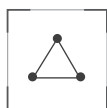




SE5 640

Uncooled Infrared Thermal Imaging Module

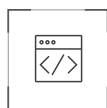
The SE5 640 series uncooled infrared module integrates a proprietary second-generation IR ISP and a shutterless algorithm to deliver sharp, clear image output in 640×512 high resolution. Its built-in Ultra-Clear mode further enhances the user viewing experience, while multiple pre-set image modes guarantee seamless adaptation to a wide range of complex field conditions. Key applications span outdoor integration, security and surveillance, and forest fire monitoring, highlighting its broad adaptability and field-proven performance.



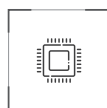
60Hz High
Refresh Rate



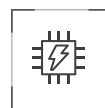
Shutterless
Algorithm



Crisp
Clean Imagery



Proprietary ISP
Chip With Robust
Performance and Low
Power Consumption

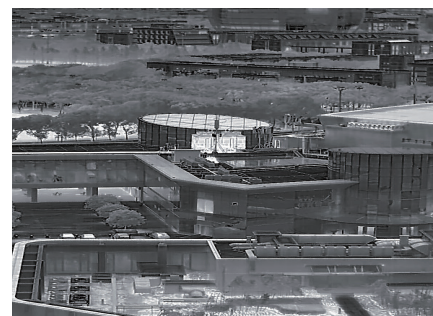
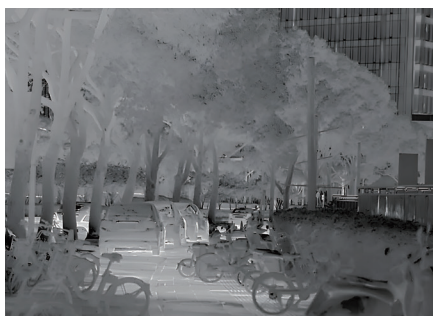


Picture-in-Picture
(PiP) Mode



Ultra-Clear
Mode

Product Imaging



Specifications

Product Model		SE5 640
Specifications		
Detector Type	Vanadium oxide uncooled infrared focal plane detector	
Spectral Range	8~14μm	
Pixel Pitch	12μm	
NETD	≤30mK@25°C,F#1.0	
Detector Frame Rate	60Hz	
Image Adjustment		
Brightness/Contrast Adjustment	0~100 levels selectable	
Electronic Zoom	1.0~8.0× continuous zoom (step 0.1×)	
Polarity	White-hot / black-hot	
Pseudocolor	Multiple pseudo-color palettes	
Crosshair	Display/hide/move	
Image Processing	Non-uniformity correction/digital filtering noise reduction/detail enhancement	
Nonuniformity Correction	Shutter calibration mode	
Image Mirroring	Left/right, up/down, diagonal	
Focusing Method	Athermalized prime/manual focus lens	
Temperature Measurement		
Range	High image quality: -20°C~ +150°C; wide range: 50°C~ +600°C	
Temperature Measurement Accuracy (Typical value)	Target temperature: -20°C ~ +150°C, accuracy: ±2°C or ±2% of the reading Target temperature: 50°C ~ +600°C, accuracy: ±5°C or ±3% of the reading	
Temperature Measurement Tools	Analysis tools: spot, line, area	
Information Row	Information bar: displays temperature and other measurement data	
Isothermal Pseudocolor	Supported	
Electrical Parameters		
Power Supply Voltage (Typical)	5V	
Typical Power Consumption @25°C	<1W	
Analog Video	/	
Digital Video	BT656/PAL/mipi/usb2.0/dvp	
Serial Communication Interface	UART/I2C	
Physical Characteristics (Excluding lens and flange)		
Dimensions (W×L×H) mm	≤28mm×28mm	
Weight(g)	28g±3g	
Optional Lenses		
Lens (mm)	19mm/35mm/55mm	
Environmental Adaptability		
Operating Case Temperature	-40°C~+65°C	
Storage Case Temperature	-50°C~+80°C	
Humidity	5% - 90% (non-condensing)	
Vibration	6.06 g, random vibration, all axes 6.06g	
Shock	80 g @ 4 ms, rear-peak sawtooth wave, 3 axes, 6 directions	

Applications



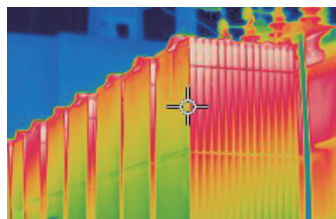
Outdoor integration



Security and surveillance systems



Forest fire monitoring



Industrial Temperature Measurement

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