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RF Exposure REPORT

Company: 3e Technologies International
9715 Key West Ave. Suite 500
Rockville, MD 20850

Contact: Ryon Coleman

Product: CM9 PCI Transmitter Module

FCC ID: QVT-525A-3

Test Report No: RFE091008-02

Issued by: NCEE Labs
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Lincoln, NE 68521

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RF Exposure Calculations:

The minimum separation distance is calculated from FCC OET 65 Appendix B, Table 1B “Guidelines for General Population/Uncontrolled Exposure.” This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain.

RF Power Measurement

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuators. The spectrum analyzer was used to make power measurements using the channel power function, with a channel width of 20MHz

Frequency (GHz)	Output Power dBm	Output Power mW
4.96	20.09	102.14
4.98	18.19	65.95

Test Equipment Used

<i>Serial #</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Last Cal.</i>
100007	Rohde & Schwarz	ESIB7	EMI Test Receiver	6/9/08

Test Environment

Testing was performed at the NCEE Labs Lincoln facility. Laboratory environmental conditions varied slightly throughout the test:

- Relative humidity of 40 ± 5%
- Temperature of 20 ± 2° Celsius

Exposure Limit (mW/cm²) = F/1200	4.13 mW/cm ²
Frequency (MHz)	4960.00
Maximum peak output power (mW)	102.14
Antenna Gain (Numeric)	6.31 (8dBi)
Antenna type	Dipole(whip)

$$P_d = (P_{out} \times G) / (4\pi \times R^2)$$

$$R = \sqrt{(P_{out} \times G) / (4 \pi \times P_d)}$$

P_d = Power density limit, mW/cm²

P_{out} = Peak power output, mW

G = Numeric Antenna Gain

R = Distance from antenna, cm

P_{out} mW	G Numeric	P_d mW/cm²	R cm	Frequency MHz	Calculation
102.14	6.31	4.13	3.5	4960	Minimum distance to meet limit
102.14	6.31	0.13	20	4960	Power density at 20 cm

Notes:

1. The minimum safe distance is based on a conservative “worst case” prediction, i.e. using the formula shown above and no duty factor. In practice the minimum distance will be much shorter. (Ref. 2)

References:

1. FCC OET Bulletin 65, Edition 97-01
2. FCC Supplement C to OET Bulletin 65, edition 01-01
3. IEEE C95.1, 1999