http://www.flomlabs.com

Date: September 30, 2008

Applicant: Novatel Wireless Inc.

9645 Scranton Rd, Suite 205

San Diego, CA 92121

Attention of: John Spall, Project Manager

Ph: 858-812-0697, Fax: 858-450-7183

email: jspall@nvtl.com

**Equipment:** PKRNVWE725 Collocated with QDS-BRCM1030 802.11

FCC ID: PKRNVWE725

**FCC Rules:** Radio Frequency Radiation Exposure Limits

47 CFR 1.1310

Fixed Based Station MPE - Mobiles

#### Gentlemen:

Enclosed please find your copy of the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

Please allow from 8-12 weeks to hear from the Commission, who may request additional data or information, and even a sample for pre-grant audit testing.

Should you need any clarification, just fax or phone. Thank you again for this order - it has been a pleasure to be of service.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s) HSB/jhe

Date: September 30, 2008

Federal Communications Commission

Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Novatel Wireless Inc.

**Equipment:** PKRNVWE725 Collocated with QDS-BRCM1030 802.11

FCC ID: PKRNVWE725

**FCC Rules:** Radio Frequency Radiation Exposure Limits

47 CFR 1.1310

MPE - Mobiles Fixed Based Station

#### Gentlemen:

On behalf of the Applicant, enclosed please find the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s) cc: Applicant HSB/jhe

## **Environmental Assessment**

for

**Mobiles** 

for

FCC ID: PKRNVWE725

Model: E725

to

**Federal Communications Commission** 

47 CFR 1.1310 (MPE)

Radio Frequency Radiation Exposure Limits

Date Of Report: September 30, 2008

On the Behalf of the Applicant: Novatel Wireless Inc.

At the Request of: Novatel Wireless Inc.

9645 Scranton Rd, Suite 205

San Diego, CA 92121

Attention of: John Spall, Project Manager

Ph: 858-812-0697, Fax: 858-450-7183

email: jspall@nvtl.com

Supervised By: Hoosamuddin S. Bandukwala, Lab Director



## Table of Contents

Rule	Description	Page	
	Test Report	1	
	Identification of the Equipment Under Test	2	
	Standard Test Conditions and Engineering Practices	3	
1.1310	Environmental Assessment	4	



## Required information per ISO 17025-2005, paragraph 5.0:

a) Test Report (Supplemental)

b) Laboratory: Flom Test Labs

(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107

(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d0890027

d) Client: Novatel Wireless Inc.

9645 Scranton Rd, Suite 205

San Diego, CA 92121

e) Identification: PKRNVWE725

FCC ID: PKRNVWE725

Description: Dell laptop model Studio XPS1640

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date: September 30, 2008

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

I) Uncertainty: In accordance with FTL internal quality manual.

m) Supervised by:

Hoosamuddin S. Bandukwala, Lab Director

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission

from this laboratory.



## **Identification of the Equipment Under Test (EUT)**

Name and Address of Applicant:	Novatel Wireless Inc. 9645 Scranton Rd, Suite 205 San Diego, CA 92121			
Manufacturer:	Novatel Wireless Inc. 9645 Scranton Rd, Suite 205 San Diego, CA 92121			
FCC ID:	PKRNVWE725			
Model Number:	PKRNVWE725			
Description:	Dell laptop model Studio XPS1640			
Type of Emission:	CDMA collocated with 802.11			
Frequency Range, MHz:	CDMA 824 - 848 and 1851 - 1908 802.11 2412 - 2462			
Power Rating, Watts: Switchable	0.296 <u>X</u> Variable <u>X</u> N/A			
Modulation:	AMPS TDMA X CDMA X OTHER			
Antenna:	Helical Monopole Whip X Other			

**Note:** For RF Safety test antenna gain taken at the upper range of expected gain (i.e. 0 dBd) and RF Power set to highest nominal power across all channels.



#### **Standard Test Conditions and Engineering Practices**

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-2003 and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

#### A2LA

"A2LA has accredited Flom Test Labs, Inc. Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to <a href="www.a2la.org">www.a2la.org</a> for current scope of accreditation.

Certificate number: 2152.01





Name of Test: Environmental Assessment

**Specification**: FCC: 47 CFR 1.1310

Measurement Guide: ANSI/IEEE C95.1 1992

Name of Test: R.F. Radiation Exposure

FCC Rules: 1.1307, 1.1310, 1.1311, 2.1091
Description, EUT: See page 2 of Test Report

Limits: Uncontrolled Exposure

47 CFR 1.1310 Table 1, (B)  $\begin{array}{lll} 0.3\text{-}1.234 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = 100 \\ 1.34\text{-}30 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = (180/\text{f}^2) \\ 30\text{-}300 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = 0.2 \\ 300\text{-}1500 \text{ MHz} & \text{Limit } [\text{mW/cm}^2] = f/1500 \\ 1500\text{-}100,000 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = 1.0 \\ \end{array}$ 

Test Frequencies, MHz 824 – 848 Power, Conducted, mW = 291 Antenna Gain = 3 dBi

Antenna Model Planer Inverted F Antenna

Distance cm 20

Limit Calculations  $Limit_{[mW/cm2]} = 0.549$ 

Test Frequencies, MHz 1851 - 1908 Power, Conducted, mW = 296 Antenna Gain = 3 dBi

Antenna Model Planer Inverted F Antenna

Distance cm 20

Limit Calculations  $Limit_{[mW/cm2]} = 1.0$ 



### **PKRNVWE725 CDMA**

CDMA Frequency	TX Power	Power Density	Limit	Result
MHz	(m)W	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	
824 – 848	291	0.116	0.549	Pass
1851 - 1908	296	0.118	1.0	Pass

# QDS-BRCM1030 802.11.a,b,g

802.11 a,b,g Frequency MHz	TX Power (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2412 – 2462	202	0.080	1.0	Pass

## PKRNVWE725 CDMA Collocated with QDS-BRCM1030 802.11.a,b,g

CDMA Frequency	802.11.a,b,g	CDMA	802.11.a,b,g	Total	Limit	Result
MHz	Frequency	Power	Power	Power	(mW/cm <sup>2</sup> )	
	MHz	Density	Density	Density		
		(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )		
824 – 848	2412 – 2462	0.116	0.080	0.196	0.549	Pass
1851 - 1908	2412 – 2462	0.118	0.080	0.198	1.0	Pass

Supervised By:

Hoosamuddin S. Bandukwala, Lab Director



# Testimonial and Statement of Certification

## This is to certify that:

- 1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
- 2. **That** the technical data supplied with the application was taken under my direction and supervision.
- 3. **That** the data was obtained on representative units, randomly selected.
- 4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Certifying Engineer:

Hoosamuddin S. Bandukwala, Lab Director