 802.11b/g/n HT20/HT40 • Bluetooth v2.1+EDR, Bluetooth v3.0+EDR, Bluetooth v4.0 LE
Antenna Type / Gain	BT/WLAN: External Antenna / 5.00 dBi for Antenna A BT/WLAN: External Antenna / 4.61 dBi for Antenna B
HW Version	REV:4
SW Version	3188-BSP-AS-1-6-B-2016-06-17-1
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. Chose the maximum antenna gain to calculate exposure conservatively.

3. Maximum RF average output power among production units

Mode		Maximum Average Power (dBm)
2.4GHz	802.11b	12.0
	802.11g	11.5
	802.11n-HT20	11.5
	802.11n-HT40	11.0
	Bluetooth v2.1+EDR/ Bluetooth v3.0+EDR	3.5
	Bluetooth v4.0 LE	-2.5

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	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				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
WLAN2.4GHz 802.11b	2412.0	5.00	12.00	17.00	0.05	50.12	0.01	1.00
WLAN2.4GHz 802.11g	2412.0	5.00	11.50	16.50	0.04	44.67	0.01	1.00
WLAN2.4GHz 802.11n-HT20	2412.0	5.00	11.50	16.50	0.04	44.67	0.01	1.00
WLAN2.4GHz 802.11n-HT40	2422.0	5.00	11.00	16.00	0.04	39.81	0.01	1.00
Bluetooth	2402.0	5.00	3.50	8.50	0.01	7.08	0.00	1.00

Note:
1. For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band .
2. WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.
3. Chose the maximum antenna gain to calculate exposure conservatively.

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.