

YUSENSE®



Dedicated to DJI M300/M350 RTK

# MS600 PRO

6-band multispectral camera

## 6-Band multispectral MS600 Pro



Six narrow-band spectral bands, sapphire optical Windows, large apertures, low distortion, broadband transmission, all-glass lens and an aluminum camera housing. In addition, MS600 V2 has a large dynamic range of intelligent dimming performance, which can meet the application needs of precision agriculture, forestry monitoring, river monitoring, ecological protection, target recognition and other industries.

## ■ Product Features

- ◆ Six band Multi-spectral bands.
- ◆ Ground resolution 8.65 cm @ h120m.
- ◆ 12bit raw data and global shutter.
- ◆ Airborne integrated control.
- ◆ Calculate reflectance in real time.
- ◆ Downlink light sensor(DLS).
- ◆ Fastest 1s synchronous imaging in all bands.
- ◆ Standard with 64GB TF card, maximum support 128GB TF card.
- ◆ Timing, Overlap Rate Trigger Mode.
- ◆ Special for DJI M300/M350 RTK UAV.

## ■ Spectral Remote Sensing Hardware System M300/M350 RTK + MS600 Pro

### Multi-source Load

The double gimbal supports the simultaneous mounting of the long light Ysense MS600 Pro multi-spectral camera and DJI standard camera, which easily realizes the synchronous acquisition of high-definition RGB, multi-spectrum, thermal infrared and other multi-source data.

### Airborne Integration

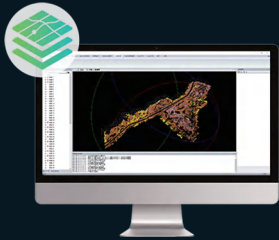
It is fully compatible with Payload SDK, Onboard SDK, Mobile SDK and other DJI SDKs, and can complete the parameter setting, status monitoring and data preview of airborne integration through DJI Pilot.

### Real-time Data Transmission

Use the Ysense Fly ground station APP developed by YUSENSE to synchronously execute cloud tasks, upload data in real time and display cloud index results, and synchronously submit cloud preprocessing tasks.



## ■ Data Preprocessing Software Yusense Map



Yusense Map is a powerful, easy-to-operate multi-spectral image processing software for UAVs. Without too much manual intervention, it can complete a series of tasks such as camera parameter reading, aerial triangulation, Band alignment, orthophoto generation and precise DSM.

**Band alignment:** Photogrammetric theoretical adjustment solution, automatic precise matching of homonymous image points, and sub-pixel multi-channel registration.

**split joint:** Automatic aerial triangulation, high-precision screening of matching points, seamless orthophoto stitching.

**Multi-source data processing:** It can process multi-spectral, thermal infrared, visible light and other data.

**Spectral index calculation:**Support free editing of index formula.

**High-precision radiometric correction:**Accurate radiation correction, synchronous calculation of real reflectivity, scientific restoration of the essential characteristics of the target.

## ■ Typical Application



### Condition monitoring

By using vegetation factors such as NDVI and LAI, quantifying the consistency of vegetation canopy status at different spatial scales, and using characteristic spectra of vegetation in different health states to quantitatively assess vegetation growth, which can provide data support for irrigation, fertilization, plant protection, yield evaluation and other work.



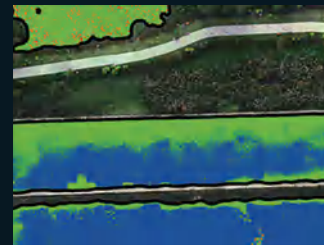
### Discolored pine monitoring

Using spectrum and texture information to achieve efficient suppression of the environmental background of soil, withered grass and other objects and high-precision identification of color-change pine. By accurately extracting the location, spatial distribution and canopy area of color-changing pine trees, we can provide data support for the management of diseased trees.



### Black and smelly water monitoring

By referring to the evaluation standard of surface black and smelly water, using the characteristic spectrum of black and smelly water to construct the classification index to achieve black and smelly water classification inversion and spatial information statistics. This technology can assist in analyzing the influence of domestic sewage and industrial wastewater on surrounding water, and finally help pollution source investigation and water environment assessment.



### Water eutrophication monitoring

Referring to the eutrophic state evaluation standard, the classification index is constructed by using the characteristic spectrum to realize the classification inversion and spatial information statistics of water eutrophication, to assist the analysis of the impact of farmland wastewater, fishery and aquaculture on the surrounding water body, and to assist the investigation of pollution sources and water environment assessment.

## ■ Product Parameters


Band configuration	Six multispectral channels	Power supply mode	X-Port
Target surface size	1/3"	Power consumption	—
Effective pixels	1.2Mpx	Image format	16bit original TIFF image & 8bit reflectance JPG
Shutter type	Global shutter	Video format	—
Quantitative figures	12bit	Data processing software	Yusense Map/Yusense Map Plus
Viewing Angle	49.5°×38.1°	Control method	Yusense Fly / DJI Pilot
GSD	8.65cm@h120m	Picture mode	Timed trigger, Overlap rate trigger
Image size	110m×83m@h120m	Frequency of taking pictures <sup>[2]</sup>	1Hz
Spectral band <sup>[1]</sup>	450nm@30nm, 555nm@27nm, 660nm@22nm 720nm@10nm, 750nm@10nm, 840nm@30nm	Storage medium	Standard with 64GB, A maximum of 128GB is supported (The transfer speed of the SD card needs to be U3 or higher)
Optical window	Sapphire optical window	Operating ambient temperature	-10°C~+50°C (Relative wind speed ≥ 1m/s)
Size		Storage Environment Temperature	-30°C~+70°C
Weight	≤670g	Environmental humidity	RH(%) ≤ 85% (Non condensation)
Installation interface	X-Port	Product certification	CE、FCC、RoHS


Note: [1] Standard wavelength, The following 18 wavelengths are allowed to be assembled and customized (consult YUSENSE marketing personnel for detailed assembly method and cost): 410nm @ 35nm, 450nm @ 30nm, 490nm @ 25nm, 530nm @ 27nm, 555nm @ 27nm, 570nm @ 32nm, 610nm @ 30nm, 650nm @ 27nm, 660nm @ 22nm, 680nm @ 25nm, 720nm @ 10nm, 720nm @ 15nm (high pass), 750nm @ 10nm, 780nm @ 13nm, 800nm @ 35nm, 840nm @ 30nm, 900nm @ 35nm, 940nm @ 30nm (tolerance ± 5 nm).


[2] Test results of storage media with data transmission speed rating of U3 and above (read and write speed ≥ 60MB/s).

Let every drone have the right spectral camera

YUSENSE Information Technology and Equipment (Qingdao) Co., Ltd.

 0532-68012101

 [www.yusense.com.cn](http://www.yusense.com.cn)

 Block F, Building 3, Zhongou Kechuang Park, No.67, Taihong Road, High-tech Zone, Qingdao City, Shandong Province, China

