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MATRICE 300 RTK

The Cyber Workhorse

A New Standard for the Commercial Drone Industry

The Matrice 300 RTK is DJI's latest commercial drone platform that takes inspiration from modern aviation systems. Offering up to 55 minutes of flight time, advanced AI capabilities, 6 Directional Sensing & Positioning and more, the M300 RTK sets a whole new standard by combining intelligence with high-performance and unrivaled reliability.



15 km Max
Transmission¹



55-min Max Flight
Time²



6 Directional Sensing &
Positioning



Primary Flight Display



IP45 Rating



-20°C to 50°C Operating
Temperature



Hot-swappable Battery



UAV Health
Management System

¹ Unobstructed, free of interference, when FCC compliant. Maximum flight range specification is a proxy for radio link strength and resilience. Always fly your drone within visual line of sight unless otherwise permitted.

² Actual flight time may vary because of the environment and payload configurations.



Improved Transmission System

The all-new OcuSync Enterprise enables transmission up to 15 km away and supports triple-channel³ 1080p video. Real-time auto-switching between 2.4 GHz and 5.8 GHz⁴ enables more reliable flight near high-interference environments, while AES-256 encryption offers secure data transmission.



15 km

Transmission Range

1080 p

Triple-channel Video

2.4/5.8 GHz

Real-time Auto-switching

³ Each RC supports two streams. Triple stream channeling is only supported with dual RC.

⁴ Due to local policies, some countries do not support 5.8 GHz transmission.

Enhanced Flight Performance

The refined airframe and propulsion system design gives you a more efficient and stable flight, even in harsh conditions.



55 min

Max Flight Time

7 m/s

Max Descend Speed⁵

23 m/s

Max Speed

7000 m

Service Ceiling⁶

15 m/s

Wind Resistance

⁵ Achieved in Forward Flight using S Mode.

⁶ The service ceiling of 7000 m is achievable with high altitude propellers.

Multiple Payload Configurations

Configure your M300 RTK to fit your mission needs. Mount up to 3 payloads simultaneously, with a maximum payload capacity of 2.7 kg.



Single Downward Gimbal

Single Upward Gimbal x Single Downward Gimbal

Single Upward Gimbal x Dual Downward Gimbals

Smart Inspection



Live Mission Recording

Record mission actions such as aircraft movement, gimbal orientation, photo shooting, and zoom level to create sample mission files for future automated inspections.

AI Spot-Check⁷

Automate routine inspections and capture consistent results every time. Onboard AI recognizes the subject of interest and identifies it in subsequent automated missions to ensure consistent framing.

Waypoints 2.0

Create up to 65,535 waypoints and set multiple actions for one or more payloads, including 3rd party ones, at each waypoint. Flightpath planning is also optimized to maximize flexibility and efficiency for your missions.

⁷ This feature is only supported when the aircraft is paired with the Zenmuse H20 Series payloads.

Smart Pin & Track⁸



PinPoint

A quick tap marks an object in view, advanced sensor fusion algorithms immediately deliver its coordinates.

Smart Track

Identify and follow moving subjects like people, vehicles, and boats with the auto-zoom function, while continuously acquiring the subject's dynamic location.

Location Sharing

While either PinPoint or Smart Track is enabled, the subject's location can be projected across multiple camera views, to another remote controller, or shared through online platforms such as DJI FlightHub⁹.

⁸ This feature is only supported when the aircraft is paired with the Zenmuse H20 Series payloads.

⁹ Support for location sharing via DJI FlightHub is coming soon.

Aviation-Grade Situational Awareness

The M300 RTK adopts a new Primary Flight Display (PFD) that integrates flight, navigation, and obstacle information to empower the pilot with exceptional situational awareness.



Flight Information

Flight information such as aircraft attitude, altitude, and velocity, as well as wind speed and wind direction, are all intuitively presented.

Navigation Display

Pilots can also view the live status of the aircraft's heading, trajectory, PinPoint information, and home point projection, in a more efficient way. Visualize all nearby obstacles at once with the new obstacle map, so you can be fully informed.



Advanced Dual Control

Either operator can now obtain control of the aircraft or payload with a single tap. This creates new possibilities for mission strategies as well as higher flexibility during operations.



A Powerful Vision System You Can Rely On

To enhance in-flight safety and aircraft stability, dual-vision and TOF sensors appear on all six sides of the aircraft, offering a maximum detection range of up to 40m, with options to customize the aircraft's sensing behavior via the DJI Pilot App. Even in complex operating environments, this 6 Directional Sensing and Positioning system helps keep the aircraft and the mission safe.



Professional Maintenance for Your Drone Fleet

The new integrated Health Management System displays the current status of all systems, notification logs, and a preliminary troubleshooting guide. Also in the system are the aircraft's flight logs, duration, and mileage throughout its entire lifecycle, and tips on aircraft care and maintenance.

[Visit the Matrice 300 RTK product page to download the maintenance manual.]



Redundancy Systems for Safer Flights

The M300 RTK's built-in advanced redundancy systems help keep your critical missions going even in unexpected scenarios.

[For more information, visit the Matrice 300 RTK product page to get a comprehensive Redundant Systems report.]



More Adaptable Than Ever Before



IP45



Self-Heating Battery



-20°C to 50°C



Anti-Collision Beacon



AirSense ADS-B Receiver

Accessories



Battery Station

The battery station manages up to 8 flight batteries and 4 remote controller batteries, while fast charging allows you to conduct your missions without running out of power.



TB60 Intelligent Flight Battery

The high-capacity, hot-swappable TB60 Intelligent Flight Battery lets operators change batteries without powering off, saving time during critical missions.



DJI Smart Controller Enterprise

The DJI Smart Controller Enterprise comes with an ultra-bright 5.5-inch 1080p display that maintains clear visibility even in direct sunlight.

Twice as bright as conventional smart devices at 1000 cd/m² | Supports DJI Pilot and 3rd party apps | HDMI port and microSD card slot | -20°C to 40°C operating temperature | Advanced Dual Operator Mode

Accessories



D-RTK 2 Mobile Station¹⁰

Gain improved relative accuracy with centimeter-level precision positioning data using the D-RTK 2 High Precision GNSS Mobile Station, which supports all major global satellite navigation systems and provides real-time differential corrections.



CSM Radar¹¹

For an added safety measure, a Circular Scanning Millimeter-Wave (CSM) Radar with a detection range between 1 to 30 m can be mounted on top of the aircraft.

¹⁰ D-RTK 2 Mobile Station for Matrice 200 Series V2 and P4R can be upgraded to support M300 RTK.

¹¹ The CSM Radar will be available soon.

Compatible Payloads



Zenmuse H20

Hybrid sensor solution with LRF, zoom and wide camera



Zenmuse H20T

Hybrid sensor solution with LRF, zoom, wide and thermal camera



Zenmuse XT S¹²

Precise and rapid aerial thermal imaging with ≤ 40 mK sensitivity @ f/1.0



Zenmuse XT2

Dual-sensor camera with a 4K visual sensor and thermal imaging with < 50 mK sensitivity



Zenmuse Z30

30x optical zoom camera ideal for detailed inspections



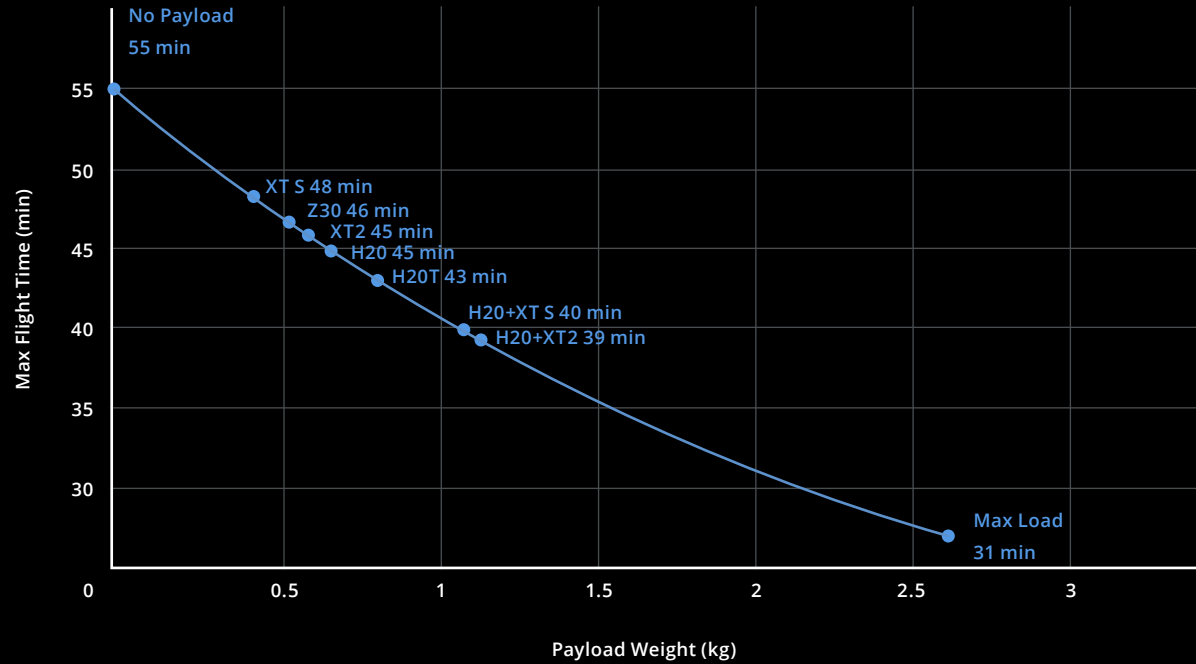
Third-Party Payloads

for specialized missions and tasks

¹² The Zenmuse XT S is only available in select countries and regions.

Flight Time

Estimate your M300 RTK's flight time based on the payload configuration.



Purpose-built Applications



DJI PILOT

DJI Pilot is developed specifically for enterprise users to unleash the power of their DJI drones. With development made specifically for the M300 RTK, DJI Pilot optimizes your flight capability for peak performance.



DJI FLIGHTHUB

DJI FlightHub is a one-stop solution for managing your drone operations, supporting large organizations to effectively scale their aerial operations. Compatible with the M300 RTK, you can integrate FlightHub directly into your existing fleet of DJI drones and leverage its aerial intel across your organization.

Leverage The DJI Ecosystem For Extended Solutions



PAYLOAD SDK

Integrate a variety of 3rd party payloads like gas detectors, loudspeakers, multispectral sensors, and more. Payload SDK supports DJI SkyPort, DJI SkyPort V2, and DJI X-Port. These greatly reduce the payload development lifecycle and maximize the potential of your payloads in more diverse scenarios.



ONBOARD SDK

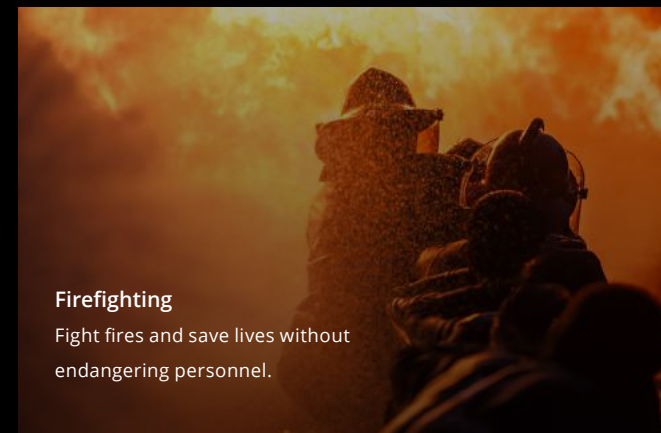
Harness the full computing power of your M300 RTK. Onboard SDK supports customized development of a wide range of features such as 6 Directional Sensing and Positioning, UAV Health Management System, Waypoints 2.0, and more.



MOBILE SDK

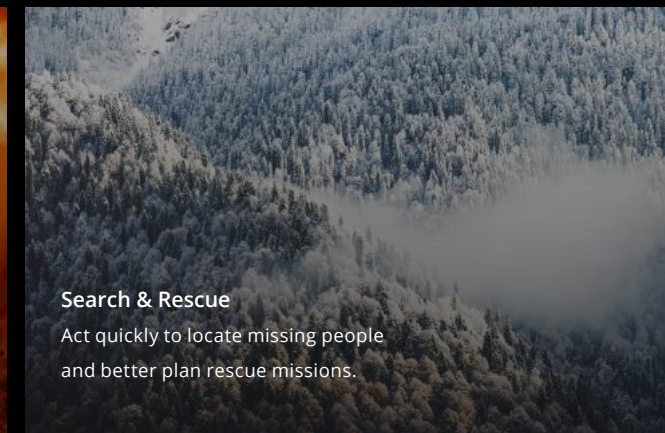
With a large network of 3rd party mobile applications, you can unlock the capabilities of your drone platform to meet specialized mission needs. Utilizing Mobile SDK, the M300 RTK supports highly customizable mobile app development.

Applications



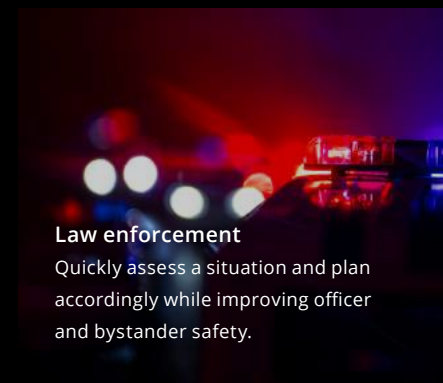
Firefighting

Fight fires and save lives without endangering personnel.



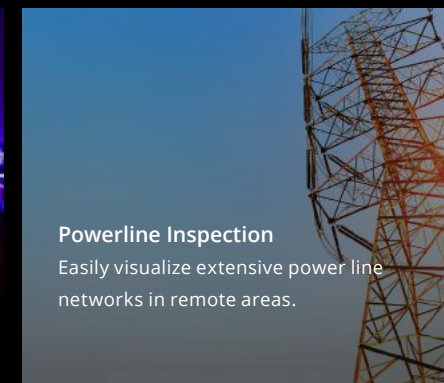
Search & Rescue

Act quickly to locate missing people and better plan rescue missions.



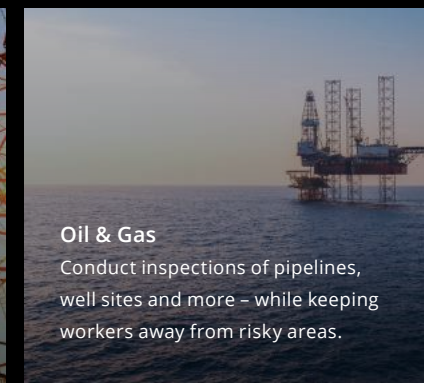
Law enforcement

Quickly assess a situation and plan accordingly while improving officer and bystander safety.



Powerline Inspection

Easily visualize extensive power line networks in remote areas.



Oil & Gas

Conduct inspections of pipelines, well sites and more - while keeping workers away from risky areas.

Specifications: Aircraft

	MATRICE 300 RTK
Dimensions	Unfolded, propellers excluded : 810×670×430 mm (L×W×H) Folded, propellers and landing gears included : 430 × 420 × 430 mm (L×W×H)
Diagonal Wheelbase	895 mm
Weight (Batteries excluded)	3600 g
Max Payload	2700 g
Max Takeoff Weight	9000 g
Operating Frequency	2.4000-2.4835 GHz; 5.725-5.850 GHz
EIRP	2.400-2.4835 GHz: 29.5 dBm (FCC); 18.5 dBm (CE); 18.5 dBm (SRRC); 18.5 dBm (MIC) 5.725-5.850 GHz: 28.5 dBm (FCC); 12.5 dBm (CE); 28.5 dBm (SRRC)
Hovering Accuracy (Windless or breezy)	±0.1 m (Vision System enabled); ±0.5 m (P-mode with GPS); ±0.1 m (RTK functioning properly) ±0.3 m (Vision System enabled)); ±1.5 m (P-mode with GPS); ±0.1 m (RTK functioning properly)
Max Angular Velocity	Pitch: 300°/s, Yaw: 100°/s
Max Pitch Angle	30° (P-mode and Forward Vision System enabled: 25°)
Max Ascent Speed/Max Descent Speed (vertical)	6 m/s; 5 m/s
Max Descent Speed (tilt)	7 m/s
Max Horizontal Speed	23 m/s

Specifications: Aircraft

	MATRICE 300 RTK
Service Ceiling	5000 m (2110 propellers, takeoff weight ≤ 7 kg) / 7000 m (2195 High-Altitude Low-Noise Propellers, takeoff weight ≤ 7kg)
Max Wind Resistance	15 m/s
Max Flight Time (Sea level)	55 minutes
Supported DJI Gimbals	Zenmuse XT2/XT S/Z30/H20/H20T
Supported Gimbal Configurations	Dual Downward Gimbals, Single Upward Gimbal, Single Downward Gimbal, Single Upward + Single Downward Gimbals, Triple Gimbals
Other Supported DJI Products	CMS Radar, Manifold 2
Ingress Protection Rating	IP45
GNSS	GPS+GLONASS+BeiDou+Galileo
Operating Temperature	-4° F to 122° F (-20°C to 50°C)

Specifications: Smart Controller Enterprise

OcuSync Enterprise Operation Frequency Range	2.400-2.4835 GHz; 5.725-5.850 GHz ¹³	
Max Transmission Distance (Unobstructed, free of interference)	NCC/FCC: 15 km CE/MIC: 8 km SRRC: 8 km	
Transmitter Power (EIRP)	2.400-2.4835 GHz: 29.5 dBm (FCC); 18.5 dBm (CE); 18.5 dBm (SRRC); 18.5 dBm (MIC) 5.725-5.850 GHz: 28.5 dBm (FCC); 12.5 dBm (CE); 20.5 dBm (SRRC)	
External Battery	Name	WB37 Intelligent Battery
	Capacity	4920 mAh
	Voltage	7.6 V
	Battery Type	LiPo
	Energy	37.39 Wh
	Charge Time (Using BS60 Intelligent Battery Station)	70 min (15°C to 45°C); 130 min (0° to 15°C)
Built-in Battery	Battery Type	18650 Li-ion (5000 mAh @ 7.2 V)
	Charge Type	Supports USB charger rated 12 V / 2 A

¹³Local regulations in some countries prohibit the use of the 5.8 GHz and 5.2 GHz frequencies and in some regions the 5.2 GHz frequency band is only allowed for indoor use.

Specifications: Smart Controller Enterprise

Built-in Battery	Rated Power	17 W
	Charge Time	2 hours and 15 minutes (Using a USB charger rated 12 V / 2 A)
Working Time¹⁴	Built-in battery: Approx. 2.5 hours Built-in Battery + External Battery: Approx. 4.5 hours	
Power Supply Voltage / Current (USB-A port)	5 V / 1.5 A	
Operation Temperature Range	-4°F to 104°F (-20°C to 40°C)	

Specifications: Vision System

Obstacle Sensing Range	Forward / Backward / Left / Right: 0.7 - 40 m Upward / Downward: 0.6 - 30 m
FOV	Forward / Backward / Downward: 65°(H), 50°(V) Left / Right / Upward: 75°(H), 60°(V)
Operating Environment	Surfaces with clear patterns and adequate lighting (> 15 lux, the equivalent of an environment with normal exposure levels such as indoors with a fluorescent light)

¹⁴The Smart Controller Enterprise will supply power for the mobile device installed, which may affect the above-mentioned specifications.

Specifications: Infrared ToF Sensing System

Obstacle Sensing Range	0.1 -8 m
FOV	30°
Operating Environment	Large obstacles with diffuse reflection and a high reflectivity (reflectivity> 10%)

Specifications: Intelligent Flight Battery

Capacity	5935 mAh
Voltage	52.8 V
Battery Type	LiPo 12S
Energy	274 Wh
Net Weight (Each)	Approx. 1.35 kg
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Optimal Storage Temperature	71.6° to 86°F (22°C to 30°C)
Charging Temperature	41°F to 104°F (5°C to 40°C)
Charging Time	When using the Battery Station, Using a 220 V power supply: It takes about 60 minutes to fully charge two TB60 Intelligent Flight Batteries, and it takes about 30 minutes to charge from 20% to 90% Using a 110 V power supply: It takes about 70 minutes to fully charge two TB60 Intelligent Flight Batteries, and it takes about 40 minutes to charge from 20% to 90%

Specifications: FPV Camera

Resolution	960p
FOV	145°
Frame Rate	30 fps

Specifications: Battery Station

Maximum Capacity	8 TB60 Intelligent Flight Batteries 4 WB37 Batteries
Input Voltage	100-120VAC, 50-60Hz / 220-240VAC, 50-60Hz
Output Power	100 V-120 V: 750 W 220 V-240 V: 992 W
Operating Temperature	-20°C to 40°C

*Please refer to the official product page for the latest specifications.