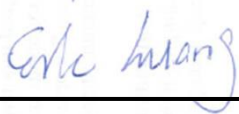


RF Exposure Evaluation Report

APPLICANT : Igluu LLC
EQUIPMENT : Digital Media Receiver
MODEL NAME : SK705DI
FCC ID : ZWJ-0823
STANDARD : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Deputy Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA273180-04	Rev. 01	Initial issue of report	May 30, 2014

1. Administration Data

1.1. Testing Laboratory

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978

Applicant	
Company Name	Igluu LLC
Address	830 Bear Tavern Road Suite 305 West Trenton, NJ 08628

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Digital Media Receiver
Model Name	SK705DI
FCC ID	ZWJ-0823
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	• 802.11a/b/g/n HT20/HT40 • Bluetooth v2.1+EDR
Antenna Type	Fixed Internal Antenna
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

3. Maximum RF average output power among production units

Band / Mode	IEEE 802.11 average power (dBm)							
	Frequency (MHz)	Channel	Ant 0				Ant 0+1	
			11b	11g	HT20	HT40	HT20	HT40
2.4GHz WLAN	2412	CH 1	16.0	8.5	7.5		9.5	
	2422	CH 3				4.5		6.0
	2437	CH 6	17.5	17.0	17.5	10.5	20.0	13.5
	2452	CH 9				7.5		7.5
	2462	CH 11	17.5	11.5	10.0		11.0	

Band / Mode	IEEE 802.11 average power (dBm)							
	Frequency (MHz)	Channel	Ant 0			Ant 0+1		
			11a	HT20	HT40	HT20	HT40	
5.2GHz WLAN	5180	CH 36	14.5	14.5		16.0		
	5190	CH 38			6.5		8.5	
	5200	CH 40	14.5	14.5		16.0		
	5210	CH 42						
	5220	CH 44	14.5	14.5		16.0		
	5230	CH 46			14.5		16.0	
	5240	CH 48	14.5	14.5		16.0		
5.8GHz WLAN	5745	CH 149	14.5	14.5		17.0		
	5755	CH 151			14.5		17.0	
	5765	CH 153	14.5	14.5		17.0		
	5775	CH 155						
	5785	CH 157	14.5	14.5		17.0		
	5795	CH 159			14.5		17.0	
	5805	CH 161	14.5	14.5		17.0		
5825	CH 165	14.5	14.5		17.0			

Mode / Band	Average Power (dBm)		
	1Mbps	2Mbps	3Mbps
Bluetooth v2.0+EDR	7.0	7.0	7.0

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/f ²)	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/f ²)	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 20 cm 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 Calculations

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)	Power Density / Limity
2.4GHz WLAN	2412.0	5.42	20.0	25.420	0.348	348.337	0.069	1.000	0.069
5.2GHz WLAN	5180.0	4.63	16.0	20.630	0.116	115.611	0.023	1.000	0.023
5.8GHz WLAN	5745.0	5.74	17.0	22.740	0.188	187.932	0.037	1.000	0.037
Bluetooth	2402.0	5.48	7.0	12.480	0.018	17.701	0.004	1.000	0.004

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band

5.2. Collocated Power Density Calculations

WLAN Power Density / Limit	Bluetooth Power Density / Limit	Σ (Power Density / Limit) of WWAN+WLAN+Bluetooth
0.069	0.004	0.073

Note:

- For collocation analysis, 2.4GHz WLAN is chosen for summation due to the highest (power density/limit) among all WLAN modes.
- Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth.
- Considering the WLAN and Bluetooth transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

Conclusion:

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