

iLC212R

Uncooled Thermal Module (For Consumer Electronics)

Cost Effective Thermal imaging
Solution for Emerging Applications



Description

Oriented for optimal Size-Weight-and-Performance-Cost (SWaP-C), the iLC212R thermal module delivers smooth thermal images and provides various standard interfaces to facilitate the secondary development of OEM customers. Its cost control accelerates the popularization of thermal imaging technology in the consumer industries, such as Community Fireproof & Theftproof, Smart Building, Smart Breeding, Home Care etc.

Optimal SWaP-C

- Reduced cost: self-developed WLP 256×192/12μm infrared detector with high annual output
- Miniature size: 21mm×21mm×12.8mm (with 3.2mm lens)
- Light weight: as low as 8.6g±1g (with 3.2mm lens)

Intelligent & Precise

- Powerful image processing algorithm: NUC, 3DNR, DNS, DRC, EE
- Non-contact temperature measurement with range of -20°C~150°C and remarkable accuracy of ±3°C or ±3%

Easy Integration

- Provide Windows/Linux/ARM SDK
- Digital video output: RAW/YUV/BT656
- Various interfaces: 30pin-HRS/RS232-TTL/USB2.0/GPIO

Specifications

Model	iLC212R
IR Detector Performance	
Sensitive Material	Vanadium Oxide
Resolution	256×192
Pixel Size	12μm
Spectral Response	8μm ~14μm
Typical NETD	≤45mK
Image Processing	
Frame Rate	25Hz/30Hz
Start-up Time	3s
Digital Video	RAW/YUV/BT656
Image Algorithm	NUC/3DNR/DNS/DRC/EE
Image Display	Black Hot/White Hot/Pseudo Color
PC Software	
ICC Software	Module Control and Video Display
Electrical Specifications	
Standard External Interface	30Pin_HRS: DF40C-30DP-0.4V(51), (HRS, Male)
USB Expansion Board	Type-C
Communication Interface	RS232-TTL/USB2.0
Digital Video Interface	CMOS8/USB2.0
Supply Voltage	3.3V±0.1V VDC
Typical Power Consumption	0.7W
Temperature Measurement	
Operating Temperature Range	-10°C~+50°C
Temperature Measurement Range	-20°C~+150°C, 0~550°C, Support Customization and Expansion
Temperature Measurement Accuracy	Greater of ±3°C/±3% Greater of ±8°C/±8% (IP67)
Regional Temperature Measurement	Support Maximum, Minimum and Average Value of the Output Regional Temperature
SDK	Windows/Linux/ARM; Achieve Video Stream Analysis and Conversion from Gray to Temperature
Physical Characteristics	
Size (mm)/Weight	21×21×12.8 (With 3.2mm Lens) 8.6g
	21×21×17.4 (With 3.2mm Lens; IP67) 13g
	21×21×17.4 (With 7mm Lens; IP67) 17.3g
Installation Interface	M1.6x3.3; Two Interfaces / Surface; 2 Surfaces in Total
Environmental Adaptability	
Operating Temperature	-40°C ~ +70°C
Storage Temperature	-45°C ~ +85°C
Humidity	5%~95%, non-condensing
Vibration	5.35grms, 3-axis
Shock	Half Sine Wave, 40g/11ms, 3-axis, 6-direction
Certification	ROHS2.0/REACH
Optics	
Optional Lens	3.2mm/F1.1; FOV: 51°×39°; Coating: AR; Fixed Athermal 7mm/F1.1; FOV: 24°×18°; Coating: HD/DLC; Fixed Athermal
Protection Level	Reserved Installation Position for Sealing Ring, With the Module Up to IP67

Specifications are subject to change without prior notice.

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