

Eltek Technologies Ltd

ADSL WIFI Router

Main Model: A7200-G1

Serial Model: A7200-G2

April 28, 2014




Report No.: 14070120-FCC-H2

(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:

		
Back Huang Compliance Engineer	Alex Liu Technical Manager	

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Test result presented in this test report is applicable to the representative sample only.

MPE Calculation Report
To: FCC 2.1091

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Country/Region	Scope
USA	EMC , RF/Wireless , Telecom
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Taiwan	EMC, RF, Telecom , Safety
Hong Kong	RF/Wireless ,Telecom
Australia	EMC, RF, Telecom , Safety
Korea	EMI, EMS, RF , Telecom, Safety
Japan	EMI, RF/Wireless, Telecom
Singapore	EMC , RF , Telecom
Europe	EMC, RF, Telecom , Safety

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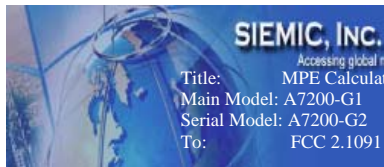
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Title: MPE Calculation Report for ADSL WIFI Router
Main Model: A7200-G1
Serial Model: A7200-G2
To: FCC 2.1091

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1 EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programmers was to demonstrate compliance of the Eltek Technologies Ltd, ADSL WIFI Router and Model: A7200-G1 against the current Stipulated Standards. The ADSL WIFI Router has demonstrated compliance with the FCC 2.1091.

EUT Information

EUT Description : ADSL WIFI Router

Main Model : A7200-G1

Serial Model : A7200-G2 (The difference between Main Model and Serial Model is only the Software)

Antenna Gain : WIFI: 2 dBi

Classification
Per Stipulated Test Standard : FCC 2.1091

2 TECHNICAL DETAILS

Purpose	Compliance testing of ADSL WIFI Router with stipulated standards
Applicant / Client	Eltek Technologies Ltd Glatt-Tower, 10th Floor, CH-8301 Glattzentrum
Manufacturer	Atrie TECHNOLOGY INC. 10F, No. 14, Lane 609, Sec. 5, Chung Hsin Rd., San Chung Dist., New Taipei City, 24159 Taiwan, (R.O.C)
Laboratory performing the tests	SIEMIC (Shenzhen-China) Laboratories Zone A, Floor 1, Building 2, Wan Ye Long Technology Park, South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong, China Tel: +86-0755-2601 4629 / 2601 4953 Fax: +86-0755-2601 4953-810 Email: China@siemic.com.cn
Test report reference number	14070120-FCC-H2
Date EUT received	March 17, 2014
Standard applied	FCC 2.1091
Dates of test (from – to)	April 25, 2014
No of Units	#1
Equipment Category	DTS
Trade Name	N/A
RF Operating Frequency (ies)	802.11b/g/n(HT20): 2412-2462 MHz 802.11n(HT40): 2422-2452 MHz
Number of Channels	802.11b/g/n(HT20): 11CH 802.11n(HT40): 7CH
Modulation	802.11b/g/n: DSSS/OFDM
FCC ID	2AB3KA7200

3 FCC §2.1091 - Maximum Permissible exposure (MPE)

3.1 Applicable Standard

According to §1.1307(b)(1), 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 of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

3.2 Test Data

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

WIFI Mode:

Maximum peak output power at antenna input terminal: 16.13(dBm)
Maximum peak output power at antenna input terminal: 41.02 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412(MHz)
Antenna Gain (typical): 2 (dBi)

Antenna Gain (typical): 1.585 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.013(mW/cm²)

MPE limit for general population exposure at prediction frequency: 1 (mW/cm²)

$0.013 \text{ (mW/cm}^2\text{)} < 1 \text{ (mW/cm}^2\text{)}$

Result: Pass