PLUG Series
Uncooled Thermal Modules (Thermography)

**Accurate Measurement
Professional Inspection**

Predictive Maintenance

Machine Vision

Metallurgical Petrochemical

New Energy

Railway Safety

Building Inspection

Description

The PLUG-R series come with additional temperature measurement function based on the PLUG series imaging modules. It provides radiometric temperature data for each pixel, which ensures the accurate temperature measurement and professional thermographic inspections. With the powerful SDK database, you can design your own thermographic IR camera just with a housing for the PLUG-R series.

For Industrial Inspection & Thermography

- Support high thermal sensitivity, NETD < 30mK
- With optional temperature measurement function and customizable temperature range

Plug & Play for Easy Integration

- Standard 50pin interface, various expansion boards available
- Standard optical interfaces; a full set of infrared lenses
- Perfect SDK database, ongoing update and optimization

Various Expansion Components

- USB3.0/VPC/Cameralink/HDMI/Gig-E network port

Model	PLUG1212R	PLUG617R	PLUG417R
IR Detector Performance			
Resolution	1280×1024	640×512	384×288
Pixel Size	12μm	17μm	
Spectral Range	8μm ~14μm		
Typical NETD	＜50mK	＜30mK	
Image Processing			
Frame Rate	25Hz	25Hz/30Hz	25Hz/30Hz/50Hz/60Hz
Start-up Time	25s	15s	15s
Analog Video	/	PAL/NTSC	
Digital Video	RAW/YUV/BT1120	RAW/YUV/BT656/LVDS	
Expansion Component	USB 3.0/Cameralink/HDMI	USB/VPC/Cameralink/Gig-E	
Dimming Mode	Linear/Histogram/Mixed		
Digital Zoom	1~8X 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)　Image Detail Enhancement (IDE)		
Electrical Specification			
Standard External Interface	50pin_HRS Interface		
Communication Mode	RS232-TTL, 115200bps		
Supply Voltage	5V±0.3V	4~6V	4.5~6V
Typical Power Consumption	2W/5V@23±5℃	1.5W	2W
Temperature Measurement			
Operating Temperature Range	-10℃~+50℃		
Temperature Range	-20℃~+150℃，0℃~+550℃		
Temperature Accuracy	Greater of ±3℃ or ±3%	Greater of ±2℃ or ±2%	
SDK	Support ARM/Windows/Linux, Achieve Video Stream Analysis and Conversion from Gray to Temperature		
Physical Characteristics			
Size (mm)	56×56×44	44.5×45.95×36.6	44.5×44.5×36.6
Weight	220g±5g	90g±3g	77g±3g
Environmental Adaptability			
Operating Temperature	-40℃ ~ +70℃		
Storage Temperature	-45℃~+85℃		
Humidity	5%~95%, non-condensing		
Vibration	Random Vibration 5.35grms, 3-axis		
Shock	Half-sine Wave, 40g/11ms, 3-axis 6-direction		
Optics			
Optional Lens	Fixed Focus Athermal: 14mm/25mm	Fixed Focus Athermal: 7.5mm/13mm/19mm/25mm	Fixed Focus Athermal: 7.5mm/13mm/19mm/25mm

Specifications are subject to change without prior notice.

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