
Project 12000-10

Prepared for:
UControl, Inc.
5918 West Courtyard Drive
Suite 400
Austin, TX 78730

By

Professional Testing (EMI), Inc.
1601 N. A.W. Grimes Blvd., Suite B
Round Rock, Texas 78665

February 28, 2011

MPE / RF Exposure Report
uControl
Y6Q-SMCTB01Z
9454A-SMCTB01Z

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(3) The significance of this report is dependent on the representative character of the test sample submitted for evaluation and the results apply only in reference to the sample tested. The manufacturer must continuously implement the changes shown herein to attain and maintain the required degree of compliance.



Applicant: UControl, Inc.
Applicant's Address: 5918 West Courtyard Drive, Suite 400
Austin, TX. 78730
FCC ID: Y6Q-SMCTB01Z
IC Number: 9454A-SMCTB01Z
Project Number: 12000-10
Test Dates: December 16 – 17, 2010, January 20, February 25, 2011

I, Layne Lueckemeyer, for Professional Testing (EMI), Inc., being familiar with the FCC rules and test procedures have reviewed the test setup, measured data and this report. I believe them to be true and accurate.

Layne Lueckemeyer
Product Development Engineer

This report has been reviewed and accepted by uControl, Inc. The undersigned is responsible for ensuring that this device will continue to comply with the FCC and IC rules.

1.0 MPE Prediction

Prediction of MPE limit at a given distance was made by using equation from page 18 of OET Bulletin 65, Edition 97-01.

In order to prove that SAR is not required we used the combined MPE calculation of the Wi-Fi device and the GPRS module. The data is contained in the worksheet below.

1.1 Evaluation Procedure

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

1.2 Evaluation Criteria

MPE limit for uncontrolled exposure at prediction frequency (mW/cm²): 1.0

MPE Prediction Calculation

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
12000-10	February 28, 2011	15.247	N/A	N/A	N/A	N/A	N/A

Calculations

$$S = PG / 4\pi R^2$$

Where: S = power density

P= power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

MPE Zigbee Transmitter

Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Prediction Distance (cm)	Max Antenna Gain (dBi)	Max Antenna Gain (numeric)	Power Density at 20.0 cm (mW/cm ²)
2480	13.85	24.27	20	2.0	1.585	.007653

NOTE: Antenna Gain is estimated worst case scenario.

.007653 mW/cm² is below the MPE limit of 1.0 mW/cm² for uncontrolled exposure at prediction frequency, therefore the unit meets the evaluation criteria.

NOTE: Client provides professional installation instructions which detail how to maintain the 20 cm separation distance.