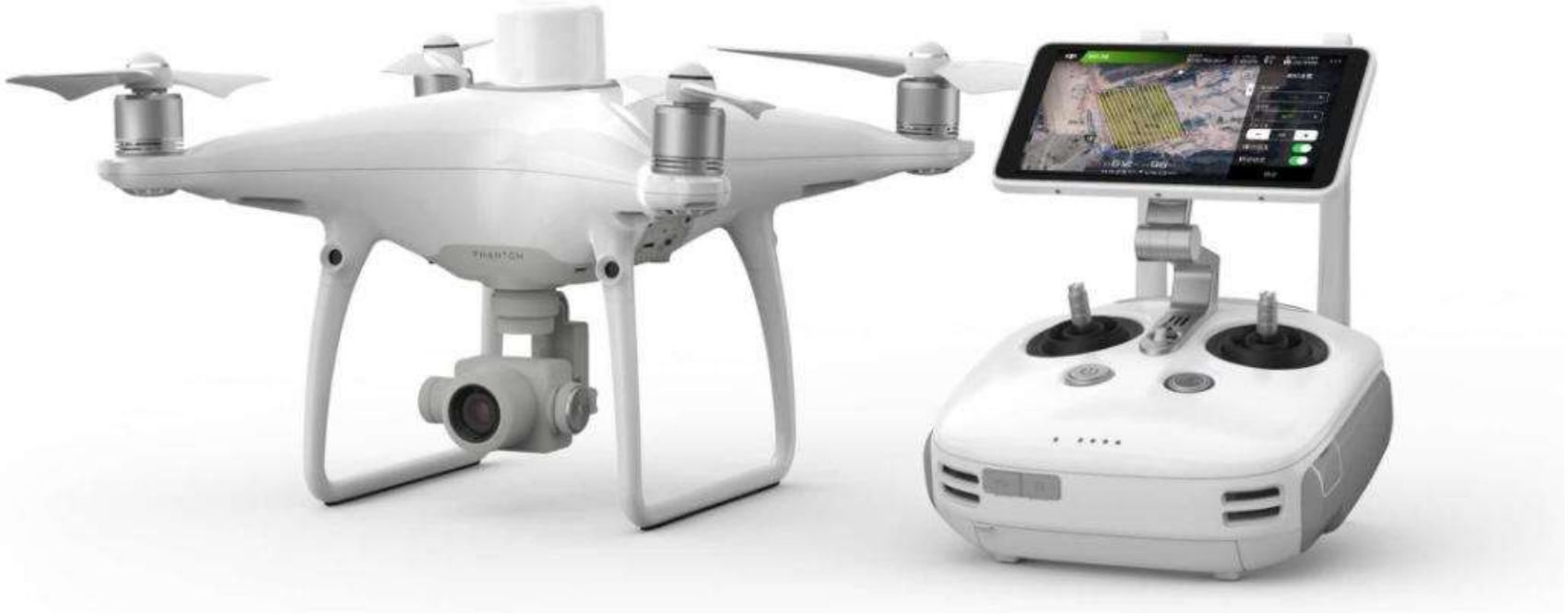
Next Generation Mapping

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

1cm+1ppm
RTK Horizontal Positioning Accuracy

1.5cm+1ppm
RTK Vertical Positioning Accuracy

5cm*
(*When flying at 100m height, 2.7cm GSD, sunny.)
Absolute Horizontal Accuracy
of Photogrammetric Models



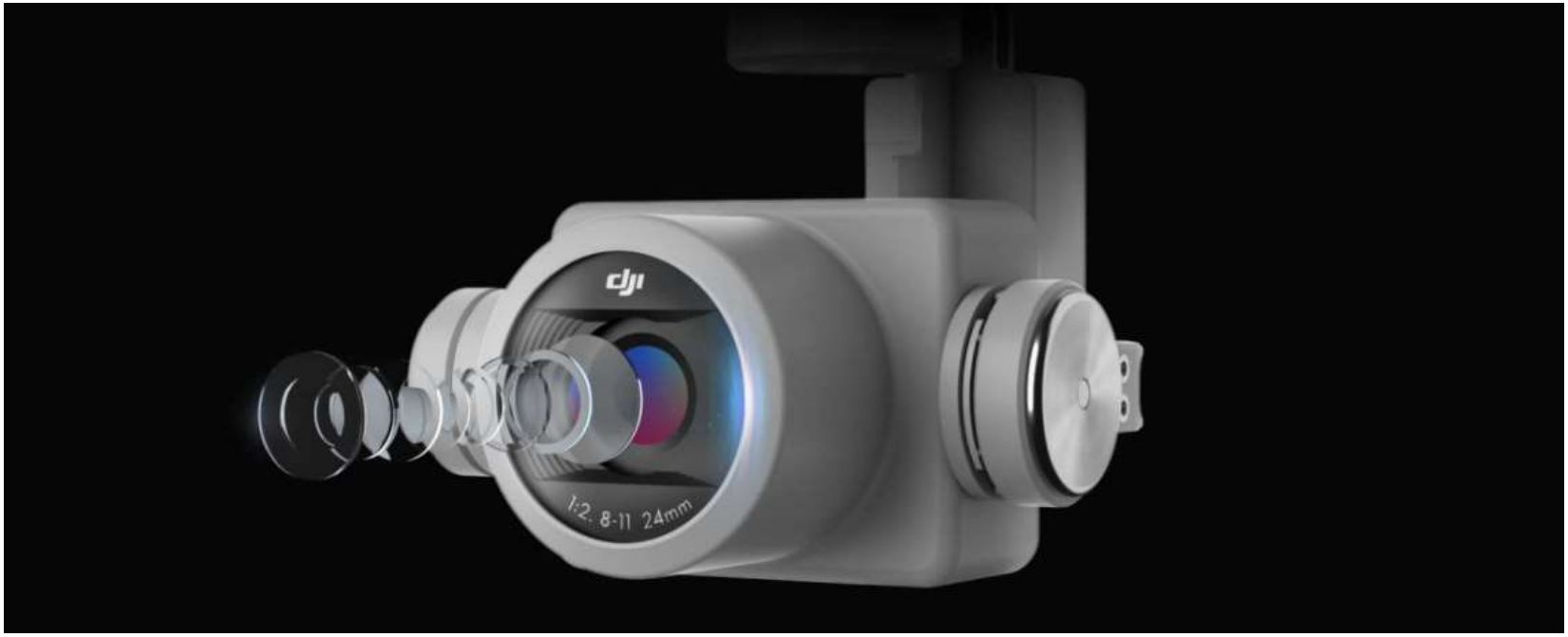
Centimeter Level Positioning System

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.

Fit the Phantom 4 RTK to any workflow, with the ability to connect this positioning system to the D-RTK 2 Mobile Station, NTRIP (Network Transport of RTCM via Internet Protocol) using a 4G dongle or WiFi hotspot, or store the satellite observation data to be used for Post Processed Kinematics (PPK).

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. To ensure each Phantom 4 RTK offers unparalleled accuracy, every single camera lens goes through a rigorous calibration process where radial and tangential lens distortions are measured. The distortion parameters gathered are saved into each image's metadata, letting post-processing software adjust uniquely for every user.

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.

The GS RTK app has been built with its users in mind and therefore has a range of features built for specific mapping or inspection workflows. The app has implemented direct loading of KML area files for in-office flight planning, a new shutter priority mode to keep exposure consistent across all photos and a strong wind alarm to warn pilots of adverse conditions.