

Three-Band Multispectral Imager

ATH1603

Features

- Selectable mounts compatible with any drone model
- All images are automatically geotagged with GPS
- Upgradable to a high-precision GPS receiver
- Trigger options: interval/timer and external PWM shooting mode
- Wide range of applications: agriculture, forestry, and mapping
- Easily extract images using PWM signals via USB
- No mechanical scanning, ensuring high reliability

Application

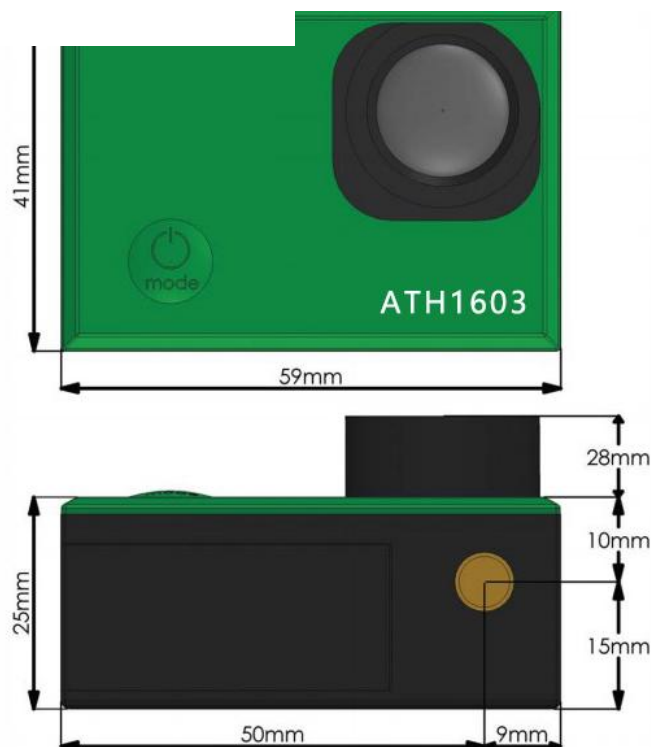
- Phenotypic analysis
- Crop health mapping
- Moisture stress analysis
- Leakage detection
- Fertilizer management
- Regional mapping
- High-altitude flights
- Meteorological research
- Disease identification, etc.

Description

The ATH1603 is a hyperspectral imager with three channels, independently developed by Optosky. It allows for the selection of lenses and filters based on application scenarios, meeting the needs of various environments.

The ATH1603 is a compact, cost-effective hyperspectral camera suitable for both ground and UAV airborne mapping applications. The ATH1603 features real-time imaging, high resolution, and low noise, making it widely applicable in industries such as mapping, plant disease detection, water quality monitoring, and meteorological research. Additionally, its capabilities in hyperspectral imaging make it useful for applications in gas chromatography and life science.

The ATH1603 hyperspectral camera is a new, easy-to-use hyperspectral imager equipped with a GPS receiver, automatically geotagging each image. It has a 12000-megapixel sensor capable of capturing high-resolution, high-quality data and provides real-time output of inversion results.



1. Spectral channel selection

Serial Number	Model	Channels	Parameters
1	ATH1603-RGB	RGB	Red + Green + Blue
2	ATH1603-OCN	OCN	Orange (615nm) + Cyan (490nm) + Near Infrared (808nm)
3	ATH1603-RGN	RGN	Red (660nm) + Green (550nm) + Near Infrared (850nm)
4	ATH1603-NGB	NGB	Near Infrared (850nm) + Green (550nm) + Blue (490nm)

2. Parameter

Serial Number	Specification	Parameter
1	Number of Channels	3
2	Central Wavelengths (RGB)	Blue: 450nm (Bandwidth: 35nm)
		Green: 555nm (Bandwidth: 27nm)
		Red: 660nm (Bandwidth: 22nm)
3	Resolution	4000x3000
4	Lens Focal Length	8mm
5	Field of View	48° × 36.8°
6	Bit Depth	12-bit
7	Shutter Speed	1/2000 to 1 min (Automatic)
8	ISO	50, 100, 200, 400, 800, 1600, Auto
	Data Output Interface	USB 3.0
9	Power Consumption	USB-powered, 5V, 1A
10	Size	8.2 x 6.7 x 6.45 cm
11	Weight	<150 g
12	Operating Temperature	-20 ~ 50°C
13	Storage Temperature	-20 ~ 50°C

3. Lens Selection

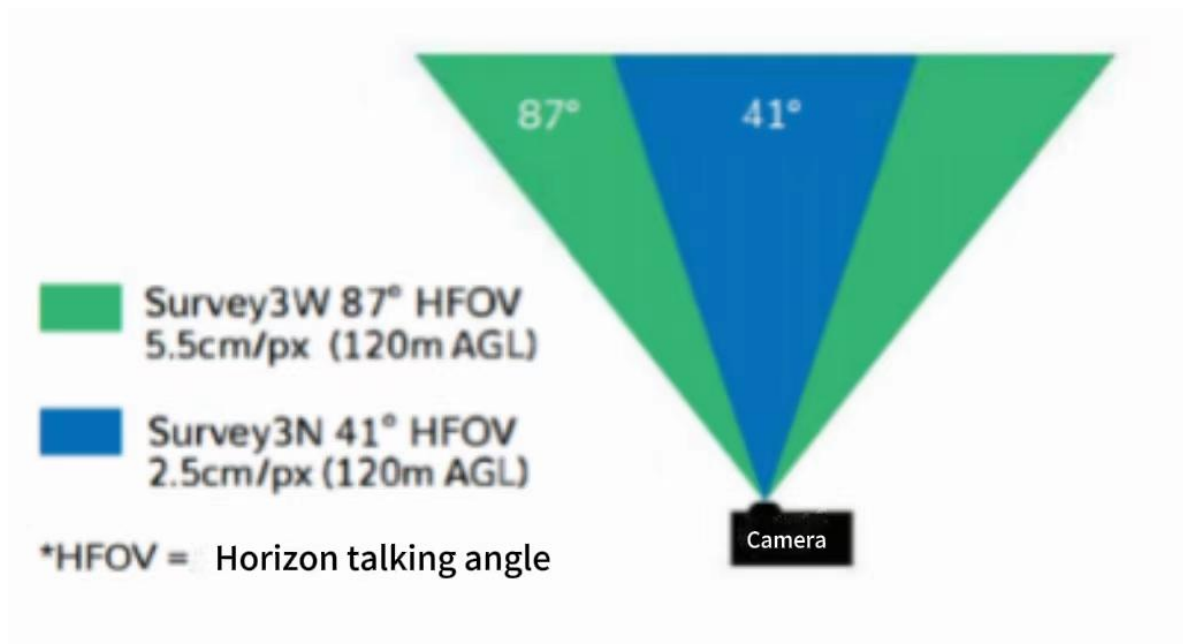


Figure 1. ATH1603 Lens Selection Diagram