Main Specifications

Category	Parameter	Value
Detector	Model	M200A
	Focal plane array/Spectral range	Uncooled FPA microbolometer (VOx)/8-14μm
	Pixel pitch	12 μm
Imaging and optical data	Infrared resolution	256x192 pixels
	NETD	≤0.04℃@30℃ (≤40mk)
	FOV	56°×42°
	Focal length	3.2mm
	Spatial resolution/IFOV	3.75mrad
	Focus	Focus-free
	f number	1.1
	Image frequency	25Hz
	Digital zoom	2x, 4x
Image presentation	Resolution	1920x1080 pixels, CMOS
	Visual camera	2 Megapixels
	Screen	3.5 inch touch screen, 640x480
	Color palette	7 color palettes (white hot black hot iron lava rainbow rainbowHC RdGy)
	Temperature Range of Color Code	Manual/Automatic temperature range
	Image mode	IR/Visual/PIP/Fusion
	Laser pointer	Available, class 2, <1mW/650nm, eye-safe
Measurement analysis	Temperature Range	-20℃- +550℃
	Accuracy	±2℃ or ±2% (of reading, whichever is greater)
	Measurement mode	Central spot (for full frame), hot spot, cold spot
	Spotmeter	10 in live mode
	Line	10 in live mode
	Area	10 in live mode
	Automatic hot/cold detection	Automatic maximum/minimum markers within area
	Temperature alarm	Full frame high/low temperature alarm
	Alarm mode	Image alarm
	Auto/timed photograph	Support auto photograph when trigger alarm and timed photograph, photo numbers and time interval can be set
	Video streaming	Real-time radiometric infrared-video streaming over UVC
	Settings	Data/time, ℃/℉/K, language (12, English/Russian/Polish/German/French/Korean/Portuguese/Spanish/Hungarian/Italian/Turkish/Traditional_Chinese)
	Emissivity correction	Variable from 0.01 to 1.0 (increment: 0.01)
	Atmospheric transmissivity adjustment	Object distance setting (0.5-4m, step size 0.25m); Ambient temperature(adjustable, −10℃~+50℃, step size 1℃)
Storage	Memory card	32G Micro SD card
	File format - thermal	JPG, with original temperature data
	File format - visual	JPG, without temperature data
	Non-radiometric infrared-video recording	H.264 to memory card
	Image naming	Support automatic naming/text input/naming through QR code scanning
	Voice annotation	voice recording (unlimited time), stored with images (microphone built-in)
	Text annotation	available
Power supply	Interface	USB Type C
	Battery	Rechargeable li-ion battery
	Battery Operation time	About 8 hours continuous operation
	Charging time	About 3 hours
	Power management	Auto shut-down (5 min, 10 min, 20 min, off)
Environment	Working temp.	-10℃-+50℃
	Storage temp.	-20℃~+60℃
	Humidity	10%-95% (Non-condensing)
	Encapsulation	IP54(IEC 60529)
	Impact and Vibration	Impact 25g (IEC 60068-2-27); vibration 2.5g (IEC 60068-2-6)
	Drop resistance	2m
	Wifi	available
	Certificate	CE/FCC/RoHS2.0
Dimension & Weight	Weight	635g
	Dimension	258mm×105mm×102mm
	Tripod	1/4"-20-UNC
Interface	Power input	DC 5V
	Accessories	5V 2A power adapter, USB cable, SD card, documentation, battery charger

Authorized IRay Distributor:

IRay Technology Co., Ltd.

·The manual is for illustrative purposes only. The pictures and technical specifications are subject to change without notice.

Sample No.: DY2021Y001-M200A Printing Time: July 2021

InfiRay

Tianxuan M200A

Handheld Thermal Camera

Check Clearly, Solve Quickly

InfiRay® Tianxuan M200A is an focus-free handheld thermal camera equipped with a 3.5-inch large touch screen. It inherits the advantage of "Check Clearly, Solve Quickly" from the Tianxuan M series, and is installed with the self-developed 12μm high-sensitive 256×192 infrared detector and 2,000,000-pixel visible light camera for clear locating. It features the 40mK thermal sensitivity and 25Hz high frame rate, focus-free design, and USB plug-and-play analysis, to provide accurate data and clear images satisfying the requirements of process monitoring and R&D analysis.

01
Large screen shows clear data
Clear view, accurate measurement, and broad range

- M200A is equipped with a 3.5-inch 480×640 touch screen, lifting the fineness and details of infrared images to a completely new level.
- 256×192 self-developed infrared detector, 25Hz frame rate, and 49152 temperature measurement points on a frame. Clear view, missing no temperature details and improving inspection efficiency.
- 40mK high-sensitive detector chip + professional temperature measurement algorithm. Accurate temperature measurement provids more detailed temperature resolution and dual vision: infrared for measurement and visible light for location.
- 56° wide FOV + focus-free design provides a larger inspection range at the same distance. Broad inspection range covers a whole cabinet in 1m and achieves high-efficiency inspection in narrow spaces.
- Two levels of temperature measurement: -20℃ to +150℃, 100℃ to 550℃; ±2℃ measurement accuracy, satisfying temperature requirements in different scenarios.

3.5-inch
480×640
touch screen

256×192
self-developed
infrared detector

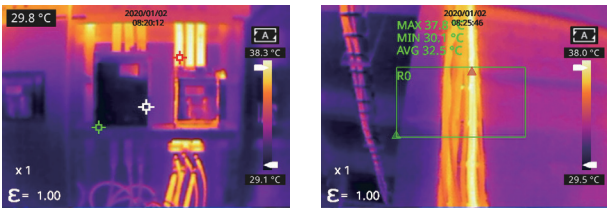25Hz
25Hz frame rate
49152
measurement points

40mK
High-sensitive
detector chip

56°
56° wide FOV
and focus-free design

2,000,000-pixel
visible light

USB charging port, easy for use

3.5-inch
480×640 touch screen

Gallery

Power

Back

ok

Navigation

Camera trigger
Easy photographing

Ergonomic handle,
comfortable to grab

2,000,000-pixel
digital camera

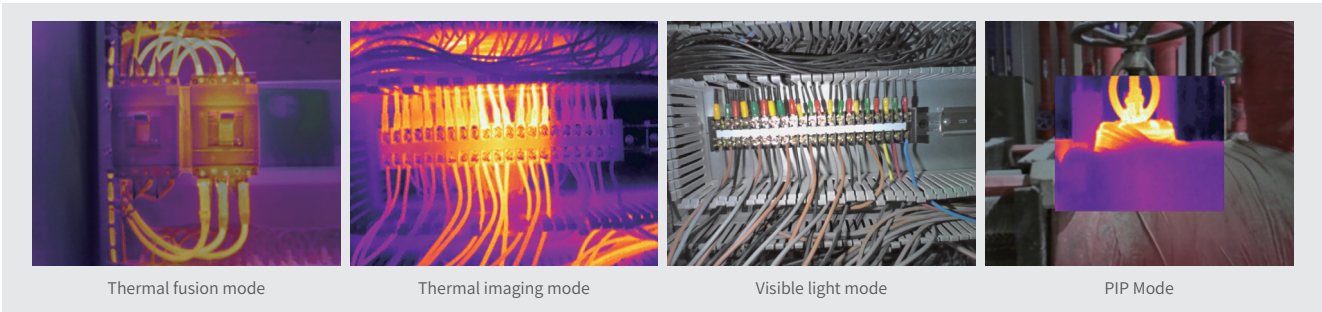56° wide FOV +
focus-free design

Infrared lens

Laser pointer

02
See temperature difference with intelligent software
Support UVC, settable thresholds, and alarms

- M200A is connected to the InfiRay® software ecosystem. With the USB real-time image analysis function, you can measure and analyze temperature at one time. It supports dual-platform analysis on both PC software and App, with rich software functions, curve generation for temperature rise by a click, settable alarm threshold, and multi-area flexible alarm.
- It is equipped 3.5-inch touch screen and supports the highest temperature, central spot, and cold/hot spot tracing as well as temperature display. Temperature measurement can be directly conducted on points, lines, and areas to facilitate partial area measurement and partition measurement.
- 4 modes+7 color palettes are suitable for more measurement modes. Wide temperature range for you to adjust manually, size and position settable for PIP mode. In dual-vision fusion mode, the infrared image can be adjusted on the touch screen to implement dual-vision registration. 4× digital zoom is supported for infrared images. One device can satisfy multi-scenario and multi-purpose requirements of users.

Dual-vision registration
touch screen adjustment

USB plug-and-play
analysis

Thermal fusion mode   Thermal imaging mode   Visible light mode   PIP Mode

03
Strong, durable, and rigid
IP54, 2m drop protection, and 8h long battery life

- Well made with fine materials, M200A supports IP54 and 2m drop protection. With the perfectly curved camera trigger, you can short press it for photographing or long press it for recording. The internal 32G memory is sufficient for use!
- M200A is equipped with two quick removal batteries, rechargeable on a portable 5V mobile power supply, to achieve ultra-long battery life for you to use at will. This prevents process delays due to insufficient power for users.

2m
drop protection

IP54
grade

8h

Applications

Product R&D   Building inspection   Equipment maintenance   Electric routine inspection   Electrical maintenance