

Uncooled Thermal Modules for Temperature Screening STiHA Series



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STiHA Series Uncooled Thermal Modules for Temperature Screening

STiHA series thermal module is mainly composed of a 384x288/17 μ m infrared detector, optical lens, and SDK for temperature measurement with accuracy up to $\pm 0.5^{\circ}\text{C}$. The captured temperature data and heat distribution of the target can be used to achieve radiation-free, non-invasive early disease diagnosis and long-distance, large-scale body temperature screening. Customers can quickly develop and integrate various temperature measuring systems like medical diagnosis and epidemic prevention.

✓ Non-contact Temperature Measurement

- $\pm 0.5^{\circ}\text{C}$ high precision temperature measurement without external black body
- Detect distance: 0.5m (for medical diagnosis) / 5m (for epidemic prevention and animal thermography)

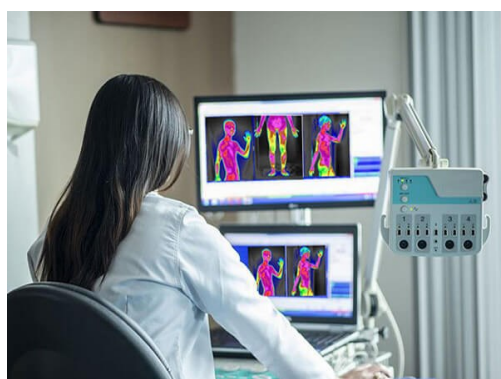
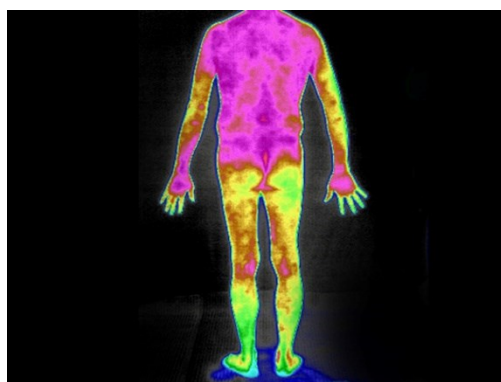
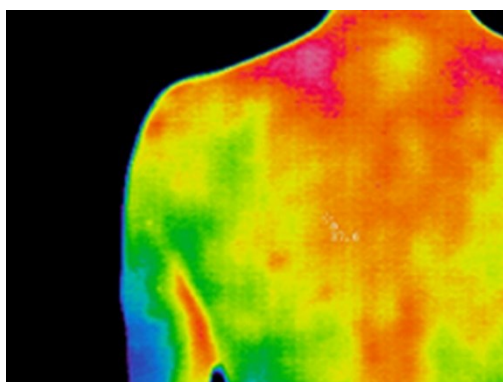
✓ Fast Integration into System

- An all-in-one standard Type-C interface with power supply, data transmission and control.
- Support Windows/Android/Linux SDK; Achieve video stream analysis and conversion from gray to temperature

✓ Compact & Light Structure

- Small size: 25.4mm x 25.4mm x 30.3mm (with lens)
- Light weight as low as 32.2g

Applications



STiHA417W 384x288/17μm Thermal Module for Medical Thermal Image Screening

STiHA417W thermal module is specially developed for medical diagnosis. It is integrated with self-developed wafer level packaging 384×288/17μm infrared detector, 9.1mm lens, 30pin standard interface (Optional Type-C expansion board) and SDK for temperature measurement with accuracy up to ±0.5°C. The captured temperature data and heat distribution of target can be used to achieve radiation-free, non-invasive early disease diagnosis and long-distance, large-scale body temperature screening.

With typical NETD<50mk/f1.0/25°C, and temperature uniformity ≤±0.3°C (better than the industry average of ±0.5°C), the overall thermal imaging uniformity of the STiHA417W thermal imaging module is better, and its temperature measurement function is more stable.

Without an external black body, the STiHA417W thermal imaging module has a compact & light structure, which guarantees a lower integration cost. STiHA417W thermal camera module has an all-in-one standard Type-C interface with power supply, data transmission and control, customers can quickly develop and integrate various temperature measuring systems like medical diagnosis and epidemic prevention.

The STiHA417W thermal camera module can be quickly integrated into various medical thermal imaging devices, and it is expected to be widely used in the fields of Disease Screening, Traditional Chinese Medicine Physiotherapy, Health check-ups, Rehabilitation, etc. at present and in the future.

Specifications

Model	STiHA417W
IR Detector Performance	
Resolution	384×288
Pixel Size	17μm
Spectral Range	8~14μm
Typical NETD	< 50mk
Image Processing	
Frame Rate	25Hz
Start-up Time	5s
Digital Video	RAW/YUV
Image Display	Black Hot/White Hot/Pseudo Color
Image Algorithm	NUC/3DNR/DNS/DRC/EE/SFFC
Electrical Specification	
Standard External Interface	Type-C
Communication Mode	USB
Supply Voltage	5±0.5V
Typical Power Consumption	0.85W
Temperature Measurement	
Operating Temperature Range	-10°C ~ +50°C
Temperature Measurement Range	15°C ~ 50°C
Temperature Measurement Accuracy	≤±0.5°C (No wind indoor, target temperature range 32°C~42°C)
Measuring Distance	Two Modes: 0.5m or 5m
SDK	Support Windows/Android/Linux SDK, Achieve Full Screen Thermography
Physical Characteristics	
Size (mm)	≤25.4×25.4×30.3 (With 9.1mm Lens)
Weight	32.2±3g (With 9.1mm 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: 9.1mm
Certificate	
Standard	ROHS/REACH

STiHA417 Infrared Module Specially Developed for IR Fever Sensing System

STiHA417 uncooled infrared thermal camera is specially developed for infrared (IR) fever sensing systems in order to measure human body temperature anytime and anywhere. It consists of a 400×300@17μm infrared detector, 7mm infrared optical lens, and a specialized SDK for human body temperature measurement.

Data captured by STiHA417 can be transferred to the back-end integration platform via a 50-pin or USB3.0 interface to achieve the display of full-screen temperature data and infrared thermal images and many other functions. With such an infrared thermal imaging module, customers could develop and integrate their own IR fever sensing system quickly and efficiently.

The STiHA417 thermal camera is specially developed for elevated skin temperature screening. It is easy to be integrated into an infrared thermographic system which has been used for fighting against COVID-19 and fast to detect elevated body temperature in places that have a large volume of people, such as airports, subways, train stations, schools, shopping centers, etc.

Specifications

Model	STiHA417
IR Detector Performance	
Resolution	400x300
Pixel Pitch	17μm
Spectral Range	8~14μm
NETD	<30mK
Image Processing	
Frame Rate	25Hz
Start-up Time	<10s
Extension Component	USB Video
Dimming Mode	Linear/Histogram/Mixed
Image Display	Black Hot/White Hot/Pseudo Color
Image Direction	Horizontally/Vertically/Diagonally Flip
Image Algorithm	NUC/AGC/IDE/DNR
Electrical Specification	
Standard External Interface	TYPE-C
Communication Mode	USB
Supply Voltage	5±0.5V
Typical Power Consumption	<1.5W
Temperature Measurement	
Operating Temperature Range	16°C ~ 32°C
Temperature Range	20°C ~ 50°C
Temperature Accuracy	±0.5°C (No Wind Indoors, 32°C~42°C Target)
SDK	ARM/Windows SDK, Full Screen Thermography
Physical Characteristics	
Dimension (mm)	44.5x42.5x58.9 (iHA417+7mm Lens)
Weight	iHA417+7mm Lens≤135g
Environmental Adaptation	
Operation Temperature	-10°C ~ +50°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: 7mm
Certification	
Certification Standards	ROHS/REACH