

Technical Description & Performance Limitations of Matrice 350 RTK

AIRCRAFT	
Dimensions (unfolded, without propellers)	810x670x430 mm (LxWxH)
Dimensions (folded, with propellers)	430x420x430 mm (LxWxH)
Diagonal Wheelbase	895 mm
Weight (with single downward gimbal)	Without batteries: Approx. 3.77 kg With two TB65 batteries: Approx. 6.47 kg
Single Gimbal Damper's Max Payload	960 g
Max Takeoff Weight	9.2 kg
Operating Frequency	2.4000-2.4835 GHz 5.150-5.250 GHz (CE: 5.170-5.250 GHz) 5.725-5.850 GHz In some countries and regions, the 5.1GHz and 5.8GHz frequency bands are prohibited, or the 5.1GHz frequency band is only allowed for indoor use. Please refer to local laws and regulations for more information.
Transmitter Power (EIRP)	2.4000-2.4835 GHz: < 33 dBm (FCC) < 20 dBm (CE/SRRC/MIC)



	<p>5.150-5.250 GHz (CE: 5.170-5.250 GHz): < 23 dBm (CE)</p> <p>5.725-5.850 GHz: < 33 dBm (FCC/SRRC) < 14 dBm (CE)</p>
Hovering Accuracy (with moderate or no wind)	<p>Vertical:</p> <p>±0.1 m (with vision positioning) ±0.5 m (with GNSS positioning) ±0.1 m (with RTK positioning)</p> <p>Horizontal:</p> <p>±0.3 m (with vision positioning) ±1.5 m (with GNSS positioning) ±0.1 m (with RTK positioning)</p>
RTK Positioning Accuracy (RTK FIX)	<p>1 cm + 1 ppm (horizontal) 1.5 cm + 1 ppm (vertical)</p>
Max Angular Velocity	<p>Pitch: 300°/s Yaw: 100°/s</p>
Max Pitch Angle	<p>30° When in N mode and with the forward vision system enabled: 25°.</p>
Max Ascent Speed	6 m/s
Max Descent Speed (vertical)	5 m/s
Max Tilted Descent Speed	7 m/s



Max Horizontal Speed	23 m/s
Max Flight Altitude	5000 m When using the 2110s propellers and with the takeoff weight \leq 7.4 kg. 7000 m When using the 2112 High-Altitude Low-Noise Propellers and with the takeoff weight \leq 7.2 kg.
Max Wind Speed Resistance	12 m/s
Max Flight Time	55 minutes Measured with Matrice 350 RTK flying at approximately 8 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.
Supported DJI Gimbals	Zenmuse H20, Zenmuse H20T, Zenmuse H20N, Zenmuse P1, and Zenmuse L1
Supported Gimbal Configurations	Single downward gimbal Single upward gimbal Dual downward gimbals Single downward gimbal + single upward gimbal Dual downward gimbals + single upward gimbal



Ingress Protection Rating	IP55 The IP rating is not permanently effective and may decrease due to product wear and tear.
Global Navigation Satellite System	GPS + GLONASS + BeiDou + Galileo
Operating Temperature	-20° to 50° C (-4° to 122° F)

VIDEO TRANSMISSION

Video Transmission System	DJI O3 Enterprise Transmission
Antenna	4 video transmission antennas, 2T4R
Max Transmission Distance (unobstructed, free of interference)	20 km (FCC) 8 km (CE/SRRC/MIC)
Max Transmission Distance (with interference)	Low Interference and Obstructed by Buildings: approx. 0-0.5 km Low Interference and Obstructed by Trees: approx. 0.5-3 km Strong Interference and Unobstructed: urban landscape, approx. 1.5-3 km Medium Interference and Unobstructed: suburban landscape, approx. 3-9 km Low Interference and Unobstructed: suburb/seaside, approx. 9-20 km

VISION SYSTEM

Obstacle Sensing Range	Forward/Backward/Left/Right: 0.7-40 m Upward/Downward: 0.6-30 m
FOV	Forward/Backward/Downward: 65° (horizontal), 50° (vertical) Left/Right/Upward: 75° (horizontal), 60° (vertical)
Operating Environment	Surfaces with discernible patterns and adequate lighting (lux > 15)

INFRARED SENSING SYSTEM

Obstacle Sensing Range	0.1-8 m
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FOV	30° (±15°)
Operating Environment	Large, diffuse, and reflective obstacles (reflectivity > 10%)
LED AUXILIARY LIGHT	
Effective Illumination Distance	5 m
Illumination Type	60 Hz, solid glow
FPV CAMERA	
Resolution	1080p
FOV	142°
Frame Rate	30fps
REMOTE CONTROLLER	
Screen	7.02-inch LCD touchscreen; resolution: 1920x1200; max brightness: 1200 nits
Weight	Approx. 1.25 kg (without WB37 battery) Approx. 1.42 kg (with WB37 battery)
Global Navigation Satellite System	GPS + Galileo + BeiDou
Built-in Battery	Type: Li-ion (6500 mAh@7.2 V) Charging Type: Use the battery station or USB-C fast charger with a max power of 65 W (max voltage of 20 V). Charging Time: 2 hours Chemical System: LiNiCoAlO ₂
External Battery (WB37 Intelligent Battery)	Capacity: 4920 mAh Voltage: 7.6 V Type: Li-ion Energy: 37.39 Wh Chemical System: LiCoO ₂
Ingress Protection Rating	IP54
Operating Time	Built-in Battery: approx. 3.3 hours Built-in Battery + External Battery: approx. 6 hours
Operating Temperature	-20° to 50° C (-4° to 122° F)
Operating Frequency	2.4000-2.4835 GHz 5.725-5.850 GHz
Transmitter Power (EIRP)	2.4000-2.4835 GHz:



	< 33 dBm (FCC) < 20 dBm (CE/SRRC/MIC) 5.725-5.850 GHz: < 33 dBm (FCC) < 14 dBm (CE) < 23 dBm (SRRC)
Wi-Fi Protocol	Wi-Fi 6
Wi-Fi Operating Frequency	2.4000-2.4835 GHz 5.150-5.250 GHz 5.725-5.850 GHz
Bluetooth Protocol	Bluetooth 5.1
Bluetooth Operating Frequency	2.4000-2.4835 GHz
INTELLIGENT FLIGHT BATTERY	
Model	TB65
Capacity	5880 mAh
Voltage	44.76 V
Battery Type	Li-ion
Energy	263.2 Wh
Net Weight	Approx. 1.35 kg
Charging Temperature	-20° to 40° C (-4° to 104° F) When the ambient temperature is below 5° C (41° F), the battery will trigger the auto-heating function. Charging at low temperatures may reduce battery life. It is recommended to charge at 15° to 35° C (59° to 95° F).
Operating Temperature	-20° to 50° C (-4° to 122° F)
Charging Time	With a 220V power supply, it takes approximately 60 minutes to fully charge two TB65 Intelligent Flight Batteries and approximately 30 minutes to charge them from 20% to 90%. With a 110V power supply, it takes approximately 70 minutes to fully charge



	two TB65 Intelligent Flight Batteries and approximately 40 minutes to charge them from 20% to 90%.
Storage Temperature	22° to 30° C (71.6° to 86° F)
INTELLIGENT BATTERY STATION	
Dimensions	580x358x254 mm (LxWxH)
Net Weight	Approx. 8.98 kg
Compatible Stored Items	Eight TB65 Intelligent Flight Batteries Four WB37 Intelligent Batteries
Input Voltage	100-120 VAC, 50-60 Hz 220-240 VAC, 50-60 Hz
Max Input Power	1070 W
Output Power	100-120 V: 750 W 220-240 V: 992 W
Operating Temperature	-20° to 40° C (-4° to 104° F)