



RF EXPOSURE REPORT

| | |
|-----------|---|
| Applicant | Zhiwei Robotics Corp. |
| Address | Room 603, 2 Boyun Road, Pudong, Shanghai P.R. China |

| | |
|-------------------------------------|---|
| Manufacturer or Supplier | Zhiwei Robotics Corp. |
| Address | Room 603, 2 Boyun Road, Pudong, Shanghai P.R. China |
| Product | UNIHIKER |
| Brand Name | N/A |
| Model | DFR0706 |
| Additional Model & Model Difference | N/A |
| Date of tests | Dec. 12, 2022 ~ Feb. 06, 2023 |

- ☒ FCC Part 2 (Section 2.1091)
- ☒ KDB 447498 D01
- ☒ IEEE C95.1

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

| | |
|---|---|
| Tested by Andy Zhu Supervisor / EMC Department | Approved by Glyn He Assistant Manager / EMC Department |
|  |  |

Date: Mar. 09, 2023

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Test Report No.: FM2211WDG0121

RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|---------------|-------------------|---------------|
| FM2211WDG0121 | Original release | Mar. 09, 2023 |

1. CERTIFICATION

| | |
|--------------------------|-----------------------------|
| PRODUCT: | UNIIKER |
| BRAND NAME: | N/A |
| MODEL NO.: | DFR0706 |
| ADDITIONAL MODEL: | N/A |
| FCC ID: | 2AIDMUNIIKER13 |
| TEST SAMPLE: | ENGINEERING SAMPLE |
| APPLICANT: | Zhiwei Robotics Corp. |
| STANDARDS: | FCC Part 2 (Section 2.1091) |
| | KDB 447498 D01 |
| | IEEE C95.1 |

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| FREQUENCY RANGE (MHz) | ELECTRIC FIELD STRENGTH (V/m) | MAGNETIC FIELD STRENGTH (A/m) | POWER DENSITY (mW/cm ²) | AVERAGE TIME (minutes) |
|---|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE | | | | |
| 300-1500 | ... | ... | F/1500 | 30 |
| 1500-100,000 | ... | ... | 1.0 | 30 |

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

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

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

| Frequency Band | Antenna Gain (dBi) | Antenna Type |
|--|--------------------|--------------|
| BT 2.4GHz (2402-2480MHz) | -2.16 | PCB Antenna |
| Wi-Fi 2.4GHz 2422-2452MHz for 11n(HT40) 2412-2462MHz for 11b/g/n(HT20) | -2.34 | PCB Antenna |

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

| Mode | Frequency (MHz) | Target Power (dBm) | Tolerance (dBm) | Lower Tolerance (dBm) | Upper Tolerance (dBm) |
|--------------|-----------------|--------------------|-----------------|-----------------------|-----------------------|
| BT (GFSK) | 2402-2480MHz | 4 | +1 | 3 | 5 |
| BT (8DPSK) | 2402-2480MHz | 6 | +1 | 5 | 7 |
| BT-LE (GFSK) | 2402-2480MHz | 4 | +1 | 3 | 5 |
| 802.11b | 2412-2462MHz | 16 | +1 | 15 | 17 |
| 802.11g | 2412-2462MHz | 16 | +1 | 15 | 17 |
| 802.11n HT20 | 2412-2462MHz | 15 | +1 | 14 | 16 |
| 802.11n HT40 | 2422-2452MHz | 15 | +1 | 14 | 16 |



The measured conducted Average Power

| Mode | Frequency (MHz) | Averaged Power (dBm) |
|--------------|-----------------|----------------------|
| BT (GFSK) | 2480 | 4.16 |
| BT (8DPSK) | 2480 | 5.84 |
| BT-LE (GFSK) | 2480 | 4.39 |
| 802.11b | 2462 | 16.49 |
| 802.11g | 2462 | 16.12 |
| 802.11n HT20 | 2462 | 14.81 |
| 802.11n HT40 | 2452 | 14.24 |

| FREQUENCY BAND | MAX AVERAGE POWER (dBm) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm ²) | LIMIT (mW/cm ²) |
|----------------|-------------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| BT 2.4GHz | 7 | -2.16 | 20 | 0.000606 | 1.0 |
| Wi-Fi 2.4GHz | 17 | -2.34 | 20 | 0.005817 | 1.0 |

CONCLUSION:

The BT and WLAN can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$$(0.000606/1) + (0.005817/1) = 0.006423 < 1, \text{ which is less than the "1" limit.}$$

--- END ---