

PHANTOM 4 MULTISPECTRAL



AIRCRAFT

Takeoff Weight

1487 g

Diagonal Distance (Propellers Excluded)

350 mm

Max Service Ceiling Above Sea Level

19685 ft (6000 m)

Max Ascent Speed

6 m/s (automatic flight); 5 m/s (manual control)

Max Descent Speed

3 m/s

Max Speed

31 mph (50 kph) (P-mode); 36 mph (58 kph) (A-mode)

Max Flight Time

Approx. 27 minutes

Operating Temperature

0° to 40° C (32° to 104° F)

Operating Frequency

2.4000 GHz to 2.4835 GHz (Europe, Japan, Korea)

5.725 GHz to 5.850 GHz (Other countries/regions)[1]

Transmission Power (EIRP)

2.4 GHz: < 20 dBm (CE / MIC / KCC)

5.8 GHz: < 26 dBm (FCC / SRRC / NCC)

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 Compensation

The relative positions of the centers of the six cameras' CMOS and the phase center of the onboard D-RTK antenna have been calibrated and are recorded in the EXIF data of each image.

MAPPING FUNCTIONS

Ground Sample Distance (GSD)

(H/18.9) cm/pixel, H indicates the aircraft altitude relative to the area mapped (unit: m)

Rate of Data Collection

Max operating area of approx. 0.63 km² for a single flight at an altitude of 180 m, i.e., GSD is approx. 9.52 cm/pixel, with a forward overlap rate of 80% and a side overlap ratio of 60%, during a flight that drains the battery from 100% to 30%.

GNSS

Single-Frequency High-Sensitivity GNSS

GPS + BeiDou + Galileo[2] (Asia); GPS + GLONASS + Galileo[2] (other regions)

Multi-Frequency Multi-System High-Precision RTK GNSS

Frequency Used

GPS: L1/L2; GLONASS: L1/L2; BeiDou: B1/B2; Galileo[2]: E1/E5

First-Fixed Time: < 50 s

Positioning Accuracy: Vertical 1.5 cm + 1 ppm (RMS); Horizontal 1 cm + 1 ppm (RMS).

1 ppm indicates error with a 1 mm increase over 1 km of movement.

Velocity Accuracy: 0.03 m/s

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GIMBAL

Controllable Range

Tilt: -90° to +30°

VISION SYSTEM

Velocity Range

≤ 31 mph (50 kph) at 6.6 ft (2 m) above ground
with adequate lighting

Altitude Range

0 - 33 ft (0 - 10 m)

Operating Range

0 - 33 ft (0 - 10 m)

Obstacle Sensory Range

2 - 98 ft (0.7 - 30 m)

Operating Environment

Surfaces with clear patterns and adequate
lighting (> 15 lux)

CAMERA

Sensors

Six 1/2.9" CMOS, including one RGB sensor for
visible light imaging and five monochrome
sensors for multispectral imaging.

Each Sensor: Effective pixels 2.08 MP (2.12 MP
in total)

Filters

Blue (B): 450 nm ± 16 nm; Green (G): 560 nm ±
16 nm; Red (R): 650 nm ± 16 nm; Red edge (RE):
730 nm ± 16 nm; Near-infrared (NIR): 840 nm ±
26 nm

Lenses

FOV (Field of View): 62.7°

Focal Length: 5.74 mm (35 mm format
equivalent: 40 mm), autofocus set at ∞

Aperture: f/2.2

RGB Sensor ISO Range

200 - 800

Monochrome Sensor Gain

1 - 8x

Electronic Global Shutter

1/100 - 1/20000 s (visible light imaging); 1/100 -
1/10000 s (multispectral imaging)

Max Image Size

1600×1300 (4:3.25)

Photo Format

JPEG (visible light imaging) + TIFF (multispectral
imaging)

Supported File Systems

FAT32 (≤ 32 GB); exFAT (> 32 GB)

Supported SD Cards

microSD with a minimum write speed of 15
MB/s. Max Capacity: 128 GB. Class 10 or UHS-1
rating required

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REMOTE CONTROLLER

Operating Frequency

2.4000 GHz to 2.4835 GHz (Europe, Japan, Korea)

5.725 GHz to 5.850 GHz (Other countries/regions)[1]

Transmission Power (EIRP)

2.4 GHz: < 20 dBm (CE / MIC / KCC)

5.8 GHz: < 26 dBm (FCC / SRRC / NCC)

Max Transmission Distance

FCC / NCC: 4.3 mi (7 km)

CE / MIC / KCC / SRRC: 3.1 mi (5 km)
(Unobstructed, free of interference)

Built-in Battery

6000 mAh LiPo 2S

Operating Current / Voltage

1.2 A @ 7.4 V

Mobile Device Holder

Tablets and smartphones

Operating Temperature

0° to 40° C (32° to 104° F)

INTELLIGENT FLIGHT BATTERY (PH4-5870MAH-15.2V)

Capacity 5870 mAh

Voltage 15.2 V

Battery Type LiPo 4S

Energy 89.2 Wh

Net Weight 468 g

Operating Temperature

-10° to 40° C (14° to 104° F)

Charging Temperature

5° to 40° C (41° to 104° F)

Max Charging Power

160 W

INTELLIGENT FLIGHT BATTERY CHARGING HUB (PHANTOM 4 CHARGING HUB)

Voltage 17.5 V

Operating Temperature

5° to 40° C (41° to 104° F)

AC POWER ADAPTER (PH4C160)

Voltage 17.4 V

Rated Power 160 W

NOTE

[1] To comply with local laws and regulations, this frequency is not available in some countries or regions.

[2] Support for Galileo is coming soon.

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