



Compliance Testing, LLC

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

info@ComplianceTesting.com

Test Report

Prepared for: Ubiquiti Networks, Inc

Model: LBE-5AC

Description: LightBeam AC 5

FCC ID: SWX-LBE5AC

Serial Number: N/A

To

FCC Part 1.1310

Date of Issue: October 19, 2015

On the behalf of the applicant:

**Ubiquiti Networks, Inc
2580 Orchard Parkway
San Jose, CA 95131**

Attention of:

**Michael Taylor, Compliance Manager
Ph: (408) 942-3085
E-mail: compliance@ubnt.com**

**Prepared By
Compliance Testing, LLC
1724 S. Nevada Way
Mesa, AZ 85204
(480) 926-3100 phone / (480) 926-3598 fax
www.compliancetesting.com
Project No: p14a0031**

**Alex Macon
Project Test Engineer**

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Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	August 19, 2015	Alex Macon	Original Document
2.0	September 9, 2015	Amanda Reed	Updated FCC ID
3.0	October 19, 2015	Alex Macon	Updated output power measurements for 23 dBi antenna.



ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)

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

Please refer to <http://www.compliancetesting.com/labscope.html> for current scope of accreditation.

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: LBE-5AC

Description: LightBeam AC 5

Firmware: N/A

Software: N/A

Serial Number: N/A

Additional Information:

The EUT was tested conducted mode with RF connectors mounted on the EUT at the antenna input. When the test cable is plugged into the RF connector mounted to the EUT it disables the antenna connection.

The EUT is powered by POE (Power Over Ethernet).

The different data rates were evaluated and the worst case data rate was chosen for all the testing.



Average Power calculations

Average Power = Peak Power * duty-cycle%

UNII-2A

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
5265	3.16	100	158

UNII-2C

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
5600	3.80	100	191



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
1.34-30 MHz
30-300 MHz
300-1500 MHz
1500-100,000 MHz

Limit [mW/cm²] = 100
Limit [mW/cm²] = (180/f²)
Limit [mW/cm²] = 0.2
Limit [mW/cm²] = f/1500
Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	5265
Power, Conducted, mW (P)	3.16
Antenna Gain Isotropic	23
Antenna Gain Numeric (G)	199.53
Antenna Type	Dish
Distance (R)	20cm

$S = \frac{P * G}{4\pi r^2}$			
Power Density (S) mw/cm ²	Power mW (P)	Numeric Gain (G)	Distance (r ²) cm
0.1254406335	3.16	199.53	20

Power Density (S) =	0.125
Limit =(from above table) =	1.0

The Power Density of 0.125 mw/cm² is under the limit of 1.0 mw/cm² for the uncontrolled /general population exposure environment



MPE Evaluation

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30-300 MHz
300-1500 MHz
1500-100,000 MHz

Limit [mW/cm²] = 100
Limit [mW/cm²] = (180/f²)
Limit [mW/cm²] = 0.2
Limit [mW/cm²] = f/1500
Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	5600
Power, Conducted, mW (P)	3.80
Antenna Gain Isotropic	23
Antenna Gain Numeric (G)	199.53
Antenna Type	Dish
Distance (R)	20cm

$S = \frac{P * G}{4\pi r^2}$			
Power Density (S) mw/cm ²	Power mW (P)	Numeric Gain (G)	Distance (r ²) cm
0.1508463314	3.8	199.53	20

Power Density (S) =	0.150
Limit =(from above table) =	1.0

The Power Density of 0.150mw/cm² is under the limit of 1.0 mw/cm² for the uncontrolled /general population exposure environment.

END OF TEST REPORT