



FCC TEST REPORT

FCC ID: QOB-WFD4105

Product	:	Indoor Micro Plug-In
Model Name	:	51511,51512,51514,58683,WFD4105, WFD4107
Brand	:	Enbrighten,Ultrapro,GE
Report No.	:	PTC22060603801E-FC02
Prepared for		
Jasco Products Company LLC		
10 e memorial road Building B Attn M Simpkins, oklahoma city, Oklahoma 73114 United States		
Prepared by		
Precise Testing & Certification Co., Ltd.		
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TEST RESULT CERTIFICATION

Applicant's name : Jasco Products Company LLC
Address : 10 e memorial road Building B Attn M Simpkins, oklahoma city, Oklahoma 73114 United States
Manufacture's name : Quang Dong Vu Hao Electronics Co.,Ltd
Address : TOAN MY VILLAGE, VOI TOWN, LANG GIANG DISTRICT, BAC GIANG PROVINCE, VIETNAM
Product name : Indoor Micro Plug-In
Model name : 51511,51512,51514,58683,WFD4105, WFD4107
Test procedure : FCC CFR47 Part 15 Section 15.247, ANSI C63.10:2013
Test Date : Jun. 08, 2022 to Jun. 17, 2022
Date of Issue : Jun. 17, 2022
Test Result : PASS

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

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Test Engineer:

A handwritten signature in black ink that reads "Simon Pu".

Simon Pu / Engineer

Technical Manager:

A handwritten signature in black ink that reads "Ronnie Liu".

Ronnie Liu / Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	Indoor Micro Plug-In
Model Name	:	51511,51512,51514,58683,WFD4105, WFD4107
Specification	:	802.11b/g/n HT20
Operation Frequency	:	2412-2462MHz for 802.11b/g/ n(HT20)
Number of Channel	:	11 channels for 802.11b/g/ n(HT20)
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Antenna installation	:	PCB antenna
Antenna Gain	:	1 dBi
Power supply	:	Input: 125V 60Hz Output:125V 15A
Hardware Version	:	N/A
Software Version	:	N/A

Model difference:

Model	Difference Description
51511,51512,51514,58683,WFD4105	51511,51512,51514,58683,WFD4105 and WFD4107 are just different in the shape of the product shell. The shape of the plastic shell of the product is different.
WFD4107	



4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density



4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
2462	1.26	21.16	21.16 ± 0.5	141.2538	0.035378	1	Pass

*****THE END REPORT*****