




RF EXPOSURE REPORT



Report No.: 18070022-FCC-H-V1

Applicant	Horizon Hobby, LLC	
Product Name	Glimpse	
Main Model No.	BLH2202	
Serial Model No.	N/A	
Test Standard	FCC 2.1091: 2017	
Test Date	January 05 to 26, 2018	
Issue Date	February 09, 2018	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification	<input checked="" type="checkbox"/>	
Equipment did not comply with the specification	<input type="checkbox"/>	
		
Aaron Liang Test Engineer	David Huang Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn

Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

Test Report	18070022-FCC-H-V1
Page	3 of 9

This page has been left blank intentionally.

CONTENTS

1. REPORT REVISION HISTORY	5
2. CUSTOMER INFORMATION	5
3. TEST SITE INFORMATION	5
4. EQUIPMENT UNDER TEST (EUT) INFORMATION	6
5. FCC §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)	7
5.1 APPLICABLE STANDARD	7
5.2 TEST RESULT	8

1. Report Revision History

Report No.	Report Version	Description	Issue Date
18070022-FCC-H	NONE	Original	January 27, 2018
18070022-FCC-H-V1	V1	Updated the Operating Frequency	February 09, 2018

2. Customer information

Applicant Name	Horizon Hobby, LLC
Applicant Add	4105 Fieldstone Road, Champaign, IL 61822, USA
Manufacturer	Yunee International(China) Co., Ltd
Manufacturer Add	No.388 East Zhengwei Road, Jinxi Town, Kunshan, Jiangsu, 215324, China

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Labview of SIEMIC version 2.0

4. Equipment under Test (EUT) Information

Description of EUT:	Glimpse
Main Model:	BLH2202
Serial Model:	N/A
Equipment Category :	DTS
Antenna Gain:	2.4G: 1dBi WIFI(5745-5825MHz): 1dBi
Antenna type :	Internal antenna
Trade Name :	N/A
Port:	Please refer to the user manual
FCC ID:	BRWBLH2202MD
Type of Modulation:	2.4G: GFSK 802.11: OFDM(BPSK/QPSK/16QAM/64QAM/256QAM)
RF Operating Frequency (ies):	2.4G: 2404-2476 MHz 802.11a: 5745-5825 MHz; (TX/RX)
Number of Channels:	2.4G: 40CH WIFI: 24CH

5. FCC §2.1091 - Maximum Permissible exposure (MPE)

5.1 Applicable Standard

According to §1.1307(b)(1), 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 level in excess of the Commission' s guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

5.2 Test Result

5G WIFI

Test mode	Freq Band (MHz)	CH	Frequency (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)
802.11a	5745-5825	Low	5745	10.95	11±1
		Mid	5785	10.74	11±1
		High	5825	10.96	11±1

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

5G WIFI:

For the antenna manufacturer provide only used limited to ERP/EIRP or radiated spurious emission test. The MPE evaluation as below:

Maximum output power at antenna input terminal: 12dBm

Maximum output power at antenna input terminal: 15.85(mW)

Prediction distance: >20 (cm)

Predication frequency: 5825 (MHz) High frequency

Antenna Gain (typical): 1 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.004(mW/cm²)

MPE limit for general population exposure at prediction frequency: 1 (mW/cm²)

Test Report	18070022-FCC-H-V1
Page	9 of 9

0.004(mW/cm²) < 1 (mW/cm²)

Result: Pass