



# Monarch PCBA

Hyperspectral imaging module

## Description

Monarch PCBA-Unispectral low-cost hyperspectral imaging module designed for rapid integration into customerspecific spectral imaging solutions. The API/SDK interfaces enables the secondary development on Windows/Linux/Android systems. With the low-cost design, compact form factor, and developer-friendly features, the module empowers customers to swiftly develop multispectral application products tailored to diverse industries, and a broad range of application scenarios.

## Key Features

- High-speed cameras
- Spectral center wavelength range: 510-690nm;713-920nm, continuously adjustable
- 60 frames/s with single band mode
- Compatible with Windows/Android/Linux platforms with API
- USB 3.0 high-speed data transfer
- Improve SDK support, quickly and conveniently integrate with customer systems

## Applications

- Food quality
- Smart Agriculture
- Research Institutepol
- Industrial sorting
- Biopharmaceuticals

## Specifications

### NIR, VIS Hyperspectral Camera

F/#	4.7
EFL	4.98 mm
H-FOV,V-FOV, D-FOV	31.5°,25.5°,39.8°
Image Resolution	1280x 1024
Preview Mode	60 FPS
Gain	X1-X10
Exposure Time	1-500 ms

### Spectral

FWHM	25nm±5@image center
Spectral Response	500-700nm;700-930nm
Spectral Band Range	510-690nm;713-920nm
Spectral Accuracy	±5nm
Working Mode	Single frame/spectral image cube
Data Format	ENVI (RAW) & PNG
Spectral Channel Numbers	181;208

### System

Input Voltage	5 VDC
Power Consumption	<1.6W (Peak)
Peak Current	0.32A
Interface Protocol	USB-3.0

### Working Environment

Temperature	0 ° -70 ° C
Humidity	<90%
Size	60*40*10.2mm

### System Development

Host Computer	Windows/Linux/Android
Develop Tools	Python/C API