IEEE C95.1 2005
KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

WattBox IP Power Strip w/ Wi-Fi | 1 Controlled Bank (2 Outlets); WattBox IP Power Strip | 1 Controlled Bank (2 Outlets)

Model: WB-150-IPW-1B-2; WB-150-IP-1B-2

Trade Name: WattBox

Issued to

Wirepath Home Systems, LLC, DBA SnapAV
1800 Continental Blvd Suite 200 Charlotte, North Carolina 28273 USA

Issued by

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
Issued Date: March 5, 2019

Note: *This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, A2LA, NIST or any government agencies. The test results in the report only apply to the tested sample.*

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	March 5, 2019	Initial Issue	ALL	Allison Chen
01	March 13, 2019	1. Revised applicant company name.	P.1	Allison Chen

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

Approved by:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

Reporter:

Allison Chen
Report coordinator
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

<table>
<tr><td>EUT</td><td>WattBox IP Power Strip w/ Wi-Fi | 1 Controlled Bank (2 Outlets);
WattBox IP Power Strip | 1 Controlled Bank (2 Outlets)</td></tr>
<tr><td>Model</td><td>WB-150-IPW-1B-2; WB-150-IP-1B-2</td></tr>
<tr><td>Model Discrepancy</td><td>Difference of the two model numbers (list on this report) are just for printed model on housing, please see as below:
<table>
<tr><td>Product name</td><td>WattBox IP Power Strip w/ Wi-Fi | 1 Controlled Bank (2 Outlets)</td><td>WattBox IP Power Strip | 1 Controlled Bank (2 Outlets)</td></tr>
<tr><td>Model No.</td><td>WB-150-IPW-1B-2</td><td>WB-150-IP-1B-2</td></tr>
</table></td></tr>
<tr><td>Frequency band (Operating)</td><td>☒ IEEE 802.11b/g/n HT20 Mode: 2.412GHz ~ 2.462GHz
IEEE 802.11n HT40 Mode: 2.422GHz ~ 2.452GHz
☐ Others</td></tr>
<tr><td>Device category</td><td>☐ Portable (<20cm separation)
☒ Mobile (>20cm separation)
☐ Others</td></tr>
<tr><td>Exposure classification</td><td>☐ Occupational/Controlled exposure (S = 5mW/cm^2)
☒ General Population/Uncontrolled exposure (S=1mW/cm^2)</td></tr>
<tr><td>Antenna Specification</td><td>Antenna Gain : 0.50 dBi (Numeric gain: 1.12)</td></tr>
<tr><td>Tune-up max. Average Power</td><td>IEEE 802.11b Mode: 20.00 dBm (100.000 mW)
IEEE 802.11g Mode: 20.00 dBm (100.000 mW)
IEEE 802.11n HT 20 Mode: 19.50 dBm (89.125 mW)
IEEE 802.11n HT 40 Mode: 19.00 dBm (79.433 mW)</td></tr>
<tr><td>Evaluation applied</td><td>☒ MPE Evaluation*
☐ SAR Evaluation
☐ N/A</td></tr>
</table>

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm^2

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

IEEE 802.11b Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
1	2412	100.000	1.12	20	0.0223	1.000

IEEE 802.11g Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
6	2437	100.000	1.12	20	0.0223	1.000

IEEE 802.11n HT20 Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
6	2437	89.125	1.12	20	0.0199	1.000

IEEE 802.11n HT40 Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
6	2437	79.433	1.12	20	0.0177	1.000