



Product Service

## FCC - TEST REPORT

Report Number : **68.950.12.155.01** Date of Issue: 25 October 2012

Model : **316942**

Product Type : MP10 Module

Applicant : ICON Health & Fitness Inc.

Address : 1500S 1000W, LOGAN, Utah 84321

Production Facility : Wanlida Group Co., Ltd.

Address : Wanlida Industry Zone, Nanjing, Fujian, China 363601

Test Result :  **Positive**     **Negative**

Total pages including Appendices : 18

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## 2 Details about the Test Laboratory

### Details about the Test Laboratory

#### Test site1:

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch  
6th Floor, H Hall,  
Century Craftwork Culture Square,  
No. 4001, Fuqiang Road,  
Futian District 518048,  
Shenzhen,P.R.C.

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

#### Test site2:

Company name: Audix Technology (shenzhen) Co.,Ltd  
Block Shenzhen, Science & Industry Park,  
Nantou, Shenzhen,  
Guangdong,  
China

Telephone: 86 755 2663 9496

Fax: 86 755 2663 2877



### 3 Description of the Equipment Under Test

#### Description of the Equipment Under Test

Product:	MP10 Module
Model no.:	316942
Serial number:	NIL
Options and accessories:	NIL
Rating:	DC 12V, 24W AC Adaptor: Input: 100-240V, 50/60Hz, 1A Output: 12V DC, 2A
Antenna:	Integral antenna inside enclosure of EUT, NOT accessible by end user Antenna Gain=1dBi
RF Transmission Frequency:	2412-2462MHz
Description of the EUT:	NIL

#### Auxiliary Equipment and Cable Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
LCD monitor	DELL	1907FPt	7735430660POG WD-04
Keyboard	DELL	SK-8115	E145614
Mouse	DELL	OCJ339	G0203WAZ
VGA cable	DELL	Unshield	140cm
AC Power cable	DELL	Unshield	180cm
Laptop	Lenovo	X61	L3-L3729 08/03



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## 4 Summary of Test Standards

<b>Test Standards</b>	
FCC Part 15 Subpart C, 10-1-11 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators



## 5 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart C					
Test Condition	Pages	Test Result			Test Location
		Pass	Fail	N/A	
15.207 Conducted Emission AC Power Port	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247 (b) (1) Conducted peak output power	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(d) 15.209 Spurious radiated emissions	14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2



## 6 General Remarks

### Remarks

This submittal(s) (test report) is intended for the Class 2 permissive change of FCC ID: OMC304662 comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

### SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.


□ - **Does not** fulfill the general approval requirements.

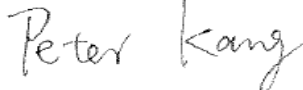
Sample Received Date: 16 October 2012


Testing Start Date: 22 October 2012

Testing End Date: 24 October 2012

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch –

<b>Tested By</b>	<u>2012-10-24</u>	<u>Sunny Lu</u>	
<b>Test Lab Engineer</b>	<b>Date</b>	<b>Name</b>	<b>Signature</b>

<b>Prepared By</b>	<u>2012-10-25</u>	<u>Peter Kang</u>	
<b>Project Engineer</b>	<b>Date</b>	<b>Name</b>	<b>Signature</b>

<b>Reviewed By</b>	<u>2012-10-25</u>	<u>Ken Li</u>	
<b>EMC Project Manager</b>	<b>Date</b>	<b>Name</b>	<b>Signature</b>

## 7 Technical Requirement

### 7.1 Conducted Emission

#### Test Method

- 1 The EUT was placed on a table, which is 0.8m above ground plane
- 2 The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
- 3 Maximum procedure was performed to ensure EUT compliance
- 4 A EMI test receiver is used to test the emissions from both sides of AC line

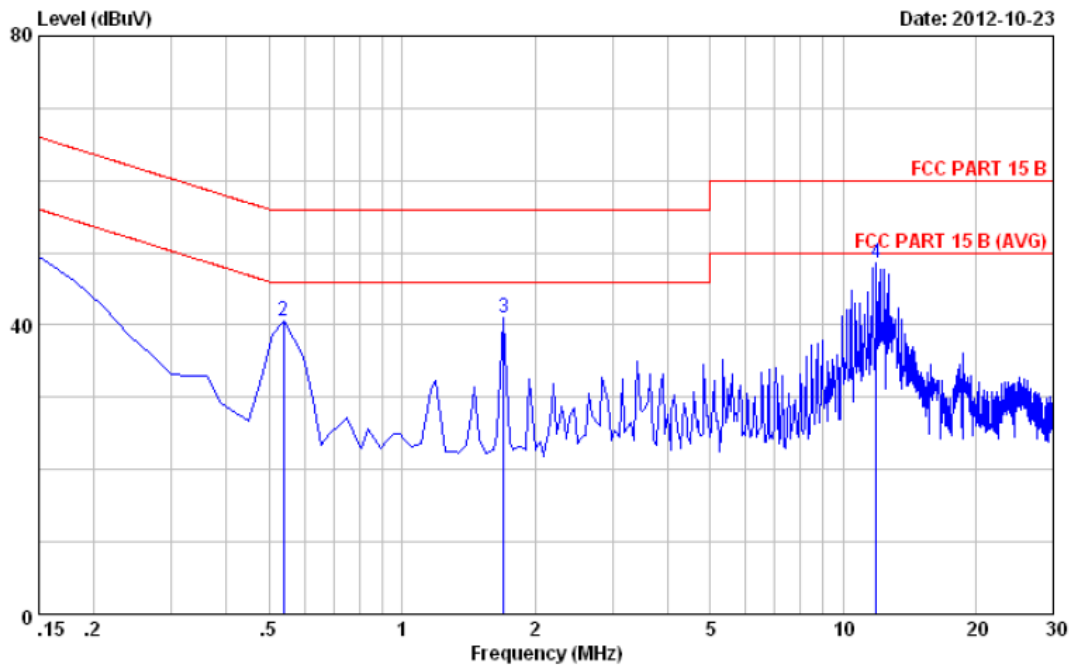
#### Limit

Frequency MHz	QP Limit dB $\mu$ V	AV Limit dB $\mu$ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Note: "\*" Decreasing linearly with logarithm of the frequency



## Conducted Emission

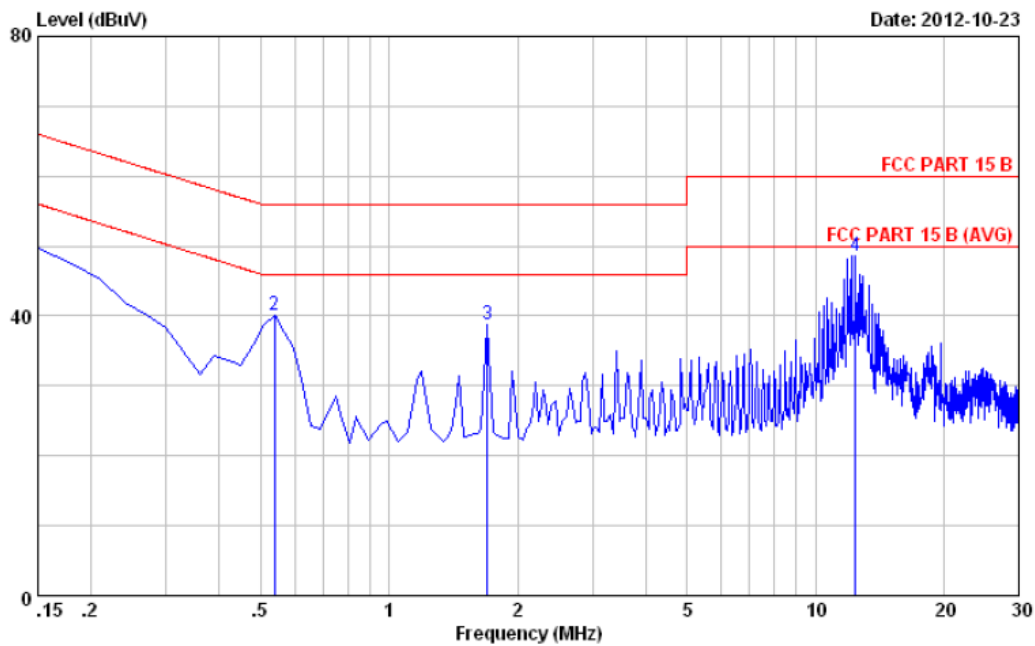


Site no :Audix No.2 Conduction  
 Dis./Lisn \*\*: 12 ENV4200 L1  
 Limit :FCC PART 15 B  
 Env./Ins. :23.9\*C/63%  
 EUT :316942  
 Power Rating :DC 12V from adator 120V/60Hz  
 Test Mode :WIFI  
 Data No :1  
 LISN phase:LINE  
 Engineer :Nick\_Huang

No	Freq	LISN Factor	Cable Loss	Reading	Emission Level	Limits	Margin	Remark
1	0.15000	9.95	9.98	29.45	49.38	66.00	16.62	Peak
2	0.53805	9.78	9.97	20.83	40.58	56.00	15.42	Peak
3	1.702	9.76	9.93	21.31	41.00	56.00	15.00	Peak
4	11.911	9.89	10.13	28.59	48.61	60.00	11.39	Peak

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.

## Conducted Emission



Site no :Audix No.2 Conduction Data No :2  
 Dis./Lisn \*\*: 12 ENV4200 N LISN phase:NEUTRAL  
 Limit :FCC PART 15 B  
 Env./Ins. :23.9°C/63% Engineer :Nick\_Huang  
 EUT :316942  
 Power Rating :DC 12V from adator 120V/60Hz  
 Test Mode :WIFI

No	Freq	LISN Factor	Cable Loss	Reading	Emission Level	Limits	Margin	Remark
1	0.15000	9.95	9.98	29.86	49.79	66.00	16.21	Peak
2	0.53805	9.78	9.97	20.29	40.04	56.00	15.96	Peak
3	1.702	9.76	9.93	19.01	38.70	56.00	17.30	Peak
4	12.389	9.91	10.15	28.44	48.50	60.00	11.50	Peak

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.

**Test Equipment List****Conducted Emission Test**

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Test Receiver	Rohde & Schwarz	ESCI	100843	Mar.28, 2013
L.I.S.N.#1	Rohde & Schwarz	ENV4200	100041	May 07, 2013
L.I.S.N.#2	Kyoritsu	KNW-407	8-1628-5	May 07, 2013
Terminator	Hubersuhner	50Ω	No. 1	May 07, 2013
Terminator	Hubersuhner	50Ω	No. 2	May 07, 2013
RF Cable	Fujikura	3D-2W	LISN Cable 2#	May 07, 2013
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	May 07, 2013

## 7.2 Conducted peak output power

### Test Method

The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.

### Limits for conducted peak output power measurements

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

## Conducted peak output power

### IEEE 802.11b modulation (1Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	14.89	Pass
CH6 2437MHz	16.05	Pass
CH11 2462MHz	16.51	Pass

### IEEE 802.11g modulation (6Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	19.15	Pass
CH6 2437MHz	20.30	Pass
CH11 2462MHz	20.48	Pass



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## Test Equipment

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
Spectrum Analyzer	Agilent	E4446A	US44300459	May 07 2013

## 7.3 Spurious radiated emissions

### Test Method

- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5 Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

### Limit

Frequency MHz	Field Strength uV/m	Field Strength dB $\mu$ V/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

## Radiated Emission

### IEEE 802.11b modulation (1 Mbps) CH1 2412MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBµV/m	Detector	Result
32.91	17.07	0.45	0	16.48	34.00	Horizontal	40.00	QP	Pass
136.7	11.32	0.93	0	23.41	35.66	Horizontal	43.50	QP	Pass
311.3	13.94	1.31	0	18.29	33.54	Horizontal	46.00	QP	Pass
4824.000	34.32	10.64	35.08	41.22	51.10	Vertical	74	PK	Pass
4824.000	34.32	10.64	35.08	31.80	41.68	Vertical	54	AV	Pass
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

### IEEE 802.11b modulation (1 Mbps) CH6 2437MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBµV/m	Detector	Result
4874.000	34.41	10.69	35.03	42.26	52.33	Vertical	74	PK	Pass
4874.000	34.41	10.69	35.03	34.07	44.14	Vertical	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

### IEEE 802.11b modulation (1 Mbps) CH11 2462MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBµV/m	Detector	Result
4924.000	-	-	-	-	-	-	-	-	-
4924.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

#### Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) If the Amp. factor is "0", means the test system did not configure with amplifier.
- (3) Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

**Radiated Emission**

## IEEE 802.11g modulation (6 Mbps) CH1 2412MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBuV	dBuV/m		dBμV/m		
32.91	17.07	0.45	0	17.18	34.70	Horizontal	40.00	QP	Pass
136.7	11.32	0.93	0	24.40	36.65	Horizontal	43.50	QP	Pass
311.3	13.94	1.31	0	19.66	34.91	Horizontal	46.00	QP	Pass
4824.000	34.32	10.64	35.08	43.17	53.05	Vertical	74	PK	Pass
4824.000	34.32	10.64	35.08	30.22	40.10	Vertical	54	AV	Pass
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

## IEEE 802.11g modulation (6 Mbps) CH6 2437MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBuV	dBuV/m		dBμV/m		
4874.000	34.41	10.69	35.03	42.32	52.39	Vertical	74	PK	Pass
4874.000	34.41	10.69	35.03	29.57	39.64	Vertical	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

## IEEE 802.11g modulation (6 Mbps) CH11 2462MHz Test Result

Frequency	Antenna Factor	Cable Loss	Amp. Factor	Reading	Emission Level	Polarization	Limit	Detector	Result
MHz	dB/m	dB	dB	dBuV	dBuV/m		dBμV/m		
4924.000	34.49	10.76	34.98	41.98	52.25	Vertical	74	PK	Pass
4924.000	34.49	10.76	34.98	26.49	36.76	Vertical	54	AV	Pass
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

## Remark:

- (4) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (5) If the Amp. factor is "0", means the test system did not configure with amplifier.
- (6) Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.



**Test Equipment List**

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
Spectrum	Agilent	E4446A	US44300459	May 07, 2013
Amp	HP	8449B	3008A02495	May 07, 2013
Antenna	EMCO	3115	9607-4877	May 16, 2013
Bilog Antenna	Schaffner	CBL6111C	2598	Dec.13, 2012
HF Cable	Hubersuhne	Sucoflex104	---	May 07, 2013



## 8 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

### System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dB $\mu$ V/m)	U=4.32dB (30MHz-25GHz)