

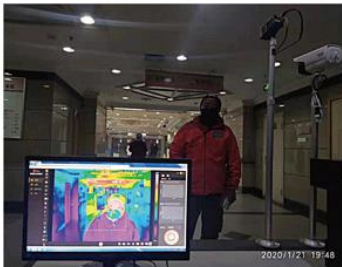
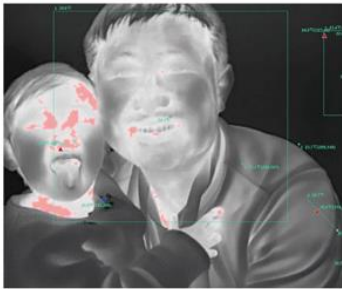


LT384H/640H

High-precise Thermographic Module



Optional: blackbody



High temperature alarm



$\pm 0.3^{\circ}\text{C}$
(with blackbody)

High accuracy



High performance



SDK

Support SDK



640×512

High resolution



50Hz

High frequency



Multi-lenses optional



Professional software

- High temperature alarm: customized alarm temperature value
- Display more spots/lines/areas measuring value, isotherm analysis function: Provide a simpler way for computer-end temperature data acquisition, more flexible and convenient applications, and reduce costs
- Compact size, easy installation: capable to install in the small space
- Multi-connectors: USB, LAN, etc., 7 connectors in total

Specification

Model	LT384H	LT640H
Specification		
Detector	VOx uncooled thermal FPA	
Resolution	384x288	640x512
Pixel size	17 μ m	14 μ m
Frequency	50Hz	25Hz
NETD	\leq 40mK@25 $^{\circ}$ C, F#1.0	
Response range	8~14 μ m	
Thermal Image		
Brightness, contrast adjustment	Manual/auto0(default)/Auto1	
Polarity	Black hot/white hot	
Palette	Upto 18 palettes	
Digital zoom	1.0-8.0x continued digital zoom (step of 0.1)	
Image process	NUC/DDE/Digital filtering noise reduction	
Image flip	Left-right/up-down/diagonal	
ROI	Support	
Temperature Measurement		
Measurement range	0 $^{\circ}$ C-60 $^{\circ}$ C	
Measurement accuracy	\pm 0.5 $^{\circ}$ C@ 33 $^{\circ}$ C-42 $^{\circ}$ C of target temperature (\pm 0.3 $^{\circ}$ C with blackbody)	
Measurement tools	10 customized spots, highest/lowest spot of frame, full frame temperature data, central spot, 12 lines/areas, isotherm	
Temperature correction	Manual/auto correction	
Lens		
Focal length	9.7mm, 13mm	13mm
Power Supply		
Power supply	USB:5V DC/5-24V DC with user expansion component	
Typical power supply	4V DC/12V DC with user expansion component	
Booting time	\leq 3s	\leq 12s
Power protection	Support over-voltage, under-voltage, reverse connected via user expansion component	
Typical consumption@25 $^{\circ}$ C	$<$ 2W	
Connector		
Analog video	1 channel PAL/NTSC	
Digital video	USB/LAN/LVDS	
Serial communication connector	RS-232/UART (3.3V)	
Physical Character		
Weight	$<$ 90g without network parts	$<$ 210g with network parts
Dimension	44.5x43x52(mm) without network parts	46.5x48x72(mm) with network parts
Environment Adaptation		
Working temperature	-10 $^{\circ}$ C-50 $^{\circ}$ C	
Storage temperature	-40 $^{\circ}$ C-80 $^{\circ}$ C	
Humidity	5-95%, non-condensing	
Vibration	4.3g random vibration, all axes	
Shock	40g, 11ms, back-peak sawtooth wave, 3 axes 6 directions	
SDK	Support	



MicrolII 384TH/640TH

Compact Thermographic Module

MicrolII series is a high precise thermal imager module designed for the products of applications on human body temperature measurement, and other industry products that requires high precise temperature measurement.

The series supports full frame temperature measurement, and the accuracy is $\pm 0.5\text{ }^{\circ}\text{C}$ (up to $\pm 0.3\text{ }^{\circ}\text{C}$ with blackbody), with build-in BT.656, LVDS, LVCMOS, analog video, USB etc. thermal video and temperature data output.



Non-contact
Measurement

$\pm 0.3\text{ }^{\circ}\text{C}$
(with blackbody)

High
Precision

320K
Pixels

Professional
Imaging

26×26
mm

Ultra
Compact

<20g

Ultra
Light

<1.0W
(640×512)

Low Power
Consumption



Microl III Specification

Model	High Precise	
	Microl III640TH	Microl III384TH
Performance Specification		
Detector	VOx uncooled thermal FPA	
Resolution	640×512	384×288
Pixel size	12μm	
Frequency	25Hz	50Hz
Response spectrum	8~14μm	
NETD	≤40mK@25°C	
Thermal Image		
Palette	Upto 18 palettes	
Zoom	1.0~8.0× Digital Zooming (0.1× Step)	
Image Filter	Digital Noise Reduction / Digital Detail Enhancement	
Power Supply		
Power Supply	4~6V DC	
	5~24V DC with User extension component	
Power Protection	Over voltage, Under voltage, Reverse connection protection(with user extension component)	
Typical Power Consumption @25°C	<1.0W (without user extension component)	<0.9W (without user extension component)
	<1.4W (with user extension component)	<1.4W (with user extension component)
Connection Interface		
Video Output	Analog video	1 channel PAL or NTSC
	Digital video	BT.656/14-bit or 8-bit LVCMOS/LVDS
Serial Port	RS-232/UART (3.3V)	
USB3.0	5V Typical, Image and Temperature data transmission, device control	
Temperature Measurement		
Measurement Range	0°C~60°C	
Measurement Accuracy (1)	±0.5°C@Target Temperature of 33°C~42°C (±0.3°C with blackbody)	
Measurement Tools	10 spots / Max & Min temp on Screen/ center spot/12Lines/ Area Analysis/1 Isothermal Analysis	
SDK		
Customization Support	User Language/Crosshair Customization	
SDK	Support	
Physical Character		
Weight	20g±3g (without lens & user extension component)	
Size	26×26×22 (mm) (without lens & user extension component)	
Environmental Adaption		
Operating Temp	-10°C~50°C(16~32°C precise mode)	
Storage Temp	-45°C~85°C	
Humidity	5~95%, non-condensing	
Vibration	6.06g, Random vibration, all axes	
Shock	80g, 4ms, back peak, sawtooth wave, 3-axis and 6-direction	

Note (1) The overall heat flux of housing is ≥ 800mW, and the average heat capacity of the heat conductor should be ≥ 90J / °C.

About IRay

IRay Technology Co., Ltd. is a wholly-owned subsidiary of Raytron Technology Co., Ltd. (SSE: 688002). As a high-tech enterprise, IRay Technology develops and manufactures infrared FPA detectors, thermal imaging modules, and other products, with completely independent intellectual property rights. We are committed to providing global customers with professional thermal imaging products and solutions. The main products include IRFPA detectors, thermal imaging cores, and terminal products for application.

With R&D personnel accounts for 51% of all employees, IRay Technology owns 311 patented technologies in multiple fields, such as the development of integrated circuit, the design and manufacture of MEMS sensor, and Matrix III image processing algorithms.

IRay products have been applied in various fields, such as aerospace, disease control and prevention, industrial temperature measurement, intelligent surveillance, outdoor observation, ADAS, AOT, AI, and machine vision.

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CT Series

Creature Thermal Module

CT Series Creature Thermal Module is designed for the measure of creature surface temperature between +30°C to +45°C. The optimum performance can be obtained when applied in indoor environment within 3 meters.



256×192

25Hz

High Frame Rate



Full Veiv Temperature
Measurement



High Image Quality



64×34×13(mm)

±0.5°C

Measurement Accuracy

3.0m

Working Distance



High Stability

CT Specification

Overview	
Sensor	VOx uncooled thermal FPA
Spectral range	8~14 μm
Resolution	256×192
FOV	42°×56°
Pixel size	12μm
NETD	<50mK @25°C, F#1.0
Response time	<10ms
Frame rate	≤25Hz
NUC	Auto/Manual
Image output	14-bit digital data
Focus	Athermalized fixed focus lens
Temperature Measurement	
Working distance	0.3~3.0m
Measurement range	+30°C~+45°C
Accuracy	30°C~45°C: ±0.5°C / ±0.3°C with blackbody Others: ±3°C
Electricity	
Interface	USB-Type-C
Consumption (room temperature)	Operating: Normally 680mW During shutter event: Normally 1.3W
Mechanical	
Dimension (w×l×h)	34×64×13(mm)
Enviromental	
Operating temperature range	-40°C~+80°C (Imaging) +10°C~+50°C (Radiometry)
Non-operating temperature	-45°C~+85°C
Shock	25g, 11ms, 25g, 11ms, Half sine wave, triaxial
Protection Grade	IP54

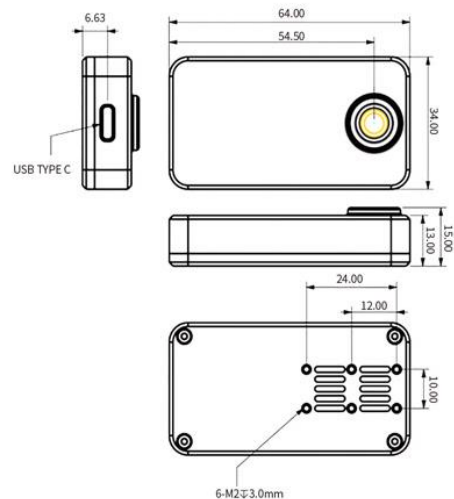
Company information

Wuxi Infisense Technology Co.,Ltd. is a high-tech enterprise dedicated to the research and development of consumer infrared thermal imaging products. We are a wholly-owned subsidiary of Yantai Raytron Technology Co.,Ltd. (SSE:SH688002). The company is located in China MEMS Innovation Park, CMP in Xinwu District, Wuxi. The products of company include S2 Series 12μm VOx Shutterless Module, Tiny Series WLP Thermal Imaging Micro Module and WLP Small Array Infrared Sensor.

Infisense, infinite sensing, intelligent living.

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This manual is for illustrative purposes only. Technology specification are subject to change without prior notice.



*Structure drawing of CT-256-A-03211-V-X vertical version module

