



# Maximum Permissible Exposure Evaluation

## FCC ID: 2A9VY-KR2015

### Original Grant

Report No.	:	TBR-C-202506-0212-10	
Applicant	:	Pathway Innovations Inc.	
Equipment Under Test (EUT)			
EUT Name	:	ORBIT Trio AIR	
Model No.	:	ORBIT Trio AIR/KR2015	
Series Model No.	:	----	
Brand Name	:	hovercam	
Sample ID	:	HC-C-202506-0212-01-01# & HC-C-202506-0212-01-02#	
Receipt Date	:	2025-07-14	
Test Date	:	2025-07-14 to 2025-08-13	
Issue Date	:	2025-08-13	
Standards	:	FCC Part 2.1091	
Test Method	:	KDB 447498 D01 General RF Exposure Guidance v06	
Conclusions	:	<b>PASS</b>	
In the configuration tested, the EUT complied with the standards specified above.			
Test By	:	Lily Zhang	Lily Zhang
Reviewed By	:	Emily	Emily Tang
Approved By	:	Ivan Su	Ivan Su
<p>This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.</p>			



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Revision History

Report No.	Version	Description	Issued Date
TBR-C-202506-0212-10	Rev.01	Initial issue of report	2025-08-13





# 1. General Information about EUT

## 1.1 Client Information

<b>Applicant</b>	:	Pathway Innovations Inc.
<b>Address</b>	:	6780 Paradise Road Las Vegas, Nevada 89119
<b>Manufacturer</b>	:	ShenZhen KerunVisual Technology Co., LTD.
<b>Address</b>	:	Unit A, F/11, Bldg.1, Senyang Electronic Technology Park, Yutang Community, Guangming High Tech Zone, Guangming District, Shenzhen, China.

## 1.2 General Description of EUT (Equipment Under Test)

<b>EUT Name</b>	:	ORBIT Trio AIR
<b>Models No.</b>	:	ORBIT Trio AIR/KR2015
<b>Model Different</b>	:	----
<b>Product Description</b>	:	Operation Frequency: 802.11b/g/n(HT20)/ax(HE20):2412MHz~2462MHz U-NII-1: 5180MHz~5240MHz
<b>Power Rating</b>	:	AC Adapter (Model: JHD-AP024U-120200BA-A): Input: 100-240V~50/60Hz, 0.55A Output: 12V=2000mA
<b>Li-ion Polymer Battery</b>	:	3.8V by 9800mAh Rechargeable Li-ion battery
<b>Software Version</b>	:	----
<b>Hardware Version</b>	:	MB_V1.3
<b>Remark:</b> The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.		

## 1.3 Antenna Gain

Band	Antenna Type	Antenna Gain(dBi)	
		Antenna 1	Antenna 2
2.4G Wi-Fi	FPC	1.96	1.96
5G Wi-Fi U-NII-1		3.37	3.37
<b>Remark:</b> The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.			





## 2. Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty (ULab)
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	$\pm 3.50$ dB $\pm 3.10$ dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	$\pm 4.60$ dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	$\pm 4.50$ dB
Radiated Emission	Level Accuracy: Above 1000MHz	$\pm 4.20$ dB
Temperature	/	$\pm 0.6^{\circ}\text{C}$
Humidity	/	$\pm 4\%$
Supply voltages	/	$\pm 2\%$
Time	/	$\pm 4\%$





### 3. Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F., Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

#### **CNAS (L5813)**

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

#### **A2LA Certificate No.: 4750.01**

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

#### **IC Registration No.: (11950A)**

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056.





## 4. Method of Measurement for FCC

### 4.1 EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 4.2 Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

### 4.3 Simultaneous transmission MPE Considerations

According to KDB447498 D01 v06: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is  $\leq 1.0$ .

This means that:

$$\sum \text{ of MPE ratios } \leq 1.0$$





## 5. Test Result

Worst MPE Result							
Test Mode	Antenna	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	Max. ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
2.4G b	Ant1	16	16±1	17	1.96	20	0.0157
	Ant2	15.14	15±1	16	1.96	20	0.0124
2.4G g	Ant1	15.45	15±1	16	1.96	20	0.0124
	Ant2	15.77	16±1	17	1.96	20	0.0157
2.4G n20	Ant1	12.34	12±1	13	1.96	20	0.0062
	Ant2	12.87	13±1	14	1.96	20	0.0078
2.4G ax20	Ant1	12.09	12±1	13	1.96	20	0.0062
	Ant2	13.05	13±1	14	1.96	20	0.0078
5G a	Ant1	12.99	13±1	14	3.37	20	0.0109
	Ant2	11.33	11±1	12	3.37	20	0.0069
5G n20	Ant1	12.3	12±1	13	3.37	20	0.0086
	Ant2	11.35	11±1	12	3.37	20	0.0069
5G n40	Ant1	13.14	13±1	14	3.37	20	0.0109
	Ant2	12.42	12±1	13	3.37	20	0.0086
5G ac20	Ant1	11.08	11±1	12	3.37	20	0.0069
	Ant2	9.83	10±1	11	3.37	20	0.0054
5G ac40	Ant1	9.68	10±1	11	3.37	20	0.0054
	Ant2	8.16	8±1	9	3.37	20	0.0034
5G ac80	Ant1	8.28	8±1	9	3.37	20	0.0034
	Ant2	7.34	7±1	8	3.37	20	0.0027
5G ax20	Ant1	10.69	11±1	12	3.37	20	0.0069
	Ant2	9.48	9±1	10	3.37	20	0.0043
5G ax40	Ant1	9.8	10±1	11	3.37	20	0.0054
	Ant2	8.36	8±1	9	3.37	20	0.0034
5G ax80	Ant1	7.07	7±1	8	3.37	20	0.0027
	Ant2	5.52	6±1	7	3.37	20	0.0022

Note: The antenna gain used max. antenna gain





**Conclusion:**

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

**Limits for General Population/ Uncontrolled Exposure**

Frequency Range (MHz)	Power density (mW/ cm <sup>2</sup> )
300-1,500	F/1500
1,500-100,000	1.0

**Summary simultaneous transmission information**

The sample supports two antennas for (2.4G WIFI&5G WIFI) Ant.1 and (2.4G WIFI&5G WIFI) Ant.2.

The (2.4G WIFI&5G WIFI) Ant.1 and (2.4G WIFI&5G WIFI) Ant.2 can transmit simultaneous.

The ((2.4G WIFI&5G WIFI) Ant.1 and (2.4G WIFI&5G WIFI) Ant.2 with two different Antenna.

According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission operations;

$\Sigma$  of MPE ratios  $\leq 1.0$

**Summary simultaneous transmission results**

*(2.4G WIFI&5G WIFI) Ant.1 + (2.4G WIFI&5G WIFI) Ant.2 Maximum Simultaneous transmission MPE Ratios is 0.0157+0.0157=0.0314 $\leq$ 1.0.*

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----END OF THE REPORT-----

