

Multilens Handheld Multispectral Imager

ATH1640

Features

- 4-eye or 6-eye camera.
- Multiple bandwidth options available.
- 10 channels available.
- Capable of capturing high-resolution multispectral images of each pixel with 1mm or even 0.5mm devices.
- Spectral image resolution is 8 million (3600*2200) pixels.
- Based on the Sony Alpha 7Rii sensor.
- Compared to conventional multispectral cameras, it has a wider dynamic range, more bands, and higher resolution.
- The sensor can be customized according to requirements.
- Capable of performing AI analysis, machine learning, and classification.
- The lens is made of all-metal and glass, with minimal impact from environmental factors.

Application

- Plant growth status.
- Agricultural monitoring.
- Cultural relic scanning and restoration, mural restoration.
- Digitalization of calligraphy and paintings.
- Textiles: pattern copying and artwork replication.
- Forensic identification: document examination and verification.

Description

The ATH1640 is a handheld multispectral imaging device independently developed and designed by Optosky. The system covers ten spectral bands within the full range of human-visible light. The ATH1640 is equipped with a built-in Sony Alpha 7Rii sensor and a quad-lens setup, enabling continuous digital alignment of all chromatic bands regardless of the acquisition distance. It can capture high-resolution multispectral images of each pixel, with resolutions as fine as 1mm or even 0.5mm, and is capable of performing AI analysis, machine learning, and classification. The ATH1640, featuring a quad-camera and multiple channels, offers high resolution, high definition, and high quality.

The ATH1640 employs high-resolution, highly reliable CCD imaging devices, providing clear imaging with minimal noise. It is particularly suited for scanning large, flat samples such as murals, calligraphy, and textiles. Due to its compact size, it is also ideal for mounting on drones for agricultural monitoring. The ATH1640 is lightweight and flexible, featuring high resolution, multiple spectral bands, comprehensive data analysis and processing capabilities, and functions such as real-time monitoring, calibration, and output of inversion results. It is widely applicable for both outdoor and laboratory settings. The ATH1640 combines multispectral imaging technology with high-definition photography, ensuring the collected data offers both high resolution and high spatial resolution. This allows for a thorough exploration of the unique spectral and spatial characteristics of materials.

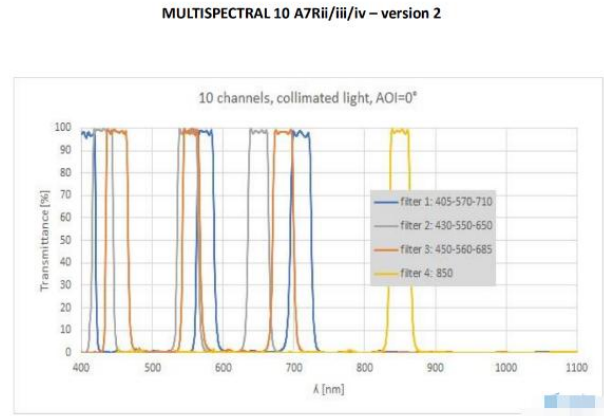
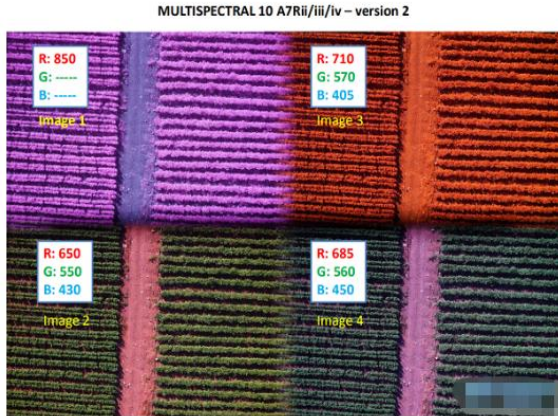


Product data information is current as of publication data. Products conform to specifications per the terms of Optosky Standard warranty.

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Tel: +86-592-6102588

1. Selection Guide

Model	Features
ATH1640	405nm、430nm、450nm、550nm、560nm、570nm、650nm、685nm、710nm、850 nm



Original Images and Band Distribution of ATH1640

2. Parameter

NO.	Specifications	ATH1640
Spectral performance	Spectral range	405nm~850nm
	Band distribution	405nm、430nm、450nm、550nm、560nm、570nm、650nm、685nm、710nm、850 nm
	Spectral resolution	3600*2200
	Maximum number of spatial channels	Single channel
	Number of spectral channels	10
	Dynamic range	12bit
Imaging lens*1	Focus mode	Manual
	Focus range	2m-∞
	F#	6.0
	Focal length	25 mm
	Dimensions	60*32.5mm
	Lens weight	181g
Mark	*1: Since the imaging lens can be customized, the table parameters are for reference only.	

3. Appearance Diagram

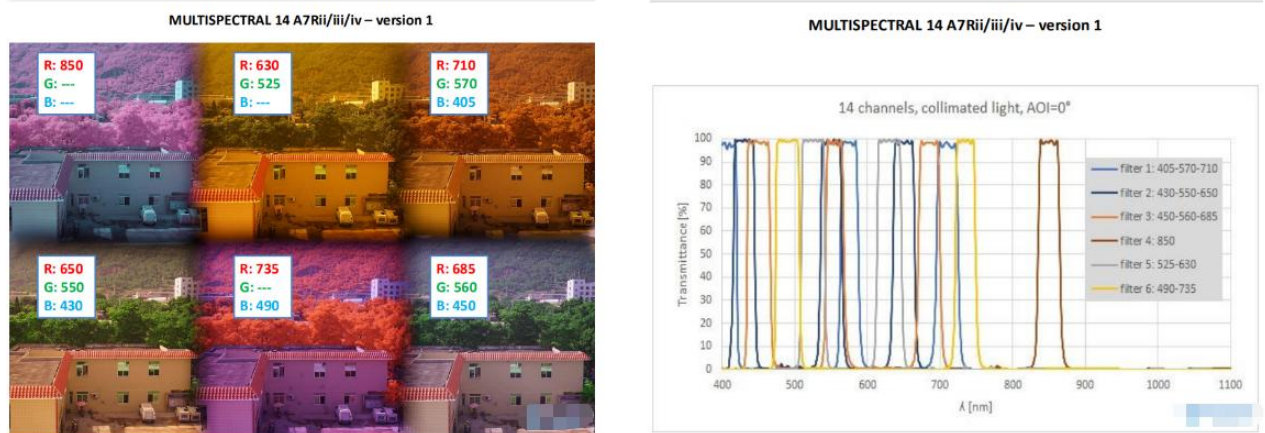


Image of ATH1640 Mounted on a Drone

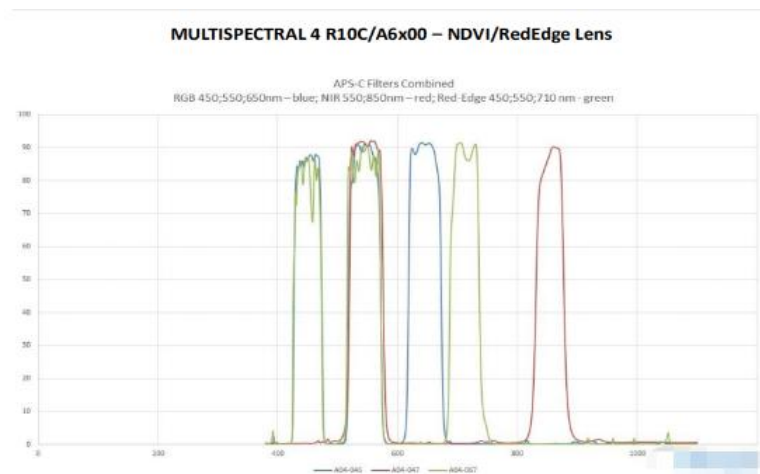
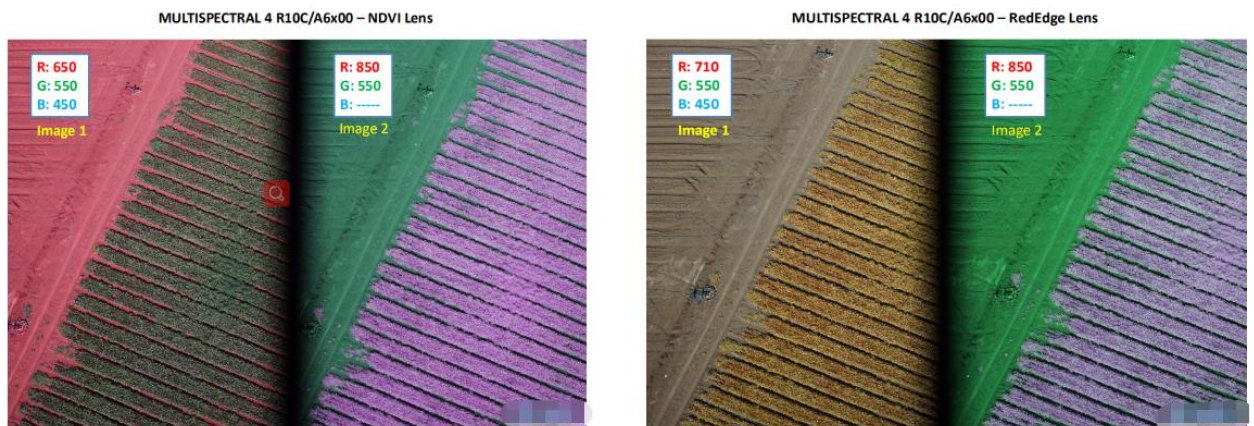


ATH1640 Mounted on a Drone

4. Applications



Multispectral Original Image of ATH1640 (Left) and Band Data (Right)



Multispectral Original Image of ATH1640 (Top) and Comparison of Band Data After EDVI and Red Edge Processing (Bottom)