

COIN Series WLP+ASIC Uncooled Thermal Modules

A New Method of Lightweight IR Products



Coin612/R Coin417/R Coin412/R Coin212/R

COIN series uncooled thermal module integrates the wafer-level package detector produced by GST, ASIC chip for imaging processing, micro-motion electromagnetic threshold shutter and general optical interface. It is beneficial to OEM customers for secondary development and suitable for the development and integration of thermal imager in various applications.



















"Minimum size and weight"

■ Dimension 20mm*20mm*10.4mm, Weight < 8g.



"Sharp image presentation"

- NETD < 40mK;
- NUC、IDE、AGC intelligient algorithm.



"Fast integration"

■ DVP/LVDS interface, raw/YUV image data output, serial port control.

Electrical Specification Standard External Interface Communication Mode Supply Voltage Supply Voltage Consumption Operating Temperature Measurement Operating Temperature Range Temperature Accuracy SDK Support ARM/windows/linux SDK, full screen thermography Physical Characteristic Dimension(mm) Dimension(mm) Dimension(mm) Dimension(mm) Temperature Tem	Model	COIN212/R	COIN412/R	COIN612/R	COIN417/R	
Pheck Pitch 12µm			IR Detector F	Performance	1	
Spectral Range NETD Admix Image Processing Frame Rate Support 9Hz/25Hz/30Hz/50Hz/60Hz Start-up Time	Resolution	256×192	400×300	640×512	400×300	
NETD Admix Image Processing Frame Rate Support 9Hz/25Hz/30Hz/50Hz/60Hz Start-up Time Analog Video PAL/NTSC Digital Video Digital Video Digital Video Digital Video Digital Video Digital Video Digital Zoom Linear/Histogram/his	Pixel Pitch	12µm	12µm	12µm	17µm	
Frame Rate Support 9Hz/25Hz/30Hz/50Hz/60Hz Start-up Time	Spectral Range	8~14μm				
Frame Rate Support 9Hz/25Hz/30Hz/50Hz/60Hz Start-up Time	NETD	< 40mK				
Start-up Time		Image Processing				
Analog Video Digital Video V16/YUV/BT656 Dimming Linear/Histogram/Mixed three modes Digital Zoom 1-8X continual zoom, step size 1/8 Black hot/Mhite hot/Pseudo color Image Dipoly Black hot/Mhite hot/Pseudo color Image Dipoly Mon-uniformity Correction (NUC);Auto Gain Control (AGC);Intelligent Detail Enhancement (DE);Digital noise reduction (DNI) Standard Standard Standard Supply Voltage Supply Voltage 3.5-5.5V Consumption 40.3W 40.3W 40.75W Temperature Measurement Operating Temperature Range 1-0°C-50°C Temperature Range 1-0°C-50°C Temperature Range Temperature Temperatur	Frame Rate	Support 9Hz/25Hz/30Hz/50Hz/60Hz				
Digital Video Digital Video Dimming Linear/Histogram/Mixed three modes Linear/Histogram/Mixed three modes Digital Zoom 1-8X continual zoom, step size 1/8 Black hot/Mhite hot/Pseudo color Image Dipelay Black hot/Mhite hot/Pseudo color Image Algorithm Non-uniformity Correction (NUC);Auto Gain Control (AGC);Intelligent Detail Enhancement (IDE);Digital noise reduction (DNI Electrical Specification Standard Esternal Interface Sopin_HRS Communication Mode Supply Voltage 3.5-5.5V Consumption	Start-up Time	<3\$				
Dimming Linear/Histogram/Mixed three modes Digital Zoom 1-9X continual zoom, step size 1/8 Image Display Black hot,White hot/Pseudo color Image Direction Horizontally/Vertically/Diagonally Flip Image Algorithm Non-uniformity Correction (NUC);Auto Gain Control (AGC);Intelligent Detail Enhancement (IDE);Digital noise reduction (DNI Electrical Specification Standard External Interface 50pin_HRS 50pin_HRS Communication RS232-TTL, 115200bps Consumption <0.3W 0.75W Temperature Measurement Operating Temperature Range 1.0°C-50°C Temperature Range 1.0°C-50°C SDK Support ARM/windows/linux SDK, full screen thermography Physical Characteristic Dimension(mm) 20X20X10.4 (with lens) 25.4X25.4X14.1 (with shutter) Module: 13g = 0.5g (with hutter) Module: 13g = 0.5g (with hutter)	Analog Video	PAL/NTSC				
Digital Zoom 1-8X continual zoom, step size 1/8	Digital Video	Y16/YUV/BT656				
Image Display Image Direction Image Direction Image Algorithm Non-uniformity Correction (NUC); Auto Gain Control (AGC); Intelligent Detail Enhancement (IDE); Digital noise reduction (DNI Electrical Specification Standard External Interface Communication Mode Supply Voltage 3.5-5.5V Consumption	Dimming	Linear/Histogram/Mixed three modes				
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Electrical Specification Standard External Interface Communication Mode Supply Voltage Supply Voltage Consumption Operating Temperature Measurement Operating Temperature Range Temperature Range Temperature Accuracy SDK Support ARM/windows/linux SDK, full screen thermography Physical Characteristic Dimension(mm) Dimension(mm) Dimension(mm) Dimension(mm) Veight To Sg 0.5g (with lens) Temperature Te	Image Direction	Horizontally/Vertically/Diagonally Flip				
Standard	Image Algorithm	Non-uniformity Correction (NUC); Auto Gain Control (AGC); Intelligent Detail Enhancement (IDE); Digital noise reduction (DNR)				
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Temperature Range Temperature	Consumption	<0.3W <0.75W				
Temperature Range -10°C-50°C Temperature Measurement Range -20°C-150°C, 100°C-550°C Temperature Accuracy ±3°C or ±3% SDK Support ARM/windows/linux SDK, full screen thermography Physical Characteristic Dimension(mm) 20X20X10.4 (with lens) 25.4X25.4X14.1(with shutter) 25.4X25.4X14.1(with shutter) Weight 7.5g±0.5g (with lens) Module:13g±0.5g (with shutter) 13g±0.5g (without lens) Module:13mm Lens: 22.4g±0.5g Module+13mm Lens:24.4g±0.5g Module+19mm Lens:43.9g±0.5g 13g±0.5g (without lens) Environmental Operation Temperature -40°C ~ +70°C Storage Temperature Humidity 5%-95%, non-condensing Vibration Random Vibration 5.35grms, 3 axis Shock Half-sine wave, 40g/11ms, 3 axis 6 direction	Operating	Temperature Measurement				
Temperature Engineering	Temperature Range	-10°C~50°C				
SDK Support ARM/windows/linux SDK, full screen thermography Physical Characteristic Dimension(mm) 20X20X10.4 (with lens) 25.4X25.4X14.1(with shutter) Module:13g±0.5g (with shutter) Module:13g±0.5g (with shutter) Module:13g±0.5g Module:	Measurement Range	-20°C~150°C, 100°C~550°C				
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Temperature Storage Temperature -45°C ~ +85°C Humidity 5%~95%, non-condensing Vibration Random Vibration 5.35grms, 3 axis Shock Half-sine wave, 40g/11ms, 3 axis 6 direction		Environmental				
Temperature Humidity 5%~95%, non-condensing Vibration Random Vibration 5.35grms, 3 axis Shock Half-sine wave, 40g/11ms, 3 axis 6 direction		-40°C ~ +70°C				
Vibration Random Vibration 5.35grms, 3 axis Shock Half-sine wave, 40g/11ms, 3 axis 6 direction	Storage Temperature	-45°C~+85°C				
Shock Half-sine wave, 40g/11ms, 3 axis 6 direction	Humidity	5%~95%, non-condensing				
	Vibration	Random Vibration 5.35grms, 3 axis				
Online	Shock	Half-sine wave, 40g/11ms, 3 axis 6 direction				
Uptics			Optics			
Optional lens Fixed focus athermal: 3.2mm Fixed focus athermal: 8.8mm/ 13mm/19mm Fixed focus athermal: 9 15mm/19mm	Optional lens	Fixed focus athermal:3.2mm	Fixed focus ath 13mm/	ermal:8.8mm/ /19mm	Fixed focus athermal:9.7mm/ 15mm/19mm	