TI Asahi

Precise Aerial Imaging System

PAIS D-600 6 Rotor Multicopter

Technical characteristics of PAIS MultiCopter:

※ The D-600 can carry mirrorless cameras or DSLR for a 15 to 20 minutes flight with 1 battery set. Optional battery packs of three sets for 45 to 60 minutes jobs.

※ Easy operating! Configuring route planning and control software, 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-600 is a 6 rotors type UAS, standard payload capacity for carrying more than 20Mpixcel 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-600 is designed for shooting high-definition video of the small area. 6 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 6 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
※ GoPro HERO4 camera
※ Sony A7R camera/Sony 20/F2.8
※ Nikon D750 camera
※ Nikon 20mm/F2.8D Lens
※ Nikon 28mm/F2.8D Lens
※ Olympus E-PL7 camera
※ F1.8 17mm lens
※ F1.8 25mm lens
※ F2.5 14mm lens
※ Canon 6D camera
※ Canon F2.8 20mm lens
※ Voigtlander F3.5 20mm lens

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Technical Specifications

Chassis	
Dimensions	110*110*52cm
Main blade Length	107cm
Arm length	37cm
Central unit Diameter	32.5cm

Power system	
Motor	Scorpion
KV	420KV
Diameter(motor)	40mm
Max power	780W
Weight(motor)	288g
Electronic Speed Controller	Drone 40A

Propeller	
Material	High-strength plastic
Dimensions	16*5.4 cm

Operation	
Max. take off weight	7~9kg
Maximum power	4500W
Control range	2 km (Max)
Endurance	20 mins
Maximum Altitude	500m
Operating Temperature	-40°C ~ +70°C
Drone Weight	5.3Kg
	Max. climb rate 2~2.7m/s
	Cruise Speed 6~8m/s
Wind loading	Beaufort scale 5 (10m/s)
Battery	6S 10000mah~16000mah
	(li-polymer)
Auto Pilot	GPS auto pilot
	Fail safe
	Auto/One key go home
	Point surrounding mode
Communication & control frequency	2.4 GHz
Position orientation	GPS,IMU
Accuracy	Verticla:±0.5m
	Horizontal:±0.5m

FCC Autopilot	
Power	Consumption Max: 5W (0.3A@12.5V)
Operating Temperature	-5°C to +60°C
Diamention	Controller: 54mm x 39mm x 14.9mm
	IMU: 41.3mm x 30.5mm x 26.3mm
	PMU: 39.5mm x 27.6mm x 9.8mm"
Weight	224g
Features	Built-in Receiver
	Multiple Control Modes
	2-axis Gimbal Supported
	Low Voltage Protection
	External Receiver Supported
	Intelligent Orientation Control
	Sound Alarm
	4 Configurable Output

GCS ground control system	
Control range	>2 km Max
Communication & control frequency	2.4G(2400MHz ~2483MHz)
Operating Temperature	-10°C ~+60°C
Diamention (Antena excl.)	73mmx47.8mmx17.1mm
Weight	93g

PAIS POS-1 Position and Orientation Systems	
Height [cm]	3.5cm
Width [cm]	6.5cm
Length [cm]	11.5cm
Weight [kg]	265g
Heading [deg]	<1
Pitch and Roll [deg]	<0.5
operating temperature [C]	-40 to 85
Tight orthogonal alignment [deg]	0.05
Output Noise [deg/sec rms]	0.9
Data update rate[Hz]	200
Accelerometer Performance	
Range In-run bias stability	
Velocity random walk	±18 g
	0.2 mg
	0.2 m/s/√hr
Gyroscope Performance	
Input range	±300 deg/sec
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/

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