

# RF EXPOSURE REPORT

Applicant	Shenzhen Arashi Vision Company Limited
Address	6/F, Building A, Logan Century Center, Haixiu Road, Bao'an District, Shenzhen, China



Manufacturer or Supplier	Shenzhen Arashi Vision Company Limited
Address	6/F, Building A, Logan Century Center, Haixiu Road, Bao'an District, Shenzhen, China
Product	Insta360 ONE R
Brand Name	Insta360
Model	CINORAH/A
Additional Model & Model Difference	CINORAH/X (X can be changed with the way change of packing, from B,C,D to Z), see items 1.1
Date of tests	Sep. 19, 2019 ~ Nov. 07, 2019

☒ FCC Part 2 (Section 2.1093)

☒ KDB 447498 D01

☒ IEEE C95.1

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Andy Zhu Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	  Date: Nov. 15, 2019

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Test Report No.: FM190919N042

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM190919N042	Original release	Nov. 15, 2019

## 1. CERTIFICATION

<b>FCC ID:</b>	2AFSH-CINORAH-A
<b>PRODUCT:</b>	Insta360 ONE R
<b>BRAND NAME:</b>	Insta360
<b>MODEL NO.:</b>	CINORAH/A
<b>ADDITIONAL NO.:</b>	CINORAH/X (X can be changed with the way change of packing, from B,C,D to Z)
<b>TEST SAMPLE:</b>	Engineering Sample
<b>APPLICANT:</b>	Shenzhen Arashi Vision Company Limited
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1093)
	KDB 447498 D01
	IEEE C95.1

Note1: Additional model (See above table) is identical with the test model CINORAH/A except the packing method and model number for marketing purpose.

## 2. RF EXPOSURE DEFINE

The corresponding SAR Exclusion Threshold condition, listed below:

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, 16 where}$$

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

- 2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:
- a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz
  - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at  $> 1500$  MHz and  $\leq 6$  GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
- a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

## 3. CLASSIFICATION

The antenna of this product, under normal use condition, is at less than 20cm away from the body of the user. So, this device is classified as **Portable Device**.

## 4. SAR TEST EXCLUSION THRESHOLDS

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
802.11b	2412-2462MHz	8.5	+1	7.5	9.5
802.11g	2412-2462MHz	8.5	+1	7.5	9.5
802.11n HT20	2412-2462MHz	8.5	+1	7.5	9.5
Wi-Fi 5GHz(Band1)	5150-5250MHz	7	+1	6	8
Wi-Fi 5GHz(Band4)	5725-5850MHz	6.5	+1	5.5	7.5

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
802.11b	2412	9.22
802.11g	2412	9.05
802.11n HT20	2462	9.17
Wi-Fi 5GHz(Band1)	5240	7.86
Wi-Fi 5GHz(Band4)	5825	7.32

**SAR Test Exclusion Thresholds**

Mode	Frequency (MHz)	Maximum source-based time averaged conducted output power (dBm)	Minimum separation distance (mm)	Result of Eq. 1	Limit for 1-g SAR	Limit for 10-g extremity SAR	Verdict
Wi-Fi 2.4GHz	2462	9.5	5	2.797	3.0	7.5	Exempt from SAR
Wi-Fi 5GHz (Band1)	5240	8	5	2.889	3.0	7.5	Exempt from SAR
Wi-Fi 5GHz (Band4)	5825	7.5	5	2.714	3.0	7.5	Exempt from SAR

**Conclusion**

Therefore our device complies with FCC's RF radiation exposure limits for general population without SAR evaluation.