



# SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

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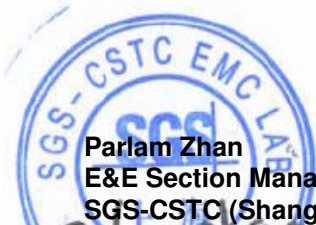
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## 1 Cover Page

# FCC MPE REPORT

Application No.:	SHEM1411003009RF
Applicant:	Hansong (Nanjing) Technology Ltd.
FCC ID:	XCO-NANOTX
IC:	7756A-NANOTX
<b>Equipment Under Test (EUT):</b> <b>NOTE:</b> The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	RCC-NANO1-TX
Model No.(EUT):	RCC NANO ONE TRANSMITTER
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance
Date of Receipt:	November 26, 2014
Date of Test:	January 26, 2015 to March 10, 2015
Date of Issue:	April 20, 2015
Test Result:	<b>Pass*</b>

\* In the configuration tested, the EUT complied with the standards specified above.





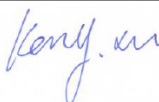
The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	April 20, 2015	/	Original

Authorized for issue by:				
Engineer		Eddy Zong		
		Print Name		
Clerk		Susie Liu		
		Print Name		
Reviewer		Keny Xu		
		Print Name		

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## 4 General Information

### 4.1 Client Information

Applicant:	Hansong (Nanjing) Technology Ltd.
Address of Applicant:	8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211106, China.
Manufacturer:	ARTISON, LLC
Address of Manufacturer:	2231 Meridian Blvd. #1, Minden, NV 89423, USA
Factory:	Hansong (Nanjing) Technology Ltd.
Address of Factory:	8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211106, China.

### 4.2 General Description of E.U.T.

Brand Name:	ARTISON
Rated Input:	DC 5V 1A via adapter
Adapter: Model No.:	GPE053B-050100-Z
Rated Input:	AC 100V-240V 50Hz 0.2A
Rated Output:	DC 5.0V 1000mA
Cable length:	AC port: 2 wires
	DC port: 140 cm

### 4.3 Details of E.U.T.

Operation Frequency:	2403.5MHz~2477.3MHz
Modulation Technique:	FSK (FHSS)
Number of Channel:	49
Antenna Type	Integral PCB print antenna
Antenna Gain	1.5 dBi

#### 4.4 Test Location

All tests were performed at SGS E&E EMC lab

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

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#### 4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. Date of expiry: 2017-07-14.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2017-09-16.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1. Expiry Date: 2017-06-18.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868 and C-4336 respectively. Date of Registration: 2012-05-29. Date of Expiry: 2015-05-28.

## 5 Test Standards and Limits

According to §1.1310 Radiofrequency radiation exposure limits:

The limit for general population/uncontrolled exposures

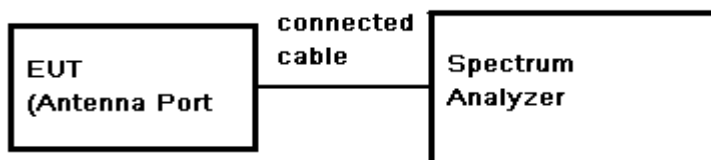
Frequency	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

## 6 Measurement and Calculation

### 6.1 Maximum transmit power

**EUT Operation:** Test in fixing frequency operating mode at lowest, middle and highest frequency.

**Test Configuration:**



**Test Data:**

For BT:

Test mode	Channel	Reading Peak Power (dBm)	Cable Loss (dB)	Peak Power (dBm)	Peak Power (mW)	Peak Power Limit (dBm)	Result
FSK	Low	14.39	0.5	14.89	30.83	30	PASS
	Mid	14.89	0.5	15.39	34.59	30	PASS
	High	15.47	0.5	15.97	39.54	30	PASS

## 6.2 MPE Calculation

According to the formula  $S = \frac{PG}{4R^2\pi}$ , we can calculate S which is MPE.

Note:

- 1)  $P$  (Watts) = Power Input to antenna =  $10^{\frac{dBm}{10}} / 1000$
- 2)  $G$  (Antenna gain in numeric) =  $10^{(Antenna\ gain\ in\ dBi / 10)}$
- 3)  $R$  = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm<sup>2</sup>

The Max Conducted Peak Output Power is 38.04mW in high channel;

The best case gain of the antenna is 1.5dBi. 1.5dB logarithmic terms convert to numeric result is nearly 1.4125

$$\text{So, } S = \frac{PG}{4R^2\pi} = \frac{38.04 \times 1.4125}{4 \times 400 \times 3.14} = 0.012 \text{ mW/cm}^2$$

The BT and the DTS modules can't simultaneous transmitting at frequency 2.4GHz band, according to the KDB447498 D01 section 7.2 determine the device is exclusion from SAR test.

## 7 EUT Constructional Details

Refer to the < RCC NANO ONE TRANSMITTER \_External Photos > & < RCC NANO ONE TRANSMITTER \_Internal Photos>.

**--End of the Report--**