

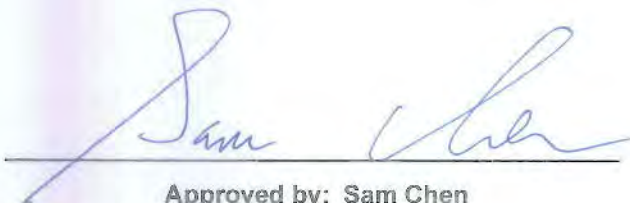


# RADIO EXPOSURE TEST REPORT

**FCC ID** : ACQ-HC200  
**Equipment** : HC200  
**Brand Name** : HomeSight  
**Model Name** : HC200  
**Applicant** : ARRIS  
101 Tournament Drive, Horsham  
Pennsylvania, United States, 19044  
**Manufacturer** : Hon Lin Technology Co Ltd.  
4-1, Min Sheng St., Tu Cheng Industrial District,  
Tucheng Dist., New Taipei City 236, Taiwan R.O.C.  
**Standard** : 47 CFR Part 2.1091

The product was received on Dec. 10, 2021, and testing was started from Dec. 17, 2021 and completed on Feb. 21, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

**Sporton International Inc. Hsinchu Laboratory**  
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

**Declaration of Conformity:**

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

**Comments and Explanations:**

1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
2. The presented declaration output power of WLAN 2.4 GHz, 5GHz and Bluetooth for EUT in the report are provided by the manufacturer, and We, Sporton International Inc. Hsinchu Laboratory does not guarantee its accuracy.

**Reviewed by: Sam Chen**

**Report Producer: Penny Kao**



# 1 General Description

## 1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5240 5260-5320 5500-5700 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Bluetooth	2400-2483.5	2402-2480	BR / EDR: FHSS (GFSK / $\pi/4$ -DQPSK / 8DPSK) LE: GFSK
24GHz	24000-24250	24050-24250	FMCW

## 1.2 Antenna Information

For WLAN 2.4GHz/5GHz and Bluetooth:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)					Remark
					2.4-2.4835 / Bluetooth	5.15-5.25	5.25-5.35	5.47-5.725	5.725-5.85	
1	-	PSA/WA-F-LB-02-288	FPC Antenna	UFL	3.76	3.84	3.84	3.89	3.72	1TX/1RX

For 24GHz:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
1	-	-	Patch Antenna	I-PEX	2	1TX/1RX

Note: The above information was declared by manufacturer.



### 1.3 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	NetBit	NPD20AD5	INPUT: 100-240V~,50/60Hz, 0.5A OUTPUT: 20.04W 12.0V, 1.67A 5.0V, 3.0A
2	Remote Control	Omni Remotes	RC463050/01BRP	-
Others				
HDMI cable*1: 1.73m, non-shielded, without core USB type-C cable*1: 1.8m, non-shielded, without core Plug*1				

### 1.4 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065      FAX: 886-3-656-9085
Test site Designation No. TW3787 with FCC.	
Conformity Assessment Body Identifier (CABID) TW3787 with ISED.	



## 2 Maximum Permissible Exposure

### 2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	<30
30-300	27.5	0.073	0.2	<30
300-1500	-	-	f/1500	<30
1500-100,000	-	-	1.0	<30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



### 2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
24G	2.00	-22.88	-20.88	0.50	-20.38	0.00001	20	0.0000018	1.00000
2.4G;G1D	3.76	19.65	23.41	0.35	23.76	0.23768	20	0.04728	1.00000
5.2G;D1D	3.84	18.06	21.90	0.44	22.34	0.17140	20	0.03410	1.00000
5.3G;D1D	3.84	18.28	22.12	0.22	22.34	0.17140	20	0.03410	1.00000
5.6G;D1D	3.89	18.08	21.97	0.42	22.39	0.17338	20	0.03449	1.00000
5.8G;D1D	3.72	18.48	22.20	0.02	22.22	0.16672	20	0.03317	1.00000
BT	3.76	11.68	15.44	0.32	15.76	0.03767	20	0.00749	1.00000

Simultaneous Transmission Analysis Mode: 24GHz + WLAN 5GHz +BT

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
5.6G;D1D	3.89	18.08	21.97	0.42	22.39	0.17338	20	0.03449	1.00000	0.03449
BT	3.76	11.68	15.44	0.32	15.76	0.03767	20	0.00749	1.00000	0.00749
24G	2.00	-22.88	-20.88	0.50	-20.38	0.00001	20	0.0000018	1.00000	0.0000018
									Sum Ratio	0.0419818
									Ratio Limit	1

Simultaneous Transmission Analysis Mode: 24GHz + WLAN 2.4GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
2.4G;G1D	3.76	19.65	23.41	0.35	23.76	0.23768	20	0.04728	1.00000	0.04728
24G	2.00	-22.88	-20.88	0.50	-20.38	0.00001	20	0.0000018	1.00000	0.0000018
									Sum Ratio	0.0472818
									Ratio Limit	1

Note 1: The above antenna gain was declared by manufacturer.

Note 2: Max field strength(AVG) =61.09dBuV/m

$$\text{EIRP(dBm/MHz)} = 61.09\text{dBuV/m} - (95.2 + (20\log(3/1))) = -43.65 \text{ dBm/MHz.}$$

$$\text{EIRP(dBm)} = 10\log((10(-43.65/10) ) \times \text{OBW}(189.29)) = -20.88 \text{ dBm.}$$

—————THE END—————