Compliance Testing, LLC
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Test Report

Prepared for: Ubiquiti Networks, Inc

Model: NBE-M5-16

Description: NanoBeam M5 16

FCC ID: SWX-NBE5M16

To

FCC Part 1.1310

Date of Issue: July 31, 2015

On the behalf of the applicant:	**Ubiquiti Networks, Inc** **91 E. Tasman Drive** **San Jose, CA 95134**
Attention of:	**Michael Taylor, Compliance Manager** **Ph: (408) 942-3085** **E-Mail: compliance@ubnt.com**

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Project No: p14a0021

Alex Macon
Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	June 26, 2015	Alex Macon	Original Document

ILAC / A2LA

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The tests results contained within this test report all fall within our scope of accreditation, unless below

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Testing Certificate Number: **2152.01**

FCC Site Reg. #349717

IC Site Reg. #2044A-2

Non-accredited tests contained in this report:

N/A

EUT Description
Model: NBE-M5-16
Description: NanoBeam M5 16
Firmware: N/A
Software: N/A
Serial Number: N/A
Additional Information: The EUT is a 2x2 MIMO 802.11n radio

Source Based Time Averaged Power Calculation

Average Power Calculations

Average Power = Peak Power * duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
5800	155	100	155

MPE Evaluation

This is a **fixed/mobile** device used in uncontrolled /general population exposure environment.

Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)		
	0.3-1.234 MHz:	Limit [mW/cm²] = 100
	1.34-30 MHz:	Limit [mW/cm²] = (180/f²)
	30-300 MHz:	Limit [mW/cm²] = 0.2
	300-1500 MHz:	Limit [mW/cm²] = f/1500
	1500-100,000 MHz	Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	5800
Power, Conducted, mW (P)	155
Antenna Gain Isotropic	16
Antenna Gain Numeric (G)	39.81
Antenna Type	Point to Point
Distance (R)	20

$$S = \frac{P * G}{4\pi r^2}$$

Power Density (S) mw/cm^2	Power mW (P)	Numeric Gain (G)	Distance (r^2) cm
1.2276281235	155	39.81	20

Power Density (S) =	1.23
Limit =(from above table) =	1.0

The Power Density of 1.23 mw/cm^2 is over the limit of 1.0 mw/cm^2 for the uncontrolled /general population exposure environment so Minimum Safe Distance was calculated.

R=√(PG/4πL)

Distance (R) cm	Power mW (P)	Numeric Gain (G)	Limit (L)
22.1649	155	39.81	1

The minimum safe distance is 22.2 cm.

END OF TEST REPORT