1 LABORATORY TEST REPORT

1.1 PRE-TEST INFORMATION COLLECTION

Tested by:	
Verified by:	
Start date of performance of the test:	02 April 2026
End date of performance of the test:	
Facility:	
Location:	
Event/Sponsor:	SZ DJI TECHNOLOGY CO., LTD
sUAS Make/Model:	DJI Matrice 400
sUAS Manufacturer:	SZ DJI TECHNOLOGY CO., LTD
Organization:	

1.2 EQUIPMENT RECEIVED AND IDENTIFICATION

The Target of Evaluation, PRS with sUAS, is composed of the following components:

- Parachute Recovery Systems (PRS)
  - DJI AP100 Parachute (AP100), firmware version: 00.01.9101
- Small Unmanned Aircraft Systems (sUAS)
  - DJI Matrice 400 (Matrice 400), firmware version: 17.02.1004
  - DJI RC Plus 2 (TKPL2), firmware version: 88.64.0629
  - APP (DJI Pilot 2), APP version: root-develop-7252
- sUA Components and Payload
  - Propellers (2510F)
  - Landing Gear (M400 LG)
  - Intelligent Flight Battery (TB100-20254-48.23)
  - DJI Cellular Dongle 2 (IG831T)

  - Gimbal Connector:
  - Single Gimbal Connector (M400 SGC)
  - Dual Gimbal Connector (M400 DGC)
  - Third Gimbal Connector (M400 TGC)

  - Camera and Payloads:
  - Zenmuse H30 (ZH30)
  - Zenmuse H30 (ZH30T)
  - Zenmuse L2 (ZL2)
  - Zenmuse P1 (ZP1)
  - Zenmuse S1(ZS1)
  - Zenmuse V1(ZV1)
-

1.3 SAMPLE LIST

Date of receipt:		**02 Mar 2026**
Item	**Model**	**Serial Number**
sUA	Matrice 400	1581F8DBD25260060126
		1581F8DBD25260060074
		1581F8DBW256R00A2QB1
		1581F8DBD25260060049
		1581F8DBW255D00A2LJH

		1581F8DBD25260060129
		1581F8DBD25260060052
Controller	TKPL2	7CACMB800102DA
PRS	AP100	BXEDNCH0010129
		BXEDNCH0010154
		BXEDNCH0010102
		BXEDNCH0010173
		BXEDNCH0010161
		BXEDNCH0010152
		BXEDNCH0010150
		BXEDNCH0010151
		BXEDNCH0010142
		BXEDNCH0010148
		BXEDNCH0010145
		BXEDNCH0010175
		BXEDNCH0010171
		BXEDNCH0010167
		BXEDNCH0010131
		BXEDNCH0010146
		BXEDNCH0010130
		BXEDNCH0010108
		BXEDNCH0010122
		BXEDNCH0010135
		BXEDNCH0010123
		BXEDNCH0010105
		BXEDNCH0010136
		BXEDNCH0010138
		BXEDNCH0010128
		BXEDNCH0010126
		BXEDNCH0010104
		BXEDNCH0010119
		BXEDNCH0010124
Battery	TB100-20254-48.23	8DAPN28CAE00F8
Propeller	2510F	/
Date of receipt:		**23 Mar 2026**
Controller	TKPL2	875DLC80010187
Date of receipt:		**29 Apr 2026**
sUA	Matrice 400	1581F8DBW25B800B33ZH
		1581F8DBW257200A2QS8
		1581F8DBW256500A2NSJ
		1581F8DBD25370070024
Propeller	2510F	/

1.4 SAMPLE PHOTO

1.5 Test Execution Overview

The testing encompassed the complete spectrum of failure scenarios required for a multirotor sUA, as defined in the standard's test matrix as mandated by Sections 6.4 (Testing Matrix and Requirements):

- **Failure Scenarios (FS)**

  Full Power Cut (FS 1 & 4), Critical Number Motor Failure - CNMF (FS 2 & 5), Critical Number Motor Failure plus one, CNMF + 1 (FS 3 & 6), and Shock Load Testing (FS 7). The failure scenarios are instigated independently via the failure box. The installation of failbox set up refer to ANNEX, where the installation did not reduce areas of entanglement or close off previously open areas of the aircraft. The modification to the forebody mass fail within the manufacturer-defined maximum weight limit.

- **Flight Conditions**

  Tests were conducted in both hover and at maximum forward speed (25 m/s).

- **Weight Configurations**

  Tests were performed at both Minimum Takeoff Weight and Maximum Takeoff Weight with a worst-case edge-case payload configuration. The manufacturer-declared MTOM (Maximum Takeoff Weight) is 15800 g. The minimum takeoff weight comprises the aircraft airframe and all essential installed components, including the battery, dongles, and parachute module.

- **Worst-case edge-case**

  The worst-case edge-case is determined by identifying the combination of weight, speed, and center-of-gravity conditions that are most adverse to PRS deployment and descent performance. The selection is based on assessment of PRS installation geometry, deployment dynamics, and aircraft attitude effects, and is verified through representative test configuration.

- **Deployment Trigger**

  Both Autonomous Triggering System (ATS) and Manual Triggering Device (MTD) deployments were tested, with MTD tests incorporating the required 2-second delay.

- **Independent Oversight**

  All failure modes were instigated independently via a failbox, concealed from the Remote Pilot in Command (RPIC) to prevent anticipation. Every trial was documented with continuous video recording from takeoff to landing.

- **Results Analysis**

  - The minimum flyable altitude (MDA) was recorded in all automatic deployments. It was determined as the height difference between the failure scenario initiation altitude and the altitude at which a stable vertical descent was achieved post-parachute deployment.
  - The rate of descent was recorded throughout all trials, from which the average rate of descent for the PRS was derived.
  - The Minimum Flyable Altitude Rating (MFAR) was obtained by the greatest MDA calculated for the respective hover and full forward trials during all automatic deployments, plus a 6.56 ft (2 m) buffer and the total length of the parachute assembly. The total length of the parachute is 3.12 m.

The detailed results refer to Section 3 TESTING MATRIX RESULT TABLE.

2 REFERENCED DOCUMENTS

No.	Documentation	Description
1	DJI AP100 parachute User Manual V0.3	Parachute Manual (PM) includes maintenance and continued operational safety expectations.
2	DJI MATRICE 400 User Manual v2.0 2026.01	Manufacturer's instruction of the UAS.

3 TESTING MATRIX RESULT TABLE

GENERAL DATA	
Date of performance of the test (start):	02 Apr 2026
Date of performance of the test (end):	21 May 2026
ENVIRONMENTAL CONDITIONS DURING TESTS	
02 Apr 2026	**Trial Number: 1 - 5**
Temperature (ºC):	24.3
Relative humidity (%):	62.3
Wind Speed (m/s)	3.0
Illuminance (lux)	11400
Pressure (kPa)	101.438
06 Apr 2026	**Trial Number: 6 - 13**
Temperature (ºC):	31.3
Relative humidity (%):	36.5
Wind Speed (m/s)	1.0
Illuminance (lux)	42500
Pressure (kPa)	100.781
13 Apr 2026	**Trial Number: 14 - 16**
Temperature (ºC):	89.2
Relative humidity (%):	15.5
Wind Speed (m/s)	0.9
Illuminance (lux)	15560
Pressure (kPa)	101.296
19 May 2026	**Trial Number: 17 - 23**
Temperature (ºC):	28.9
Relative humidity (%):	71.8
Wind Speed (m/s)	3.4
Illuminance (lux)	10300
Pressure (kPa)	100.680
21 May 2026	**Trial Number: 24 - 29**
Temperature (ºC):	2.6
Relative humidity (%):	27.5
Wind Speed (m/s)	42.5
Illuminance (lux)	20400

Pressure (kPa)	100.164

Trial Number	FS Test ID	Failure Scenario	Deployment Type	Weight Config.	Result	Minimum Deployable Altitude (ft)	Rate of Descent (ft/sec)
11	FS 1.1	Hover Full Power Cut	MTD	MinTOW	PASS	NA	13.85
15	FS 1.2		MTD	MaxTOW	NT	NT	NT
1	FS 1.3		ATS	MinTOW	PASS	74.28	12.73
2			ATS	MinTOW	PASS	193.24	10.17
3			ATS	MinTOW	PASS	178.22	12.2
NT	FS 1.4		ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
4	FS 2.1	Hover CNMF Failure	MTD	MinTOW	NT	NT	NT
5	FS 2.2		MTD	MaxTOW	NT	NT	NT
13	FS 2.3		ATS	MinTOW	PASS	73.16	9.38
17			ATS	MinTOW	PASS	110.89	10.56
18			ATS	MinTOW	PASS	86.61	10.07
27	FS 2.4		ATS	MaxTOW	PASS	122.05	12.5
28			ATS	MaxTOW	PASS	146.13	12.4
29			ATS	MaxTOW	PASS	142.06	12.89
19	FS 3.1	Hover CNMF+1 Failure	ATS	MinTOW	PASS	81.36	10.66
20			ATS	MinTOW	PASS	166.34	12.89
21			ATS	MinTOW	PASS	100.72	10.83
NT	FS 3.2		ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
12	FS 4.1	Full Forward Speed Full Power Cut	MTD	MinTOW	PASS	NA	19.62
14	FS 4.2		MTD	MaxTOW	PASS	NA	14.4
6	FS 4.3		ATS	MinTOW	PASS	80.71	11.65
7			ATS	MinTOW	PASS	67.26	11.25
8			ATS	MinTOW	PASS	112.2	14.47
16	FS 4.4		ATS	MaxTOW	PASS	83.33	10.3
NT			ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
10	FS 5.1	Full Forward Speed CNMF Failure	MTD	MinTOW	PASS	NA	12.2
NT	FS 5.2		MTD	MaxTOW	NT	NT	NT
9	FS 5.3		ATS	MinTOW	PASS	261.81	11.58
25			ATS	MinTOW	PASS	69.88	10.93
26			ATS	MinTOW	PASS	85.96	12.2
NT	FS 5.4		ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
22	FS 6.1	Full Forward Speed CNMF+1 Failure	ATS	MinTOW	PASS	93.83	10.7
23			ATS	MinTOW	PASS	160.1	9.71
24			ATS	MinTOW	PASS	91.54	14.9
NT	FS 6.2		ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT
NT			ATS	MaxTOW	NT	NT	NT

NT	FS 7.1	Shock Load Testing	ATS / MTD	MaxTOW	NT	NT	NT
NT			ATS / MTD	MaxTOW	NT	NT	NT
NT			ATS / MTD	MaxTOW	NT	NT	NT
NT			ATS / MTD	MaxTOW	NT	NT	NT
NT			ATS / MTD	MaxTOW	NT	NT	NT
NA	FS 8	Not Applicable for Multirotor drone			NA	NA	NA
NA	FS 9	Not Applicable for Multirotor drone			NA	NA	NA
NA	FS 10	Not Applicable for Multirotor drone			NA	NA	NA

Test Conclusion:

Test by client needs. The number of tests which are required by client has been completed, with no PRS failures occurring throughout the entire process.

Minimum Deployable Altitude Testing (MDA) - Hover:	193.24 ft
Minimum Flyable Altitude Rating (MFAR) - Hover:	210.04 ft
Minimum Deployable Altitude Testing (MDA) - Full Forward Flight	261.81 ft
Minimum Flyable Altitude Rating (MFAR) - Full Forward Flight	278.61 ft
Rate of Descent Testing:	12.12 ft/sec

4 TEST SUMMARY

Overview of Test

This test program was conducted to validate the performance and reliability of the DJI AP100 Parachute (Model: AP100) Parachute Recovery System (PRS) integrated onto DJI Matrice 400 (Model: Matrice 400) small Unmanned Aircraft (sUA).

Summary of Test Results & Key Metrics

Test by client needs, a total of 29 individual trials were executed.

Metric	Requirement / Target	Test Result
Total Trials	Per matrix (6.4.3.1)	29 trials executed
Successful Deployments	No PRS failure	No PRS failure
Unacceptable Entanglement	0 allowed	0 occurrences
Minimum Deployable Altitude Rating (MDA)	Calculated per 6.4.3.8	261.81 ft (79.8 m) AGL
Minimum Flyable Altitude Rating (MFAR)	Calculated per 6.4.3.9	278.61 ft (84.92 m) AGL
Average Rate of Descent	Measured across all trials	12.12 ft/s (3.69 m/s)

Key Observations

1. Deployment Reliability: The PRS demonstrated all deployment success across all failure scenarios and flight conditions.
2. Entanglement: No instances of unacceptable entanglement were observed.
3. Electronic System Performance: The ATS correctly identified and reacted to all instigated failures. The FTS consistently terminated motor power prior to parachute inflation. The MTD responded reliably within the required parameters.

ANNEX

A1. PARACHUTE RECOVERY SYSTEM COMPONENTS



A2. AIRFRAME MODIFICATIONS FOR TESTING



Overall configuration



Failbox installation



MinTOW (left) and MaxTOW (right) configuration



Weight installation

---End of Report-