



TI Asahi

Precise Aerial Imaging System

PAIS D-800 8 Rotor Multicopter

Technical characteristics of PAIS MultiCopter:

- ※ The D-800 can carry mirrorless cameras or DSLR for a 20 minutes flight with 1 battery set. Optional battery packs of three sets for 60 minutes jobs.
- ※ Automatic landing and auto return.
- ※ In addition to FCC auto pilot and flight control IMU attitude recording unit, it also equipped PAIS POS-1 Position and orientation system that can solve precision trace element exterior orientation and to make a direct geopositioning, without ground control points or RTK base station.
- ※ A traditional large-format camera can be equipped with large-scale mapping. Optional GPS+GLONASS or GPS+GLONASS+BEIDOU GNSS can be added to POS-2 high-precision positioning and orientation systems.
- ※ Configuration 2D gimbal which is capable for tilt and pan photography.
- ※ Configuration 3D gimbal can be 360-degree panorama photography.

Performance Specifications:

The PAIS D-800 is a 8 rotors type UAS, standard payload capacity for carrying more than 18Mpixel high resolution digital camera (with video transmitter module), as shown. D-600 can be operated height of up to 500m, each operation endurance time for maximum 20 minutes.

The D-800 is designed for shooting high-definition video of the small area. 8 rotors type UAS with panoramic photography module, in addition to shoot aerial photographs, it also capable for 360 degrees panoramic photo shoot. With "Autopana Giga" software and "Pano2VR" post processing softwares, it can create more comprehensive and intuitive image of the shooting area.

Compact POS is designed for 8 rotor type UAS with integrating GPS module and micro-electromechanical IMU ADIS16405. GPS module is equipped U-Blox LEA-6T single frequency receiver. Both are providing high precision with a light weight. It is suitable for multirotor type UAS. In addition, the GPS module also supports external time mark recording function, it can record GPS time while shooting images. It can be a reference for a photo and POS data synchronization solution.



Recommended optional camera and lens

- | | |
|--------------------------------|------------------------------|
| ※ GoPro HERO3+ camera | ※ Olympus E-PL7 camera |
| ※ GoPro HERO4 camera | ※ F1.8 17mm lens |
| ※ Sony A7R camera/Sony 20/F2.8 | ※ F1.8 25mm lens |
| ※ Nikon D750 camera | ※ F2.5 14mm lens |
| ※ Nikon 20mm/F2.8D Lens | ※ Canon 6D camera |
| ※ Nikon 28mm/F2.8D Lens | ※ Canon F2.8 20mm lens |
| | ※ Voigtlander F3.5 20mm lens |



Precise Aerial Imaging System

PAIS D-800 8 Rotor Multicopter



Technical Specifications

Frame		FCC Autopilot	
Airframe diameter	104.5cm	Power Consumption	Max: 5W (0.3A@12.5V)
Arm length	38.6cm	Operating Temperature	-5°C to +60°C
Arm weight	325g (Including motor, Power Controller, propeller)		Controller: 54mm x 39mm x 14.9mm
Central unit Diameter	33.75cm	Diamention	IMU: 41.3mm x 30.5mm x 26.3mm
Center frame weight	1330g(Including landing gear mounting base)		PMU: 39.5mm x 27.6mm x 9.8mm
Size of payload	46cm(L)×51.1cm(Width:Bottom)×30.5cm(H) (Width:Top15.5 cm)	Weight	224g
Eletric Motor		Features	Built-in Receiver
KV	400rpm/V		Multiple Control Modes
Max power	500W		2-axis Gimbal Supported
Weight	158g(incl. fan)		Low Voltage Protection
Power Controler			External Receiver Supported
Working current	40A		Intelligent Orientation Control
Working voltage	6S LiPo		Sound Alarm
Compatible signal frequency	30Hz ~ 450Hz		4 Configurable Output*
Drive PWM frequency	8KHz	GCS ground control system	
Weight (with heat sink)	35g	Control range	>2 km Max
Folding propeller		Communication & control frequency	2.4G(2400MHz~2483MHz)
Material	High-strength plastic	Operating Temperature	-10°C ~+60°C
Size	15x5.2inch	Diamention (Antenaexcl)	73mmx47.8mmx17.1mm
Weight	13g	Weight	93g
Flight parameters		PAIS POS-1 Position and Orientation Systems	
Max. take off weight	6.0Kg ~ 11.0Kg	Height [cm]	3.5cm
Total Weight	4.2Kg	Width [cm]	6.5cm
Capacity of battery	LiPo (6S, 10000mAh~20000mAh, Min 15C)	Length [cm]	11.5cm
Maximum power	4000W	Weight [kg]	265g
Max. take off weight	1500W(@Takeoff Weight 9.5Kg)	Heading [deg]	<1
Endurance	15min (@15000mAh&Takeoff Weight9.5Kg)	Pitch and Roll [deg]	<0.5
Operating Temperature	-10 ~ +40 oC	operating temperature [C]	-40 to 85
Maximum Altitude	<500m	Tight orthogonal alignment [deg]	0.05
Communication & control frequency	2.4 GHz Wireless communication	Output Noise [deg/sec rms]	0.9
Position orientation	GPS,IMU	Data update rate[Hz]	200
Accuracy	Vertical :± 0.5m	Accelerometer Performance	
	Horizontal: ± 1m	Range In-run bias stability	
Wind loading	Beaufort scale 5 (12m/s)	Velocity random walk	±18 g
Lithium polymer battery	6S 10000mah~16000mah		0.2 mg
Auto Pilot	GPS auto pilot		0.2 m/s/√hr
	Fail safe	Gyroscope Performance	
	Auto/One key go home	Input range	±300 deg/sec
	Point surrounding mode	In-run bias stability	0.007 deg/sec
		Angular random walk	2 deg/√hr

*specofocations are subject to change without notice.

TI Asahi Co., Ltd.
International Sales Department
 4-3-4 Ueno Iwatsuki-Ku, Saitama-Shi
 Saitama, 339-0073 Japan
 Tel.: +81-48-793-0118
 Fax: +81-48-793-0128
 E-mail: International@tiasahi.com

www.pentaxsurveying.com/en/

Your Official Pentax Dealer



The CE marking assures that this product complies with the requirements of the EC directive for safety.

JSIMA
 Japan Surveying Instruments Manufacturers Association

Member symbol of the Japan Surveying Instruments Manufacturers' Association representing the high quality surveying products.

