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PHANTOM 4 RTK

VISIONARY INTELLIGENCE. ELEVATED ACCURACY.

Upgrade your next mapping mission with the Phantom 4 RTK – DJI's most compact and accurate low altitude mapping solution.

NEXT GENERATION MAPPING

DJI has rethought its drone technology from the ground-up, revolutionizing its systems to achieve a new standard for drone accuracy – offering Phantom 4 RTK customers centimeter-accurate data while requiring fewer ground control points.

1 cm + 1 ppm
RTK Horizontal Positioning Accuracy

1.5 cm + 1 ppm
RTK Vertical Positioning Accuracy

5 cm*
Absolute horizontal Accuracy of Photogrammetric Models

RTK Module | 1" CMOS Sensor | TimeSync | GS RTK App | OcuSync | D-RTK 2 Mobile Station

*when flying in sunny conditions, wind speeds below 4 m/s, 100m height and 2.74 cm GSD, front overlap rate of 80%, side overlap rate of 70%

CENTIMETER LEVEL POSITIONING SYSTEM

A new RTK module is integrated directly into the Phantom 4 RTK, providing real-time, centimeter-level positioning data for improved absolute accuracy on image metadata. Sitting just beneath the RTK receiver is a redundant GNSS module, installed to maintain flight stability in signal-poor regions such as dense cities. Combining both modules, the Phantom 4 RTK is able to optimize flight safety while ensuring the most precise data is captured for complex surveying, mapping and inspection workflows.

GATHER ACCURATE DATA WITH TIMESYNC

To take full advantage of the Phantom 4 RTK's positioning modules, the new TimeSync system was created to continually align the flight controller, camera and RTK module.

Additionally, TimeSync ensures each photo uses the most accurate metadata and fixes the positioning data to the center of the CMOS – optimizing the results from photogrammetric methods and letting the image achieve centimeter-level positioning data.

PRECISE IMAGING SYSTEM

Capture the best image data with a 1-inch, 20 megapixel CMOS sensor. Mechanical shutter makes mapping missions or regular data capture seamless as the Phantom 4 RTK can move while taking pictures without the risk of rolling shutter blur. Due to the high resolution, the Phantom 4 RTK can achieve a Ground Sample Distance (GSD) of 2.74 cm at 100 meters flight altitude.

PURPOSE-BUILT FLIGHT PLANNING APPLICATION

A new GS RTK app allows pilots to intelligently control their Phantom 4 RTK, with two planning modes – Photogrammetry and Waypoint Flight – alongside a more traditional flight mode. The planning modes let pilots select the drone's flight path while adjusting overlap rate, altitude, speed, camera parameters and more, offering an automated mapping or inspection workflow.

OCUSYNC TRANSMISSION SYSTEM

Enjoy stable and reliable HD image and video transmission at distances of up to 7 km*, great for mapping larger sites.

*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.

SEAMLESS COMPATIBILITY WITH D-RTK 2 MOBILE STATION

Support your Phantom 4 RTK missions with the D-RTK 2 Mobile Station – providing real-time differential data to the drone and forming an accurate surveying solution. The Mobile Station's rugged design and OcuSync transmission system ensures you can gain centimeter-level accurate data with your Phantom 4 RTK in any condition.

MOBILE SDK SUPPORTED

The Phantom 4 RTK is compatible with the DJI Mobile SDK, opening up its functions to automation and customization through a mobile device.

START MAPPING TODAY

With a built-in flight planning app (GS RTK) and an easy method to collect RTK data (RTK Network or D-RTK 2 Mobile Station), pilots have a full solution for any surveying, mapping or inspection workflow – right out of the box.

SPECIFICATIONS

Aircraft	Takeoff Weight	1391 g
	Max Service Ceiling Above Sea Level	19685 ft (6000 m)
	Max Flight Time	Approx. 30 minutes
	Operating Temperature Range	32° to 104° F (0° to 40°C)
	Hover Accuracy Range	RTK enabled and functioning properly: Vertical: ±0.1 m; Horizontal: ±0.1 m
		RTK disabled Vertical: ±0.1 m (with vision positioning) ; ±0.5 m (with GNSS positioning) Horizontal: ±0.3 m (with vision positioning) ; ±1.5 m (with GNSS positioning)
	Image Position Offset	The position of the camera center is relative to the phase center of the onboard D-RTK antenna under the aircraft body's axis:(36, 0, and 192 mm) already applied to the image coordinates in Exif data. The positive x, y, and z axies of the aircraft body point to the forward, rightward, and downward of the aircraft, respectively.
GNSS	Single-Frequency, High-Sensitivity GNSS Module	GPS+BeiDou+Galileo（Asia)
		GPS+GLONASS+Galileo (other regions)
	Multi-Frequency, Multi-System High Precision RTK GNSS Module	Frequency Used: GPS: L1/L2; GLONASS: L1/L2; BeiDou: B1/B2; Galileo: E1/E5a
		Velocity Accuracy: 0.03 m/s
Camera	Sensor	1" CMOS; Effective pixels: 20 M
	Lens	FOV(Field of View)84°,8.8 mm(35 mm format equivalent:24 mm), f/2.8 - f/11, auto focus at 1 m - ∞
	ISO Range	Video:100-3200(Auto), 100-6400(Manual); Photo:100-3200(Auto),100-12800(Manual)
	Shutter Speed	Electronic Shutter Speed: 8–1/8000 s
		Mechanical Shutter Speed: 8–1/2000 s
	Still Image Size	3:2: 5472×3648
		4:3: 4864×3648
	Supported SD Cards	MicroSD, Max Capacity: 128 GB. Class 10 or UHS-1 rating required