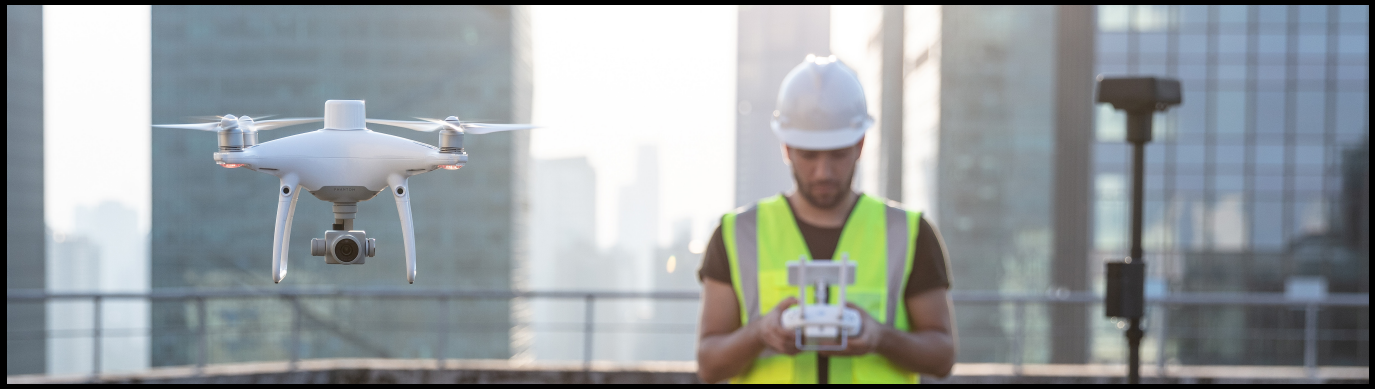
PHANTOM 4 RTK

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. In addition to optimized flight safety and precise data collection, the Phantom 4 RTK stores satellite observation data to be used for PPK, which can be conducted using DJI Cloud PPK Service . Connect the Phantom 4 RTK to the D-RTK 2 High Precision GNSS Mobile Station, or NTRIP using a 4G dongle or WiFi hotspot.

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 optical center of the lens – 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 missions seamless as the Phantom 4 RTK captures images while in motion without the risk of rolling shutter blur. The high resolution enables the Phantom 4 RTK to achieve a GSD of 2.74 cm at 100 meters flight altitude. Each Phantom 4 RTK's camera lens goes through a rigorous calibration process, with parameters saved into each image's metadata, letting post-processing software adjust uniquely for every user.

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.

PURPOSE-BUILT FLIGHT PLANNING APPLICATION

The DJI GS RTK app and Remote Controller with built-in screen give users a streamlined control scheme for surveying missions and other data acquisition scenarios.

The GS RTK app allows pilots to intelligently control their Phantom 4 RTK, with multiple planning modes, including Photogrammetry (2D and 3D), Waypoint Flight, Terrain Awareness, Block Segmentation , and more. Users can also import KML/KMZ files to optimize the workflow for their missions.

ACCESS A VARIETY OF 3RD PARTY APPLICATIONS

Pilots with experience using 3rd party apps on DJI drones can access the world's leading drone app ecosystem for their Phantom 4 RTK with the SDK Remote Controller. Users can plug in a compatible Android or iOS device and install any compatible DJI Mobile SDK-enabled app to harness the full power of their Phantom 4 RTK.

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, or acquire accurate location coordinates when used as an RTK rover.

INTEGRATED SURVEYING SOLUTION

Phantom 4 RTK is fully optimized for aerial photogrammetry. When used with DJI Terra, it is an integrated, efficient, and high-accuracy solution without the use of GCPs.

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

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