RF Exposure Evaluation Report

APPLICANT	:	Lyve Minds, Inc.
EQUIPMENT	:	Set Top Box
BRAND NAME	:	Lyve
MODEL NAME	:	HAN01
MARKETING NAME	:	Lyve Studio
FCC ID	:	2ABQW-HAN
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

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.
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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA421348-02	Rev. 01	Initial issue of report	Oct. 02, 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	Lyve Minds, Inc.
Address	10001 N. De Anza Blvd, Ste 300 Cupertino, CA 95014

Manufacturer	
Company Name	FIH Mobile Limited
Address	No.4, Mingsheng St.,Tu-Cheng Dist., New Taipei City 23679, Taiwan

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Set Top Box
Brand Name	Lyve
Model Name	HAN01
Marketing Name	Lyve Studio
FCC ID	2ABQW-HAN
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	・802.11a/b/g/n HT20/HT40/VHT20/VHT40 ・Bluetooth v2.1+EDR， Bluetooth v4.0-LE
Antenna Type	WLAN: PIFA Antenna Bluetooth: PIFA Antenna
HW Version	EVT
SW Version	Andriod 4.2 V0.240
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

Mode / Band	Average Power (dBm)			
	1Mbps (GFSK)	2Mbps (π/4-DQPSK)	3Mbps (8-DPSK)	BT4.0-LE (GFSK)
2.4 GHz Bluetooth	8	4	4	4

Band / Frequency (MHz)	IEEE 802.11 Average Power (dBm)			
	11b	11g	HT20	HT40
2.4GHz Band	21	15	13	13

Band / Frequency (MHz)	IEEE 802.11 Average Power (dBm)					
	11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	17	16	16	16	16	16
5.3GHz Band	17					
5.5GHz Band	20					
5.8GHz Band	20					

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 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. Collocated 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)	Power Density / Limit
2.4GHz WLAN	2412.0	4.83	21.00	25.830	0.383	382.825	0.076	1.000	**0.076**
5GHz WLAN	5180.0	5.57	20.00	25.570	0.361	360.579	0.072	1.000	0.072
Bluetooth	2402.0	4.83	8.00	12.830	0.019	19.187	0.004	1.000	**0.004**

Note:

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

WLAN Power Density / Limit	Bluetooth Power Density / Limit	Σ(Power Density / Limit) of WLAN+Bluetooth
0.076	0.004	0.080

Note:

1. 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.
2. Considering the WLAN collocation with the 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.