Flexible Replacement of Imaging Module

MS400G SERIES

4-Band Ground-based Multispectral Camera

4-Band & RGB Ground-based Multispectral MS400G Series

Multispectral Measuring Instrument MS400G0

Standard band：555nm、660nm、720nm、840nm、RGB

Target range：3m

- ◆ Web-side parameter setting, multi-browser compatibility.
- ◆ Yusense Net supports networking access for multiple devices.
- ◆ Yusense Net enables data calculation and analysis.

Portable Multispectral Measuring Instrument MS400G1

Standard band：555nm、660nm、720nm、840nm、RGB

Target range：3m

◆ Tripod support, portable lithium battery power supply.
◆ Web-side parameter setting, multi-browser compatibility.
◆ Yusense Net supports networking access for multiple devices.
◆ Yusense Net enables data calculation and analysis.

Fixed Multispectral Measuring Instrument MS400G2

Standard band：555nm、660nm、720nm、840nm、RGB

Target range：Consultation and customization

- ◆ Fixed installation, degree of protection IP65.
- ◆ Web-side parameter setting, multi-browser compatibility.
- ◆ Yusense Net supports networking access for multiple devices.
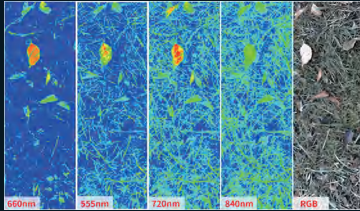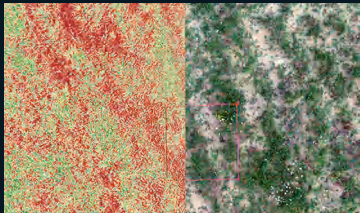- ◆ Yusense Net enables data calculation and analysis.

YUSENSE NET

Yusense Net is a status monitoring and command control software for MS400 series multi-spectral cameras, which supports the independent or networking use of single or multiple MS400 series multi-spectral cameras through LAN/public network communication, and can realize the parameter configuration, raw data acquisition, transmission and analysis of camera terminals. It meets the application needs of remote visual monitoring, plant phenotype research, plant phenology observation and so on.
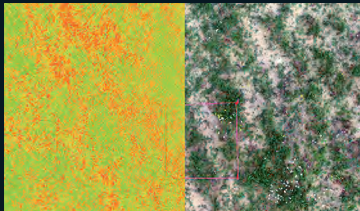
▪ Typical Application

Plant Phenotypic Studies

Close observation of plant growth status and synchronous multi-spectral/visible light imaging, comprehensive acquisition of plant shape, texture, spectral and other physiological characteristics, provide data basis for plant phenotype research.

Vegetation coverage monitoring

Based on the spectral differences between crops and weeds, soil and other environments, the precise identification and plant segmentation of crop seedlings are completed, the area of crop plants in the unit area is quantitatively evaluated, and the regional emergence rate is calculated, which provides data support for scientific research and breeding, farming and seedling supplement.

Assessment of Plant Health

Based on different vegetation coverage scenarios, the corresponding vegetation remote sensing index was selected, the vegetation growth and coverage status were analyzed, and the plant health degree was evaluated through the growth uniformity traits.

■ Product Parameters

Band configuration	Four Multi-spectral bands and one RGB sensor	Power supply mode [2]	12V
Target surface size	MS:1/4" ; RGB:1/4"	Power consumption	≤7W@12V
Effective pixels	MS:1.3Mpx ; RGB:8.0Mpx	Storage medium	Standard and support up to 64G capacity (transmission speed U3 and above rating) micro SD card
Shutter type	Global shutter/Shutter	Video format	—
Quantitative figures	MS:12bit ; RGB:8bit	Data processing software	Yusense Map/Yusense Map Plus
Viewing Angle	MS:36.7°×31.3° ; RGB:37.5°×28.6°	Control method	WIFI (WEB interface access)/Ethernet/UART/Yusense net
GSD	_	Picture mode	External trigger, Timed trigger, Cascade trigger
Image size	MS:2.0m×1.7m@3m ; RGB: 2.0m×1.5m@3m (G0&G1)	Frequency of taking pictures [3]	1Hz
Spectral band [1]	555nm@27nm,660nm@22nm, 720nm@10nm,840nm@30nm, RGB	Image format	Multispectral: 16 bit original TIFF & 8 bit reflectance JPEG; RGB: 8bit JPEG (including GPS and ambient light information)
Optical window	Optical-grade glass window	Operating ambient temperature	-10°C~+50°C(Relative wind speed≥1m/s)
Size	≤55mm×65mm×50mm	Storage Environment Temperature	-30°C~+70°C
Weight	≤175g	Environmental humidity	RH(%)≤85%(Non condensation)
Installation interface	7×M3	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] 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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