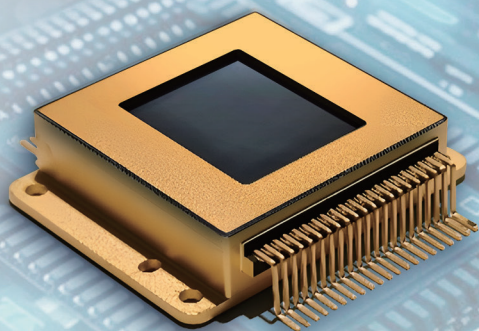




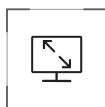
RSS102M1

Short-Wave Infrared InGaAs Focal Plane Detector

The RSS102M1 is a digital high-resolution short-wave infrared InGaAs focal plane detector with an area array size of 1280×1024 and a pixel pitch of $10\mu\text{m}$. It supports high frame rate ROI windowing and is housed in a hermetically sealed metal package with a built-in TEC for active temperature control. The product features a large array format, high resolution, low noise, and low power consumption. It can be widely used in applications such as visual enhancement, machine vision, photovoltaic inspection, and space remote sensing.



Digital



High Resolution



Low Noise



Low Power Consumption



Large Array Format



Built-in TEC

Product Imaging



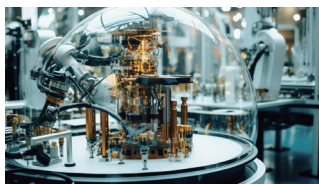
Specifications

Product Model	RSS102M1
Sensor	InGaAs
Spectral Response Range	0.9~1.7 μ m
Quantum Efficiency	>70%(1.0~1.6 μ m)
Optical Fill Factor	100%
Pixel Pitch	10 μ m
Area Array Size	1280 $\times$ 1024
Effective Pixel Rate	$\geq$ 99.8%
Maximum Frame Rate	60fps (full window)
Integration Type	Global shutter
Minimum Integration Time	1 μ s
Readout Noise (Typical)	45e@20 $^{\circ}$ C, high gain mode
Optional Gain	3-level
Average Pixel Dark Current	$\leq$ 90ke/s@20 $^{\circ}$ C
Operating Power Consumption	$\leq$ 350mW
Signal Output Swing	/
Effective Data Output Bit Depth	13bit
Dynamic Range	$\geq$ 48dB
Response Inhomogeneity	$\leq$ 5%, non-corrected
Packaging Type	Gas-tight metal packaging (built-in single stage TEC)
Outline Dimensions	32.0mm $\times$ 23.5mm $\times$ 7.0mm (excluding pin size)
Device Weight	28 $\pm$ 2g
Operating Environment Temperature	-40 $^{\circ}$ C~+65 $^{\circ}$ C
Storage Environment Temperature	-45 $^{\circ}$ C~+70 $^{\circ}$ C

Applications



Vision Enhancement



Machine Vision



Photovoltaic Inspection



Space Remote Sensing

Company Profile

Raytron Microelectronics Co., Ltd.

+86 400-998-9038 +86 198 0619 1838

marketing@raytrontek.com www.raytron-microelectronics.com

Version: PL202610V1



Official Website



LinkedIn Official Account