GLOBAL SENSOR TECHNOLOGY

iLC212R Uncooled Thermal Module

Cost Effective Thermal imaging Solution
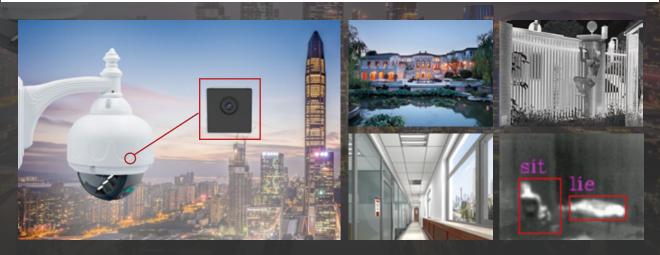## for Emerging Applications

iLC212R

iLC212R-P

Oriented for optimal Size-Weight-and-Performance-Cost (SWaP-C), the iLC212 thermal module delivers sharp, 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 & Theft-proof, 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℃~150℃ and remarkable accuracy of ±3℃ or ±3%

" Easy Integration "

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

Model	iLC212R	iLC212R-P
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	Non-uniformity Correction (NUC) 3D Noise Reduction (3DNR) De-noise (DNS) Dynamic Range Compression (DRC) Edge Enhancement (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	TTL-232/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℃~+50℃	
Temperature Measurement Range	-20℃~+150℃; Support Customization and Expansion	
Temperature Measurement Accuracy	Greater of ±3℃/±3% (@23℃±3℃) Temperature Measurement Distance is 1.5m	Greater of ±8℃/±8% (@23℃±3℃) Temperature Measurement Distance is 1.5m
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		
Dimension (mm)	21×21×12.8 (With 3.2mm Lens)	21×21×17.4 (With 3.2mm Lens)
Weight	8.6g±1g (With 3.2mm Lens)	13g±1g (With 3.2mm Lens)
Installation Interface	M1.6x3.3; Two Interfaces / Surface; 2 Surfaces in Total	
Environmental Adaptability		
Operating Temperature	-40℃～+70℃	
Storage Temperature	-45℃～+85℃	
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; HFOV: 55.6±2.8°; Coating: AR; Fixed Athermal	
Protection Level	/	IP67 Rating

Specifications are subject to change without prior notice.

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