# **RF Exposure Evaluation Report**

APPLICANT : Gibi Technologies Incorporated

**EQUIPMENT**: PET location service provider

BRAND NAME : Gibi Technologies Incorporated

MODEL NAME : GIBI01

FCC ID : 2ABUGGIBI01

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

Cole huan'

Jones/sav

Approved by: Jones Tsai / Manager





**Report No.: FA421343** 

#### SPORTON INTERNATIONAL INC.

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 FCC ID: 2ABUGGIBI01 Page Number : 1 of 7

Report Issued Date : Jul. 29, 2014 Report Version : Rev. 01

### **Report No. : FA421343**

## **Table of Contents**

1.	ADM	INISTRATION DATA	4
		Testing Laboratory	
		Applicant	
	1.3.	Manufacturer	4
2.	DESC	CRIPTION OF EQUIPMENT UNDER TEST (EUT)	5
3.	MAXI	IMUM RF AVERAGE OUTPUT POWER AMONG PRODUCTION UNITS	5
4.	RF E	XPOSURE LIMIT INTRODUCTION	6
5.	RADI	IO FREQUENCY RADIATION EXPOSURE EVALUATION	7
	5.1	Standalone Power Density Calculations	7

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: 2ABUGGIBI01 Page Number : 2 of 7
Report Issued Date : Jul. 29, 2014

Report Version : Rev. 01



## SPORTON LAB. RF Exposure Evaluation Report

### **Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA421343	Rev. 01	Initial issue of report	Jul. 29, 2014

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: 2ABUGGIBI01 Page Number : 3 of 7
Report Issued Date : Jul. 29, 2014
Report Version : Rev. 01

**Report No. : FA421343** 

## 1. Administration Data

### 1.1. <u>Testing Laboratory</u>

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

## 1.2. Applicant

Company Name	Gibi Technologies Incorporated
Address	2120 Camino De Los Robles. Menlo Park. CA 94025. USA

### 1.3. Manufacturer

Company Name	Daviscomms (Malaysia) Sdn Bhd				
	Plot 18, Lorong Perusahaan Maju 1, Kawasan, Perusahaan Perai 4, 13600 Perai, Malaysia				

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: 2ABUGGIBI01 Page Number : 4 of 7
Report Issued Date : Jul. 29, 2014
Report Version : Rev. 01

Report No.: FA421343

### 2. Description of Equipment Under Test (EUT)

Product Feature & Specification				
EUT Type	PET location service provider			
Brand Name	Gibi Technologies Incorporated			
Model Name	GIBI01			
FCC ID	2ABUGGIBI01			
IMEI Code	357330050017326			
Wireless Technology and Frequency Range  Mode	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz • GPRS/EGPRS • RMC 12.2Kbps • HSDPA			
	• HSUPA			
Antenna Type	PIFA Antenna			
HW Version	R02			
SW Version	R01			
EUT Stage	Identical Prototype			

Report No.: FA421343

**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	Burst Average power(dBm)				
iviode	GSM 850	GSM 1900			
GPRS (GMSK, 1 Tx slot)	33.0	30.0			
GPRS (GMSK, 2 Tx slots)	30.0	27.0			
GPRS (GMSK, 3 Tx slots)	29.0	25.0			
GPRS (GMSK, 4 Tx slots)	28.0	24.0			
EDGE (8PSK, 1 Tx slot)	27.0	25.0			
EDGE (8PSK, 2 Tx slots)	25.0	23.0			
EDGE (8PSK, 3 Tx slots)	23.0	21.0			
EDGE (8PSK, 4 Tx slots)	22.0	20.0			

Mode	Average power(dBm)			
Mode	WCDMA Band V	WCDMA Band II		
RMC 12.2K	24.5	22.5		
HSDPA Subtest-1	24.5	22.5		
HSUPA Subtest-5	23.0	21.0		

 SPORTON INTERNATIONAL INC.
 Page Number
 : 5 of 7

 TEL: 886-3-327-3456
 Report Issued Date
 : Jul. 29, 2014

 FAX: 886-3-328-4978
 Report Version
 : Rev. 01

FCC ID: 2ABUGGIBI01

### 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 Electric field strength (V/m)		Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)	
500 St.	(A) Limits for O	ccupational/Controlled Expos	sures	W	
0.3-3.0	614	1.63	*(100)	6	
3.0-30	1842/	f 4.89/1	*(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 Gene	ral Population/Uncontrolled I	Exposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/	f 2.19/1	*(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

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: 2ABUGGIBI01 Page Number : 6 of 7
Report Issued Date : Jul. 29, 2014

Report No.: FA421343

Report Version : Rev. 01

### 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)
GPRS 850 (1 Tx slot)	824.2	1.37	33.0	34.370	2.735	344.350	0.069	0.549
GPRS 850 (2 Tx slots)	824.2	1.37	30.0	31.370	1.371	344.350	0.069	0.549
GPRS 850 (3 Tx slots)	824.2	1.37	29.0	30.370	1.089	408.319	0.081	0.549
GPRS 850 (4 Tx slots)	824.2	1.37	28.0	29.370	0.865	433.511	0.086	0.549
EGPRS 850 (1 Tx slot)	824.2	1.37	27.0	28.370	0.687	86.497	0.017	0.549
EGPRS 850 (2 Tx slots)	824.2	1.37	25.0	26.370	0.434	108.893	0.022	0.549
EGPRS 850 (3 Tx slots)	824.2	1.37	23.0	24.370	0.274	102.565	0.020	0.549
EGPRS 850 (4 Tx slots)	824.2	1.37	22.0	23.370	0.217	108.893	0.022	0.549
GPRS 1900 (1 Tx slot)	1850.2	1.37	30.0	31.370	1.371	172.584	0.034	1.000
GPRS 1900 (2 Tx slots)	1850.2	1.37	27.0	28.370	0.687	172.584	0.034	1.000
GPRS 1900 (3 Tx slots)	1850.2	1.37	25.0	26.370	0.434	162.555	0.032	1.000
GPRS 1900 (4 Tx slots)	1850.2	1.37	24.0	25.370	0.344	172.584	0.034	1.000
EGPRS 1900 (1 Tx slot)	1850.2	1.37	25.0	26.370	0.434	54.576	0.011	1.000
EGPRS 1900 (2 Tx slots)	1850.2	1.37	23.0	24.370	0.274	68.707	0.014	1.000
EGPRS 1900 (3 Tx slots)	1850.2	1.37	21.0	22.370	0.173	64.714	0.013	1.000
EGPRS 1900 (4 Tx slots)	1850.2	1.37	20.0	21.370	0.137	68.707	0.014	1.000
WCDMA Band 5	826.4	1.37	24.5	25.870	0.386	386.367	0.077	0.551
WCDMA Band 2	1852.4	1.37	22.5	23.870	0.244	243.781	0.049	1.000

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

#### **Conclusion:**

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

**SPORTON INTERNATIONAL INC.** TEL: 886-3-327-3456

FAX: 886-3-328-4978 FCC ID: 2ABUGGIBI01 Page Number : 7 of 7
Report Issued Date : Jul. 29, 2014
Report Version : Rev. 01

Report No.: FA421343