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Amended RF Exposure REPORT

Includes RFE091008-02-02 and amendment
2.4GHz and 5.7GHz Bands

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: RFE091008-02-02A

Issued by: NCEE Labs
4740 Discovery Dr.
Lincoln, NE 68521

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Reason for amendment:

Output power for 5.745 was modified to match test report R091008-02-02. The highest antenna gain was changed to 22dBi to match the same report.

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 power sensor and power meter. Measurements were made with the transmitter continuously active. The highest power settings were chosen from the 2.4GHz and the 5.7GHz bands

| Frequency (GHz) | Output Power dBm | Output Power mW |
|-----------------|------------------|-----------------|
| 2.437 | 18.20 | 66.07 |
| 5.745 | 21.68 | 147.23 |

Test Equipment Used

| DESCRIPTION AND MANUFACTURER | MODEL NO. | SERIAL NO. | LAST CALIBRATION DATE |
|------------------------------|-----------|------------|-----------------------|
| Hewlett Packard Power Meter | 4378 | 100307 | 20 Jan 2009 |
| Hewlett Packard Power Sensor | 8481A | 2702A63981 | 20 Jan 2009 |

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 | 2.03 mW/cm ² | 4.79 mW/cm ² |
| Frequency (MHz) | 2437 | 5745 |
| Maximum peak output power (mW) | 66.07 | 147.23 |
| Antenna Gain (Numeric) | 25.19 (14dBi) | 158.19 (22dBi) |
| Antenna type | Dish | Dish |

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

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

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 |
|-------------------------------------|----------------------------|--------------------------------------------------|-----------------------|--------------------------------|--------------------------------|
| 66.07 | 25.19 | 2.03 | 8.08 | 2437 | Minimum distance to meet limit |
| 66.07 | 25.19 | 0.33 | 20.00 | 2437 | Power density at 20 cm |
| 147.23 | 158.19 | 4.79 | 19.67 | 5745 | Minimum distance to meet limit |
| 147.23 | 158.19 | 4.63 | 20.00 | 5745 | 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