

YUSENSE®



For Scientific Research

MS600 DUAL

6-Band Satellite Cooperative Multispectral Camera

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Based on the MS600 V2 multi-spectral camera host, the band configuration is optimized on the basis of maintaining the appearance and main performance of the product, which is consistent with the current mainstream satellite band design such as Sentinel-2 and Landsat-Next. It ensures the information unification of satellite-borne and airborne spectral data by scientific researchers in agriculture, forestry and grass industry, ecological environment and other fields to the greatest extent.

■ Product Features

- ◆ Six band Multi-spectral bands.
- ◆ Ground resolution 8.65 cm @ h120m.
- ◆ Cascade application scene synchronous exposures.
- ◆ 100MB network port/TTL serial port.
- ◆ 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.
- ◆ The band design continues the composition of the mainstream satellite band.
- ◆ Cascade application scene integration Skyport interface.

■ Spectral Remote Sensing Hardware System 8Air + MS600 Dual

Integration of Remote Sensing and Mapping

It is equipped with a multi-spectral camera MS600 Dual and a small mapping camera to acquire high-definition RGB and multi-spectral images at the same time.

Multi-directional Obstacle Avoidance to Ensure

Forward obstacle avoidance: binocular vision + 100m multi-target millimeter wave radar + 600m laser ranging radar;

Downward looking obstacle avoidance: binocular vision + laser ranging;

Terrain Data Obstacle Avoidance: Automatic Route Optimization.

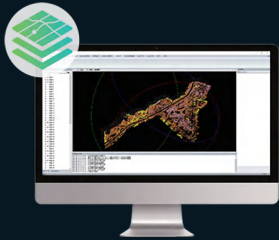


Long Endurance, High Adaptability, Suitable for Large Area Remote Sensing

Taking off and landing at an altitude of 4800 meters @ force 5 wind, cruising at an altitude of 7500 meters @ force 6 wind, the maximum operation duration under typical working conditions is 6 hours @ 1 kg, perfect system monitoring and warning, up to 28 fully automated emergency handling strategies, and field safety is guaranteed.

Applicable groups: government and enterprise users, large and medium-sized farmers, remote sensing service teams.

■ 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.

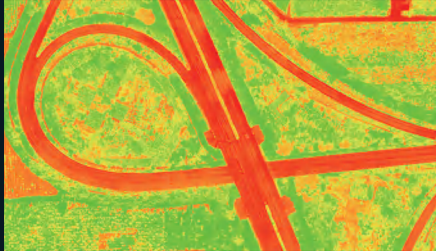
split joint: Automatic aerial triangulation, high-precision screening of matching points, seamless orthophoto stitching.

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.

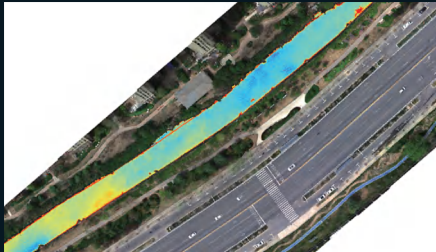
High-precision radiometric correction: Accurate radiation correction, synchronous calculation of real reflectivity, scientific restoration of the essential characteristics of the target.

- **Typical Application**



Vegetation Physiological Parameters Inversion

MS600 Dual is a supplement to MS600 V2 multi-spectral camera in the near-infrared band. When cascaded with MS600 V2, more vegetation canopy information can be mined, more spectral factors can be constructed, and the accuracy of canopy physiological parameters inversion of pan-vegetation scenes such as crops, forests and grasses can be improved.



Quantitative Inversion of Water Quality Parameters

MS600 Dual expands the number of blue-green bands, provides more refined data information for water body detection, especially provides more abundant information data for the inversion of total nitrogen, total phosphorus, ammonia nitrogen, COD and other parameters, and helps to improve the inversion accuracy of water quality chemical parameters.

■ Product Parameters

Band configuration	Six multispectral channels	Power supply mode ^[2]	12V
Target surface size	1/3"	Power consumption	≤10w@12V
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	WIFI (WEB interface access)/Ethernet/UART
GSD	8.65cm@h120m	Picture mode	External trigger, Timed trigger, Overlap rate trigger, Cascade trigger
Image size	110m×83m@h120m	Frequency of taking pictures ^[3]	1Hz
Spectral band ^[1]	410nm@35nm, 490nm@25nm, 610nm@30nm 650nm@27nm, 780nm@13nm, 940nm@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	≤80mm×75mm×55mm	Storage Environment Temperature	-30°C~+70°C
Weight	≤280g	Environmental humidity	RH(%) ≤85% (Non condensation)
Installation interface	4×M3	Product certification	CE, FCC, RoHS


Note: [1] The spectral band is not customizable with a tolerance of ± 5 nm.


[2] Please consult the marketing staff of Yuchen for details if other voltages are used for power supply.


[3] 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

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