

MATRICE 30



AIRCRAFT

Dimensions (unfolded, excl. propellers)

470×585×215 mm (L×W×H)

Dimensions (folded)

365×215×195 mm (L×W×H)

Diagonal Wheelbase

668 mm

Weight (incl. two batteries)

3770 ± 10 g

Max Takeoff Weight

4069 g

Max Takeoff Weight for C2 Certification in EU

3998 g

Operation Frequency[1]

2.4000-2.4835 GHz; 5.725-5.850 GHz

Transmitter Power (EIRP)

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

5.8 GHz: <33 dBm (FCC/SRRC); <14 dBm (CE)

Hovering Accuracy

(windless or breezy)

Vertical: ±0.1 m (Vision System enabled); ±0.5 m (N-mode with GPS); ±0.1 m (RTK)

Horizontal: ±0.3 m (Vision System enabled); ±1.5 m (N-mode with GPS); ±0.1 m (RTK)

RTK Positioning Accuracy

(fixed RTK enabled)

1 cm+1 ppm (horizontal)

1.5 cm+1 ppm (vertical)

Max Angular Velocity

Pitch: 150°/sec.; Yaw: 100°/sec.

Max Tilt Angle

35° (N-mode and Forward Vision System enabled: 25°)

Max Ascent/Descent Speed

6 m/s, 5 m/s

Max Tilt Descent Speed

7 m/s

Max Horizontal Speed

23 m/s

Max Service Ceiling Above Sea Level (without other payload)

5,000 m (with 1671 propellers)

7,000 m (with 1676 propellers)

Max Wind Resistance

12 m/s

Max Hover Time [2]

36 min

Max Flight Time[2]

41 min

Motor Model

3511

Propeller Model

1671

1676 High Altitude (not included)

Ingress Protection Rating[3]

IP55

GNSS

GPS+Galileo+BeiDou+GLONASS

(GLONASS is supported only when RTK module is enabled)

Operating Temperature

-20° to 50° C (-4° to 122° F)

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GIMBAL

Angular Vibration Range $\pm 0.01^\circ$

Controllable Range

Pan: $\pm 90^\circ$

Tilt: -120° to $+45^\circ$

Mechanical Range

Pan: $\pm 105^\circ$

Tilt: -135° to $+60^\circ$

Roll: $\pm 45^\circ$

ZOOM CAMERA

Sensor

1/2" CMOS, Effective pixels: 48M

Lens

Focal length: 21-75 mm (equivalent: 113-405 mm)

Aperture: f/2.8-f/4.2

Focus: 5 m to ∞

Exposure Compensation

± 3 ev (using 1/3 ev as step length)

Electronic Shutter Speed

Auto Mode:

Photo: 1/8000-1/2 s

Video: 1/8000-1/30 s

M Mode:

Photo: 1/8000-8 s

Video: 1/8000 -1/30 s

ISO Range

100-25600

Max. Video Resolution

3840×2160

Max Photo Size

8000×6000

WIDE CAMERA

Sensor

1/2" CMOS, Effective pixels: 12M

Lens

DFOV: 84°

Focal length: 4.5 mm (equivalent: 24 mm)

Aperture: f/2.8

Focus: 1 m to ∞

Exposure Compensation

± 3 ev (using 1/3 ev as step length)

Electronic Shutter Speed

Auto Mode:

Photo: 1/8000-1/2 s

Video: 1/8000-1/30 s

M Mode:

Photo: 1/8000-8 s

Video: 1/8000-1/30 s

ISO Range 100-25600

Max. Video Resolution

3840×2160

Photo Size

4000×3000

FPV CAMERA

Resolution 1920×1080

DFOV 161°

Frame Rate 30 fps

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LASER MODULE

Wavelength

905 nm

Max Laser Power

3.5 mW

Single Pulse Width

6 ns

Measurement Accuracy

$\pm (0.2 \text{ m} + D \times 0.15\%)$

D is the distance to a vertical surface

Measuring Range

3-1,200 m (0.5×12 m vertical surface with 20% reflectivity)

VISION SYSTEMS

Obstacle Sensing Range

Forward: 0.6-38 m

Upward/Downward/Backward/Sideward: 0.5-33 m

FOV 65° (H), 50° (V)

Operating Environment

Surfaces with clear patterns and adequate lighting (> 15 lux)

INFRARED SENSING SYSTEMS

Obstacle Sensing Range

0.1 to 10 m

FOV

30°

Operating Environment

Large, diffuse, and reflective obstacles (reflectivity >10%)

TB30 INTELLIGENT FLIGHT BATTERY

Capacity 5880 mAh

Voltage 26.1 V

Battery Type Li-ion 6S

Energy 131.6 Wh

Net Weight Approx. 685 g

Operating Temperature

-20° to 50° C (-4° to 122° F)

Storage Temperature

20° to 30° C (68° to 86° F)

Charging Temperature

-20° to 40° C (-4° to 104° F)

(When the temperature is lower than 10° C (50° F), the self-heating function will be automatically enabled. Charging in a low temperature may shorten the lifetime of the battery)

Chemical System

LiNiMnCoO₂

AUXILIARY LIGHTS

Effective Illumination Distance

5 m

Illumination Type

60 Hz, solid glow

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REMOTE CONTROLLER

Screen

7.02 inch LCD touchscreen, with a resolution of 1920×1200 pixels, and high brightness of 1200 cd/m²

Internal Battery

Type: Li-ion (6500 mAh @ 7.2 V)

Charge Type: Supports battery station or USB-C charger maximum rated power 65W (max voltage of 20V)

Charge Time: 2 hours

Chemical System: LiNiCoAlO₂

External Battery(WB37 Intelligent Battery)

Capacity: 4920 mAh

Voltage: 7.6 V

Battery Type: Li-ion

Energy: 37.39 Wh

Chemical System: LiCoO₂

Operating Time[5]

Internal Battery: Approx. 3 hours 18 min

Internal Battery + External Battery: Approx. 6 hours

Ingress Protection Rating[3]

IP54

GNSS

GPS+Galileo+BeiDou

Operating Temperature

-20° to 50° C (-4° to 122° F)

O3 ENTERPRISE

Operating Frequency[1]

2.4000-2.4835 GHz, 5.725-5.850 GHz

Max Transmission Distance (unobstructed, free of interference)

15 km (FCC); 8 km (CE/SRRC/MIC)

Max Transmission Distance (with interference)

Strong Interference (urban landscape, limited line of sight, many competing signals): 1.5-3 km (FCC/CE/SRRC/MIC)

Medium Interference (suburban landscape, open line of sight, some competing signals): 3-9 km (FCC); 3-6 km (CE/SRRC/MIC)

Weak Interference (open landscape abundant line of sight, few competing signals): 9-15 km (FCC); 6-8 km (CE/SRRC/MIC)

Transmitter Power (EIRP)

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

5.8 GHz: <33 dBm (FCC); <14 dBm (CE); <23 dBm (SRRC)

WI-FI

Protocol Wi-Fi 6

Operating Frequency[1]

2.4000-2.4835 GHz; 5.150-5.250 GHz; 5.725-5.850 GHz

Transmitter Power (EIRP)

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

5.1 GHz: <26 dBm (FCC); <23 dBm (CE/SRRC/MIC)

5.8 GHz: <26 dBm (FCC/SRRC); <14 dBm(CE)

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BLUETOOTH

Protocol

Bluetooth 5.1

Operating Frequency

2.4000-2.4835 GHz

Transmitter Power (EIRP)

<10 dBm

BS30 INTELLIGENT BATTERY STATION

Dimensions

353×267×148 mm

Net Weight

3.95 kg

Compatible Battery Type

TB30 Intelligent Flight Battery

WB37 Intelligent Battery

Input

100-240 VAC, 50/60 Hz

Output

TB30 Battery Port: 26.1 V, 8.9 A (supported up to two outputs simultaneously)

WB37 Intelligent Battery: 8.7 V, 6 A

Output Power

525 W

USB-C port

Max. output power of 65 W

USB-A port

Max. output power of 10 W (5 V, 2 A)

Power Consumption (when not charging battery)

< 8 W

Output Power (when warming up battery)

Approx. 30 W

Operating Temperature

-20° to 40° C (-4° to 104° F)

Ingress Protection Rating[3]

IP55 (with the cover closed properly)

Charging Time[6]

Approx. 30 min (charging two TB30 batteries from 20% to 90%)

Approx. 50 min (charging two TB30 batteries from 0% to 100%)

Protection Features

Anti-Backflow Protection

Short Circuit Protection

Over Voltage Protection

Over Current Protection

Temperature Protection

OTHER

Footnotes

[1] 5.8 and 5.1GHz frequencies are prohibited in some countries. In some countries, the 5.1GHz frequency is only allowed for use indoors.

[2] The maximum flight time and the hover time were tested in a lab environment and is for reference only.

[3] This protection rating is not permanent and may reduce over time after long-term use.

[4] Infrared temperature measurement accuracy was tested in a lab environment and is for reference only.

[5] The maximum operating time was tested in a lab environment and is for reference only.

[6] The charging time was tested in a lab environment at room temperature. The value provided should be used for reference only. The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

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