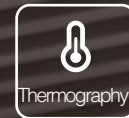


## TWIN Series Uncooled Thermal Modules

Compact Structure  
High Performance



### Description

TWIN series uncooled thermal modules integrate GST self-developed ceramic package infrared detector, high performance signal processing circuit and enhanced image algorithm to output clear, sharp images and accurate temperature data. Its compact design and light weight structure could satisfy customers' strict integration requirements on size, weight and power consumption.

#### Optimal SWaP-C

- Mini size: 25.4mm×25.4mm×22mm (without lens)
- Light weight: as low as 20g (without lens)
- Power consumption as low as 0.8W

#### Outstanding Performance

- Powerful image process algorithm: NUC/3DNR/DNS/DRC/EE
- Temperature measurement range: -20°C~+150°C, 0~+550°C (customizable)
- Temperature measurement accuracy: ±2°C or ±2%

#### Strong Universality

- Good stability in various harsh environments
- Image data output: USB2.0/DVP/LVDS
- Support Windows/Linux SDK; achieve video stream analysis and conversion from gray to temperature

# Specifications

Model	TWIN612/R	TWIN412/R
<b>IR Detector Performance</b>		
Resolution	640×512	384×288
Pixel Size	12μm	
Spectral Range	8μm ~14μm	
Typical NETD	<30mK	
<b>Image Processing</b>		
Frame Rate	25Hz/30Hz	25Hz/30Hz/50Hz
Start-up Time	5s	
Analog Video	PAL/NTSC	
Digital Video	YUV/BT.656/LVDS/USB2.0	
Image Display	11 in Total (White Hot/Lava/Ironbow/Aqua/Hot Iron/ Medical/Arctic/Rainbow1/Rainbow2/Red Hot/Black Hot)	
Image Algorithm	NUC/3DNR/DNS/DRC/EE	
<b>Electrical Specifications</b>		
Standard External Interface	50pin_HRS	
Communication Interface	RS232/USB2.0	
Supply Voltage	4~5.5V	
Typical Power Consumption	0.8W	
<b>Temperature Measurement</b>		
Operating Temperature Range	-10°C~+50°C	
Temperature Measurement Range	-20°C~+150°C, 0°C~+550°C	
Temperature Measurement Accuracy	Greater of ±2°C or ±2%	
SDK	Windows/Linux; Achieve Video Stream Analysis and Conversion from Gray to Temperature	
<b>Physical Characteristics</b>		
Size (mm)	25.4×25.4×22.0mm (Without Lens)	
Weight	20g (Without Lens)	
<b>Environmental Adaptability</b>		
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	
<b>Optics</b>		
Optional Lens	Fixed Athermal: 13mm/19mm/25mm/35mm/50mm/70mm (TWIN612/412) Fixed Athermal: 13mm/19mm/25mm (TWIN612R/412R)	

Specifications are subject to change without prior notice.

**Wuhan Global Sensor Technology Co., Ltd**

+86 27 81298493

marketing@gst-ir.com

www.gst-ir.net

No. 6 Huanglongshan South Rd, Wuhan 430205, P.R.China