



FCC ID: 2AVTJ-CP32
Report No.: T201221W04-MF1

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Rev.: 00

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

SPX Sandpiper Digital Display

Model: CP32

Trade Name: Connectpoint

Issued to

Connectpoint Inc.
175 Cremona, Suite 160 Goleta California 93117 United States

Issued by

Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City, Taiwan. (R.O.C.)
Issue Date: February 05, 2021

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	February 05, 2021	Initial Issue	ALL	Mita Wu



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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
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
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.



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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

EUT	SPX Sandpiper Digital Display																	
Model	CP32																	
Model Discrepancy	N/A																	
Frequency band (Operating)	<div><input checked="" type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462 MHz</div> <div><input checked="" type="checkbox"/> 802.11n HT40: 2422MHz ~ 2452MHz</div> <div><input type="checkbox"/> 802.11a/n HT20: 5180MHz ~ 5240MHz / 5260 ~ 5320MHz 5500 ~ 5700MHz / 5745MHz ~ 5825MHz</div> <div>802.11n HT40: 5190MHz ~ 5230MHz / 5270 ~ 5310MHz 5510 ~ 5670MHz / 5755MHz ~ 5795MHz</div> <div>802.11ac VHT80: 5210MHz / 5290MHz / 5530MHz / 5775MHz</div> <div><input type="checkbox"/> Others</div>																	
Device category	<div><input type="checkbox"/> Portable (<20cm separation)</div> <div><input checked="" type="checkbox"/> Mobile (>20cm separation)</div> <div><input type="checkbox"/> Others</div>																	
Exposure classification	<div><input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm²)</div> <div><input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm²)</div>																	
Antenna Specification	PCB Antenna 2.4GHz: Directional Gain : 4.00 dBi (Numeric gain: 2.51) Worst																	
Maximum Measurement Average Power	<table><tr><td>2.4GHz</td><td></td><td></td></tr><tr><td>IEEE 802.11b Mode:</td><td>21.57 dBm</td><td>(143.549 mW)</td></tr><tr><td>IEEE 802.11g Mode:</td><td>19.67 dBm</td><td>(92.683 mW)</td></tr><tr><td>IEEE 802.11n HT 20 Mode:</td><td>19.56 dBm</td><td>(90.365 mW)</td></tr><tr><td>IEEE 802.11n HT 40 Mode:</td><td>19.58 dBm</td><td>(90.782 mW)</td></tr></table>			2.4GHz			IEEE 802.11b Mode:	21.57 dBm	(143.549 mW)	IEEE 802.11g Mode:	19.67 dBm	(92.683 mW)	IEEE 802.11n HT 20 Mode:	19.56 dBm	(90.365 mW)	IEEE 802.11n HT 40 Mode:	19.58 dBm	(90.782 mW)
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Evaluation applied	<div><input checked="" type="checkbox"/> MPE Evaluation*</div> <div><input type="checkbox"/> SAR Evaluation</div> <div><input type="checkbox"/> N/A</div>																	

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:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

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 / cm ²	Limit (mW/cm2)
6	2437	177.828	2.51	20	0.0888	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	112.202	2.51	20	0.0560	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	112.202	2.51	20	0.0560	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	112.202	2.51	20	0.0560	1

--End of Report--