IEEE C95.1

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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

All In One Panel PC

Model: 3365-199

Trade Name: ADLINK TECHNOLOGY INC.

Issued for

ADLINK TECHNOLOGY INC.

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	01/05/2016	Initial Issue	All Page	Gloria Chang
01	04/22/2016	Revised Applicant Address & Antenna Information	All Page	Gloria Chang

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1. 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.

2. EUT Specification

Product Name	All In One Panel PC
Model Number	3365-199
Identify Number	T150902D01
Received Date	September 02, 2015
Frequency band (Operating)	☒ 802.11b/g/gn HT20: 2412MHz ~ 2462MHz 802.11gn HT40: 2422MHz ~ 2452MHz 802.11a, 802.11an HT20: 5180 MHz ~ 5240 MHz / 5745 MHz ~ 5825 MHz 802.11an HT40: 5190 MHz ~ 5230 MHz / 5755 MHz ~ 5795 MHz ☐ Others
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation) ☐ Others
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna Specification	WiFi (2.4GHz) Antenna 1 Gain 4.69 dBi (Numeric gain: 2.94) WiFi (2.4GHz) Antenna 2 Gain 4.24 dBi (Numeric gain: 2.65) WiFi (5GHz) Antenna 1 Gain 7.50 dBi (Numeric gain: 5.62) WiFi (5GHz) Antenna 2 Gain 5.84 dBi (Numeric gain: 3.84)

Maximum Average output power	IEEE 802.11b Mode: 14.40 dBm (27.542 mW) IEEE 802.11g Mode: 26.12 dBm (409.261 mW) IEEE 802.11n HT 20 Mode: 25.03 dBm (318.420 mW) IEEE 802.11n HT 40 Mode: 24.12 dBm (258.226 mW) 5G UNII Band 1: IEEE 802.11a Mode: 18.32 dBm (67.920 mW) IEEE 802.11n HT 20 Mode: 18.17 dBm (65.615 mW) IEEE 802.11n HT 40 Mode: 18.73 dBm (74.645 mW) 5G UNII Band 3: IEEE 802.11a Mode: 18.36 dBm (68.549 mW) IEEE 802.11n HT 20 Mode: 18.68 dBm (73.790 mW) IEEE 802.11n HT 40 Mode: 16.31 dBm (42.756 mW)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A

3. 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 watts / meter

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

4. 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:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	27.542	2.94	20	0.0161	1

IEEE 802.11g mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	409.261	2.94	20	0.2394	1

IEEE 802.11gn HT20 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	318.42	2.94	20	0.1863	1

IEEE 802.11gn HT40 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	258.226	2.94	20	0.1511	1

5G UNII Band 1 :

IEEE 802.11a mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
5240	67.92	5.62	20	0.0760	1

IEEE 802.11an HT20 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
5785	65.615	5.62	20	0.0734	1

IEEE 802.11an HT40 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
5230	74.645	5.62	20	0.0835	1

5G UNII Band 3 :

IEEE 802.11a mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
5785	68.549	5.62	20	0.0767	1

IEEE 802.11an HT20 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
5785	73.79	5.62	20	0.0825	1

IEEE 802.11an HT40 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
5795	42.756	5.62	20	0.0478	1