

Clear and Accurate, IRay



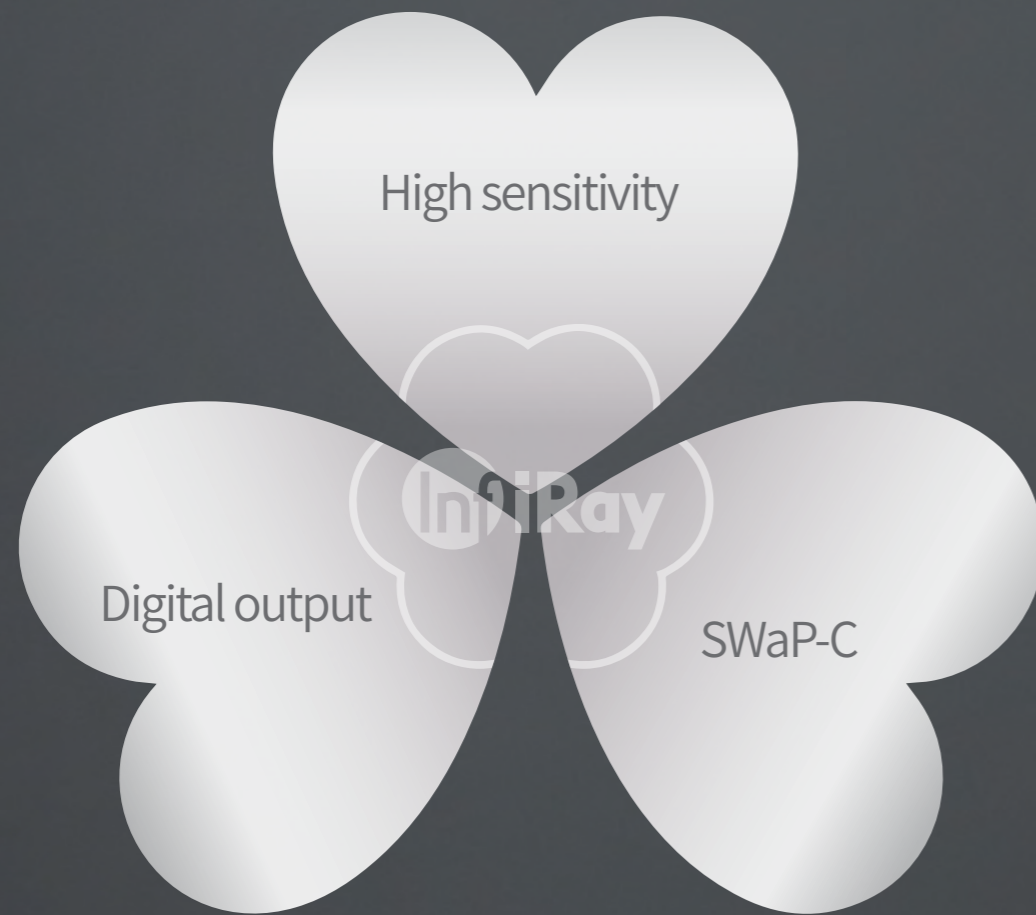
Temperature
Measurement
Product

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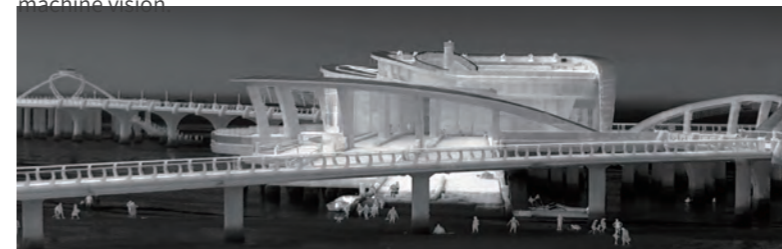


Company Profile

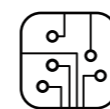
IRay Technology Co., Ltd. concentrates on developing and manufacturing thermal imaging technologies and products with completely independent intellectual property rights. IRay is committed to providing global customers with professional thermal imaging products and solutions. The main products include IRFPA detectors, thermal imaging modules, and terminal products.

With R&D personnel accounts for 48% of all employees, IRay owns 605 autho-rized and accept intellectual properties: 478 authorized and accept patented technologies in China (including integrated circuit chip, the design and manu-facture of MEMS sensor, Matrix III image algorithm and intelligent precise tem-perature measuring algorithm), 12 authorized and accept patented technolo-gies overseas, 78 software copyrights, and 37 integrated circuit designs.

IRay products have been applied in various fields, such as disease prevention and control, industrial temperature measurement, surveillance and fire protec-tion, outdoor observation, automatic driving, IoT, AI, and machine vision.



InfIRay Optoelectronic Industry Chain



Integrated Circuit Design



FPA Sensor Array Design



Detector Packaging and Testing



Infrared Imaging Modules Assembling



Terminal Applications

Explore Perceive the Future

2010-2011

IRay was established in Yantai, Shandong Province, China (2010)

IRay's industrial production of infrared detector was listed as the First Strategic Emerging Industry Projects in Shandong Province (2011)

2012-2014

Released 384×288 35μm uncooled infrared FPA detector (2012)

Released 640×512/384×288 25μm uncooled infrared FPA detector (2013)

Released 640×512/384×288 20μm uncooled infrared FPA detector

2015

Released 640×512/384×288 17μm high-performance uncooled infrared FPA detector

Released 25mm×25mm VGA Micro series module

Released 1024×768 14μm uncooled infrared FPA detector with large array, high sensitivity, and high resolution

2016

Released 640×512/384×288 17μm ultra-sensitive uncooled infrared FPA detector (NETD≤30mK)

Released 640×512 17μm wide-spectra (3~14μm) uncooled infrared FPA detector

2017

Released WLP (wafer level packaging) uncooled infrared FPA detector

Released 640×512 12μm uncooled infrared FPA detector (ceramic packaging & digital output)

2018

Released 12μm megapixels uncooled infrared FPA detector (ceramic packaging & digital output)

Released the Nano series module (Power consumption≤0.5W & Weight ≤15g)

2019

Released the 1st 1280×1024 10μm VOx uncooled infrared FPA detector in China

Released 256×192 12μm WLP (wafer level package) sensor and imaging module

Released 12μm high-accuracy temperature measurement

Released IRay's first VOx shutterless module

Released 12μm thermal imaging monocular/binocular for outdoor application

2020

Released world's first megapixel temperature measurement thermal camera - AT1280

Released series of handheld and online temperature measurement thermal cameras

Achieved mass production of a full series of thermal imaging modules equipped with self-developed ASIC image processing chips

Tianshu Series Handheld Thermal Camera



See difference

Tianshu Series Handheld Thermal Camera adopts the infrared detector with nearly 50000 pixels. It has wide temperature range (-20 °C~+550 °C), infrared+visible light fusion, 7 pseudo colors+4 image modes, 11h working time, IP54 protection grade, and 2m drop-proof. All these advantages can fully meet the various application needs of electrical diagnostics, machinery/equipment maintenance, building inspection, property and household, and other occasions. It is easy to use, professional, and efficient.



1 An Ultra-performance, hot spot spotting tool

- 0.05°C Thermal sensitivity

Ultra thermal sensitivity makes tiny abnormal temperature clearly visible. Tianshu C series is also suitable for the inspection of building quality, material defect, and precision devices.

- -20°C~+550°C Wider range suitable for more scenarios

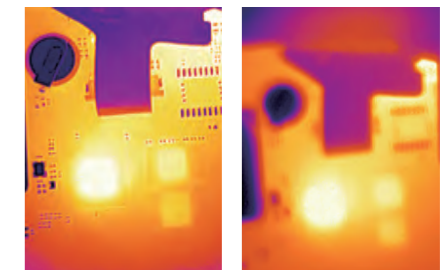
From HVAC to automotive maintenance, One good temperature measuring tool is enough.

- Benefit from high resolution and sensitivity

Application scenarios can be expanded to product development and process testing.

- 256×192 With nearly 50,000 temperature measurement pixels

It can output clear thermal images to pinpoint the fault at a glance. It can achieve accurate search, getting rid of fuzzy images.



Clear image
obvious details

Blur image
lost details



2 Better Performance, Faster inspection

- **Dual vision Visible light fusion**

Infrared/visible light/dual vision fusion/ picture-in-picture mode can easily compare and Locate hot spot. Up to 7 plates are adaptive to more scenes;

- **11h ultra-long battery Life**

With the Type-C charging interface, it is fully charged in 4h. With 11h battery life, it is ready to use with no-worry power supply;

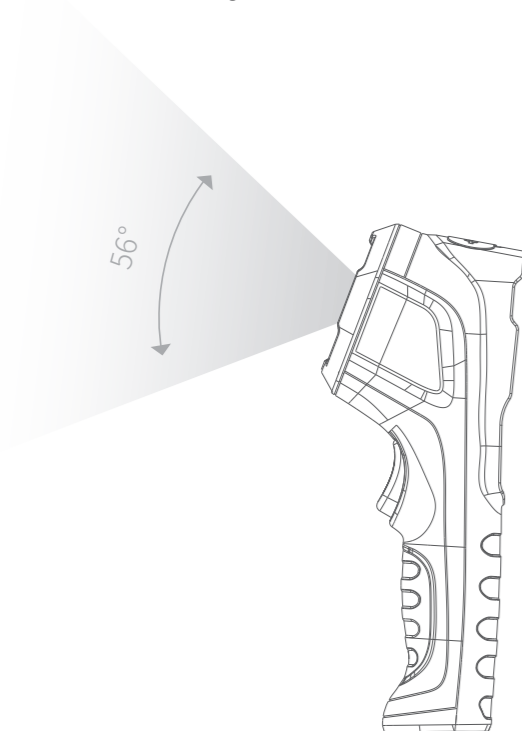


- **Auto tracking of highest and lowest-temperature points**

The highest/lowest temperature point could be displayed real-time on screen for easy trouble shooting, also the alarm threshold could be set.

- **56° FOV Focus-free design with large FOV**

Inspection in a narrow space has never been more easy. It can cover the entire electric cabinet at 1m distance and scan 10m² indoor floor at one glance



3 Friendly interaction, simple design with rich functions

- **5 buttons Easy operation, pick and scan**

Measure temperature with ultra easy button navigation, no additional training needed, just unbox and power up.

- **Ergonomic body design, ultra comfortable to grab**

Its camera trigger has perfect radius with the non-slip texture for better touch. Made of two-color injection molding environmental protection material, the first impression after picking it up is comfortable.

- **Support PC offline temperature analysis**

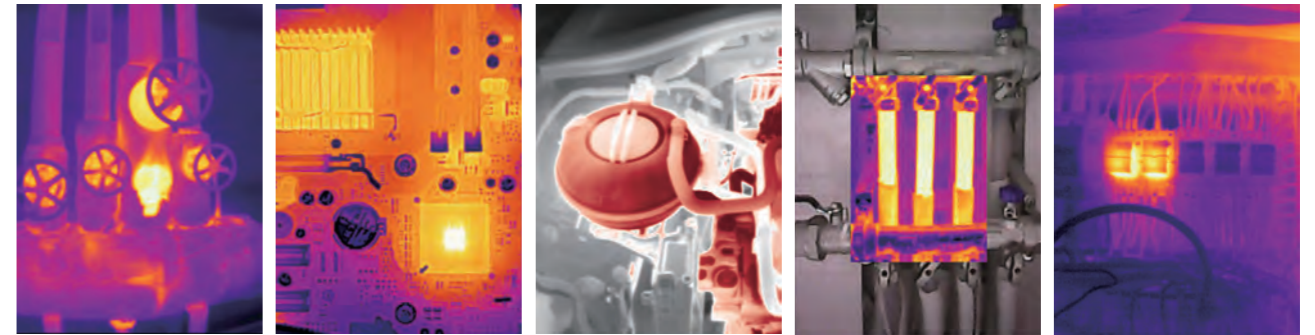
The backstage supports professional temperature analysis and image optimization, and the analysis report can be formed with one click.

- **Compact and Robust**

Design of IP54 encapsulation and 2m drop-proof.



Application Fields



Machinery maintenance

Product testing

Automotive maintenance

HVAC maintenance

Electrical diagnosis

Main Specifications

Model	C100	C200
Detector Type	VOx uncooled infrared FPA detector	
Resolution	160×120	256×192
Spectral Band	8~14 μm	
Pixel Pitch	12 μm	
NETD	<50mK	
Frame Rate	25Hz	
FOV	35.3°×26.7°	56°×42.2°
IFOV	3.8mrad	3.8mrad
Focusing Mode	Focus-free	
Measuring Range	-20 °C~ +550 °C	
Temperature Measurement Accuracy	±2°C or ±2% of the reading (the larger one shall prevail)	
Measurement Tools	Central Spot measurement/Hotspot and cold spot tracing	
Image Modes	Thermal imaging, fusion, PIP, visible imaging	
Palette	7	
Temperature Alarm	Full frame high/low temperature alarm	
Alarm Mode	Support image and LED alarm	
Photo Function	Support, with temperature data	
Secondary Analysis	Provide PC analysis software for secondary analysis of data	
Screen Size	2.8LCD (320×240)	
Lighting	LED fill-in light	
Storage	Standard 16GB SD card, supporting expansion	
Tripod Support	Yes, at the bottom of the handle	
Operating Time	11h, @25°C indoor	
Charging Time	About 4h, @25°C indoor	
Dimension	237×75×92mm	
Weight	520g	
Operating Temperature	-10°C~+50°C	
Storage Temperature	-20°C~+60°C	
Operating Humidity	Relative humidity 10%-95%, non-condensing	
Drop Protection	2m	
IP Encapsulation	IP54	

Tianshu Series

Handheld Thermal Camera C200Pro



See Difference

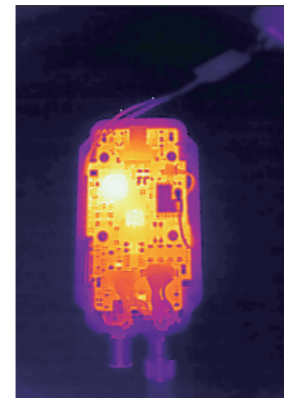


InfiRay® Tianshu C200 Pro is a handheld thermal camera with an upgraded thermographic detector. Operating efficiency is upgraded: InfiRay® self-developed high-performance 12μm infrared detector, 256×192 high resolution, and 0.04°C temperature resolution are C200 Pro's "trump cards" to provide infrared thermal images of rich details and accurate temperature measurement. With pro-grade 2,000,000-pixel visible light and low lag, it can meet professional work requirements easily. What's more, it features timed photographing, 15h long battery life, plug-and-analyze through USB. Tianshu C200 Pro, powerful upgrade of the detector.

1 Powerful Upgraded Detector

- Pro-grade high-performance infrared detector

With pro-grade 256×192 resolution, 2,000,000-pixel visible light, and pro-grade low lag, it can meet professional requirements easily. Matrix III intelligent image algorithm optimizes the short-distance imaging. With 56° wide FOV, it provides efficient short-distance details observation, to get clear thermal images with rich details.

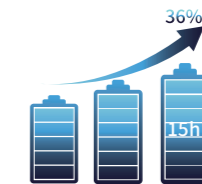


- Pro-grade built-in thermal imaging functions

For professional users, the built-in timed photographing and automatic alarm snapshot are provided: the number of photos to take and the time interval can be set, and meanwhile, the automatic alarm and snapshot can be set. Besides, it features automatic record and trace of abnormal temperature, real-time record of equipment status separated from PC, target temperature trend, ultra-long battery life, external power supply, and quick deployment.

- Pro-grade easy-to-use thermal imager

Battery life is improved again: 15h, increased by 36% compared with the last generation. IP54 waterproof and dustproof and 2m drop protection make it easier to use: even in a complicated environment, it can still provide crisp and clear thermal images.



- Pro-grade software support

For professional users, the analysis function has been greatly upgraded: support plug-and-analyze through USB on PC. It supports not only real-time screen projection and offline image analysis but also full-frame real-time temperature analysis and real-time point/line/area temperature analysis. Click to output reports, helping professional users output infrared inspection results and work efficiently



2 Professional · Occupational

- **0.04°C temperature resolution and ±2°C measurement accuracy**

C200 Pro can discern subtle temperature differences of the target, which is also applicable to high-accuracy inspection scenarios such as material defect detection and precise component testing.

- **-20°C - +550°C wide measurement range**

Meet the demands to inspect different industrial temperature targets. C200 Pro can meet all the requirements such as building HVAC and vehicle maintenance.



- **5 modes +7 palettes**

5 popular modes with 7 palettes provide 29 combinations of temperature data heat maps, to support various complicated observation tasks of professionals.

- **Focus-free design and 56° wide FOV**

The focus-free lens, 56° wide FOV, and 256×192 high resolution ensure that the area you cannot approach can be inspected at a safe distance, and meanwhile to get crisp thermal images with rich details.



3 Solid · Reliable

- **Continue the famous design appearance**

Inherited from the last generation, the camera trigger has a perfect radius with a non-slip better touch. The boxing glove appearance and lower gravity center make it convenient to pick up.



- **IP54 +2m-drop protection**

It has IP54 waterproof and dustproof performance. With drop protection, even if it falls from 2m height, it still can provide clear thermal images.



- **Handheld or fixed, quick deploy**

Besides handheld operation, it also has a 1/4 common threaded interface at the bottom, via which it can be fixed on a tripod for operation. With the USB screen projection analysis function, it can perform better temperature monitoring work.

Application Fields



Electrical maintenance

Equipment inspection

HVAC

Vehicle maintenance

Product R&D

Main Specifications

		C200 Pro
Thermal Module	Detector Resolution	256×192
	Pixel Size	12μm
	NETD	<40mK
	Focal Length	3.2mm
	FOV	56°×42°
	IFOV	3.8mrad
Temperature Measurement	Focusing Mode	Focus-free
	Temperature Measurement	Center/highest/lowest/3 settable points
	Measurement Range	-20 °C~ +550 °C
	Measurement Accuracy	±2% or ±2°C
	Measurement Unit	°C, °F, K
	Measurement Resolution	0.1°C
System Function	Emissivity	0.01 - 1.0, adjustable
	Frame Rate	20Hz
	Lighting	LED fill-in light
	Image Mode	Thermal imaging, thermal fusion, visible light, PIP
	Palettes	White-hot, black-hot, molten metal, iron red, rainbow, high-contrast rainbow, black red
	Temperature Alarm	Full frame highest/lowest-temperature alarm
	Alarm Mode	Image alarm, LED alarm
	Automatic Alarm Snapshot	Support automatic alarm snapshot; Photo number and time interval can be set.
	Timed Photographing	Support. Photo number and time interval can be set.
	Photo Storage	Automatic/Manual
	Image Data	Image and temperature data
	USB Video Transmission	Support, real-time analysis of temperature
	PC Analysis Software	Support
	Display Size	2.8LCD (320×240)
	Memory Card	16GB Micro SD card
	Battery Type	Rechargeable lithium-ion battery
	Power Supply	USB type-C
Charging Time	About 4h in the shutdown status	
Operating Time	15H	
Power Management	Adjustable (automatic shutdown, 5 min, 10 min, 20 min)	
Others	Tripod Support	Yes, at the bottom of the handle
	Operating Temperature	-10°C~+50°C
	Staging Temperature	-20°C~+60°C
	Relative Humidity	10% - 95%, non-condensing
	IP Grade/Drop Protection	IP54 2m
	Dimension (L × W × H)	237×75×92 (mm)
	Weight	520g
Accessory	USB cable, 16GB SD card, user guide	

Tianxuan Series Handheld Thermal Camera



Tianxuan Series Handheld Thermal Camera comes with 384×288 VOx infrared detector and the optimized circuit, Matrix III intelligent image processing algorithm, and patented temperature measurement algorithm. It provides clearer thermal images and more accurate and stable temperature data. Also, it is equipped with an intelligent touch screen, manual focusing lens, dual vision, and various built-in analysis functions, to ensure accurate test results and efficient analysis and diagnosis.



- Check clearly, Solve quickly



1 Even more powerful performance Makes M300 to greater

- With 384×288 thermal resolution, thermal sensitivity of 0.05°C, and 44 ° FOV, M300 can display rich details that low resolution products cannot, and makes sure the abnormal temperature targets were not missed.
- Manual focusing provides clear images of targets from far to near. Especially for observing tiny near targets. So the lens equipped on M300 is close to the quasi macro level, tiny targets at the size of 1mm (at the distance of 0.1m) can be distinguished.
- It supports customized point/line/area temperature analysis. By simply clicking and dragging your finger on the touch screen, you can find the abnormal temperature of your interest on the thermal image. The intuitive feedback is simple and clear.
- It has a wide measurement range of -20°C~+550°C. From building detection to vehicle maintenance, it is adaptive to various scenes and purposes. There is no need to switch equipment, to save costs and improve efficiency.
- It has powerful image fusion functions. With a 5 million pixels digital camera, it can provide more comprehensive and richer information, easier for observation under complex conditions.



Screen
Cancel
Gallery
Power
Navigation
OK

Laser pointer
Visible light lens
Infrared lens

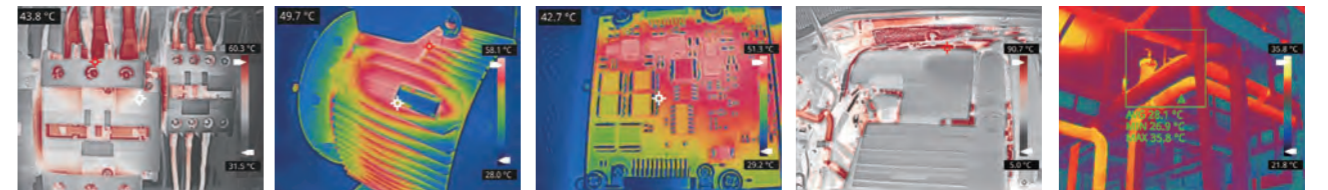
2 Intelligent analysis. Discover more, within the image

- Support WiFi transmission. After connected to mobile phone APP, it can analyse and share thermal images and temperature data at any time and anywhere.
- Intelligent PC analysis software supports the resetting of the measurement parameters. Click to form the detection report, convenient for data sorting, analysing, and mining.

3 Professional design, expert's choice, choose to be an expert

- It supports both screen-touch and button operation. The touch panel is clear to see, easy to use, and convenient to analyse the data. The physical buttons are user-friendly, and convenient to operate with gloves.
- The operation interface is clear and user friendly. It can be easily operated without training.
- It needs only one button to take photos or videos. Voice annotation is supported to perfectly restore the scene and simplify the complicated work procedures.
- The large capacity 4500mAh battery in M300 is designed to be quickly detachable. Each M300 is shipped with two batteries and a charging dock, to meet heavy daily usage.
- 3.5-inch LCD high definition (640×480) capacitive touch screen, with adjustable screen brightness, is more convenient for observation and analysis.
- Compact and robust design with IP54 protection and 2m drop-proof. all these are to ensure you can work without worry.
- Dual modes support hand-held operation and fixed operation on the tripod, flexible and reliable.
- Laser pointer can locate targets quickly and accurately, improving inspection efficiency.
- Built-in high/low-temperature alarm supports user-defined alarm temperature.

Application Fields



Electrical diagnosis Machinery maintenance Product assessment Automotive maintenance HVAC maintenance

Main Specifications

Model	M300
Detector Type	VOx Uncooled infrared FPA detector
Detector Resolution	384×288
Spectral Band	8~14μm
Pixel Pitch	12μm
NETD	<35mK
Frame Rate	25Hz
FOV	43.7°×31.9°
IFOV	1.98mrad
Focusing Mode	Manual focusing
Measuring Range	-20 °C~+550 °C
Temperature Measurement Accuracy	±2°C or ±2% of the reading (the larger one shall prevail)
Measurement Tools	Central spot measurement/Hotspot and cold spot tracing
Image Modes	IR, Visible, PIP,Fuse
Palette	7
Temperature Alarm	Full frame high/low temperature alarm
Secondary Analysis	Equipped with PC and app analysis software for secondary analysis of data
WiFi	Support WiFi data transmission
Screen Size	3.5" LCD (640×480) touch screen
Laser	Laser pointer
Storage	Standard 32GB SD card
Tripod Support	Yes, at the bottom of the handle
Operating Time	4h, @25°C indoor
Charging Time	About 3h, @25°C indoor
Weight	670g
Dimension	256.4×105.1×105.3mm
Operating Temperature	-10°C~+50°C
Storage Temperature	-20°C~+60°C
Operating Humidity	Relative humidity 10%-95%, non-condensing
Drop Protection	2m
IP Encapsulation	IP54

Tianshu Series

Handheld Thermal Camera M600

IRay Tianxuan M600 Series Handheld Thermal Camera is a high-resolution manual focusing temperature measurement thermal camera. It is provided with a built-in InfiRay® self-developed high-performance 12μm infrared detector and a 5-million-pixel visible light camera of 35 mK thermal sensitivity and 30 Hz high frame rate. With its accurate manual focusing function, it can save focusing time and provide accurate data and clear images to meet the requirements of research and analysis work. With its excellent characteristics, Tianxuan Handheld Thermal Camera is the right-hand assistant of engineers in scientific research, professional equipment, and building inspection.



Check clearly, Solve quickly

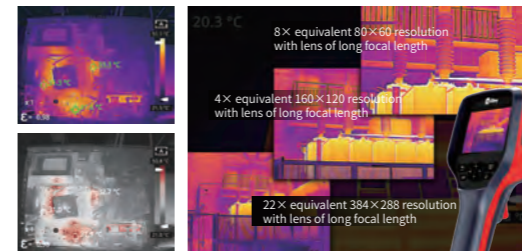


1 High-performance temperature measurement core

Tianxuan M600 performs well in key tasks, with one machine serving several purposes

- Real 320,000 real-time infrared temperature measurement points + 5 million pixels and visible light

The 12μm high-performance 640×512 infrared detector, together with an accurate manual focusing lens, can observe the fine structure of circuit board accurately from a close distance, or inspect power lines and building facades far away. With 8x digital zoom and ultra-high infrared resolution, it can perfectly replace the combination of one camera and multiple lenses with low resolution, no need to change the lens.



640×512 infrared detector, convenient for long and short distance applications

- High resolution, high frame rate, high accuracy, wide range, all in Tianxuan M600

Tianxuan M600 can distinguish a temperature difference of 0.035°C, and together with the 30 Hz high frame rate, can capture delicate and smooth images and videos in scientific research works, with no detail missing. Its measurement accuracy reaches ±2°C, and meanwhile, it provides a wider measurement range to ensure the accuracy of temperature data.



- Start analysis once the USB is plugged, support full-frame real-time transmission and analysis of temperature information

It supports cloud services and timed photographing. The software on PC terminal supports real-time and offline analysis. The photos and videos taken can be uploaded to the cloud and can be downloaded, opened, and analyzed at multiple clients. The report can be output by pressing one key, which further supports the applications in scientific research and equipment monitoring and temperature measurement assessment.

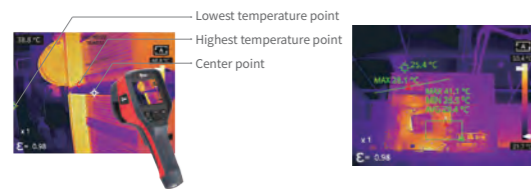


Plug and analyze through USB

2 Advanced interaction function Tianxuan M600 visualize temperature data clearly

- **Three-point temperature display, custom point/line/area**

Tianxuan M600 can automatically trace the highest and lowest temperature points and the temperature of the central point; it can perform movable point/line/area temperature measurement; hot spot tracing can be displayed for line/area temperature measurement; the highest temperature value can be displayed for line temperature measurement, and the highest, lowest and average values can be displayed for area temperature measurement;



- **Complete analysis data on PC, easy to operate the APP**

It can upload the thermal image and visible light image with temperature data to the analysis software on PC terminal for professional analysis. It supports WiFi transmission and can be connected to App for analysis and sharing temperature images and data, which is efficient and fast;



- **Built-in 5 image modes+10 palettes settings**

Tianxuan M600 has 5 image modes including detail enhancement, IR, visible light, PIP, and fusion, with 10 pseudo color settings, to meet the temperature measurements of different requirements and increase the efficiency of temperature measurement;



- **Support full-frame high/low temperature alarm and timed photographing**

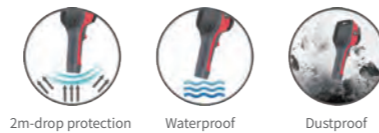
When the temperature in the inspection area exceeds the threshold value, a temperature alarm is sent in order to discover the fault point in advance to "nip in the bud" so as to effectively reduce the loss caused by high-temperature accident. It especially supports timed photographing to record temperature rise changes so as to help equipment operation analysis and various scientific research applications.



3 Easy and reliable overall performance Tianxuan M600 is your efficient and right-hand thermal imaging assistant

- **Solid and durable, IP54 + 2m-drop protection**

It features a 2m-drop protection and is waterproof/dustproof. Its IP grade reaches IP54, so that its temperature measurement accuracy, imaging quality, and application functions will not be influenced even if the tools drop off, are trampled, or get stained with water or dirt.



- **Laser pointer module, quick observation target positioning**

Tianxuan M600 has a built-in laser pointer to help you quickly locate the observation target and obtain an accurate temperature measurement value.



- **HD thermal image displayed on a 3.5-inch HD touch screen**

After the 640×512 HD infrared thermal image is obtained, you can view more temperature information details of each image on the 3.5-inch HD touch screen.



- **Voice annotation and QR code naming functions free your hands**

It can help you quickly distinguish the necessary information for imaging during a long time period of temperature measurement work and recognize the real-time site situation at that time accurately. The images can be named automatically, or by scanning QR code, or by entering a name manually.



Application Fields



Product R&D

Building inspection

Equipment maintenance

Electric inspection

Electrical maintenance

Main Specifications

	Model	M600
Thermal Imaging Performance	Detector Type	Uncooled VOx Infrared Detector
	Detector Resolution	640×512
	Spectral Band	8~14μm
	Pixel Size	12μm
	NETD	35mk
	I FOV	1.31mrad
	Frame Rate	30Hz
	Focal Length	9.1mm
	FOV	48°×38°
	Focusing Mode	Manual focusing
	Measurement Range	-20°C~+550°C
	Accuracy	±2°C or ±2% of the reading (The greater shall prevail)
	Measurement Resolution	0.1°C
	Thermal Camera Functions	Temperature Measurement Mode
Custom Point, Line and Area		Movable point/line/area temperature measurement; displaying hot spot tracing for line/area temperature measurement; displaying the highest temperature value for line temperature measurement, and displaying the highest,
Temperature Measurement		lowest and average values for area temperature measurement;
Measurement Unit		Centigrade, Fahrenheit, Kelvin
Image Mode		Detail enhancement, IR, visible light, PIP, fusion
Palettes		10 palettes
Temperature Alarm		Full frame high/low temperature alarm
Temperature Range of Color Code		Manual/automatic temperature range
Laser Pointer		Yes
Visible Light Camera		5 million pixels
Digital Zoom		Max. 8×
Photo/Video Storage Function		IR .jpg picture + visible light .jpg picture with temperature data; video without data;
Annotation Function		Voice annotation via microphone
Display Size		3.5-inch touch screen (480×640)
Figure Naming		Automatic naming, naming by scanning QR code, naming by manually enter
Memory Card		Standard 32GB Micro SD card
Cloud Function		Transfer shooting data to cloud drive, share data and perform secondary analysis at multiple clients; support automatic time synchronization;
Battery Type		Rechargeable and dismountable Li-ion battery
Power Supply		USB TypeC
Connection Type	USB, SD card, WiFi (AP mode or networking mode)	
Charging Time	About 3h	
Operating Time	About 3h	
Power Management	Automatic shutdown: 5 min, 10 min, 20 min, non-automatic shutdown	
Physical Characteristics	Analysis Software	PC&APP
	Installation Way	Tripod support
	Operating Temperature	-10°C~+50°C
	Staging Temperature	-20°C~+60°C
	Relative Humidity	10% - 95%, non-condensing
	Drop Protection	2m
	Ingress Protection Grade	IP54(IEC 60529)
	Impact and Vibration	Impact 25g (IEC 60068-2-27); vibration 2.5g (IEC60068-2-6)
	Dimension (H×W×D)	256.4 × 105.1 × 105.3(mm)
	Weight	About 670g
	Authentication	CE/FCC/RoHS2.0
Accessor	5V 2A power adapter, USB cable, SD card, user guide, desktop charger	

AT Series

AT20 Online Dual-spectrum Thermal Camera



AT20 is a cost-effective thermal camera for temperature measurement and video capture, providing both thermal and visiblelight video and images. AT20 is compact and compatible, supporting various interface protocols, which can be widely used in electrical equipment (voltage converter, high voltage switch cabinet, elevator electrical cabinet, etc.) operation status safety monitoring, confined space (hazardous chemicals warehouse, coal bunker, etc.) fire-fighting monitoring.

- Cost-effective thermal imaging video capturing terminal



1 Cost-effective thermal imaging video capturing terminal

- **Economical and practical**

- IoT-grade video and temperature data acquiring terminal.
- Only a few hundred dollars



- **Remote operation**

- Support remote reset and upgrade to reduce the troubleshooting time.
- Remote access to real-time video and temperature data, convenient for back-end real-time analysis, alarm, and system control.



- **Flexible configuration**

- Compact to adapt to small space installation;
- Compatible with Ethernet and multiple interface protocols such as Modbus TCP.
- Provide SDK to support all-platform development (Windows\Linux\Android\iOS).



- **Clear images**

- 50,000 infrared pixels to provide high-definition easy-to-read images and help detect tiny temperature differences, which contributes to accurate analysis and judgment of problems.



2 To see wider and clearer

- Equipped with dual-spectrum lenses, providing thermal imaging and 2 million-pixel visible light images, convenient to observe the actual situation of the scene.

- 56 ° FOV and focus-free design can get a wider FOV at the same distance.

- 256 × 192 infrared pixels and 0.04°C temperature resolution can provide clear thermal images to distinguish more details and see farther targets.



3 Data analysis, effective and convenient

- Support the display and analysis of the temperature in the designated selection area of videos and pictures. With up to 16 constituencies can be selected.
- Temperature measurement range is -20°C~+550°C, which is more suitable for the requirements of closed environment monitoring.
- Supports segmented video recording and can retain the original test data for analysis.
- Temperature resolution of 40mK allows more detailed temperature resolution and clearer display of details.



4 User friendly, easy to install

- Small size, easy to install, very suitable for installation in small spaces.
- Compatible with interfaces such as Ethernet and Modbus TCP, supporting all platforms (Windows\Android\Macs\Linux, etc.) development.
- Realize remote operation, support remote start and reset.
- Provide SDK, making secondary development simpler and faster.
- No need to install software, just go through the web browser to enter the control interface remotely.



Application Fields



Status monitoring



Firefighting detection



Hazardous chemicals monitoring



Cabinet inspection

Main Specifications

Model	AT20
Infrared Specification	
Detector Resolution	256×192
NETD	40mK
Frame Rate	30Hz
Lens	3.2mm
FOV	56°×42°
Focusing	Focus-free
Visible light	
Visible Light Pixel	200W (SC2310 CMOS sensor)
FOV	72°×61°
Fill-in Light	LED indicator
Temperature Measurement	
Measurement Range	-20°C~+550°C
Precision	±2°C或±2%, The greater shall prevail
Point	Up to 16
Line	Up to 16
Area	Up to 16
Palettes	18
Environmental Variable Correction	Distance, ambient temperature, emissivity, reflected temperat
Alarm	
Alarm Function	All temperature measurement points, areas, and lines can be provided with separate alarm output
Alarm Input/Output	1-channel alarm input (optoelectronic isolation, 3 - 5.5V) 2-channel alarm output (optoelectronic isolation, 3 - 25V DC, max. 85 mA) Other alarms: image/video storage, file sending (FTP), E-mail (SMTP), flashing light alarm
Protocol	
Network Protocol	TCP、UDP、RTSP、HTTP、SMTP
Interface Protocol	ONVIF、GB28181、Modbus TCP、MQTT
Device Hot Spot	Visit the web management interface via the device hot spot Http
Image Stream	
Image Stream Format	H.264/H.265
Resolution	Visible light 1080P; support 4 times of infrared super-resolution, with the maximum of 1024×768
Image Mode	Thermal image, visible light image, dual-spectrum fusion, detail enhancement; support side-by-side display of visible light images
Frame Rate Adjustment	Support frame rate adjustment
Data Stream	
Data Stream Transmission	Visible light, infrared image, temperature stream, frame rate adjustable
Image Storage	
Storage Medium	Internal 32G memory
Storage Mode	Infrared/visible images, to be stored at the same time
File Format	jpg, mp4
Storage Form	Local storage; can be connected with monitoring system such as NVR
SDK	
SDK	SDK Multi-platform (Android\IOS\Windows\Macs\Linux) SDK that supports users' secondary development
Power	
External Power Supply	12~30V DC
POE	IEEE 802.3af
Power Consumption	≤2W
External Interface	M12 type-A 8-pin, including 10M/100M adaptive Ethernet port and POE power supply; M12 type-A 12-pin, including DC power supply and alarm input/output
Environmental	
IP Grade	IP67
Operating Temperature	-10°C~+50°C
Storage Temperature	-40°C~+70°C
Humidity	≤95% non-condensin
Impact	25G, IEC68-2-29
Vibration	2G, IEC68-2-6
Certifications	CE/FCC/ROHS
Dimension	109×55.9×29.5mm
Weight	About 170g
Product and Accessories	
Product and Accessories	AT20 Online Dual-spectrum Thermal Camera, M12 8-pin to RJ45 cable (44cm long), fixtures (screw, install stickers)
Optional Accessories	M12 12-pin to DC interface & alarm input and output cable, front/back bracket

AT Series Automatic Focusing Online Temperature Measurement Thermal Camera AT31/61/1280



AT31/61 is equipped with a compact professional electric focusing lens, which adds flexibility for using & installing and makes it adaptable to more targets. It is equipped with our self-developed high performance, high resolution, and high sensitivity VOx detector. Combined with the Matrix III patented image algorithm, intelligent temperature measurement algorithm, the temperature measurement result is more accurate and reliable, providing professional customers with more comprehensive and accurate thermal imaging products and solutions.

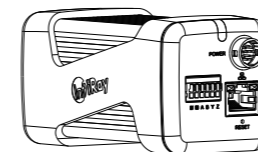
AT1280 1.3 megapixel infrared temperature measurement, camera breaks the ceiling of infrared temperature measurement vision, entering a new era of megapixel thermal camera.

- Observe and analyze the thermal world



1 AT31/61 -- Accurately transmit on-site temperature data

- Provide various compact electric focusing lenses selection to meet different field & depth of view requirement. Provide more accurate temperature and output high-quality thermal images.
- 50Hz frame rate and Gigabit Ethernet interface support real-time transmission of on-site temperature data.



- -20°C~+550°C wide range temperature measurement makes it possible to monitor more industrial targets requiring high-temperature measurement.
- Patented intelligent temperature compensation algorithm greatly improves measurement accuracy and adding convenience for engineers to pinpoint and troubleshoot the failure.

2 The combination of hardware and software innovation makes AT31 / 61 your ideal powerful equipment

- Multiple network protocols such as TCP, UDP, ICMP, and DHCP, can achieve real-time temperature monitoring and abnormal warning. Compatible with protocols such as ONVIF, GB28181, and GenlCam provide convenience for on-site installation and sharing analysis and alarm results.
- Automatic focusing makes field test and application more convenient.
- Displaying more Test results of spots, Lines, and areas provides an easier way for obtaining back-end temperature data and makes the application more flexible and convenient, reducing the cost of use.
- Provide SDK and PC software to support customized secondary development Improve practicality and feasibility to form your unique advantages to customer .
- Comply with RoHS, CE, and other EU Environment-Protecting Directives, bring no worry for export.

■ 1.3 million pixels high-definition thermal imager



3
1.3 megapixel infrared temperature measurement,
A whole new thermal world waiting to be explored.

- Most advanced REAL 1.3-megapixel infrared temperature measurement contributes to the future;
- 1280×1024 full-picture temperature measurement thermal imager, providing rich temperature details, can easily cope with large area temperature measurement application of key nodes;
- Can be used in core power equipment inspection, large-scale oil and chemical engineering equipment monitoring, high-precision scientific research test and evaluation. Break through the ceiling of infrared temperature measurement imaging and enter the new stage of megapixel.



Application Fields



Electrical inspections Petrochemical equipment monitoring Automatic control Firefighting surveillance R&D test and evaluation

Resolution	384×288					640×512					
	7.8	13	15	19	25	7.8	10.6	13	15	19	25
Lens(mm)	7.8	13	15	19	25	7.8	10.6	13	15	19	25
FOV (H×V)	47°×35.6°	29.6°×22°	25°×18.7°	19.6°×14.7°	14.8°×11.1°	62.4°×50.9°	49.3°×39.2°	39.6°×31.6°	34.2°×27.4°	26.5°×21.3°	20.3°×16.3°
IFOV	2.17mrad	1.3mrad	1.1mrad	0.89mrad	0.68mrad	1.79mrad	1.32mrad	1.07mrad	0.93mrad	0.73mrad	0.56mrad

Main Specifications

Model	AT31	AT61	AT1280
Detector Parameters			
Detector Type	VOx uncooled infrared FPA detector		
Resolution	384×288	640×512	1280×1024
Frame Rate	50Hz	25Hz(30Hz Optional)	15Hz(30Hz Optional)
Temperature Measurement Performance			
Measuring Range	-20°C~+150°C, 0°C~+550°C		
NETD	<50mk @25°C, F1.0(<40mk Optional)		
Measurement Accuracy @Environment Temperature -20°C~60°C	±2°C or ±2% of the reading (the larger one shall prevail)		
Temperature Measurement Tools	Comprehensive analysis of temperature Professional temperature analysis software It can be seen and analyzed		
Ethernet			
Network Protocol	TCP, UDP, ICMP, DHCP, RTSP		TCP, UDP, ICMP, DHCP, RTSP, GigE
Network Interface	RJ45		
Image Adjustment			
Brightness and Contrast Adjustment	Manual/Auto 0 (defaulted)/Auto 1		
Polarity	Black hot/White hot		
Palette	Support 18 palettes		
Image Flip	Horizontal/Vertical/Diagonal Mirror Image		
Area-of-interest	Support		
Lens			
Focal Length	7.8mm/10.6mm/13mm/15mm/25mm		19mm
Lens Control	Support auto/manual focusing		
Power Interface			
Power Voltage	10~36V DC		10~16V DC
Typical Power Consumption @25°C	≤3W	≤3.3W	≤6W
Power Protection	Support overvoltage, undervoltage, and reverse connection protection		
Physical Characteristics			
Dimension	55×55×119(mm) (L×W×H)		62×70×130(mm) (L×W×H)
Environment Adaptability			
Operating Temperature	-20°C~+70°C		-10°C~+60°C
Storage Temperature	-45°C~+85°C		-20°C~+65°C
Impact	30g, 11ms, all axials		
Vibration	4.3g, random vibration, all axials		
Humidity	5%-95%, non-condensing		
Software Support			
SDK	Support		
PC Software	Support		
Environmental Directives			
RoHS2.0	Support		
CE	Support		

AT Series Fixed Focusing Online Temperature Measurement Thermal Camera AT31F/61F

AT31F/61F adopts a high-performance VOx detector with high resolution and high sensitivity. Combined with the Matrix III patented image algorithm, it provides clearer images and more temperature details. Its patented intelligent temperature measurement algorithm makes the results more accurate and reliable. Thanks to its characteristics, such as low power consumption, small size, short start-up time, it is professional, simple, and easy to use with its comprehensive analysis software.

- Observe and analyze the thermal world



1 Excellent configuration, more usable than ever

- It is specially optimized for network. One or multiple cameras can be controlled at the same time with our professional PC software, reducing the application cost.
- -20°C~+550°C wide range temperature measurement makes it possible to monitor more industrial targets requiring high-temperature measurement.
- It provides lenses of various optional focal lengths. It can output high-quality infrared images and meet the detecting requirements for space-restricted areas and small targets.

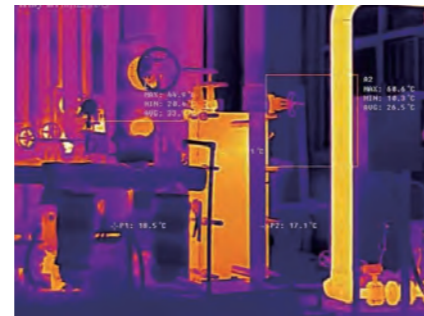
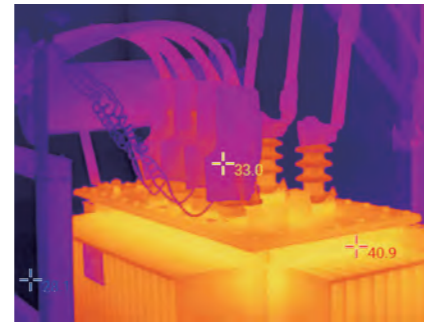
2 Dedicated support, work together to form your exclusive advantage

- Provide Windows/Linux/Android SDK to support users' secondary development and improve practicality to form customer advantages.
- Displaying more point, line, and area test results provides an easier way for obtaining back-end temperature data and makes the application more flexible and convenient, reducing the cost of use.
- Support alarm function and provide abnormal alarm (I/O output, log, image storage, file sending (FTP), E-mail (SMTP));



3 Advanced interface, powerful and versatile

- 50Hz frame rate and Gigabit/Mbit/adaptive Ethernet interface support real-time transmission of on-site temperature data.
- Rich back-end interfaces can be directly connected to various monitoring systems for integration programs, for integration programs and is compatible with various PLC secondary development for automatic production, greatly reducing, greatly reducing the R&D cycle.
- Multiple network protocols, such as TCP, UDP, ICMP, and DHCP, can achieve real-time temperature monitoring and abnormal warning. Compatible with protocols, such as ONVIF and GB28181, it can provide convenience for on-site installation and share analysis and alarm results easily at the same time.



Application Fields



Industrial process control



Quality test



Equipment condition monitoring



Fire warning



R&D test and evaluation

	384×288							
Resolution								
Lens(mm)	4	6.2	9.7	13	19	25	35	50
FOV(H×V)	90.3°×60.7°	61.5°×45.7°	37.9°×28.7°	20.1°×15.1°	19.5°×14.7°	14.9°×11.2°	10.6°×8°	7.4°×5.6°
IFOV	4.250mrad	2.742mrad	1.753mrad	1.308mrad	0.895mrad	0.680mrad	0.486mrad	0.340mrad
	640×512							
Resolution								
Lens(mm)	4.1	5.8	9.1	13	19	25	35	55
FOV(H×V)	89°×75°	70°×57°	48°×38°	33°×26°	22°×18°	17°×14°	12.5°×10°	8°×6.4°
IFOV	2.92mrad	2.06mrad	1.31mrad	0.92mrad	0.63mrad	0.48mrad	0.34mrad	0.21 mrad

Main Specifications

Model	AT61F	AT31F
Detector Parameters		
Detector Type	VOx uncooled infrared FPA detector	
Resolution	640×512	384×288
Pixel Pitch	12μm	17μm
Spectral Band	8~14μm	
NETD	<50mk @25°C,F1.0(<40mK Optional)	
Frame Rate	50Hz	
Image Adjustment		
Polarity	Black hot/White hot	
Palette	Support 18 palettes	
Temperature Measurement Performance		
Measuring Range	-20°C~+150°C, 0°C~+550°C	
High and low gain mode	High gain mode, low gain mode, and two modes automatic switching	
Temperature Measurement Accuracy	±2°C or ±2% of the reading (the larger one shall prevail) @Environment Temperature -20°C~60°C	
Power		
Power Supply Range	9~26V DC	
Power Protection	reverse connection protection	
Typical Power Consumption @25°C	<3W	
Interface		
Analog Video Output	1 channel video	
Network Interface	RJ45 10M/100M/1000M self-adapted	
Alarm Interface	1 input, 1 output	
Network Protocol	Ethernet/IP, TCP, UDP, SNTP, RTSP, HTTP, ICMP, SMTP, DHCP, UPnP, PPPoE	
Ethernet	Control and transmit images	
Interface Protocol	Support customized ONVIF, GB28181	
Serial Communication Interface	Customizable RS-485, RS-232	
Compression Standard		
Video Compression Standard	H.264/H.265	
Video Format	mp4, mov	
Alarm		
Alarm Function	All temperature measurement points, the highest temperature, lowest temperature and average temperature in all temperature measurement areas can be configured with separate alarm outputs	
Alarm Output	I/O output, log, save image, file sending (FTP), email (SMTP), notification	
Physical Characteristics		
Weight(without lens)	<150g	
Dimension(without lens)	46.5×48×83 (mm)	
Environment Adaptability		
Operating Temperature	-20°C~+60°C	
Storage Temperature	-40°C~+70°C	
Humidity	5~95%, non-condensing	
Secondary Development		
Secondary Development	Provide Windows / Linux SDK and instruction	
Accessories		
Accessories	Interface cable	

ATSeries

AT31U Online Ultra-high Temperature Measurement Thermal Camera



AT31U is a small dedicated online ultra-high temperature thermal camera, built-in InfiRay® 12μm infrared detector. 3.3mm pinhole Ge lens, combined with professional temperature measurement algorithms and excellent networking capabilities, provides advanced and reliable temperature measurement technology for metal smelting, blast furnace condition monitoring, steel rolling, laser welding and other high temperature measurement and monitoring. The temperature measurement range of AT31U can reach 1500°C. Its small body can provide clear images and makes installation convenient. It supports secondary development and meets the needs of users for high temperature monitoring applications.

■ Observe and analyze the thermal world



1 Visualize temperature, see and analyze

• Ultra-high temperature range

- Temperature measurement range is up to 1,500°C, which meets the requirements of ultra-high temperature test.



1500°C



• Solid and Robust

- Small window design and shell can effectively protect the lens and camera, which is suitable for terrible environment.



2 Excellent images in high-temperature range

• ±2%/-20°C~1500°C: high accuracy, wider range, meet the demands of ultra-high temperature measurement.

• 384×288 infrared resolution, adopting self-developed infrared detector for clearer images at ultra-high temperature.

• 89.3 ° wider FOV displays more comprehensive temperature data, more suitable for high temperature testing scenes.


• 40mK high sensitivity displays more temperature details clearly during high temperature measurement, and no details are overlooked.






3 Precise structural design, adaptable to harsh and high temperature environment


- Ultra-small window design reduces the probability of high-temperature slag spluttering; the lens can be easily replaced, reducing maintenance costs.
- Equipped with a sturdy metal shell to help the machine resist high temperature and harsh environment and make the equipment difficult to damage.
- The size is small and light, convenient to carry and integrate into the equipment cabinet.



Small window to prevent splashing and effectively protect the lens



Metal shell, hard to damage



Compact and easy to integrate

4 Easy to integrate, convenient to develop

- 9-26V DC wide voltage power supply, flexible power distribution.
- Supports multiple interfaces and protocols such as RJ45 and TCP, which is convenient for network development and data transmission.
- Provide SDK for fast, simple, and convenient secondary development.



Application Fields



Main Specifications

Model	AT31U
Imaging and Optical Data	
Resolution	384×288
Heat Sensitivity/NETD	40mk
Image Frequency	40Hz
Focal Length	3.3mm
FOV (H×V)	89.3°×73.1°
IFOV	5.15mrad
Detector	
Detector Type	Uncooled VOx infrared focal plane detector
Wave Band	8~14μm
Pixel Size	17μm
Temperature Measurement	
Temperature Range	0~450°C / 450°C~1500°C
Precision	±2 °C or ±2% (The greater shall prevail)
Measurement Tool	Any fixed point; full-screen high/low temperature capture; temperature measurement at central point; line/area analysis tool; manual temperature range selection.
Interface	
Analog Video Output	1-channel video
Network Interface	RJ45 10M/100M/1000M adaptive
Alarm Interface	1-channel input, 1-channel output
Network Protocol	Ethernet/IP, TCP, UDP, SNTP, RTSP, HTTP, ICMP, SMTP, DHCP, UPnP, PPPOE
Ethernet	Control and transmit images
Interface Protocol	Support customized ONVIF
Image Adjustment	
Brightness and Contrast	Manual/Auto 0 (default)/Auto 1
Polarity	Black-hot/White-hot
Palette	Support 18 pseudo colors
Image Reverse	Left and right/Up and down/Diagonal
Power Supply System	
Typical Consumption @ 25°C	≤3W
External Power Supply and Connector Type	DC power
Voltage	9-26VDC
Environmental	
Operating Temperature	-20°C~+60°C
Storage Temperature	-40°C~+70°C
Humidity (Operating and Storage)	5% - 95% RH (non-condensing)
Impact	30g, 11ms, all axes
Vibration	4.3g, random vibration, all axes
Physical	
Weight	314g±5g
Thermal Imager (L×W×H)	46.5mm × 48mm×148mm
Shell Material	Aluminum
Product Name and Accessory	Online ultra-high temperature thermal imager, dedicated cables

LT Series Uncooled Thermal Imaging Module for Temperature Measurement

LT Supplies more stable and reliable temperature measurement performance in the industry. It provides incomparable high-quality images, more stringent electrical performance, and richer data interface, suitable for applications with very strict requirements for thermal imaging core.

■ Smarter Machine Vision



1 High performance, meet various future demands

- Self-developed VOx detector has high frame rate, high resolution, and high sensitivity.
- -20°C~+550°C wide range temperature measurement makes it possible to monitor more industrial targets requiring high-temperature measurement.
- Real-time full-frame temperature output ensures the measurement accuracy to be $\pm 2^{\circ}\text{C}$ or $\pm 2\%$.
- Its double calibration modes support manual correction and automatic correction. Cooperated with patented intelligent temperature measurement algorithm, it ensures measurement accuracy and improves work efficiency.
- Provide various lenses to detect targets of different depth of field target in a single lens. Provide more accurate temperature and output high-quality thermal images.

2 Various electrical performance and rich interface for wide application

- It has compact size, light weight, and is easy to install. It is applicable for space-restricted areas and brings no load on the equipment to be tested.
- Support standard USB interface (optional) to transmit real-time on-site temperature data, no need to connect the back-end with complex data cables.
- Support multiple image and temperature data output interfaces to achieve rapid transmission of image and temperature data and improve work efficiency.

3 Improve development efficiency with the support of professional software

- Provide Windows/Linux/Android SDK to support users' secondary development and improve practicality to form customer advantages.
- Professional analysis software displays more point, line, and area test results, providing an easier way for obtaining back-end temperature data and making the application more flexible and convenient while reducing the cost of use.



Main Specifications

Model	LT640P	LT640	LT384
Detector Parameters			
Detector Type	VOx uncooled infrared FPA detector		
Resolution	640×512		384×288
Pixel Pitch	12μm	14μm	17μm
Detector frame rate	30Hz		50Hz
Spectral Band	8~14μm		
NETD	<50mk@25°C, F1.0(<40mk Optional)		
Image Adjustment			
Brightness and Contrast Adjustment	Manual/Auto 0 (defaulted)/Auto 1		
Polarity	Black hot/White hot		
Palette	Support 18 palettes		
Digital Zoom	1.0~8.0× Continuous Zoom (Step Size 0.1)		
Image Processing	Non-uniformity Correction, Digital Filtering Denoise, Digital Detail Enhancement		
Mirror Image	Horizontal/Vertical/Diagonal Mirror Image		
Area-of-interest	Support		
Temperature Measurement Performance			
Measuring Range	-20°C~+150°C, 0°C~+550°C (Optional)		
Gain Switch	High Gain/Low Gain/Auto Switch		
Temperature Measurement Accuracy	±2°C or ±2% of the reading (the larger one shall prevail) @Environment Temperature -20°C~60°C		
Measurement Tools	10 Fixed Dots Measurement, Maximum/Minimum Temperature Dots Capture, Full Frame Measurement, Center Dot Measurement, 12 Line/Rectangle Analysis, Isotherm Analysis		
Measurement Settling Time	≤10s(Fastest)		
Temperature Correction	Manual/Auto		
Lens			
Lens	4mm、5.8mm、6.2mm、9.7mm、13mm、19mm、25mm、35mm、50mm		
Power			
Power Supply Range	USB; 45V DC/ Expansion Board Support 5~24V DC		
Typical Working Voltage	4V DC/Expansion Board Support 12V DC		
Boot Time	≤12s		≤3s
Power Protection	Overvoltage, Undervoltage, Reverse Connection (Adaptive Expansion Board)		
Typical Power Consumption @25°C	<2W		
Interface			
Analog Video Output	1Channel (PAL)/NTSC		
Digital Video Output	USB, 14 and 10-bit LVDS-H/F		
Serial Communication Interface	RS-232/UART (3.3V)		
Physical Characteristics			
Weight (without lens)	<76g		
Dimension (without lens)	44.5×43 (mm) (Width × height)		
Environment Adaptability			
Operating Temperature	-40°C~+80°C		
Storage Temperature	-45°C~+85°C		
Humidity	5~95%, non-condensing		
Vibration	4.3g, random vibration, all axials		
Impact	40g, 11ms, Final Peak Sawtooth Wave, 3 Axial 6 Direction		

Application Fields



Industrial equipment



Electrical equipment



UAVs



Robots



Fire-fighting equipment, and hand-held thermal imagers

Micro III Series Ultra-Compact High Accuracy Thermographic Module



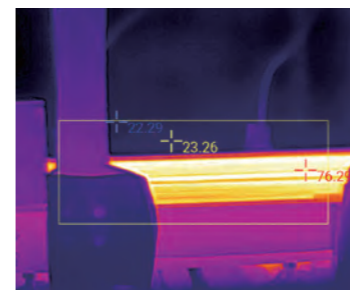
Micro III professional thermographic module has great advantages of small size, light weight, and low power consumption, thanks to its special technique and optimized circuits. With Matrix III patented image algorithm and intelligent temperature measurement algorithm, it can provide temperature data with high accuracy. Rich interfaces and functions make it easier to use and integrate, providing new solutions for thermal imaging products in various industries.

- Cherry chip, tiny titan



1 Cherry Chip, Tiny Titan

- It has ultra-small volume (26×26×22mm) and neat appearance. Its optical center coincides with geometric center overlap. And its cherry size adds convenience to integration.
- Its ultra-light weight (<20g) adds great power to light unmanned aircraft, small hand-held observation equipment, and machine vision equipment.
- Ultra-low power consumption (Full frame rate 50Hz, power consumption<900mW) brings great technical advantages, needless to worry about heat dissipation.



2 From range to accuracy, meet the demands of system integrators

- Wide range of temperature measurement (-20°C~+550°C) fits various industrial application scenarios.
- The high accuracy of temperature measurement ($\pm 3^{\circ}\text{C}$ or $\pm 3\%$) can meet the requirements of temperature measurement application in various industrial scenes.
- With a high frame rate (50Hz), the video is smooth without lag when observing the target moving at high speed moving or with rapid temperature change, which improves detection efficiency and data reliability.
- With high sensitivity (0.05°C), it can distinguish more details and detect farther targets while providing HD images.
- With Matrix III intelligent image algorithm, it can ensure high image quality while outputting accurate temperature data.



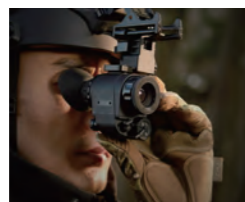
3 Everything you need is already here. Interfaces, different temperature measurement modes, RoHS, SDK for secondary development...

- Rich data interfaces (5 main types) adapt to more platforms, reducing the R&D cycle and costs.
- 6 temperature measurement modes to help engineers conduct more professional and comprehensive temperature analysis, without missing any abnormal temperature points.
- Comply with RoHS, no worry to export;
- Provide SDK and support user customization of language and reticle, improving practicality and forming customer advantage.

Application Fields



Security monitoring



Night vision/ firefighting helmet



Light UAV



Patrol Robot



Handheld temperature measurement

Main Specifications

Model	MicroIII 640T	MicroIII 384T
Detector Parameters		
Detector Type	VOx uncooled infrared FPA detector	
Resolution	640×512	384×288
Pixel Pitch	12μm	
Detector frame rate	25Hz	50Hz
Spectral Band	8~14μm	
NETD	≤50mK@25°C	
Image Adjustment		
Brightness and Contrast Adjustment	Manual/ Auto	
Palette	Support 18 palettes	
Color Palettes	Display/ Fade/ Move (Support for Customization)	
Digital Zoom	1.0~8.0× Continuous Zoom(Step Size 0.1)	
Image Processing	Digital Filtering Noise Reduction/ Digital Detail Enhancement	
Power		
Power Supply Range	4~6V DC	
Power Protection	Expansion Board Support 5~24V DC Expansion Board Support Over Voltage, Under Voltage and Reverse	
Typical Power Consumption @25°C	<1.0W (Without Expansion Board)	<0.9W (Without Expansion Board)
	<1.5W (With Expansion Board)	<1.4W (With Expansion Board)
Interface		
Video Output	Analog Video	1 Channel (PAL/NTSC)
	Digital Video	BT.656/14-bit or 8-bit LVCMOS/LVDS/MIPI/CameraLink
Serial Communication Interface	RS-232/UART (3.3V)	
USB3.0	Typical Voltage 5V, Support Image and Temperature Data Transmission, Support Control Protocol	
Temperature Measurement Performance		
Measuring Range	-20°C~+150°C, 0°C~+550°C	
Measurement Accuracy	±3°C or ±3% of the reading (the larger one shall prevail)@Environment Temperature -20°C~60°C	
Temperature Measurement Tools	10 Fixed Dots Measurement, Maximum/Minimum Temperature Dots Capture, Center Dot Measurement, 12 Line/Rectangle Analysis, Isotherm Analysis	
Secondary Development		
Support	Language Customize Supported / Reticle Customize Supported	
SDK	Support	
Physical Characteristics		
Weight	20g±3g (Without Lens and Expansion Board)	
Dimension	26×26×22 (mm) (Without Lens and Expansion Board)	
Environment Adaptability		
Operating Temperature	-40°C~+80°C	
Storage Temperature	-45°C~+85°C	
Humidity	5%~95%, non-condensing	
Vibration	6.06g, random vibration, all axials	
Impact	80g, 4ms, Final Peak Sawtooth Wave, 3 Axial 6 Direction	
Environmental Directives		
RoHS2.0	Support	
CE	Support	

High Accuracy Temperature Measurement Products



LT Series High-precise Thermographic Module LT384H/640H

- High-performance temperature measurement with the accuracy of $\pm 0.5^{\circ}\text{C}$ ($\pm 0.3^{\circ}\text{C}$ with blackbody) meets various future needs;
- Various electrical specifications and interfaces widen the application range;
- Professional software improves development efficiency.



Micro III Series Ultra-compact Professional Grade Thermographic Module Micro III 384TH/640TH

- Ultra-small SWaP meets various needs of integrators;
- Wide measuring range ($0^{\circ}\text{C}\sim+60^{\circ}\text{C}$) can deal with various industrial scenes;
- High measuring accuracy ($\pm 0.5^{\circ}\text{C}$) meets the needs of industrial temperature measurement in various scenes.



HT Series High-precise Temperature Measurement Thermal Bullet Camera HT300/600

- 320,000 large array can capture more temperature details;
- Support multi-target high-temp alarm and auto face tracing;
- The system is clear, easy to use, and quickly deployed;
- Detecting distance: 2-6m.



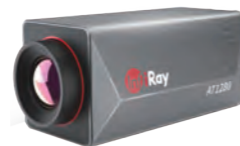
DT Series Dual-spectrum Accurate Temperature Measurement Camera DTC300/200

- Non-contact quick measurement with the accuracy of $\pm 0.3^{\circ}\text{C}$ (with black body);
- Unaware quick measurement improves efficiency;
- Infrared+2-megapixel visible light optimizes recognition;
- Detecting distance: 1-3m.



AT Series Precise Body Temperature Measurement Thermal Camera AT300/600

- Compact and miniaturized design realizes quick deployment;
- Megapixel optional, non-contact measurement with the high accuracy of $\pm 0.3^{\circ}\text{C}$;
- Auto and real-time alarm with multiple methods of sound and image;
- Detecting distance: 1-5m.



AT Series 1.3 Megapixel Body Temperature Measurement Thermal Camera AT1280H

- Clear thermal details displayed by 1.3 megapixel makes temperature measurement more accurate and reliable;
- Keep a longer detection distance to improve the passage efficiency and reduces the risk of cross-infection;
- Help prevent and control the epidemic while providing a richer visual perception for future infrastructure.



IT Series AI Thermal Imaging Temperature Screening System ITS II 300

- High-precision real-time temperature measurement supports fast no-stop quick passing;
- Infrared + visible dual light vision with AI face recognition technology;
- Cloud big data access;
- Detecting distance: 5-10m.



Tianshu Series Handheld Thermal Camera C200H

- Non-contact quick screening, efficient and cost effective;
- Auto snapshot of high temperature with traceable data;
- Easy to deploy, out of the box;
- Detecting distance < 1m.