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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

iSmart CAM ; Can Cam

Model: TTD-VMi120S, TTD-VMi120S-xxx
("xxx"=001-999 or blank for indicate different customer serial number)

Data Applies To: HC-8301, HC-8301A, HC-8301B, HC-8301C, HC-8301D

Trade Name: Tranwo ; Smart Bridge

Issued for

Tranwo Technology Corp

No.236, Sec. 3, Huanbei Rd., Jubei City, Hsinchu County, 30265 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
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Testing Laboratory
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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	iSmart CAM ; Can Cam
Model Number	TTD-VMi120S, TTD-VMi120S-xxx ("xxx"=001-999 or blank for indicate different customer serial number)
Data Applies To	HC-8301, HC-8301A, HC-8301B, HC-8301C, HC-8301D
Identify Number	T150910S01
Received Date	September 10, 2015
Frequency band (Operating)	☒ 802.11b/g/gn HT20: 2412MHz ~ 2462MHz 802.11gn HT40: 2422MHz ~ 2452MHz ☐ 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 Gain : -0.83 dBi (Numeric gain: 0.83)
Maximum Peak output power	IEEE 802.11b Mode: 20.57 dBm (114.025 mW) IEEE 802.11g Mode: 22.04 dBm (159.956 mW) IEEE 802.11gn HT 20 Mode 22.10 dBm (162.181 mW) IEEE 802.11gn HT 40 Mode 21.32 dBm (135.519 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)
2412	114.025	0.83	20	0.0188	1

IEEE 802.11g mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	159.956	0.83	20	0.0264	1

IEEE 802.11gn HT20 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	162.181	0.83	20	0.0268	1

IEEE 802.11gn HT40 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
2437	135.519	0.83	20	0.0224	1