

Keen M615

Short-Wave Infrared Camera

Keen M615 lightweight short-wave infrared module adopts a self-developed InGaAs shortwave Infrared FPA detector with a pixel size of $15\mu\text{m}$ and an array size of 640×512 , specifically developed for mobile scenarios. Featuring SWaP, it measures $22 \times 22 \times 23.5\text{mm}$ and weighs only 18g, and has a low power consumption of 0.65w, suitable for mobile and portable battery-powered systems such as UAVs, handheld devices, and outdoor observation.



Product Highlights

SWaP

- Compact size: $22 \times 22 \times 23.5\text{mm}$ (without lens)
- Light weight: 18g (without lens)
- Low power consumption: 650mW@25°C



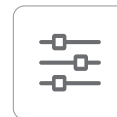
All Weather Multi-Scenario Imaging

- The product showcases a robust capacity to permeate haze and smoke, enabling long detection distances even in adverse weather conditions.
- The InGaAs spectral band covers various commonly used laser wavelengths, making it widely applicable in the laser field.
- It features some thermal imaging characteristics, capable of detecting high-temperature radiation targets ($\geq 250^\circ\text{C}$).



Excellent Performance

- Equipped with a self-developed InGaAs short-wave infrared detector with a resolution of 640×512 and a pixel size of $15\mu\text{m}$.
- Imports high-quality image processing algorithms and TECLESS solutions to ensure detailed imaging effects in TEC-less temperature control conditions.
- Excellent exposure adaptability, smoothly switching as the scene changes.



Specifications

Product Model	Keen M615
Detector Type	InGaAs short-wave infrared focal plane detector
Spectral Response Range	0.9-1.7μm
Pixel Pitch	15μm
Resolution	640×512
Frame Rate	25Hz
Effective Pixel Rate	≥99.8%
Integration Type	Snapshot global shutter
Exposure Time Range	0.005~20ms
Output Data Depth	bit/10bit/14bit
Readout Noise (Typical value)	35e@Gain0
Optional Gain	3-level
Dynamic Range	50dB(Gain0),60dB(Gain1),73dB(Gain2)
Average Pixel Dark Current	≤100ke/s@20°C
On-board Image Processing	Non-uniformity correction, brightness/contrast adjustment, time domain/airspace noise reduction, digital detail enhancement
Power Supply Range	5V DC
Typical Power Consumption @25°C	<650mW
Digital Video	MIPI/Cameralink/USB3.0
Communication Interface	RS-422/UART (1.8V)
Optical Interface	C-Mount
Weight	18g±2g
Dimensions	22mm×22mm×23.5mm
Operating Case Temperature	-40°C~+50°C
Storage Case Temperature	-45°C~+70°C
Vibration	4.06g, random vibration, 3 axes
Shock	80g, 4ms, sawtooth waveform, 3 axes/6 directions

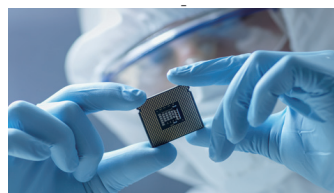
Applications



Handheld Devices



Commercial Drone



Semiconductor Testing



Outdoor Observation and Sight

Company Profile

Raytron Microelectronics Co., Ltd. is a wholly-owned subsidiary of Raytron Technology Co., Ltd., providing global customers with infrared detectors, core modules, and industry solutions.

Our products are widely used in various fields, including infrared temperature measurement, night vision observation, machine vision, intelligent driving, Commercial Drone, smart industry, security monitoring, Internet of Things, medical epidemic prevention and gas detection.

With the mission of "to create incremental value for customers with technological advancements", we are committed to leaving a name in the history of constantly expanding human perception capabilities.



Official Website



LinkedIn Official Account

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