

MATRICE 4 THERMAL

AIRCRAFT

Takeoff Weight (with propellers):

1219 g*

* The standard weight of the aircraft (including the battery, propellers, and a microSD card). The actual product weight may vary due to differences in batch materials and external factors.

Takeoff Weight (with Low-Noise propellers):

1229 g*

* The standard weight of the aircraft (including the battery, propellers, and a microSD card). The actual product weight may vary due to differences in batch materials and external factors.

Max Takeoff Weight:

Standard Propellers: 1420 g

Low-Noise Propellers: 1430 g

Dimensions:

Folded: 260.6×113.7×138.4 mm (L×W×H)

Unfolded: 307.0×387.5×149.5 mm (L×W×H)

Maximum dimensions excluding propellers.

Max Payload:

200 g

Propeller Size:

10.8 in

Diagonal Wheelbase:

438.8 mm

Max Ascent Speed:

10 m/s

Maximum Ascent Speed With Accessories:

6 m/s

Max Descent Speed:

8 m/s

Max Descent Speed With Accessories:

6 m/s

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

21 m/s

21 m/s flying forward, 18 m/s flying backward, 19 m/s flying sideways*

* No faster than 19 m/s with Sport mode in EU regions.

Max Altitude:

6000 m

Max Operating Altitude with Payload:

4000 m

Max Flight Time (without wind):

49 min (standard propellers)

46 min (low-noise propellers)

Measured with the aircraft flying at approximately 9 m/s without payloads in a windless environment until the battery level reached 0%. Data is for reference only. Actual usage time may vary depending on the flight mode, accessories, and environment. Please pay attention to reminders in the app.



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Max Hover Time (without wind):

42 min (standard propellers)

39 min (low-noise propellers)

Measured by the aircraft hovering in a windless environment at sea level, from 100% battery level until 0%.

Max Flight Distance (no wind):

35 km (standard propellers)

32 km (low-noise propellers)

Measured with the aircraft flying at approximately 14 m/s without payloads in a windless environment until the battery level reached 0%. Data is for reference only. Actual usage time may vary depending on the flight mode, accessories, and environment. Please pay attention to reminders in the app.

Max Wind Speed Resistance:

12 m/s*

* Max wind speed resistance during takeoff and landing.

Max Pitch Angle:

35°

Operating Temperature:

-10°C to 40°C (14°F to 104°F)

GNSS:

GPS + Galileo + BeiDou + GLONASS*

* GLONASS is supported only when the RTK module is enabled.

Hovering Accuracy Range (windless or breezy):

±0.1 m (with Vision System); ±0.5 m (with GNSS); ±0.1 m (with RTK)

RTK GNSS Accuracy:

RTK Fix:

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

Internal Storage:

N/A

Ports:

E-Port interface × 1: Supports official accessories and third-party PSDK devices (hot-swapping is not supported)

E-Port Lite interface × 1: supports USB connection to DJI tuning software and some third-party PSDK devices.

Accessories or expansion modules must be installed before powering on.

Propeller Model:

1157F (standard propellers)

1154F (low noise propeller)

Beacon:

Built into the aircraft

MATRICE 4 THERMAL

CAMERA

Image Sensor

DJI Matrice 4T

Wide: 1/1.3-inch CMOS, Effective Pixels: 48 MP

Medium Tele Camera: 1/1.3-inch CMOS, Effective Pixels: 48 MP

Telephoto: 1/1.5-inch CMOS, Effective Pixels: 48 MP

DJI Matrice 4E

Wide: 4/3-inch CMOS Effective Pixels: 20 MP

Medium Tele Camera: 1/1.3-inch CMOS,

Effective Pixels: 48 MP

Telephoto: 1/1.5-inch CMOS, Effective Pixels: 48 MP

Lens:

DJI Matrice 4T

FOV: 82°

Equivalent Focal Length: 24 mm

Aperture: f/1.7

Focus: 1 m to ∞

DJI Matrice 4E

FOV: 84°

Equivalent Focal Length: 24 mm

Aperture: f/2.8-f/11

Focus: 1 m to ∞

Medium Tele Camera

FOV: 35°

Equivalent Focal Length: 70 mm

Aperture: f/2.8

Focus: 3 m to ∞

Tele camera

FOV: 15°

Equivalent Focal Length: 168 mm

Aperture: f/2.8

Focus: 3 m to ∞

ISO Range:

Normal Mode: ISO 100 to ISO 25600

Night Scene Mode:

Matrice 4T:

Wide Camera: ISO 100 to ISO 409600

Midum Tele Camera: ISO 100 to ISO 409600

Tele Camera: ISO 100 to ISO 819200

Matrice 4E:

Wide Camera: ISO 100 to ISO 204800

Midum Tele Camera: ISO 100 to ISO 409600

Tele Camera: ISO 100 to ISO 409600

Shutter Speed:

DJI Matrice 4T

2-1/8000 s

DJI Matrice 4E

Wide:

Electronic Shutter: 2-1/8000 s

Mechanical Shutter: 2-1/2000 s

Medium Telephoto: 2-1/8000 s

Telephoto: 2-1/8000 s

Max Photo Size:

DJI Matrice 4T

Wide: 8064 × 6048

Medium Telephoto: 8064 × 6048

Telephoto: 8192 × 6144

DJI Matrice 4E

Wide: 5280 × 3956

Medium Telephoto: 8064 × 6048

Telephoto: 8192 × 6144

Minimum Photo Interval:

DJI Matrice 4T: 0.7 s

DJI Matrice 4E: 0.5 s

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Still Photography Modes:

DJI Matrice 4T:

Wide:

Single: 12 MP/48 MP

Interval: 12 MP/48 MP

JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s

Smart Shooting: 12MP

Panorama: 12 MP (raw image); 100 MP
(stitched image)

Medium Tele Camera:

Single: 12 MP and 48 MP

Interval: 12 MP/48 MP

JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s

Smart Shooting: 12MP

Telephoto:

Single: 12 MP and 48 MP

Interval: 12 MP/48 MP

JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s

Smart Shooting: 12MP

DJI Matrice 4E:

Single: 20 MP

Interval: 20 MP

JPEG: 0.5/0.7/1/2/3/5/7/10/15/20/30/60 s

JPEG + RAW: 2/3/5/7/10/15/20/30/60 s

Smart Shooting: 20 MP

Panorama: 20 MP (raw image); 100 MP
(stitched image)

Medium Tele Camera:

Single: 12 MP and 48 MP

Interval: 12 MP/48 MP

JPEG: 0.5/0.7/1/2/3/5/7/10/15/20/30/60 s

Smart Shooting: 12 MP

Telephoto:

Single: 12 MP and 48 MP

Interval: 12 MP/48 MP

JPEG: 0.5/0.7/1/2/3/5/7/10/15/20/30/60 s

Smart Shooting: 12 MP

Video Codec and Resolution:

Video Coding Format: H.264/H.265

Coding Strategy: CBR, VBR

Resolution:

4K: 3840 × 2160@30fps

FHD: 1920 × 1080@30fps

Max Video Bitrate:

H.264: 60Mbps

H.265: 40Mbps

Supported File System:

exFAT

Photo Format:

DJI Matrice 4T: JPEG

DJI Matrice 4E:

Wide: JPEG/DNG (RAW)

Medium Tele Camera: JPEG

Telephoto: JPEG

Video Format:

MP4 (MPEG-4 AVC/H.264)

Digital Zoom:

Telephoto:

16x (112x hybrid zoom)

NIR AUXILIARY LIGHT

Infrared Illumination:

DJI Matrice 4T:

FOV: 5.7°±0.3°

MATRICE 4 THERMAL

LASER MODULE

Laser Rangefinding:

Measurement Range: 1800 m (1 Hz) @20% reflectivity target*

Oblique Incidence Range (1:5 Oblique Distance): 600 m (1 Hz)

Blind Zone: 1 m

Distance Measurement Accuracy:

1-3 m: System Error <0.3 m, Random Error <0.1 meters @1 σ

Other Distances: $\pm(0.2+0.0015D)$ (D represents the measurement distance in meters)

INFRARED THERMAL CAMERA

Thermal Imager:

DJI Matrice 4T: uncooled vanadium oxide (VOx)

DO NOT expose the infrared camera lenses to strong sources of energy such as the sun, lava, or a laser beam. Otherwise, the camera sensor may be burned leading to permanent damage.

Resolution:

DJI Matrice 4T: 640 × 512

Pixel Pitch:

DJI Matrice 4T: 12 μ m

Frame Rate:

DJI Matrice 4T: 30 Hz

Lens:

DJI Matrice 4T DFOV: 45° $\pm$ 0.3°

DJI Matrice 4T equivalent focal length: 53 mm

DJI Matrice 4T Aperture: f/1.0

DJI Matrice 4T Focus: 5 m to ∞

Sensitivity:

DJI Matrice 4T: ≤ 50 mk@F1.0

Temperature Measurement Method:

DJI Matrice 4T: Spot Meter, Area Measurement

TEMPERATURE MEASUREMENT RANGE:

DJI Matrice 4T:

High Gain Mode: -20°C to 150°C (-4°F to 302°F) ()

Low Gain Mode: 0°C to 550°C (32°F to 1022°F)

Palette:

DJI Matrice 4T:

White Hot/Black Hot/Tint/Iron Red/Hot Iron/Arctic/Medical/Fulgurite/Rainbow 1/Rainbow 2

Photo Format:

DJI Matrice 4T: JPEG (8bit)、R-JPEG (16bit)

Video Resolution:

DJI Matrice 4T:

1280 × 1024@30fps (Super Resolution enabled, Night Mode not activated)

Other conditions: 640 × 512@30fps

Video Bitrate:

DJI Matrice 4T:

6.5Mbps (H.264 640 × 512@30fps)

5Mbps (H.265 640 × 512@30fps)

12Mbps (H.264 1280 × 1024@30fps)

8Mbps (H.265 1280 × 1024@30fps)

Video Format:

DJI Matrice 4T: MP4

Still Photography Modes:

DJI Matrice 4T:

Single: 1280 × 1024/640 × 512

Interval: 1280 × 1024/640 × 512

JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s

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Photo Resolution:

DJI Matrice 4T:

Infrared: 1280 × 1024 (Super Resolution on)
640 × 512 (Super Resolution off)

Digital Zoom:

DJI Matrice 4T: 28x

Infrared Wavelength:

DJI Matrice 4T: 8um to 14um

Infrared Temperature Measurement

Accuracy:

DJI Matrice 4T: High Gain: $\pm 2^{\circ}\text{C}$ or $\pm 2\%$,
whichever is greater
DJI Matrice 4T: Low Gain: $\pm 5^{\circ}\text{C}$ or $\pm 3\%$,
whichever is greater

GIMBAL

Stabilization System:

DJI Matrice 4T: 3-axis (tilt, roll, pan)

DJI Matrice 4E: 3-axis (tilt, roll, pan)

Mechanical Range:

DJI Matrice 4T

Gimbal Mechanical Limits:

Tilt: -140° to 113°

Roll: -52° to 52°

Pan: -65° to 65°

Soft Limits:

Tilt: -90° to 35°

Roll: -47° to 47°

Pan: -60° to 60°

DJI Matrice 4E

Gimbal Mechanical Limits:

Tilt: -140° to 50°

Roll: -52° to 52°

Pan: -65° to 65°

Soft Limits:

Tilt: -90° to 35°

Roll: -47° to 47°

Pan: -60° to 60°

Controllable Rotation Range:

DJI Matrice 4T

Pan: -90° to 35°

Pan: Not controllable

DJI Matrice 4E

Tilt: -90° to 35°

Pan: Not controllable

Max Control Speed (tilt):

$100^{\circ}/\text{s}$

Angular Vibration Range:

$\pm 0.007^{\circ}$

Yaw Axis:

Manual operation is uncontrollable

The MSDK interface program is
controllable.

Ingress Protection Rating:

No Standard Protection Level

Operating Temperature:

Standard: -10°C to 40°C (14°F to 104°F)

SENSING

Sensing Type:

Omnidirectional binocular vision system,
supplemented with a 3D infrared sensor at
the bottom of the aircraft.

Forward:

Binocular Measurement Range: 0.4-22.5
m

Measurement Range: 0.4-200 m

Obstacle Avoidance Speed: Flight Speed
 $\leq 21 \text{ m/s}$

FOV: 90° (horizontal), 135° (vertical)

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Backward:

Measurement Range: 0.4-22.5 m

Measurement Range: 0.4-200 m

Obstacle Avoidance Speed: Flight Speed
≤21 m/s Field of View (FOV)-90°
(horizontal), 135° (vertical)

Lateral:

Measurement Range: 0.5-32 m

Measurement Range: 0.5-200 m

Obstacle Avoidance Speed: Flight Speed
≤21 m/s

FOV: 90° (horizontal), 90° (vertical)

Downward:

Measurement Range: 0.3-18.8 m

Obstacle Avoidance Speed: Flight Speed
≤10 m/s

The FOV to the front and rear is 160° and
160° 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.).

VIDEO TRANSMISSION

Video Transmission System:

O4 Enterprise

Live View Quality:

Remote Controller: 1080p/30fps

Operating Frequency:

2.400-2.4835 GHz

2.400-2.4835 GHz

5.725-5.850 GHz

5.150-5.250 GHz (CE)

Operating frequency allowed varies among countries and regions.
Refer to local laws and regulations for more information.

Transmitter Power (EIRP):

2.4 GHz: ≤33 dBm (FCC), ≤20 dBm
(CE/SRRC/MIC)

5.8 GHz: <33 dBm (FCC), <30 dB (SRRC) ,
<14 dBm (CE)

5.15-5.25: < 23 dBm (FCC/CE)

Max Transmission Distance

(unobstructed, free of interference):

25 km (FCC)

12 km (CE)

12 km (SRRC)

12 km (MIC)

Measured in an unobstructed environment free of interference. The
above data shows the farthest communication range for one-way, non-
return flights under each standard. During your flight, please pay
attention to RTH reminder on the DJI Pilot 2 app.

Max Transmission Distance (with interference):

Strong Interference - City Centers (approx.
1.5-5 km)

Medium Interference - Suburban Areas
(approx. 5-15 km)

Micro interference: Suburbs/Seasides
(approx. 15-25 km)

* Data is tested under FCC standards in unobstructed environments of
typical interference. Only to serve as a reference and provides no
guarantee as to the actual flight distance.

Max Download Speed:

20 MB/s

The above data was measured under conditions where the aircraft and
remote controller were in close proximity without interference.

MATRICE 4 THERMAL

Latency (depending on environmental conditions and mobile device):

130 ms

Under near-field interference-free conditions, the Latency performance when shooting with a 1x lens.

Antenna:

8 antennas, 2T4R

Others:

Cellular Dongle Compartment

MEMORY CARD

Supported SD Cards:

U3/Class10/V30 or above is required, or use a memory card from the recommended list.

Recommended microSD Cards:

Lexar 1066x 64GB U3 A2 V30 microSDXC

Lexar 1066x 128GB U3 A2 V30 microSDXC

Lexar 1066x 256GB U3 A2 V30 microSDXC

Lexar 1066x 512GB U3 A2 V30 microSDXC

Kingston Canvas GO! Plus 64GB U3 A2 V30 microSDXC

Kingston Canvas GO! Plus 128GB U3 A2 V30 microSDXC

Kingston Canvas GO! Plus 256GB U3 A2 V30 microSDXC

Kingston Canvas GO! Plus 512GB U3 A2 V30 microSDXC

INTELLIGENT FLIGHT BATTERY

Capacity:

6741 mAh

Standard Voltage:

14.76 V

Max Charging Voltage:

17.0 V

Cell Type:

Li-ion 4S

Energy:

99.5 Wh

Weight:

401 g

Recharging Temperature:

5°C to 40°C (41°F to 104°F)

Discharge Rate:

4C

Max Charging Power:

1.8C

Supports low-temperature charging:

Not supported

Cycle Count:

200

POWER ADAPTER (100W)

Input:

100-240 V (AC), 50-60 Hz, 2.5 A

Output:

Max. 100 W (total)

When both ports are used, the max output power of one port is 82 W, and the charger will dynamically allocate the output power of the two ports according to the power load.

Rated Power:

100 W

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CHARGING HUB

Input:

USB-C: 5-20 V, max 5 A

Output:

Battery Interface: 11.2 V to 17 V

Rated Power:

100 W

Recharging Type:

4 batteries charging in sequence

Support Standard Mode (100% SOC) and

Standby Mode (90% SOC)

Compatible Battery:

DJI Matrice 4E/T Series Intelligent Flight Battery

Charging Temperature:

5° to 40° C (41°F to 104°F)

DJI RC PLUS 2 ENTERPRISE

Video Transmission System:

O4 Enterprise

Max Transmission Distance

(unobstructed, free of interference):

25 km (FCC)

12 km (CE)

12 km (SRRC)

12 km (MIC)

Measured in an unobstructed environment free of interference. The above data shows the farthest communication range for one-way, non-return flights under each standard. During your flight, please pay attention to RTH reminder on the DJI Pilot 2 app.

Operating Band of Image Transmission:

2.4000-2.4835 GHz

5.725 - 5.850 GHz

5.1GHz (receive only)

Operating frequency allowed varies among countries and regions. Refer to local laws and regulations for more information.

Antenna:

2T4R, built-in multi-beam high-gain antenna

Video Transmission Transmitter Power (EIRP):

2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC)

5.1 GHz: <23 dBm (CE)

5.8 GHz: <33 dBm (FCC), <14 dBm (CE), <30 dBm (SRRC)

4G Transmission:

DJI Cellular Dongle 2

Wi-Fi Protocol:

Wi-Fi Direct, Wireless Display, IEEE

802.11a/b/g/n/ac/ax

Support 2 × 2 MIMO Wi-Fi, Dual Band Simultaneous (DBS) with dual MAC, up to 1774.5 Mbps data rate (2 × 2 + 2 × 2 11ax DBS)

Wi-Fi Operating Band:

2.4000-2.4835 GHz

5.150-5.250 GHz

5.725-5.850 GHz

5.8 and 5.2GHz frequencies are prohibited in some countries. In some countries, the 5.2GHz frequency is only allowed for use in indoor.

Wi-Fi Transmitter Power (EIRP):

2.4 GHz: <26 dBm (FCC), <20 dBm (CE/SRRC/ MIC)

5.1 GHz: <23 dBm (FCC)

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

MATRICE 4 THERMAL

Screen Resolution:

1920 × 1200

Screen Size:

7.02 inches

Screen Frame Rate:

60 fps

Brightness:

1400 nits

Touchscreen Control:

10 Points 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

Recharging Type:

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

Storage Capacity:

ROM 128 G + expandable storage via microSD card

Charging Time:

2 hrs for internal battery or internal and external battery.

When remote controller is powered off and using a standard DJI charger.

Internal Battery Runtime:

3.8 hrs

External Battery Runtime:

3.2 hrs

Output Port:

HDMI 1.4

Indicators:

Status light & power light & permission light, three-color light, brightness can be adjusted according to ambient brightness.

Speaker:

Supports buzzer

Audio:

Array MIC

Operating Temperature:

-20° to 50° C (D228 (-4°F to 122°F)

Storage Temperature:

Within one month: -30° to 45° C (-22°F to 113°F)

One to three months: -30° to 35° C (-22°F to 95°F)

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

Recharging Temperature:

5° to 40° C (41°F to 104°F)

Supported Aircraft Models:

Support for Matrice 4T/4E

GNSS:

GPS, Galileo, and BeiDou triple-mode, supports dynamic Home Point refresh.

Dimensions:

268×163×94.5 mm (L×W×H)

Width including external antenna folded, thickness including handle and controller sticks.

Weight:

1.15 kg (without external battery)

Model:

TKPL 2

System Version:

Android 11

External Interfaces:

HDMI 1.4, SD3.0, Type-C supports OTG, supports PD charging, maximum power 65W, USB-A supports USB 2.0 interface.

Accessory:

Optional strap/waist support

MATRICE 4 THERMAL

AL1 SPOTLIGHT

Weight:

99 g (including bracket)

Approx. 91 g (excluding bracket)

Dimensions:

95×164×30 mm (L×W×H, including bracket)

79×164×28 mm (L×W×H, without bracket)

Max. Power:

32 W

Illuminance:

4.3±0.2 lux @ 100 meters, 17±0.2 lux @ 50 meters

The data was measured in a laboratory environment with the spotlight installed separately on the aircraft at an ambient temperature of 25°C.

Effective Illumination Angle:

23° (10% relative illumination)

Effective Illumination Area:

1,300 square meters @ 100 meters (10% relative illumination, Normal Mode)

2,200 square meters @ 100 meters (10% central illuminance, Wide fov Mode)

Operating Mode:

Supports always-on and strobe modes.

Gimbal Structural Design Range:

Tilt: -140° to 50°

Controllable Range:

Tilt: -90° to 35°

Max Control Speed (tilt):

120°/s

Gimbal Alignment Accuracy:

±0.1°

Operating Temperature:

-20°C to 50°C (-4°F to 122°F)

Mounting:

Quick-release hand-tightened screws

AS1 SPEAKER

Weight:

92.5 g (including bracket)

Approx. 90 g (excluding bracket)

Dimensions:

73×70×52 mm (L×W×H, including bracket)

73×70×47 mm (L×W×H, without bracket)

Max. Power:

15 W

Max. Volume:

At 1 meter, it can reach 114 decibels (114dB@1m).

Data measured in a laboratory environment at 25°C. Actual conditions may vary slightly due to software version, audio source, specific environment, and other factors. The final effect is subject to actual use.

Effective Broadcast Distance:

300 m

Data measured in a laboratory environment at 25°C. Actual conditions may vary slightly due to software version, audio source, specific environment, and other factors. The final effect is subject to actual use.

Broadcast Mode:

Real-time broadcasting (supports echo suppression-), recorded broadcasting, media import (supports simultaneous transmission and playback), text-to-speech**

* Need to upgrade to the latest firmware.

** Currently only supports Chinese and English.

Operating Temperature:

-20°C to 50°C (-4°F to 122°F)

Mounting:

Quick-release hand-tightened screws