IEEE C95.1

KDB 447498 D01 v06

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

7-INCH Connected AV & NAVI Station

Model: PTA-100

Trade Name: ASUKA

Issued for

Asuka Autotronics Inc.

2F, No.12, Prosperity Rd. II, SBIP, Hsinchu,Taiwan, R.O.C. 300

Issued by

Compliance Certification Services Inc.
Hsinchu Lab.
No.989-1, Wenshan Rd., Shangshan Village,
Qionglin Township, Hsinchu County 30741, Taiwan (R.O.C.)
TEL: +886-3-5921698
FAX: +886-3-5921108

http://www.ccsrf.com

E-Mail: service@ccsrf.com

Issued Date: December 19, 2017

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	12/19/2017	Initial Issue	All Page	Gloria Chang

TABLE OF CONTENTS

1. TEST REPORT CERTIFICATION

We hereby certify that:

The equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirement of the applicable standards. The test record, data evaluation and Equipment under Test (EUT) configurations represented herein are true and accurate accounts of the measurement of the sample's RF characteristics under the conditions specified in this report.

APPLICABLE STANDARD	
Standard	**Test Result**
IEEE C95.1 KDB 447498 D01 v06 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: ***Prepared by:***

Rueyyan Lin
Sr. Engineer

Gloria Chang
Report coordinator

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

Product Name	7-INCH Connected AV & NAVI Station
Model Number	PTA-100
Identify Number	T171120D03
Received Date	June 19, 2017
Frequency band (Operating)	IEEE 802.11b/g/gn HT20 Mode: 2412MHz ~ 2462MHz IEEE 802.11gn HT40 Mode: 2422MHz ~ 2452MHz Bluetooth 2.1 + EDR / 4.0 Mode: 2402 ~ 2480 MHz
Device category	Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna Specification	WiFi 2.4GHz Antenna, Gain: 2dBi Bluetooth Antenna, Gain: 2dBi
Maximum average output power	IEEE 802.11b Mode: 9.67 dBm IEEE 802.11g Mode: 15.45 dBm IEEE 802.11gn HT20 MCS0 Mode: 15.31 dBm IEEE 802.11gn HT40 MCS0 Mode: 9.35 dBm Bluetooth 2.1+EDR Mode: 8.77 dBm
Evaluation applied	MPE Evaluation*

Remark:

1. For more details, please refer to the User's manual of the EUT.

2. This submittal(s) (test report) is intended for FCC ID: 2AOG5-PTA filing.

4. Test Results

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

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:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

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 / 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

Mode	Frequency (MHz)	Power (dBm)	Ant. Gain (dBi)	Distance (cm)	Power density (mW/cm²)	Limit (mW/cm²)
IEEE 802.11b	2412	9.67	2	20	0.0029	1
IEEE 802.11g	2437	15.45	2	20	0.0111	1
IEEE 802.11gn HT20 MCS0	2437	15.31	2	20	0.0107	1
IEEE 802.11gn HT40 MCS0	2437	9.35	2	20	0.0027	1
Bluetooth 2.1+EDR	2480	8.77	2	20	0.0024	1