



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

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Report No.: SHEM140900238003
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1 Cover Page

FCC MPE REPORT

Application No.:	SHEM1409002380RF
Applicant:	Lenbrook Industries Limited
FCC ID:	SVC-NADMT2
IC:	152C-NADMT2
Equipment Under Test (EUT): NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Media Tuner
Model No.(EUT):	MT2
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance
Date of Receipt:	September 17, 2014
Date of Test:	October 23, 2014 to October 28, 2014
Date of Issue:	October 29, 2014
Test Result:	Pass*

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



Tony Wu
E&E Section Manager

SGS-CSTC (Shanghai) Co., Ltd.



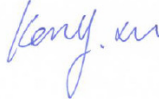
The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant 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	/	October 29, 2014	/	Original

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

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4 General Information

4.1 Client Information

Applicant: Lenbrook Industries Limited
Address of Applicant: 633 Granite Court, Pickering Ontario, L1W 3K1, Canada
Manufacturer: Lenbrook Industries Limited
Address of Manufacturer: 633 Granite Court, Pickering Ontario, L1W 3K1, Canada
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: NAD
Rated Input: DC 5.0V 1.2A
Adapter: Model No.: AS100-050-AD120
Rated Input: AC 100V-240V 50/60Hz 0.5A
Rated Output: DC 5.0V 1.2A
Cable length: AC port: 2 wires
DC port: 150 cm

4.3 Details of E.U.T.

Operation Frequency: 2412MHz-2462MHz
Modulation Technique: 802.11b: DSSS(CCK, DQPSK, DBPSK)
802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK)
Data Rate: 802.11b: 1Mbps, 5.5Mbps, 11Mbps,
802.11g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 36Mbps, 48Mbps, 54Mbps
Number of Channel: 11
Antenna Type: Integral
Antenna Gain: 2 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: 2016-06-18.

- **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

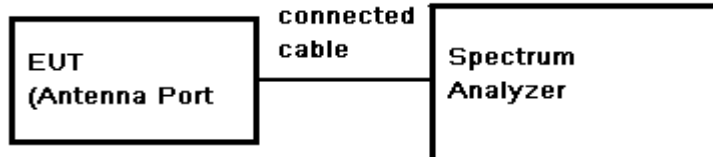
Frequency	Power density(mW/cm ²)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

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:

Test mode	Channel	Reading Peak Power (dBm)	Cable Loss (dB)	Output Peak Power (dBm)	Output Peak Power (mW)	Peak Power Limit (dBm)	Result
802.11b	Low	20.84	0.5	21.34	136.14	30	PASS
	Mid	21.01	0.5	21.51	141.58	30	PASS
	High	21.15	0.5	21.65	146.22	30	PASS
802.11g	Low	19.84	0.5	20.34	108.14	30	PASS
	Mid	19.89	0.5	20.39	109.40	30	PASS
	High	19.76	0.5	20.26	106.17	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) = $10^{\text{(Antenna gain in dBi / 10)}}$
- 3) R = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm²

The Max Conducted Peak Output Power is 146.22mW in highest channel of 802.11g;

The best case gain of the antenna is 2dBi. 2dB logarithmic terms convert to numeric result is nearly 1.58

$$\text{So, } S = \frac{PG}{4R^2\pi} = \frac{146.22 \times 1.58}{4 \times 400 \times 3.14} = 0.04613 \text{ mW/cm}^2 < 10\text{mW}$$

So the SAR report is not required.

7 EUT Constructional Details

Refer to the < MT2_External Photos > & < MT2_Internal Photos >.

--End of the Report--