Maximum Permissible Exposure Evaluation

FCC ID:2A9VY- RECASTKR1518

1. General Information about EUT

1.1 Client Information

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

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	ORBIT RECAST	
Models No.	:	ORBIT RECAST/KR1518	
Model Different	:	N/A	
Brand Name	:	hovercam	
Sample ID	:	HC-C-202408-0199-01-01	
Product Description	:	Operation Frequency:	U-NII-1: 5180MHz~5240MHz 802.11b/g/n/ax(HT20)/n(HT40): 2412MHz~2462MHz
Power Rating	:	AC Adapter (Model: JHD-AP024U-120200BA-A) Input: 100-240V~50/60Hz, 0.55A Output: 12V⎓2A DC 3.8V 9800mAh Rechargeable Li-ion battery	
Software Version	:	RecastV100	
Hardware Version	:	MB_V1.2	

1/F.,Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China
Tel: +86 75526509301 Fax: +86 75526509195

1.3 Antenna Information

Band	Antenna Type	Antenna Gain(dBi)	
		Antenna 1	Antenna 2
2.4G Wi-Fi	FPC	1.96	1.96
U-NII-1		3.15	3.15
Remark: 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. Method of Measurement for FCC

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

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

Simultaneous transmission MPE Considerations

According to KDB447498: 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 ≤ 1.0.
This means that:

∑ of MPE ratios ≤ 1.0

3. 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^2) [S]
2.4G b	Ant1	16.97	16±1	17	1.96	20	0.01566
	Ant2	16.45	16±1	17	1.96	20	0.01566
2.4G g	Ant1	14.26	14±1	15	1.96	20	0.00988
	Ant2	13.78	14±1	15	1.96	20	0.00988
2.4G n20	Ant1	13.98	13±1	14	1.96	20	0.00785
	Ant2	12.97	13±1	14	1.96	20	0.00785
2.4G n40	Ant1	13.60	13±1	14	1.96	20	0.00785
	Ant2	12.20	13±1	14	1.96	20	0.00785
5G a	Ant1	16.50	16±1	17	3.15	20	0.02059
	Ant2	16.45	16±1	17	3.15	20	0.02059
5G n20	Ant1	16.59	16±1	17	3.15	20	0.02059
	Ant2	16.56	16±1	17	3.15	20	0.02059
5G n40	Ant1	12.93	13±1	14	3.15	20	0.01032
	Ant2	13.29*	13±1	14	3.15	20	0.01032
5G ac20	Ant1	13.49	14±1	15	3.15	20	0.01299
	Ant2	14.00	14±1	15	3.15	20	0.01299
5G ac40	Ant1	13.06	14±1	15	3.15	20	0.01299
	Ant2	13.41	14±1	15	3.15	20	0.01299
5G ac80	Ant1	12.16	12±1	13	3.15	20	0.00820
	Ant2	12.93	12±1	13	3.15	20	0.00820
5G ax20	Ant1	11.84	12±1	13	3.15	20	0.00820
	Ant2	12.45	12±1	13	3.15	20	0.00820
5G ax40	Ant1	11.24	12±1	13	3.15	20	0.00820
	Ant2	11.68	12±1	13	3.15	20	0.00820
5G ax80	Ant1	10.59	11±1	12	3.15	20	0.00651
	Ant2	11.54	11±1	12	3.15	20	0.00651
Note: The antenna gain used max. antenna gain							

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^2)
300-1,500	F/1500
1,500-100,000	1.0

4. 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;
∑ of MPE ratios ≤ 1.0

5. Summary simultaneous transmission results

(2.4G WIFI&5G WIFI) Ant.1 + (2.4G WIFI&5G WIFI) Ant.2 Maximum Simultaneous transmission MPE Ratios is ***0.0156+0.02059=0.0415≤1.0.***

6. Conclusion:

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------