

MATRICE 400

SPECIFICATIONS:

Takeoff Weight (with propellers):

Without Batteries: 5020±20 g

With Batteries: 9740±40 g

Max Takeoff Weight:

15.8 kg

Dimensions:

Unfolded: 980×760×480 mm (L×W×H) (with landing gear)

Folded: 490×490×480 mm (L×W×H) (with landing gear and gimbal)

Aircraft carrying case dimensions: 779×363×528 mm (L×W×H)

Max Payload:

6 kg

Propeller Size:

25 inches

Diagonal Wheelbase:

1070 mm

Max Ascent Speed:

10 m/s

Max Descent Speed:

8 m/s

Max Horizontal Speed (at sea level, no wind):

25 m/s

Max Takeoff Altitude:

7000 m

Max Flight Time (no wind):

59 minutes

Max Hover Time (no wind):

53 minutes

Max Flight Distance (no wind):

49 km

Max Wind Speed Resistance:

12 m/s



MATRICE 400

Max Yaw Angular Velocity:

Yaw: 100°/s

Max Pitch Angle:

35°

Operating Temperature:

-20° to 50° C (-4° to 122° F) (without solar radiation)

Global Navigation Satellite System (GNSS):

GPS + Galileo + BeiDou + GLONASS*

Equipped with standard airborne ADS-B In receiver and dual antennas, supporting reception up to 20 km.

Hovering Accuracy Range (with moderate or no wind):

Vertical:

±0.1 m (with vision positioning)

±0.5 m (with satellite positioning)

±0.1 m (with RTK positioning)

Horizontal:

±0.3 m (with vision positioning)

±0.5 m (with satellite positioning)

±0.1 m (with RTK positioning)

RTK GNSS Accuracy:

RTK Fix:

1 cm + 1 ppm (horizontal), 1.5 cm + 1 ppm (vertical)

RTK Heading:

Supports RTK heading with an accuracy better than 2°

Airborne ADS-B In:

Equipped with standard airborne ADS-B In receiver and dual antennas, supporting reception up to 20 km.

Internal Storage:

N/A

Ports:

USB-C Debug Port × 1: USB 2.0

E-Port V2 × 4: At the lower part of the drone, with 120W single-port power

Cellular Dongle 2 Interface × 2: On the underside of the drone

Propeller Model:

2510F

Beacon:

Built into the aircraft

Ingress Protection Rating:

IP55

GIMBAL

Ports:**Maximum Payload for Single Gimbal****Connector:**

1400 g

Maximum Payload for Dual Gimbal**Connector:**

950 g

Maximum Payload for Third Gimbal**Connector:**

3 kg for quick-release port, 6 kg for screw lock fastening

MATRICE 400

SENSING

Sensing Type:

Omnidirectional binocular vision system (surround view provided by full-color fisheye vision sensors)

Horizontal rotating LiDAR, upper LiDAR and downward 3D infrared range sensor
Six-direction mmWave radar

Forward:

Measurement Range: 0.4-21 m

Detection Range: 0.4-200 m

Field of View (FOV): 90° (horizontal), 90° (vertical)

Backward:

Measurement Range: 0.4-21 m

Detection Range: 0.4-200 m

Field of View (FOV): 90° (horizontal), 90° (vertical)

Lateral:

Measurement Range: 0.6-21 m

Detection Range: 0.5-200 m

Field of View (FOV): 90° (horizontal), 90° (vertical)

Downward:

Measurement Range: 0.5-19 m

The FOV to the front and rear is 160° and 105° to the right and left.

Operating Environment:

Forward, Backward, Left, Right, and Upward:

Delicate texture on the surface, adequate light.

Downward:

The ground has rich textures and sufficient lighting conditions*, with a diffuse reflection surface and a reflectivity greater than 20% (such as walls, trees, people, etc.).

Rotating LiDAR:

Standard Measurement Range: 0.5-100 m @ 100,000 lux with 10% reflectivity target

Measurement Range for Power Line: 35 m @ 30° @ 10,000 lux for 21.6 mm steel-core aluminum stranded wire with a relative body tilt angle of 30° to the left and right

Field of View (FOV): 360° (horizontal), 58° (vertical)

Point-Frequency: 520,000 points/second

Laser Wavelength: 905 nm

Eye Safety Level: Class 1 (IEC60825-1:2014), eye-safe

Upper LiDAR (3D ToF):

0.5-25 m at night (reflectivity > 10%)

The FOV to the up and down is 60° and 60° to the right and left.

Downward 3D Infrared Range Sensor:

Measurement Range: 0.3-8 m (reflectivity > 10%)

The FOV to the front and rear is 60° and 60° to the right and left.

mmWave Radar:

Measurement Range for Power Line:

36 m for a 12.5mm steel-core aluminum stranded wire

50 m for a 21.6mm steel-core aluminum stranded wire

FOV: ± 45° (horizontal and vertical)

MATRICE 400

FPV CAMERA

Resolution:

1080p

Field of View (FOV):

DFOV: 150°

HFOV: 139.6°

VFOV: 95.3°

Frame Rate:

30fps

Night Vision:

Starlight Grade

VIDEO TRANSMISSION

Video Transmission System:

DJI O4 Enterprise Enhanced Video Transmission System

Live View Quality:

Remote Controller: 3-channel

1080p/30fps

Operating Frequency and Transmitter Power (EIRP):

902-928 MHz: < 30 dBm (FCC), < 16 dBm (MIC)

1.430-1.444 GHz: < 35 dBm (SRRC)

2.4000-2.4835 GHz: < 33 dBm (FCC), < 20 dBm (CE/SRRC/MIC)

5.150-5.250 GHz: < 23 dBm (FCC/CE)

5.725-5.850 GHz: < 33 dBm (FCC), < 14 dBm (CE), < 30 dBm (SRRC).

Max Transmission Distance

(unobstructed, free of interference):

40 km (FCC)

20 km (CE/SRRC/MIC)

Max Transmission Distance (with interference):

Strong interference (dense buildings, residential areas, etc.): approx. 1.5-6 km

Medium interference (suburban counties, city parks, etc.): approx. 6-15 km

Weak interference (open spaces, remote areas, etc.): approx. 15-40 km

Max Download Speed:

Standard Mode: 80Mbps Downlink

Playback Download: < 25 MBps

Single-Channel Bitrate: ≤ 12 Mbps

Antenna:

WLAN Antenna × 8: 6 vertically polarized antennas and 2 horizontally polarized antennas

sub2G Antenna × 2: 2 vertically polarized antennas

4G Antenna × 4

Operating Mode: 2T4R

Others:

Supports Dual Control Mode and 2-channel Cellular Dongle 2

MATRICE 400

BATTERY

Model:

TB100

Capacity:

20254 mAh

Standard Voltage:

48.23 V

Max Charging Voltage:

54.6 V

Cell Type:

Li-ion 13S

Energy:

977 Wh

Weight:

4720 ± 20 g

Charging Temperature:

5° to 45° C (41° to 113° F)

Discharging Temperature:

-20° to 75° C (-4° to 122° F)

Battery Heating:

Single Battery: Support

Onboard: Support

Battery Station: Support

Discharge Rate:

4C

Max Charging Power:

2C

Low-Temperature Charging:

Supports low-temperature self-heating charging

Cycle Count:

400

INTELLIGENT BATTERY STATION

Model: BS100**Net Weight:**

11.8 kg

Dimensions:

605×410×250 mm (L×W×H)

Supported Batteries:

TB100 Intelligent Flight Battery, TB100C

Tethered Battery, WB37 Battery

Operating Temperature:

-20° to 40° C (-4° to 104° F)

Input:

100-240 V (AC), 50-60 Hz, 10 A

Output:

USB-C:

TB100 Battery Interface:

100-110 V: Approx. 1185 W

110-180 V: Approx. 1474 W

180-240 V: Approx. 2184 W

WB37 Battery Interface:

100-240 V: Approx. 52 W

USB-C:

5.0 V 3.0 A, 9.0 V 3.0 A, 12.0 V 3.0 A,

15.0 V 3.0 A, 20.0 V 3.25 A

Number of Charging Channels:

Three TB100 and two WB37 batteries

Charging Mode:

Ready-to-Fly Mode 90%; Standard Mode

100%, Supports Fast Charging Mode

and Silent Mode

Charging Time:

TB100/TB100C Battery From 0% to

100%:

220 V: 45 minutes (Fast Charging

Mode); 110 minutes (Silent Mode)

110 V: 70 minutes (Fast Charging Mode);

110 minutes (Silent Mode)

MATRICE 400

DJI RC PLUS 2 ENTERPRISE ENHANCED

Video Transmission System:

DJI O4 Enterprise Enhanced Video
Transmission System

Max Transmission Distance

(unobstructed, free of interference):

40 km (FCC)

20 km (CE/SRRC/MIC)

Video Transmission Operating

Frequency and Transmitter Power

(EIRP):

902-928 MHz: < 30 dBm (FCC), < 16
dBm (MIC)

2.400-2.4835 GHz: < 33 dBm (FCC), <
20 dBm (CE/SRRC/MIC)

5.150-5.250 GHz: < 23 dBm (FCC/CE)

5.725-5.850 GHz: < 33 dBm (FCC), < 14
dBm (CE), < 30 dBm (SRRC)

Antenna:

2T4R, 2.4GHz/5.8GHz multi-beam high-
gain antenna

sub2G Module: 2T2R

Enhanced Transmission:

Supports DJI Cellular Dongle 2

Wi-Fi Protocol:

Wi-Fi Direct, Wireless Display, IEEE

802.11 a/b/n/ac/ax

Supports 2×2 MIMO Wi-Fi, dual-band

simultaneous (DBS) support for dual

MAC, with data rates up to 1774.5 Mbps

(2×2 + 2×2 11ax dual-band simultaneous)

Wi-Fi Operating Frequency:

2.4000-2.4835 GHz

5.150-5.250 GHz

5.725-5.850 GHz

Wi-Fi Transmitter Power (EIRP):

2.4 GHz: < 26 dBm, < 20 dBm

(CE/SRRC/MIC)

5.1 GHz: < 23 dBm (FCC/CE/SRRC/MIC)

5.8 GHz: < 23 dBm (FCC/SRRC), < 14
dBm (CE)

Bluetooth Protocol:

Bluetooth 5.2

Bluetooth Operating Frequency:

2.400-2.4835 GHz

Bluetooth Transmitter Power (EIRP):

< 10 dBm

Screen Resolution:

1920 × 1200

Screen Size:

7.02 inches

Screen Frame Rate:

60fps

Brightness:

1400 nits

Touchscreen Control:

10-Point Multi-Touch

Built-in Battery:

2S2P High Energy Density 18650

Lithium-ion Battery (6500 mAh @ 7.2 V)

46.8 Wh

External Battery:

Optional, WB37 (4920 mAh @ 7.6 V) 37

Wh

Charging Type:

Supports PD fast charging, with a
maximum 20V/3.25A USB Type-C
charger

Storage Capacity:

RAM 8G + ROM 128G UFS + expandable
storage via microSD card

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Charging Time:

2 hours for internal battery; 2 hours for internal plus external batteries.

Internal Battery Runtime:

3.8 hours

External Battery Runtime:

3.2 hours

Output Port:

HDMI 1.4

Indicators:

Status LED, battery level LED, connection status LED, tricolor light, brightness adjustable according to ambient light

Speaker:

Supports buzzer

Audio:

Array MIC

Operating Temperature:

-20° to 50° C (-4° to 122° F)

Storage Temperature:

Within one month: -30° to 45° C (-22° to 140° F)

One to three months: -30° to 35° C (-22° to 113° F)

Three months to one year: -30° to 30° C (-22° to 86° F)

Charging Temperature:

5° to 40° C (41° to 104° F)

Supported Aircraft Model:

Matrice 400

Global Navigation Satellite System:

GPS + Galileo + BeiDou

Dimensions:

268×163×94.5 mm (L×W×H)

Weight:

1.15 kg (without external battery)

Model:

TKPL 2

System Version:

Android 11

External Interfaces:

HDMI 1.4, SD 3.0, USB-C with OTG support, max 65W PD charging, USB-A with USB 2.0 support

Accessories:

Strap/waist support