FS-50 series multi-spectral camera

FigSpec FS-50 series is a new generation of UAV-based multi-spectral camera launched by CHNSpec Technology (Zhejiang) Co.,Ltd , adapted to DJI M350/M300RTK flight platform, with 30-180 spectral channels and 2K resolution.

It can meet the application needs of precision agriculture, military defense and homeland security, disaster prevention and forestry monitoring, river and lake ecology, target identification and other industries.

Product Characteristics

- Number of ultra-high spectral channels: 30-180 spectral channels (different models)

- 2K spatial resolution

- Global shutter, 12bit high precision sampling data

- Real-time preview of data collected by the ground station

- DJI X-Port Control and power supply, 512GSSD mass storage

- DJI M350/M ground station real-time preview data collection

- 300 RTK UAV custom, plug and play

● FIGSPEC UAV real-time flight control software, FIGSPEC Merage puzzle software, FIGSPEC Studion image analysis software

Technical parameters

Model	FS-50/30	FS-50/60	FS-50/90	FS-50/120	FS-50/150	FS-50/180
Number of spectral channels	30	60	90	120	150	180
Spectral channel wavelength	400-1000nm output one wavelength every 20nm	400-1000nm output one wavelength every 10nm	400-1000nm output one wavelength every 6.66nm	400-1000nm output one wavelength per 5nm	400-1000nm output one wavelength per 4nm	400-1000nm output one wavelength per 3.33nm
Spectral resolution/half wave width	3.5nm	3.5nm	3.5nm	2.5nm	2.5nm	2.5nm
Space resolution	1920					
sampling rate	128 line/S					
imaging sensor	1/1.1 inch CMOS					
effective pixels	1920					
Shutter type	global shutter					
digitalizing bit	12bit					
FOV	25.36°					
ground resolution	2.8cm@h120m					
Covering width	54m@h120m					
optical window	High transmittance optical glass window					
Product size	≤155*95*119mm					
Product weight	≤840g					

Installation/power supply port	X-Port
power consumption	45w
picture format	12bit.SPE (compatible with third party analysis software such as envi)
Data storage space	512SSD
application software	FIGSPEC UAV,FIGSPEC Merage puzzle software,FIGSPEC Studion image analysis software
photography method	real-time collection

Crop growth assessment

Typical applications
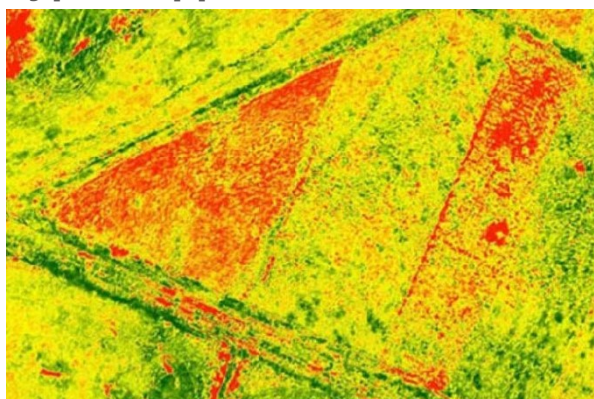

FigSpec Studio software is built with NDVI and other vegetation factors to accurately quantify the state of vegetation canopy at different spatial scales, quantitatively assess the health, stress and growth of crops and vegetation, and provide data support for crop growth assessment, yield prediction, disease and pest detection, etc.

Coverage evaluation

Based on the spectral fingerprint information of plants, accurate classification of plants in the region and crop area statistics are carried out to provide quantitative vegetation canopy data to provide data support for scientific research and production of agriculture and forestry ecological industry.
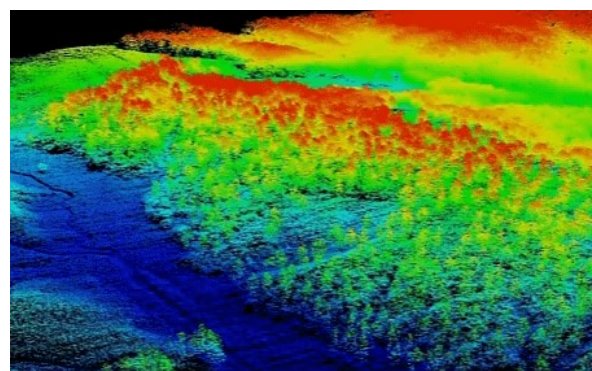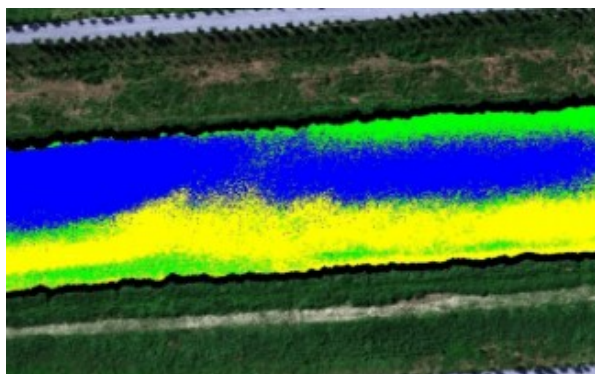
Water quality analysis and monitoring

Using the spectral data and chemical analysis results, the analysis model is constructed to realize the inversion of the classification and water quality parameters of black and odorous water bodies. Combined with spatial information to monitor the impact of domestic sewage and industrial wastewater on surrounding water bodies, help pollution source investigation and water environment assessment.

Water eutrophication monitoring

Spectral data are used to form a classification index to monitor water eutrophication and conduct spatial information statistics. Following the evaluation standards of water eutrophication status, it assists in analyzing water pollution sources such as farmland, aquaculture and fishery, and provides data and powerful data collection tools for pollution source investigation and water environment assessment.