

TAF
Testing Laboratory
1309

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

> 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
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Issue Date: February 05, 2021

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Revision History

F	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	No non-compliance noted						
47 C.F.R. Part 2, Subpart J, Section 2.1091							
Statements of Conformity							
Determination of compliance is based on the results of the compliance measurement,							
not taking into account measurement i	nstrumentation uncertainty.						

Approved by:

Kevin Tsai

Deputy Manager

Compliance Certification Services Inc.

Konil Tyon



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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.



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3. EUT SPECIFICATION

EUT	SPX Sandpiper Digital Display						
Model	CP32						
Model Discrepancy	N/A						
Frequency band (Operating)	 ⊠ 802.11b/g/n HT20: 2412MHz ~ 2462 MHz 802.11n HT40: 2422MHz ~ 2452MHz 802.11a/n HT20: 5180MHz ~ 5240MHz / 5260 ~ 5320MHz						
Device category	Portable (<20cm separation Mobile (>20cm separation Others						
Exposure classification	 ☐ Occupational/Controlled exposure (S = 5mW/cm²) ☐ General Population/Uncontrolled exposure (S=1mW/cm²) 						
Antenna Specification	PCB Antenna 2.4GHz: Directional Gain: 4.00 dBi (Numeric gain: 2.51) Worst						
Maximum Measurement Average Power	2.4GHz IEEE 802.11b Mode: IEEE 802.11g Mode: IEEE 802.11n HT 20 Mode: IEEE 802.11n HT 40 Mode:	21.57 dBm 19.67 dBm 19.56 dBm 19.58 dBm	(143.549 mW) (92.683 mW) (90.365 mW) (90.782 mW)				
Maximum tune up power	2.4GHz IEEE 802.11b Mode: IEEE 802.11g Mode: IEEE 802.11n HT 20 Mode: IEEE 802.11n HT 40 Mode:	22.50 dBm 20.50 dBm 20.50 dBm 20.50 dBm	(177.828 mW) (112.202 mW) (112.202 mW) (112.202 mW)				
Evaluation applied	✓ MPE Evaluation*✓ SAR Evaluation✓ N/A						



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4. TEST RESULTS

No non-compliance noted.

Calculation

Given

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

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:

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

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 / cm²



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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

 $S = Power density in mW / cm^2$

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)
I	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--