

# EXPOSURE REPORT

FCC ID: 2AT2A-01012

Date of issue: Jan. 16, 2020

Report Number:	MTi19101811-2E2
Sample Description:	FLIhub+FLIbank+FLIcube PD
Model(s):	010120201, 010090201, 010030201, 010050201, 01012XXXX, 01009XXXX, 01003XXXX, 01005XXXX, 01002XXXX (XXXX: 0000~9999)
Applicant:	FLI Charge, LLC
Address:	191 E Deerpath Road, Suite 100, Lake Forest, IL 60045
Date of Test:	Nov. 11, 2019 - Jan. 16, 2020

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

# Test Result Certification

Applicant's name:	FLI Charge, LLC
Address:	191 E Deerpath Road, Suite 100, Lake Forest, IL 60045
Manufacture's name:	SHENZHEN TOPBAND CO., LTD
Address:	Topband building, Liyuan industrial park, shiyan town, Bao'an district, Shenzhen, China.
Product name:	FLIhub+FLIbank+FLIcube PD
Trademark:	FLI Charge
Model name:	010120201, 010090201, 010030201, 010050201, 01012XXXX, 01009XXXX, 01003XXXX, 01005XXXX, 01002XXXX (XXXX: 0000~9999)
Standard:	FCC CFR 47 PART 1 , 1.1310
RF Exposure Procedures:	KDB 680106 D01 RF Exposure Wireless Charging App v03

*This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.*

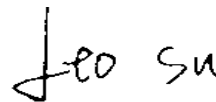
Tested by:



Demi Mu

Jan. 16, 2020

Reviewed by:



Leo Su

Jan. 16, 2020

Approved by:



Tom Xue

Jan. 16, 2020

# 1 General Information

## 1.1 Description of EUT

Product name:	FLIhub+FLIbank+FLIcube PD
Brand name:	FLI Charge
Model name:	010120201
Series model:	010090201, 010030201, 010050201, 01012XXXX, 01009XXXX, 01003XXXX, 01005XXXX, 01002XXXX (XXXX: 0000~9999)
Deference in serial model:	All the model are the same circuit and RF module, except the color.
Operation frequency:	115~205 kHz
Operational mode:	Wireless charging
Modulation type:	Load modulation
Antenna type:	Coil Antenna
Power source:	DC 20V from adapter AC 120V/60Hz.
Battery:	Power bank: DC 3.7V 2900mAh
Adapter information:	Model:Q66A-200003250 Input:AC100-240V 50/60Hz 1.5A Max Output: DC 20V 3250mA

## 1.2 Ancillary equipment list

Equipment	Model	S/N	Manufacturer
Mobile phone	S9+	/	SAMGAMG
Power bank	010030201	/	/
Adapter	Q66A-200003250	/	Shenzhen Huikeyuan Electronic Technology Co., Ltd
Load	/	/	/
iPhone	5S	/	APPLE

## 1.3 Measurement uncertainty

Measurement Uncertainty for a Level of Confidence of 95 %,  $U=2 \times U_c(y)$

Radiated emission(150kHz~30MHz)	$\pm 2.5$ dB
Radiated emission(30MHz~1GHz)	$\pm 4.2$ dB
Radiated emission (above 1GHz)	$\pm 4.3$ dB
Temperature	$\pm 1$ degree
Humidity	$\pm 5$ %

**2   Testing site**

Test Site	Shenzhen Microtest Co., Ltd
Test Site Location	No.102A & 302A, East Block, Hengfang Industrial Park, Xingye Road, Xixiang, Bao'an District, Shenzhen, Guangdong, China
FCC Registration No.:	448573

### 3 List of test equipment

Equipment No.	Equipment Name	Manufacturer	Model	Serial No.	Calibration date	Due date
MTI-E068	Broadband Field Meter	Narda Safety Test Solutions GmbH	NBM-520	D-1699	2019/07/13	2020/07/12
MTI-E069	Probe E-Field	Narda Safety Test Solutions	EF0691	H-0571	2019/07/13	2020/07/12

## 4 Test Results

### 4.4 Maximum permissible exposure

#### 4.4.1 Limit

Frequency range(MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0 6	6
300-1500			f/300	6
1500-100000			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 <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100000			1	30
f = frequency in MHz * = Plane-wave equivalent power density				

#### 4.4.2 Test Procedures

E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

These measurements should be repeated for three different client battery levels, 1%, 50%, and 99%.

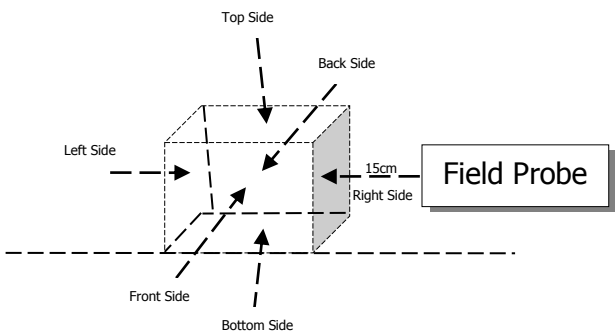
Record the test results.

KDB 680106 D01 RF Exposure Wireless Charging App v03:

- (1) Power transfer frequency is less than 1MHz.
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Note: The device is in compliance with KDB 680106 D01 RF Exposure Wireless Charging App v03 6 conditions.

4.4.3      Test Setup



## 4.4.4

## Test Result

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<1%	Top	20	0.75	0.0019
<1%	Bottom	15	0.72	0.0014
<1%	Left	15	0.71	0.0011
<1%	Right	15	0.69	0.0018
<1%	Front	15	0.75	0.0015
<1%	Back	15	0.74	0.0012
Limit			614	1.63
Margin Limit (%)			0.122	0.117

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<50%	Top	20	0.69	0.0021
<50%	Bottom	15	0.59	0.0017
<50%	Left	15	0.64	0.0015
<50%	Right	15	0.68	0.0018
<50%	Front	15	0.61	0.0011
<50%	Back	15	0.65	0.0018
Limit			614	1.63
Margin Limit (%)			0.112	0.129

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E –field(V/m)	H–field(A/m)
<99%	Top	20	0.61	0.0015
<99%	Bottom	15	0.48	0.0011
<99%	Left	15	0.51	0.0011
<99%	Right	15	0.55	0.0013
<99%	Front	15	0.63	0.0012
<99%	Back	15	0.45	0.0013
Limit			614	1.63
Margin Limit (%)			0.099	0.092



4.4.5

MPE Setup photo



----END OF REPORT----