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Report No.: GTI20160274F-2

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TEST REPORT

Product Name: WLAN 11n USB 1T1R Module

Trademark: /

Model/Type reference: A28188E

FCC ID.....: 2AHXS-A28188E

Test Standards: FCC Per 47 CFR 2.1091

Applicant: TATUNG COMPANY OF AMERICA, INC.

Address of applicant: 2850 EI PRESIDIO STREET, LONG BEACH, CA 90810,
USA

Date of Receipt: Mar. 17, 2016

Date of Test Date.....: Mar. 17, 2016 - Apr. 21, 2016

Data of issue.: May 09, 2016

Test result	Pass *
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* In the configuration tested, the EUT complied with the standards specified above



GENERAL DESCRIPTION OF EUT	
Equipment:	WLAN 11n USB 1T1R Module
Model Name:	A28188E
Manufacturer:	TATUNG COMPANY OF AMERICA, INC.
Manufacturer Address:	2850 EI PRESIDIO STREET, LONG BEACH, CA 90810, USA
Power Rating:	DC 5.0V form USB Interface

Compiled By: Thomas Morgan

(Thomas Morgan)

Reviewed By: Tony Wang

(Tony Wang)

Approved By: Walter Chen

(Walter Chen)

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1. SUMMARY

1.1. Test Facility

1.3.1 Address of the test laboratory

Shenzhen GTI Technology Co., Ltd

1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China

1.3.2 Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

IC Registration No.: 9783A

The 3m alternate test site of Shenzhen GTI Technology Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Aug, 2011.

FCC-Registration No.: 214666

Shenzhen GTI Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 214666, Sep 19, 2011

1.2. Statement of the measurement uncertainty

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

2. GENERAL INFORMATION

2.1. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

2.2. General Description of EUT

Product Name:	WLAN 11n USB 1T1R Module
Model/Type reference:	A28188E
Power supply:	DC 5.0V form USB Interface
Hardware version:	V0
Software version:	V1.1
WIFI :	
Supported type:	802.11b/802.11g/802.11n(HT20)/802.11n(H40)
Modulation:	802.11b: DSSS 802.11g/802.11n(HT20)/802.11n(HT40): OFDM
Modulation type:	802.11b: BPSK/QPSK/CCK 802.11g/802.11n(HT20)/802.11n(HT40): BPSK/QPSK/16QAM/64QAM
Operation frequency:	802.11b/802.11g/802.11n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
Channel number:	802.11b/802.11g/802.11n(HT20): 11 802.11n(HT40): 7
Channel separation:	5MHz
Antenna type:	Monopole Antenna
Antenna gain:	2.0dBi

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3. Method of measurement

3.1. Applicable Standard

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

3.2. LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm ²)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

3.3. MPE EVALUATION FORMULA

$$Pd=(Pout \cdot G) / (4 \cdot \pi \cdot R^2)$$

Where

Pd= Power density in mW/cm²

Pout=output power to antenna in Mw

G= gain of antenna in linear scale

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, 1mW/cm².

3.4. Evaluation Results

802.11 b

Test Frequency (MHz)	Antenna Gain (Numeric)	Conducted Power (dBm)		Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Verdict
		dBm	mW				
2412	2.0	16.12	40.93	20	0.0081	1.0	PASS
2437	2.0	16.19	41.59	20	0.0083	1.0	PASS
2462	2.0	15.98	39.63	20	0.0079	1.0	PASS

802.11 g

Test Frequency (MHz)	Antenna Gain (Numeric)	Conducted Power (dBm)		Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Verdict
		dBm	mW				
2412	2.0	14.45	27.86	20	0.0055	1.0	PASS
2437	2.0	14.78	30.06	20	0.0060	1.0	PASS
2462	2.0	14.71	29.58	20	0.0059	1.0	PASS

802.11 n20

Test Frequency (MHz)	Antenna Gain (Numeric)	Conducted Power (dBm)		Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Verdict
		dBm	mW				
2412	2.0	14.44	27.80	20	0.0055	1.0	PASS
2437	2.0	14.75	29.85	20	0.0059	1.0	PASS
2462	2.0	14.19	26.24	20	0.0052	1.0	PASS

802.11 n40

Test Frequency (MHz)	Antenna Gain (Numeric)	Conducted Power (dBm)		Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Verdict
		dBm	mW				
2422	2.0	14.18	26.18	20	0.0052	1.0	PASS
2437	2.0	14.04	25.35	20	0.0050	1.0	PASS
2452	2.0	14.07	25.53	20	0.0051	1.0	PASS

Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure and SAR Exclusion Threshold.

*****THE END*****