

Prüfbericht-Nr.: <i>Test report no.:</i>	CN22WMZD 004	Auftrags-Nr.: <i>Order no.:</i>	168389903	Seite 1 von 9 <i>Page 1 of 9</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2022-09-19	
Auftraggeber: <i>Client:</i>	SZ DJI TECHNOLOGY CO., LTD. 14th Floor, West Wing, Skyworth Semiconductor Design Building No.18 Gaoxin South 4th Ave Nanshan District, Shenzhen, P.R. China			
Prüfgegenstand: <i>Test item:</i>	DJI Mini 2 SE			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	MT2SD (Trademark: DJI)			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	47 CFR FCC Part 2.1091			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2022-09-20	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003336027-006~007, 009~011			
Prüfzeitraum: <i>Testing period:</i>	2022-09-21 to 2022-10-14			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	Bell Hu <i>Bell Hu</i>	genehmigt von: <i>authorized by:</i>	Hardy Suo <i>Hardy Suo</i>	
Datum: <i>Date:</i>	2022-10-31	Ausstellungsdatum: <i>Issue date:</i>	2022-10-31	
Stellung / Position:	Project Manager	Stellung / Position:	Reviewer	
Sonstiges / Other:	FCC ID: SS3-MT2SD22			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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TEST SUMMARY

3.1.1 RF EXPOSURE COMPLIANCE

RESULT: Pass

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1. TEST SITES

1.1 TEST FACILITIES

TÜV Rheinland (Shenzhen) Co., Ltd.

Address: No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China

FCC Registration No.: 694916

ISED Wireless Device Testing Laboratory: 25069

1.2 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

1.3 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

1.4 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendixes of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

1.5 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

2. GENERAL PRODUCT INFORMATION

2.1 GENERAL DESCRIPTION

The EUT (Equipment Under Test) is a DJI Mini 2 SE. It supports 2.4GHz SDR, 5.8GHz SDR and GNSS functions.

*remark: SDR means specific defined radio, and cannot changes radio specification via software/firmware by end-users.

Note: When the EUT is charged, other functions cannot be used.

For details refer to the User Manual, Technical Description and Circuit Diagram.

2.2 RATING AND SYSTEM DETAILS

Table 1: Rating of EUT

General Information of EUT	Value
Kind of Equipment	DJI Mini 2 SE
Type Designation	MT2SD
Operating Voltage	AC 100-240V, 50/60Hz input via AC/DC adapter or Battery operated (Max 7.7V, 2250 mAh)
Testing Voltage	Full battery
Extreme Temperature Range	0°C ~ 40 °C
Radiofrequency operating mode	1) 2.4GHz SDR: operating within 2400-2483.5MHz, supports 1.4MHz/3MHz/10MHz/20MHz Bandwidth 2) 5.8GHz SDR: operating within 5725-5850MHz, supports 1.4MHz/3MHz/10MHz/20MHz Bandwidth 3) GNSS (receiver): 1559-1610MHz
Adapter	Model: QC18-US Input: 100-240V, 50/60Hz, 0.5A Output: DC 5.0V/3A or 9.0V/2A or 12.0V/1.5A

Table 2: Technical Specification of EUT

Technical Specification of 2.4GHz SDR	
Operating Frequency	2407.5-2465.5MHz for 1.4MHz Bandwidth 2409.12-2467.12MHz for 1.4MHz Bandwidth (CA mode) 2417.5-2456.5MHz for 3MHz Bandwidth 2405.5-2476.5MHz for 10MHz Bandwidth 2410.5-2472.5MHz for 20MHz Bandwidth
Type of Modulation	OFDM (QPSK, 16QAM, 64QAM)
Channel Number	30 channels for 1.4MHz Bandwidth 30 channels for 1.4MHz Bandwidth (CA mode) 14 channels for 3MHz Bandwidth 72 channels for 10MHz Bandwidth 63 channels for 20MHz Bandwidth

Channel Separation	2MHz for 1.4MHz Bandwidth 2MHz for 1.4MHz Bandwidth (CA mode) 3MHz for 3MHz Bandwidth 1MHz for 10MHz Bandwidth 1MHz for 20MHz Bandwidth
Antenna Type	Integral Antenna
Antenna Number	2 Antennas, only 1TX2RX mode supported.
Antenna Gain	2.5 dBi
Technical Specification of 5.8GHz SDR	
Operating Frequency	5728.5-5844.5MHz for 1.4MHz Bandwidth 5730.12-5846.12MHz for 1.4MHz Bandwidth (CA mode) 5730.5-5844.5MHz for 3MHz Bandwidth 5732.5-5844.5MHz for 10MHz Bandwidth 5735.5-5839.5MHz for 20MHz Bandwidth
Type of Modulation	OFDM (QPSK, 16QAM, 64QAM)
Channel Number	59 channels for 1.4MHz Bandwidth 59 channels for 1.4MHz Bandwidth (CA mode) 39 channels for 3MHz Bandwidth 113 channels for 10MHz Bandwidth 105 channels for 20MHz Bandwidth
Channel Separation	2MHz for 1.4MHz Bandwidth 2MHz for 1.4MHz Bandwidth (CA mode) 3MHz for 3MHz Bandwidth 1MHz for 10MHz Bandwidth 1MHz for 20MHz Bandwidth
Antenna Type	Integral Antenna
Antenna Number	2 Antennas, only 1TX2RX mode supported.
Antenna Gain	3.5dBi

3. Test Results

3.1 Transmitter Requirements & Test Suites

3.1.1 RF Exposure Compliance

RESULT:**Pass**

Test standard	:	FCC Part 1.1091
Limit	:	Table 1 of 47 CFR FCC Part 1.1310
Kind of test site	:	Shielded room

This device is mobile device, and the applicant declares that the minimum separation distance is greater than 20cm. Therefore MPE measurement or computational modelling should be used to determine compliance.

MPE Calculation is based on the conducted power, and considering maximum power and Antenna gain. The following formula is used to MPE evaluation.

$$Pd = \frac{P_{out} * G}{4R^2 \pi}$$

Where

P_d = power density in mW/cm² or W/m²

P_{out} = output power to antenna in mW or W

G_{num} = Antenna gain in numeric

π = 3.14159

R = Distance between observation point and the center of radiator in cm or m

3.1.1.1 FCC Part 1.1310, Part 2.1091

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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

Table 3: Test Results of RF Exposure Calculations for FCC, stand-alone mode

Operating Mode	Max. EIRP incl. tune-up (dBm)	Distance (cm)	MPE (mW/cm ²)	Limit (mW/cm ²)	Verdict
2.4GHz SDR	24.00	20	0.0500	1.0	Pass
5.8GHz SDR	26.00	20	0.0792	1.0	Pass

Note:

1. The 2.4GHz SDR and 5.8GHz SDR mode of EUT cannot transmitting simultaneously.
2. 2.4G SDR and 5.8GHz SDR RF Output Power: Refer to test report CN22WMZD 001 & CN22WMZD 002.
3. EIRP= Conducted power +Directional Gain

Note: simultaneous mode not supported.

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