# RF EXPOSURE REPORT



Report No.: 16071169-FCC-H2
Supersede Report No.: N/A

Applicant	Juniper Systems Inc				
Product Name	4G Tablet PC				
Model No.	CT7G				
Serial No.	N/A				
Test Standard	FCC 2.109	3:2015			
Test Date	September	21 to Octobe	r 24, 2016		
Issue Date	October 25	, 2016			
Test Result	Pass	Fail			
Equipment compl	Equipment complied with the specification				
Equipment did no	Equipment did not comply with the specification				
Loven	Luo	Dewiol	Huang		
Loren Luo Test Engineer			Huang ked By		

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

#### Issued by:

#### SIEMIC (SHENZHEN-CHINA) LABORATORIES

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## **Laboratories Introduction**

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

#### **Accreditations for Conformity Assessment**

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



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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
16071169-FCC-H2	NONE	Original	October 25, 2016

## 2. Customer information

Applicant Name	Juniper Systems Inc
Applicant Add	1132W 1700N, Logan, Utah 84321,United States
Manufacturer	Juniper Systems Inc
Manufacturer Add	1132W 1700N, Logan, Utah 84321,United States

## 3. Test site information

	1	
Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China	
	518108	
FCC Test Site No.	718246	
IC Test Site No.	4842E-1	
Test Software	Radiated Emission Program-To Shenzhen v2.0	



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## 4. Equipment under Test (EUT) Information

Description of EUT:	4G Tablet PC
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Main Model: CT7G

Serial Model: N/A

Date EUT received: September 20, 2016

Test Date(s): September 21 to October 24, 2016

GSM850: 1.5dBi PCS1900: 1.5dBi

UMTS-FDD Band V:1.5dBi UMTS-FDD Band II:1.5dBi

LTE Band IV:1.5dBi

Antenna Gain:

LTE Band V: 1.5dBi

LTE Band VII: 1.5dBi LTE Band XVII: 1.5dBi Bluetooth/BLE/WIFI:1.5dBi

GPS:1.5dBi

Antenna Type: PIFA antenna

GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK

Type of Modulation:

802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK,  $\pi$  /4DQPSK, 8DPSK

BLE: GFSK GPS:BPSK



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GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz

LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX: 2110.7 ~ 2154.3 MHz

RF Operating Frequency (ies): LTE Band V TX: 826.5 ~ 846.5 MHz; RX: 871.5 ~ 891.5 MHz

LTE Band VII TX: 2502.5  $\sim$  2567.5 MHz; RX : 2622.5  $\sim$  2687.5 MHz LTE Band XVII TX: 706.5  $\sim$  713.5 MHz; RX : 736.5  $\sim$  743.5 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz

GPS: 1575.42 MHz

GSM 850: 124CH PCS1900: 299CH

UMTS-FDD Band V: 102CH
UMTS-FDD Band II: 277CH

Number of Channels: WIFI :802.11b/g/n(20M): 11CH

WIFI:802.11n(40M): 7CH

Bluetooth: 79CH

BLE: 40CH GPS:1CH

Port: USB Port, Earphone Port

Battery:

Input Power: Spec: 3.7V

Trade Name : Cedar

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: VSFCT7G



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## 5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

#### 5.1 RF Exposure

#### Standard Requirement:

According to §15.247 (i) and §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.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\cdot \sqrt{f_{(GHz)}} \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR,  $^{16}$  where

- f<sub>(GHz)</sub> is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $\leq 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result =  $P\sqrt{F}/D$ 

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



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## 5.2 Test Result

#### **Bluetooth Mode:**

Modulation	СН	Freque ncy	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
GFSK	Low	2402	-1.119	-1±1	0	1.000	0.31	3
	Mid	2441	-0.033	-1±1	0	1.000	0.31	3
	High	2480	-0.480	-1±1	0	1.000	0.31	3
π /4 DQPSK	Low	2402	-1.782	-1±1	0	1.000	0.31	3
	Mid	2441	-0.652	-1±1	0	1.000	0.31	3
	High	2480	-0.977	-1±1	0	1.000	0.31	3
8-DPSK	Low	2402	-1.675	-1±1	0	1.000	0.31	3
	Mid	2441	-0.450	-1±1	0	1.000	0.31	3
	High	2480	-0.909	-1±1	0	1.000	0.31	3

#### WIFI Mode:

Modulation	СН	Freque ncy (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
	Low	2412	8.45	8±1	9	7.943	2.47	3
802.11b	Mid	2442	8.41	8±1	9	7.943	2.48	3
	High	2472	8.45	8±1	9	7.943	2.49	3
802.11g	Low	2412	8.38	8±1	9	7.943	2.47	3
	Mid	2442	8.43	8±1	9	7.943	2.48	3
	High	2472	8.40	8±1	9	7.943	2.49	3
000 44=	Low	2412	8.45	8±1	9	7.943	2.47	3
802.11n (20M)	Mid	2442	8.62	8±1	9	7.943	2.48	3
	High	2472	8.46	8±1	9	7.943	2.49	3
802.11n (40M)	Low	2422	8.80	8±1	9	7.943	2.47	3
	Mid	2442	8.79	8±1	9	7.943	2.48	3
	High	2462	8.53	8±1	9	7.943	2.49	3



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#### BLE Mode:

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	-6.546	-6±1	-5	0.316	0.10	3
	Mid	2440	-6.203	-6±1	-5	0.316	0.10	3
	High	2480	-6.677	-6±1	-5	0.316	0.10	3

Result: Compliance

No SAR measurement is required.