![GSTiR logo]

PLUG1212
Uncooled Thermal Module

Mega Pixel
HD Thermal Imaging Solution

Predictive Maintenance

Railway Safety

Airport Monitoring

Security Surveillance

UAV Payloads Monitoring

Scientific Research

Forest Fire Prevention

Description

With large array 1280×1024/12μm infrared detector, full series of optical components and powerful image processing algorithm, the PLUG1212 thermal module provides superior performance, clear images, edge sharpening and enhanced details at any harsh environments. It is widely used in various industries to meet personalized observation and temperature measurement needs.

Ultra-clear Presentation
- 1280×1024 high definition for wider FOV and longer distance
- 12μm pixel size for better spatial resolution

Easy Integration
- Various image output interfaces: DVP/LVDS
- Standard optical interfaces that are compatible with full series of lenses

Sharp Image & Rich Details
- High sensitivity, typical NETD＜50mK
- Powerful image process algorithms

Accurate Temperature Measurement
- Range: -20℃～+150℃, 0℃～550℃
- Accuracy: greater of ±3℃ or ±3%

High Adaptability
- Adapt to all kinds of harsh environment like rain, snow, fog etc.

Model	PLUG1212	PLUG1212R
IR Detector Performance		
Resolution	1280×1024	
Pixel Size	12µm	
Spectral Range	8µm ~14µm	
Typical NETD	<50mK	
Image Processing		
Frame Rate	25Hz	
Start-up Time	25s	
Analog Video	/	
Digital Video	RAW/YUV/BT1120	
Extension Component	USB 3.0/Cameralink/HDMI	
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	5±0.3V (Fixed Focus) 12V±1V (Continuous Zoom)	5±0.3V
Typical Power Consumption	2W/5V@23±5°C (Fixed Focus) 4.2W/12V@23±5°C (Continuous Zoom)	2W/5V@23±5°C
Temperature Measurement		
Operating Temperature	/	-10°C~50°C
Temperature Measurement Range	/	-20°C~+150°C, 0°C~+550°C (Support Extension & Customization)
Temperature Measurement Accuracy	/	Greater of ±3°C or ±3%
Regional Temperature Measurement	/	Support Maximum, Minimum and Average Value of the Output Regional Temperature
SDK	/	Support Windows/Linux/ARM, Achieve Video Stream Analysis and Conversion from Gray to Temperature
Physical Characteristics		
Size (mm)	56×56×44 (Without Lens)	
Weight	220g±5g (Without Lens)	
Environmental Adaptability		
Operating Temperature	-40°C-+70°C	
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	
Optics		
Optional Lens	Fixed Focus Athermal: 14mm/19mm/25mm Continuous Zoom: 30~90mm, 30~180mm	Fixed Focus Athermal: 14mm/25mm