TEST REPORT

No. 2014SR0011

For

Client : AsiaTelco Technologies Co.

Production : Wireless Energy Controller

Model Name : EC-P11

Hardware Version: P1

Software Version: ECP-11_S1.0.2

Issued date: 2014-02-11

FCC ID: XYOEC-P11

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of ECIT Shanghai.

Test Laboratory:

ECIT Shanghai, East China Institute of Telecommunications

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1. Test Laboratory

1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	7F, G Area,No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China
Postal Code:	200001
Telephone:	86-21-63843300
Fax:	86-21-63843301

1.2. Project data

Project Leader:	Gong Yujuan
Testing Start Date:	Feb 10, 2014
Testing End Date:	Feb 11, 2014

1.3. Signature

Hu Jiajing
((Prepared this test report)

Yu Naiping
(Reviewed this test report)

Zheng Zhongbin
Director of the laboratory
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	AsiaTelco Technologies Co.
Address /Post:	Building-8, 3F, #289 Bisheng Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai, China
Country:	China
Telephone:	86-021-51688806
Postal Code:	201204
Contact	Certification

2.2. Manufacturer Information

Company Name:	AsiaTelco Technologies Co.
Address /Post:	Building-8, 3F, #289 Bisheng Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai, China
Country:	China
Telephone:	86-021-51688806
Postal Code:	201204
Contact	Certification

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description	Wireless Energy Controller
Model name	EC-P11
WiFi	802.11b/g/n
Antenna Type	External Antenna
FCC ID:	XYOEC-P11

Note: Photographs of EUT are shown in ANNEX A of this test report.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version:
N01	IMEI:N/A	P1	ECP-11_S1.0.2

*EUT ID: is used to identify the test sample in the lab internally.
Note: the EUT has no earphone.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	N/A	N/A	N/A	N/A
AE2	N/A	N/A	N/A	N/A

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1. Applicable Standards

The MPE report was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part 2.1091.
The limits standard is based on the Council Recommendation 1999/519/EC.
FCC CFR 47, Part 2, FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS, Oct 1,2011
Section 2.1091 Radiofrequency radiation exposure evaluation: mobile devices, Oct 1,2011

4.2. Test Limits

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 level 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 0.2m normally can be maintained between the user and the device.

Limits for Occupational / Controlled Exposure

Frequency Range [MHz]	Electric Field Strength (E) [V/m]	Magnetic Field Strength (H) [A/m]	Power Density (S) [mW/cm2]	Averaging Times |E|2, |H|2 or S [miniutes]
0.3 – 3.0	614	1.63	(100)*	6
3.0 – 30	1824/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	--	--	F/300	6
1500 - 100000	--	--	5	6

Limits for General Population / Uncontrolled Exposure

Frequency Range [MHz]	Electric Field Strength (E) [V/m]	Magnetic Field Strength (H) [A/m]	Power Density (S) [mW/cm2]	Averaging Times |E|2, |H|2 or S [miniutes]
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 - 100000	--	--	1.0	30

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

For the DUT, the limits for General Population / Uncontrolled Exposure are applicable.

5. Test Results

5.1. Conducted RF Power Output

Table 5.1: The Conducted Power For WiFi

The average conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	16.45	16.53	16.25	16.75
7	16.32	16.21	16.34	16.47
13	16.27	16.23	16.31	16.43

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	15.16	16.61	16.25	16.46	15.72	16.46	16.14	15.91
7	15.56	16.41	16.37	15.84	15.95	15.76	15.48	16.28
13	15.94	16.40	16.15	16.35	16.26	16.04	16.10	15.79

20M 802.11n（dBm）

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	16.65	15.91	15.87	15.93	15.98	16.01	15.89	15.85
7	16.45	15.64	16.36	16.20	15.74	16.20	16.43	15.93
13	16.38	15.96	15.64	15.47	16.04	15.50	16.20	16.05

5.2. Calculation Information

From the antenna specifications provided by the applicant, the antenna gain is 2 dBi in WiFi 802.11b/g/n.

So for conservative evaluation consideration, only maximum power of each frequency band based on the tighter limits respectively are used to calculate the boundary power density.

5.3. Result of WiFi 802.11b/g/n

Test Results: MPE Limit Calculation: the EUT's operating frequencies @ 2412MHz-2462 MHz; The maximum tune up procedure power is 25.0 dBm . The maximum gain is 2dBi.The resulted power density at a distance of 20cm can be deducted as follows:

EIRP=25.0+2 =27.0 dBm=501.19 mW

Power Density=EIRP*Duty Cycle/(4 π R^2)=501.19*1/(4* π *20^2)=0.100 mW/cm^2

Where Duty Cycle is 1 and R is 20cm.

The MPE limit for Occupational/Controlled Exposure is shown in the FCC KDB 447498 D01 and 47 CFR §2.1091, can be calculated as follows:

MPE limit =1 mW/cm^2

As we can see the resulted power density is below the MPE limit, therefore the DUT in this band is compliant with the FCC rules on RF exposure.

So the product is under the MPE limits. All is pass.

*****END OF REPORT*****