

FS60-UAV Hyperspectral Measurement System



FS60-UAV hyperspectral measurement system adopts ultra-high-speed CCD imaging device with high signal-to-noise ratio to provide high-stability spectral image acquisition; it adopts self-developed high-efficiency and low-power image processing algorithm, which greatly prolongs the flight time of the whole machine. Reduced system power consumption.

By measuring the spectral image information of plants, water bodies, soil and other ground objects in real time, it can be applied to precision agriculture, crop growth and yield assessment, forest disease and insect pest monitoring and fire monitoring, coastline and marine environmental monitoring, lake and watershed environmental monitoring and other applications.

The system design is compact and the spectral resolution of the imaging spectrometer host is high. The whole machine is composed of high stability PTZ, hyperspectral imager, large-capacity storage system, wireless image system, GPS navigation system, ground receiving workstation, and ground control system.

Features

- Spectral Band Range: 400~1000nm
- Spatial dimension resolution: 1920
- Maximum number of spectral bands: 1920
- Spectral resolution: 2.5nm
- Perfect compatibility with multiple data formats
- Maximum flight endurance: 60 minutes (3kg load)
- Maximum load: 10kg
- Easy to operate, no need for a professional drone operator, and can be operated by one person
- The aircraft sampling location can be observed in real time through the ground station, and the route collected point by point can be set up using the ground station
- Data preview and correction functions: irradiance correction, reflectivity correction, area correction support batch processing
- Real-time common vegetation index calculation function
- Support custom real-time analysis model input function

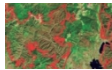
Application field



Geology and Mineral Resources Exploration



Precision Agriculture, Crop Growth and Yield Assessment



Forest disease and insect pest monitoring and fire prevention monitoring



Coastline and Marine Environment Monitoring



Pasture Productivity and Pasture Monitoring



Lake and Watershed Environmental Monitoring



Remote Sensing Teaching and Research



Meteorological research



Ecological Environment Protection and Mine Environment Monitoring



Water quality testing, soil monitoring



Quality inspection of agricultural and livestock products



Military, Defense and Homeland Security



Disaster prevention

Technical parameter

Serial number	Index	Parameter	Remark
1	Spectral camera spectral range	400-1000nm	/
2	Spectral camera spectral resolution	Better than 2.3nm	Up to 1.4nm
3	Spectral camera spatial resolution	0.9mrad	35mm lens
4	Spectral camera spatial channel number	480/960/1920	4-cell merge/2-cell merge/no merge
5	Spectral camera spectral channel number	300	4 Pixels Merge/No Merge
6	Spectral camera pixel bits	12bits	/
7	Spectral Camera Frame Rate	80Hz	/
8	Spectral camera field of view width	21.6°	35mm lens
9	Spectral camera lens focal length	16、 25、 35、 75mm	Standard 35mm, other optional
10	Visible light camera resolution	15 million pixels	/
11	Visible light camera shooting interval	Adjustable for more than 2s	/
12	Visible light camera battery life	Above 30 minutes	/
13	Standard plate reflectivity	50%, 15%, 30%, 75%, 95%	95% as standard, the rest are optional
14	Standard board size	0.5m×0.5m	Customizable
15	Number of standard boards	1	Can be added
16	The number of self-stabilizing axes of the gimbal	2 axes	/
17	PTZ working hours	40min	/
18	Number of motors per axis of the gimbal	2	/
19	Airborne data acquisition and control system CPU	I7	Optional
20	Onboard data acquisition and control system memory	8G	Optional
21	Airborne data acquisition and control system hard disk	1T	Optional
22	GPS positioning accuracy	Better than 0.3 meters	/
23	POS system acquisition mode	Hardware synchronization trigger acquisition	/
24	Ground station control mode	Remote intelligent control APP, Bluetooth connection	/
25	Ground station working distance	Radius 10KM	/
26	Ground station life time	12 hours	/
27	GPS mode	RTK and PPK support	Optional

Standard accessories

Serial number	Content
1	Host *1
2	Six-rotor UAV (including remote control) *1
3	Drone battery *1 set
4	Standard board *1

Serial number	Content
5	35mm lens
6	Air terminal control data acquisition and control software
7	Wireless keyboard mouse *1
8	Ground station APP control software

Serial number	Content
9	Ground station
10	Ground Station Antenna*1/ Data Transmission Antenna*1
11	Drone battery charger *1/ipad charger *1 /Gimbal battery charger *1