RF Exposure Evaluation Declaration

FCC ID:	HD5-WCT0TR1001
APPLICANT:	Honeywell International Inc Honeywell Safety and Productivity Solutions
Application Type:	Certification
Product:	WIFI/BT Board
Model No.:	WCT0TR1001
Brand Name:	Honeywell
FCC Rule Part(s):	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992
Test Date:	November 15 ~ 22, 2020

Reviewed By: (Jame Yuan)

Approved By: (Robin Wu)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

Revision History

Report No.	Version	Description	Issue Date	Note
2010RSU087-U4	Rev. 01	Initial Report	11-23-2020	Valid

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	WIFI/BT Board
Model No.	WCT0TR1001
Wi-Fi Specification	802.11b/g/n
Bluetooth Version	v4.2 dual mode
Frequency Range	**Wi-Fi:** For 802.11b/g/n-HT20: 2412 ~ 2462 MHz For 802.11n-HT40: 2422 ~ 2452 MHz **Bluetooth:** 2402 ~ 2480 MHz

1.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Manufacturer	Antenna Gain (dBi)	
			With Cable	Without Cable
PCB Antenna	2.4~2.5	WALSIN TECHNOLOGY CORPORATION	1.99	
Dipole Antenna	2.4~2.5		1.90	5.00

Note 1: All antenna information is provided by the manufacturer.

Note 2: The RF cable used with dipole antenna, its cable loss is 3.1dB declared by the manufacturer.

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	WIFI/BT Board
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum Output Power (dBm)	E.I.R.P (dBm)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)
802.11b/g/n	2412 ~ 2462	17.09	19.08	0.0161	1
Bluetooth	2402 ~ 2480	4.57	6.56	0.0009	1

CONCLUSION:

The Max Power Density at R (20 cm) = 0.0161mW/cm^2 < 1mW/cm^2.

So the EUT complies with the requirement.

The End

Appendix A - EUT Photograph

Refer to “2010RSU087-UE” file.