RF Exposure Evaluation Declaration

Product Name ： I600 WiMAX MODEM

Model No. ： I600

FCC ID ： Q78-ZTE-I600

Applicant ： ZTE Corporation

Address ： ZTE Plaza, Keji Road South, Hi-tech Industrial Park, Nanshan District, Shenzhen, P.R.China

Date of Receipt ： 2008/10/26

Issued Date ： 2008/10/28

Report No. ： 08AS066R-RF-US

Test Report Certification

Issued Date: 2008/10/26
Report No.: 08AS066R-RF-US

QuieTek

Product Name	:	I600 WiMAX MODEM
Applicant	:	ZTE Corporation
Address	:	ZTE Plaza, Keji Road South, Hi-tech Industrial Park, Nanshan District, Shenzhen, P.R.China
Manufacturer	:	ZTE Corporation
Address	:	ZTE Plaza, Keji Road South, Hi-tech Industrial Park, Nanshan District, Shenzhen, P.R.China
Model No.	:	I600
FCC ID	:	Q78-ZTE-I600
Rated Voltage	:	AC 120V/60Hz
EUT Voltage	:	DC 12V
Trade Name	:	ZTE
Applicable Standard	:	FCC OET 65
Test Result	:	Complied
Performed Location	:	SuZhou EMC laboratory No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392

Documented By : 
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(Marlin Chen)

Approved By : 
(Gene Chang)

Laboratory Information

We , **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	**:**	**BSMI, DGT, CNLA**
Germany	**:**	**TUV Rheinland**
Norway	**:**	**Nemko, DNV**
USA	**:**	**FCC, NVLAP**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://tw.quietek.com/modules/myalbum/
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

LinKou Testing Laboratory :

No. 5, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei, Taiwan, R.O.C.
TEL : +886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

Suzhou Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: Pd = (Pout*G)/(4*pi*r2)

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 id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
The temperature and related humidity: 18℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	I600 WiMAX MODEM
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit (5MHz Bandwidth)

Antenna Gain:
Antenna Gain: The maximum Gain measured in fully anechoic chamber is 5dBi or 3.16 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
2499.00	454.9881	0.2862
2600.00	479.7334	0.3018
2687.00	488.6524	0.3074

Note:
The power density Pd (3th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm2.

Product	:	I600 WiMAX MODEM
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit (10MHz Bandwidth)

Antenna Gain:

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 5dBi or 3.16 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
2501.00	484.1724	0.3046
2600.00	442.5884	0.2784
2685.00	433.5109	0.2727

Note:

The power density Pd (3th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm2.