

Turing A640H

Uncooled Infrared Thermal Module

Turing A640H uncooled infrared thermal module provides multiple serialized lenses and various kinds of user extension components, offering trustworthy solutions to high-reliability application scenarios. It is widely applied to fields of outdoor observation, integrated pods and driving assistance.



Product Highlights

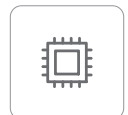
High Reliability

- Impact resistance reaching 1000g@0.3ms.



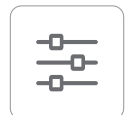
Excellent Performance

- Support shutterless algorithms, providing a smooth and continuous user experience.



Multiple Selections

- Provide 10+ athermalized lenses applicable to apps with different imaging distances.
- Provide multiple interface options such as USB, DVP, BT656, LVCMOS, and analog video.



Specifications

Model	Turing A640H
Performance Characteristics	
Detector Type	Uncooled VOx Infrared Detector
Resolution	640 × 512
Pixel Pitch	12μm
Frame Rate	50Hz (60Hz, optional)
Spectral Band	8~14μm
NETD	≤40mK@25°C, F#1.0
Image Adjustment	
Polarity	Black-hot/White-hot
Palette	Support
Reticle	Display/Blank/Move
Edge Highlight	Support
Digital Zoom	1.0~8.0× continuous zoom (step size: 0.1)
Image Processing	Shutterless
Mirroring	Scenario-based non-uniformity correction, digital filtering noise reduction, and digital detail enhancement
Power Supply	
Power Supply Range (Typical)	3.9~5V DC
Power Consumption (Typical, @25°C, Without Expansion Board)	5~18V DC supported by user extension components
	≤0.7W
Interface	
Digital Video	BT.656/DVP
Analog Video	1-channel PAL system
Extension Components	MIPI/USB/Analog video/BT.656/DVP
Serial Communication Interface	RS232/UART (3.3V)/USB2.0
Physical Characteristics	
Dimensions (Without Lens and Extension Components)	26mm × 26mm × 19.8mm
Weight (Without Lens and Extension Components)	21g ± 1g
Lens	6.9mm/9.1mm/13mm/19mm/35mm/55mm/75mm/100mm/25mm-75mm continuous zoom lens
Environment Adaptability	
Operating Temperature	-40°C~+80°C
Storage Temperature	-45°C~+85°C
Humidity	5~95%, non-condensing
Vibration	6.06g, random vibration, all axes
Impact	1000g@0.3ms, optical axis direction

Applications



Outdoor Observation



Security Monitoring



Commercial Drone



Driving Assistance

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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