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RF Exposure Evaluation Report

APPLICANT	RAJANT CORPORATION
	400 EAST KING STREET MALVERN PA 19355-3258 USA
FCC ID	VJA-F50NPRO
IC	7382A-F50NPRO
MODEL NUMBER	F50NPRO
PRODUCT DESCRIPTION	MINI PCI RADIO CARD
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Cory Leverett

We, TIMCO ENGINEERING, INC. would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and meets the requirements.

The attached report shall not be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

GENERAL REMARKS

Attestations

This equipment has been evaluated in accordance with the standards identified in this report. To the best of my knowledge and belief, these evaluations were performed using the procedures described in this report.

I attest that the necessary evaluations were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

Authorized Signatory Name:

Cory Leverett

Engineering Project Manager

Date: 11/11/2016

Applicant: RAJANT CORPORATION
FCC ID: VJA-F50NPRO
Report: V:\R\RAJANT\1961AUT16\1961AUT16RF EXP MPE RPT.DOCX

RF Exposure Requirements

General information

Device type: MINI PCI RADIO CARD

Antenna

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Fixed	Any	omni	6

Operating configuration and exposure conditions:

The conducted output power is shown in the table below. Typical use qualifies for a maximum duty cycle factor of 100%.

MPE Calculation:

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.11310, Table 1.

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Minimum Separation Distance for Mobile or Fixed Devices
General Population/Uncontrolled Exposure

Insert values in yellow highlighted boxes to determine Minimum Separation Distance

Max Power	0.186	W	*equals*	Max Power	186 mW
Duty Cycle	100	%	*equals*	Duty Factor	1 numeric
Antenna Gain	6	dBi	*equals*	Gain numeric	3.981072 numeric
Coax Loss	0	dB		Gain - Coax Loss	3.981072 numeric
Power Density	1	mW/cm^2			

Enter power Density from the chart to the right

Frequency   4985 MHz

Rule Part 1.1310, Table 1 (B)

Frequency range	Power density	Enter this value
MHz	mW/cm^2	mW/cm^2
0.3-1.34	100	**100**
1.34-30	180/f^2	**0.0**
30-300	0.2	**0.2**
300-1,500	f/1500	**3.3**
1,500-100,000	1	**1**

f = frequency in MHz

Minimum Separation Distance	8 cm	0.08 m

Minimum Seperation in Inches   3.019854 Inches

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Report: V:\R\RAJANT\1961AUT16\1961AUT16RF EXP MPE RPT.DOCX