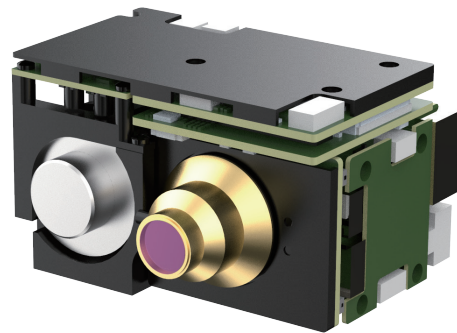


Photon H615

Medium-Wave HOT Cooled Infrared Module

Photon H615 medium-wave HOT cooled infrared module is provided with the high-performance T2SL cooled infrared FPA detector, is designed with SWaP, and is carried with the self-developed image processing algorithm. It works flexibly and reliably and plots quickly. It supports multiple digital video interfaces, is suitable for multiple focus and continuous zoom lenses, and is widely applied in the mini pod, handheld, border and sea defense and other scenarios. It provides an SDK, which is simple and easy to use, reducing secondary development costs.



Product Highlights

Industry-Leading SWaP Design

- The dimensions are as small as 76.5×69.2×46.6mm, weight is as low as 359g, and power consumption is as low as 6W, meeting the needs of miniaturized applications.



Delicate Images with High Sensitivity

- The NETD is as low as 20mK, meeting the requirements of long-distance observation of tiny targets.



Self-Developed Algorithm for Intelligent Imaging

- Equipped with a new self-developed image algorithm, it supports a wide dynamic range and adaptive integral time, providing the best imaging effect for different scenarios.



Fast Imaging for Timely Capture

- Featuring the new generation T2SL detector, it has a resolution of up to 640×512, a frame rate of up to 50Hz, and a cooling time as low as 2.5 minutes, meeting the requirements of large-range dynamic target capture.



High Reliability and Durability

- The mean time to failure (MTTF) is up to 20000h, and the operating temperature ranges from -40°C to +70°C, ensuring reliable performance in extreme environments such as polar regions or deserts.



Specifications

Product Model		Photon H615
Specifications		
Detector Type	II superlattice-like refrigerated infrared focal plane detector	
Resolution	640×512	
Pixel Pitch	15μm	
Frame Rate	50Hz/30Hz	
F #	F4.0/F5.5	
Response Band	3.6-5.0μm	
NETD	≤20mK@F4.0, 25°C/≤25mK@F5.5, 25°C	
Detector Dead-pixel Rate	≤0.5%	
Cooled Time@25°C	≤3min	
Optional Lens	Straight-tube Focus free : 50mm, 200mm Straight-tube continuous zoom: 15–300mm, 18–275 mm, 25-460mm, 33-660mm, 88-1100mm	
Image Adjustment		
Brightness/Contrast Adjustment	Automatic/manual	
Polarity	Black hot/white hot (default)	
Cross Cursor	Display/hide/move	
Electronic Zoom	1.0~8.0×continuous zoom (step 0.1×)	
Image Processing	Non-uniformity correction, digital filtering noise reduction, digital detail enhancement	
Image Flip	Left/right, up/down, diagonal flip	
Power Source		
Power Supply Range	12±0.5 V DC, typical voltage: 12V	
Typical Power Consumption @25°C	Stable power consumption≤ 6W, peak power consumption≤ 13W	
Interface		
Analog Video	PAL format	
Digital Video	Cameralink/SDI/DVP/MIPI	
Serial Communication Interface	RS422 (default baud rate: 115200)	
External Synchronization	Internal synchronization (default)/external synchronous output/external synchronous input/adaptive synchronization	
Physical Properties		
Dimensions (no lens)	76.5mm×72.8mm×46.6mm	
Weight (no lens)	≤364g	
Environmental Adaptability		
Operating Case Temperature	-40°C~-70°C	
Storage Case Temperature	-45°C~-75°C	
Random Vibration	4.16g	
Shock	Sawtooth waveform, 30g, 11ms (3 axes/ 6 directions, 3 times each)	
MTTF	≥20000h	
Storage Life	≥10years	

Applications



Border Surveillance



Coastal Surveillance



UAV



Handheld Device

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



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