

# PHANTOM 4 RTK



## AIRCRAFT

### Takeoff Weight

1391 g

### Diagonal Distance

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. 30 minutes

### Operating Temperature Range

32° to 104° F (0° to 40°C)

### Operating Frequency

2.400 GHz to 2.483 GHz (Europe, Japan, Korea)

5.725 GHz to 5.850 GHz (United States, China)

### Transmission Power (EIRP)

2.4 GHz

CE (Europe) / MIC (Japan) / KCC (Korea) : < 20 dBm

5.8 GHz

SRRC (China) / FCC (United States) / NCC(Taiwan,China): < 26 dBm

### Hover Accuracy Range

RTK enabled and functioning properly:

Vertical:  $\pm 0.1$  m; Horizontal:  $\pm 0.1$  m

RTK disabled

Vertical:  $\pm 0.1$  m (with vision positioning) ;

$\pm 0.5$  m (with GNSS positioning)

Horizontal:  $\pm 0.3$  m (with vision positioning) ;

$\pm 1.5$  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 axes 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

Frequency Used:

GPS: L1/L2;

GLONASS: L1/L2;

BeiDou: B1/B2;

Galileo: E1/E5a

First-Fixed Time: < 50 s

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

Horizontal 1 cm + 1 ppm (RMS)

1 ppm means the error has a 1mm increase for every 1 km of movement from the aircraft.

**GRIDX**  
metering and control

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## MAPPING FUNCTIONS

### Mapping Accuracy \*\*

Mapping accuracy meets the requirements of the ASPRS Accuracy Standards for Digital Orthophotos Class III

\*\* The actual accuracy depends on surrounding lighting and patterns, aircraft altitude, mapping software used, and other factors when shooting.

### Ground Sample Distance(GSD)

(H/36.5) cm/pixel,

H means the aircraft altitude relative to shooting scene (unit: m)

### Data Acquisition Efficiency

Max operating area of approx. 1 km<sup>2</sup> for a single flight(at an altitude of 182 m, i.e., GSD is approx. 5 cm/pixel, meeting the requirements of the ASPRS Accuracy Standards for Digital Orthophotos Class III

## GIMBAL

### Stabilization

3-axis (tilt, roll, yaw)

### Pitch

-90° to +30°

### Max Controllable Angular Speed

90°/s

### Angular Vibration Range

±0.02°

## 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 Sensing Range

2-98 ft(0.7-30 m)

### FOV

Forward/Rear: 60° (horizontal), ±27° (vertical)  
Downward: 70° (front and rear), 50° (left and right)

### Measuring Frequency

Forward/Rear: 10 Hz;

Downward: 20 Hz

### Operating Environment

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

## INFRARED

### Obstacle Sensing Range

0.6-23 ft(0.2 - 7 m)

### FOV

70°(Horizontal)

±10°(Vertical)

### Measuring Frequency

10 Hz

### Operating Environment

Surface with diffuse reflection material, and reflectivity > 8% (such as wall,trees, humans, etc.)

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## CAMERA

### Sensor

1" CMOS; Effective pixels: 20 M

### Lens

FOV 84°; 8.8 mm / 24 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)

### Mechanical Shutter Speed

8 - 1/2000 s

### Electronic Shutter Speed

8 - 1/8000 s

### Max Image Size

4864×3648 (4:3) ;

5472×3648 (3:2)

### Video Recording Modes

H.264, 4K: 3840×2160 30p

### Photo Format

JPEG

### Video Format

MOV

### Supported File Systems

FAT32 (≤ 32 GB) ;

exFAT (> 32 GB)

### Supported SD Cards

MicroSD, Max Capacity: 128 GB. Class 10 or UHS-1 rating required Write speed≥15 MB/s

### Operating Temperature Range

32° to 104° F (0° to 40°C)

## REMOTE CONTROLLER

### Operating Frequency

2.400 GHz-2.483 GHz(Europe,Japan,Korea)

5.725 GHz-5.850 GHz(United States, China)

### Transmission Power (EIRP)

2.4 GHz

CE / MIC / KCC: < 20 dBm

5.8 GHz

SRRC / FCC: < 26 dBm

### Max Transmission Distance

FCC: 4.3 mi(7 km);

SRRC / CE / MIC / KCC: 3.1 mi(5 km)

(Unobstrcted, free of interference)

### Power Consumption

16 W(typical value)

### Display

5.5 inch screen, 1920×1080, 1000 cd/m<sup>2</sup>,

Android System

Memory 4G RAM+16G ROM

### Operating Temperature Range

32° to 104° F (0° to 40°C)

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## 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

**Charging Temperature Range**

14° to 104°F(-10° to 40°C)

**Max charging Power**

160 W

## INTELLIGENT FLIGHT BATTERY CHARGING HUB(PHANTOM 4 CHARGING HUB)

**Voltage** 17.5 V

**Capacity** 4920 mAh

**Voltage** 7.6 V

**Battery Type** LiPo 2S

**Energy** 37.39 Wh

**Operating Temperature**

-4° to 104°F(-20° to 40°C)

**Operating Temperature Range**

41° to 104°F(5° to 40°C)

## INTELLIGENT BATTERY CHARGING HUB(WCH2)

**Input Voltage**

17.3 - 26.2 V

**Output Voltage and Current**

8.7 V, 6 A; 5 V, 2 A

**Operating Temperature**

41° to 104°F(5° to 40°C)

## AC POWER ADAPTER(PH4C160)

**Voltage**

17.4 V

**Rated Power**

160 W

## SDK REMOTE CONTROLLER

**Operating Frequency**

2.400 GHz to 2.483 GHz (Europe, Japan, Korea)

5.725 GHz to 5.850 GHz (Other countries/regions)

**EIRP**

2.4 GHz

CE / MIC / KCC: < 20 dBm

5.8 GHz

FCC / SRRC / NCC: < 26 dBm

**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**

32° to 104° F (0° to 40° C)

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