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

Wireless Docsis Probe

Model: CGN-DP2(xxxx) (x= 0～9,A～Z or blank)

Trade Name: Hitron

Issued for

Hitron Technologies Inc.

No. 1-8, Lihsin 1st Rd., Hsinchu Science Park, Hsinchu 300, Taiwan

Issued by

Compliance Certification Services Inc.
Hsinchu Lab.

NO. 989-1, Wenshan Rd., Shangshan Village,

Qionglin Township, Hsinchu County 30741, Taiwan (R.O.C.)

http://www.ccsrf.com

service@ccsrf.com

Issued Date: November 30, 2016

TAF

Testing Laboratory
0240

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	11/30/2016	Initial Issue	All Page	Michelle Chiu

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.
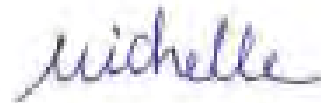
APPLICABLE STANDARD	
Standard	**Test Result**
IEEE C95.1 KDB 447498 D01 v06 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

Approved by: *Prepared by:*

Sb. Lu   Michelle Chiu
Sr. Engineer   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	Wireless Docsis Probe
Model Number	CGN-DP2(xxxx) (x= 0～9,A～Z or blank)
Identify Number	T161107S03
Received Date	November 07, 2016
Frequency band (Operating)	802.11b/g/gn HT20 Mode: 2412MHz ~ 2462MHz
Device category	Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna Specification	Airgain Embedded Antenna × 2 , Ant. 0 (Chain 0), Antenna Gain: 3 dBi Ant. 1 (Chain 1), Antenna Gain: 3 dBi
Maximum average output power	IEEE 802.11b Mode: 23.14 dBm IEEE 802.11g Mode: 29.18 dBm IEEE 802.11gn HT20 MCS0 Mode: 29.71 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: 2AHKM-CGNDP2 filing.
3. The model CGN-DP2 (CCC) was considered the main model for testing.

4. Test Results

No non-compliance noted.

Calculation

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

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

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

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 / cm^2

Mode	Frequency (MHz)	Power (dBm)	Ant. Gain (dBi)	Distance (cm)	Power density (mW/cm^2)	Limit (mW/cm^2)
IEEE 802.11b	2462	23.14	3	20	0.0818	1
IEEE 802.11g	2437	29.18	3	20	0.3286	1
IEEE 802.11gn HT20 MCS0	2437	29.71	3	20	0.3713	1