

# Monarch Pro

## Multi-Spectral Camera



### Description

The Monarch Pro camera offers exceptional price-performance value, making it an ideal choice for industrial, laboratory, and budget-conscious users. With its compact size and versatility, this cost-effective spectral camera accommodates diverse user needs.

Equipped with a ColorIR® tunable filter, the Monarch Pro camera captures images in 10 NIR bands (680nm to 940nm). It also includes a user-friendly APK for seamless data collection. The camera package features an SDK, durable casing, and a range of accessories, ensuring convenient and smooth operation.

### Key Features

- Cost-effective
- Small size
- High resolution
- Versatile specification
- Plug & Play Connection
- APK for data collection
- Robust Aluminium casing
- Waterproof & Oilproof

### Applications

- Food quality
- Agriculture
- Biomedical
- Recycling
- Pharmaceuticals
- Art analysis
- Forensics

### Specifications

#### Sensor Characteristics

Sensor type	Global shutter, B/W, CMOS (1/5")
Preview mode	60fps
Cube acquisition (10 bands)	750ms (@1ms exposure)
Resolution (H x V)	1280 x 1024
Exposure time	1 - 500ms
Gain	x1 - x10
F-Number	4.7 mm
Effective focal length	4.98 mm
H-FOV (H, V, D)	31.5°, 25.5°, 39.8°

#### Spectral Characteristics

10 CWL bands (±10nm)	713,736,759,782,805,828,851,874,897,920nm
CWL FWHM (±15nm)	30nm
AOI dependency (average)	-1.1 nm/degree

#### System Specifications

Operating temperature	15-35°C (non-condensing) Thermal shift of (-)1.1nm / °C
Storage Temperature	10°C - 50°C (non-condensing)
IP Level	55
Input voltage	5V DC
Power consumption	<1.6W (peak)
Dimensions	64 x 50 x 20 mm
Weight	50g
Interface	USB-C
Saved Data format	10bit ENVI, 8bit PNG

#### Software - Data collection

Monarch Application	Windows 10 & 11 (64bit)
Windows API	C / Python
Linux API	C / Python