

**dji** ENTERPRISE



# MATRICE 300 RTK

Built Tough. Works Smart.



## 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  
Transmission<sup>1</sup>



55-min Max Flight  
Time<sup>2</sup>



6 Directional Sensing &  
Positioning



Primary Flight Display



IP45 Rating



-20°C to 50°C Operating  
Temperature



Hot-swappable Battery



UAV Health  
Management System

<sup>1</sup> 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.

<sup>2</sup> Actual flight time may vary because of the environment and payload configurations.

## 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<sup>5</sup>

**7** m/s  
Max Descend Speed<sup>5</sup>

**23** m/s  
Max Speed

**7000** m  
Service Ceiling<sup>6</sup>

**15** m/s  
Wind Resistance

<sup>5</sup> Achieved in Forward Flight using S Mode.

<sup>6</sup> The service ceiling of 7000 m is achievable with high altitude propellers.

## Improved Transmission System

The all-new OcuSync Enterprise enables transmission up to 15 km away and supports triple-channel<sup>3</sup> 1080p video. Real-time auto-switching between 2.4 GHz and 5.8 GHz<sup>4</sup> 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

<sup>3</sup> Each RC supports two streams. Triple stream channeling is only supported with dual RC.

<sup>4</sup> Due to local policies, some countries do not support 5.8 GHz transmission.

## 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-Check<sup>7</sup>

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.

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

## 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

## 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.



## Smart Pin & Track<sup>8</sup>



### 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 FlightHub<sup>9</sup>.

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

<sup>9</sup> Support for location sharing via DJI FlightHub is coming soon.



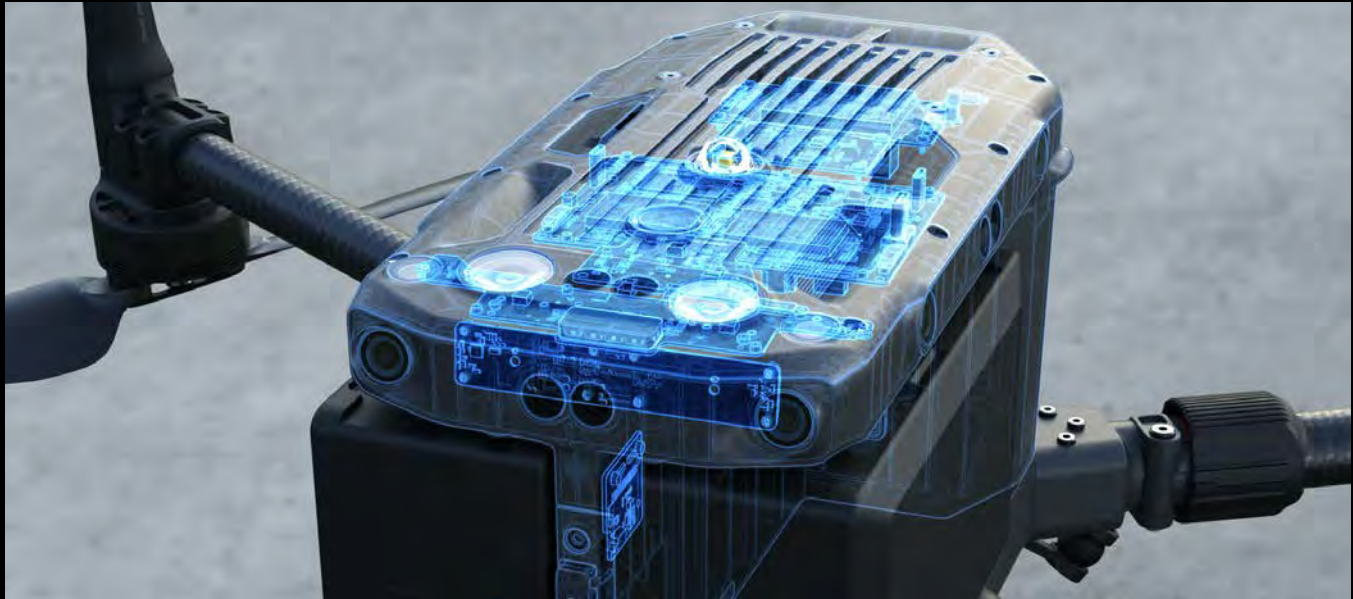
## A Powerful Vision System You Can Rely On

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.



## 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.



## 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. ]



## 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.]

## 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



More Adaptable Than Ever Before



IP45



Self-Heating Battery



-20°C to 50°C



Anti-Collision Beacon



AirSense ADS-B Receiver

## 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 S<sup>12</sup>

Precise and rapid aerial thermal imaging with  $\leq 40$  mK sensitivity @  $f/1.0$



### Zenmuse XT2

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



### Zenmuse Z30

30 $\times$  optical zoom camera ideal for detailed inspections



### Third-Party Payloads

for specialized missions and tasks

<sup>12</sup> The Zenmuse XT S is only available in select countries and regions.

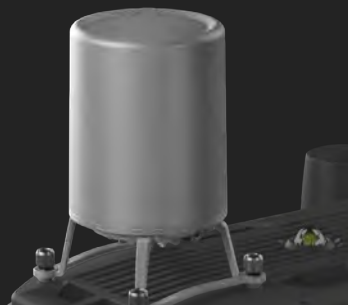


## Accessories



### D-RTK 2 Mobile Station<sup>10</sup>

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 Radar<sup>11</sup>

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.

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

<sup>11</sup>The CSM Radar will be available soon.

## 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.

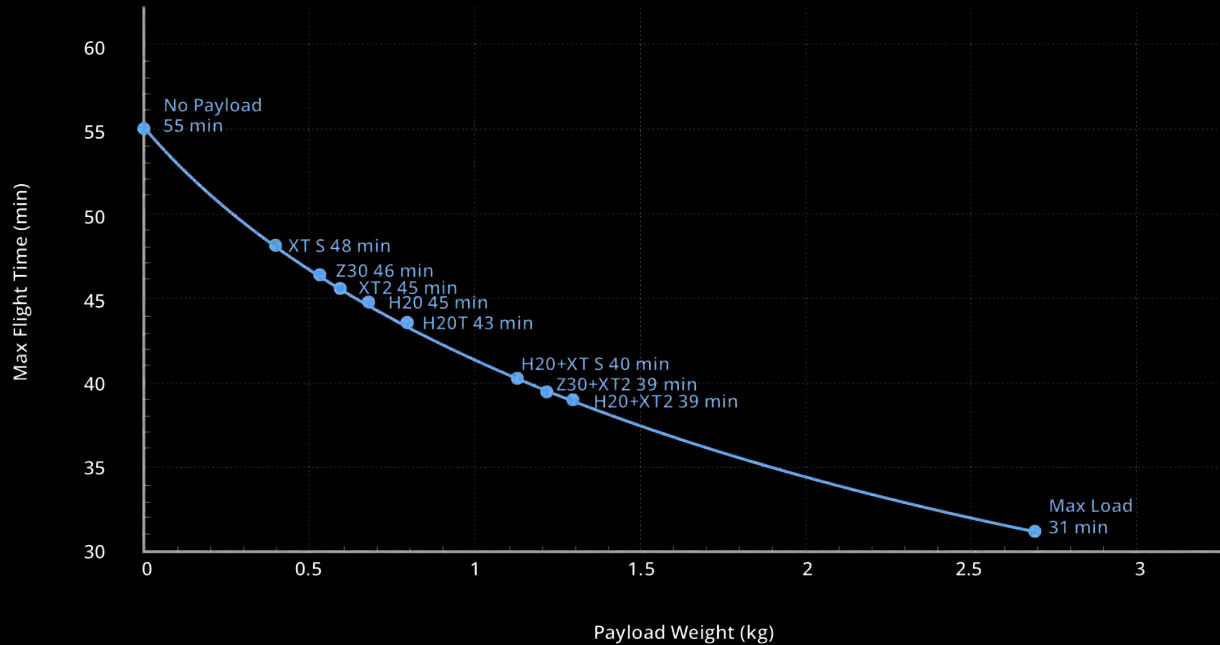


### DJI FLIGHTHUB

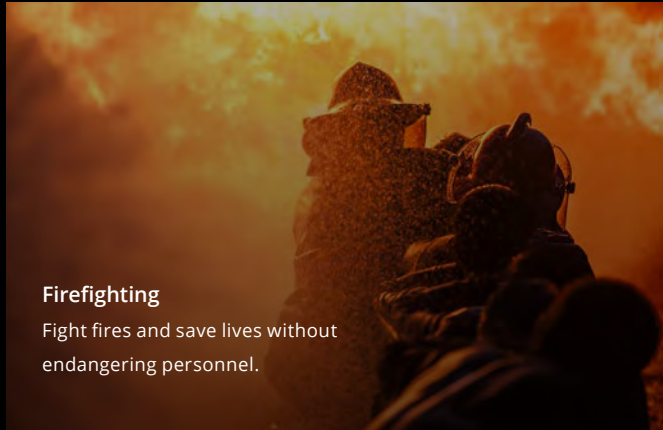
DJI FlightHub is a one-stop solution for managing your drone operations, supporting large organizations to effectively scale their aerial operations. Compatible with the M300 RTK, you can integrate FlightHub directly into your existing fleet of DJI drones and leverage its aerial intel across your organization.

# Flight Time

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



## Applications



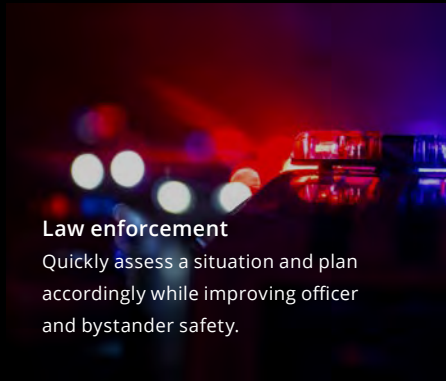
### Firefighting

Fight fires and save lives without endangering personnel.



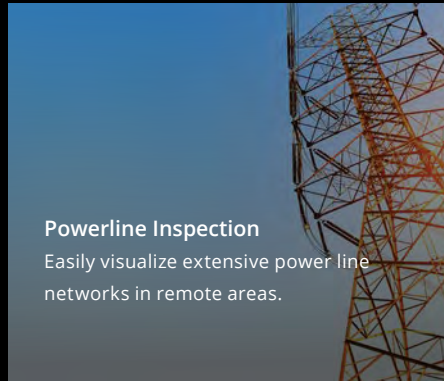
### Search & Rescue

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



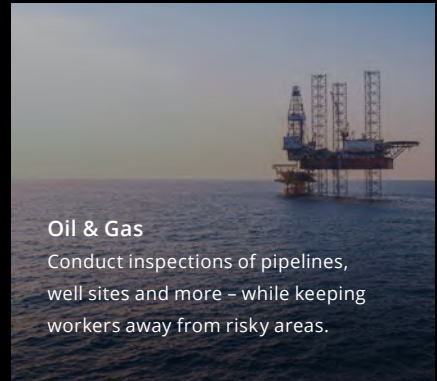
### Law enforcement

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.

## 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.

## Specifications: Aircraft

	<b>MATRICE 300 RTK</b>
<b>Dimensions</b>	Unfolded, propellers excluded : 810×670×430 mm (L×W×H) Folded, propellers and landing gears included : 430 × 420 × 430 mm (L×W×H)
<b>Diagonal Wheelbase</b>	895 mm
<b>Weight (Batteries excluded)</b>	3600 g
<b>Max Payload</b>	2700 g
<b>Max Takeoff Weight</b>	9000 g
<b>Operating Frequency</b>	2.4000-2.4835 GHz; 5.725-5.850 GHz
<b>EIRP</b>	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)
<b>Hovering Accuracy</b> (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)
<b>Max Angular Velocity</b>	Pitch: 300°/s, Yaw: 100°/s
<b>Max Pitch Angle</b>	30° (P-mode and Forward Vision System enabled); 25°
<b>Max Ascent Speed/Max Descent Speed</b> (vertical)	6 m/s; 5 m/s
<b>Max Descent Speed</b> (tilt)	7 m/s
<b>Max Horizontal Speed</b>	23 m/s

## Specifications: Aircraft

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

## Specifications: Smart Controller Enterprise

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

<sup>13</sup>Local 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

<b>Built-in Battery</b>	<b>Rated Power</b>	17 W
	<b>Charge Time</b>	2 hours and 15 minutes (Using a USB charger rated 12 V / 2 A)
<b>Working Time<sup>14</sup></b>	Built-in battery: Approx. 2.5 hours Built-in Battery + External Battery: Approx. 4.5 hours	
<b>Power Supply Voltage / Current (USB-A port)</b>	5 V / 1.5 A	
<b>Operation Temperature Range</b>	-4°F to 104°F (-20°C to 40°C)	

## Specifications: Vision System

<b>Obstacle Sensing Range</b>	Forward / Backward / Left / Right: 0.7 - 40 m Upward / Downward: 0.6 - 30 m
<b>FOV</b>	Forward / Backward / Downward: 65°(H), 50°(V) Left / Right / Upward: 75°(H), 60°(V)
<b>Operating Environment</b>	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)

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

## Specifications: Infrared ToF Sensing System

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

## Specifications: Intelligent Flight Battery

<b>Capacity</b>	5935 mAh
<b>Voltage</b>	52.8 V
<b>Battery Type</b>	LiPo 12S
<b>Energy</b>	274 Wh
<b>Net Weight (Each)</b>	Approx. 1.35 kg
<b>Operating Temperature</b>	-4°F to 122°F (-20°C to 50°C)
<b>Optimal Storage Temperature</b>	71.6° to 86°F (22°C to 30°C)
<b>Charging Temperature</b>	41°F to 104°F (5°C to 40°C)
<b>Charging Time</b>	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

<b>Resolution</b>	960p
<b>FOV</b>	145°
<b>Frame Rate</b>	30 fps

## Specifications: Battery Station

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

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