

# Turing A640H

## Uncooled Infrared Module

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Turing A640H uncooled infrared 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

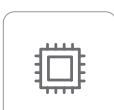
#### High Reliability

- Impact resistance reaching 1000g@0.3ms.



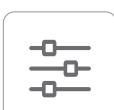
#### Excellent Performance

- 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, LVCMS, and analog video.



## Specifications

Model	Turing A640H
<b>Performance Characteristics</b>	
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
<b>Image Adjustment</b>	
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) Shutterless
Image Processing	Scenario-based non-uniformity correction, digital filtering noise reduction, and digital detail enhancement
Mirroring	Horizontal/Vertical/Diagonal
<b>Power Supply</b>	
Power Supply Range (Typical)	3.9~5V DC 5~18V DC supported by user extension components
Power Consumption (Typical, @25°C, Without Expansion Board)	≤0.7W
Power Protection	Overshoot, undervoltage, and reverse connection supported by user extension components
<b>Interface</b>	
Digital Video	BT.656/DVP/LVCMOS
Analog Video	1-channel PAL system
Extension Components	MIPPI/USB/Analog video/BT.656/DVP
Serial Communication Interface	RS232/UART (3.3V)
<b>Physical Characteristics</b>	
Dimensions (Without Lens and Extension Components)	26mm×26mm×19.8mm
Weight (Without Lens and Extension Components)	21g±1g
<b>Environment Adaptability</b>	
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



UAV



Driving Assistance

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The information is for illustrative purposes only. The pictures and technical specifications are subject to change without notice. Sample No.: O2024-Turing A640H-2P001