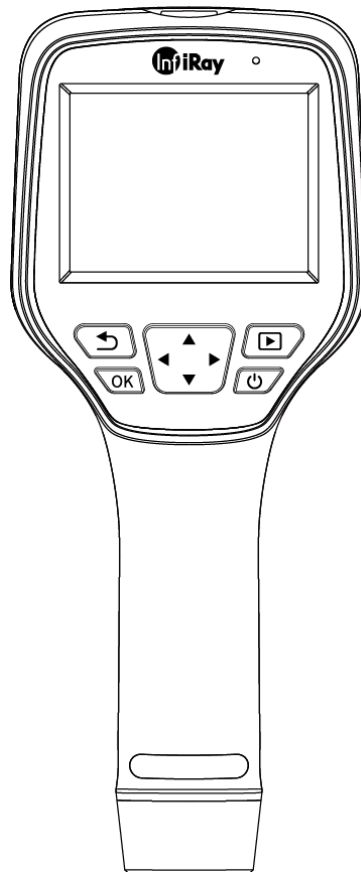




Tianxuan M320

Handheld Thermal Camera

Technical Data V1.0.0



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1. Overview

1.1 Update Comments

Our manuals are updated several times per year. Please visit our website to access the latest manuals.

1.2 Authorized Release Notes

The authorized release of this manual is the Chinese version. In case of disagreement due to translation errors, the Chinese version shall prevail. If there is any update in the future, the Chinese version will be revised first.

2. M320 Technical Data

General Description

With built-in up to 110,000 pixels (384*288) infrared detector, M320 series handheld temperature measurement thermal camera can provide clearer temperature images, more accurate temperature measurement data; support both standard H.264 video recording and IRV video recording with temperature. Wider temperature measurement range (-20°C~650°C), manual focus design, equipped with smart touch screen and manual focus lens, 10 optional color palettes, up to 8× digital zoom, time-lapse image capture, image alarm, alarm image capture and more newly-added functions such as smart patrol, isotherm and line temperature measurement trend display. dual optical imaging. All these contribute to user friendly product.

Advantages

1. Manual focusing is supported. Through manual precise focusing, small targets of 1mm can be distinguished (at a distance of 0.1m from the observation target).
2. Up to 10 custom point/line/area temperature analysis and line temperature measurement trend display is supported, temperature measurement range can reach -20°C~+650°C.
3. Powerful image fusion function, together with 5 MP visible light camera and 10 palettes, can provide more comprehensive information, making it easier to observe under complex conditions.
4. Real-time temperature analysis function is available.
5. Wi-Fi transmission is supported. When connecting to mobile APP, analyzing and sharing temperature screen and temperature measurement data at any time is available. Intelligent PC analysis software can reset the measurement settings, and generate a test report with one shot, which is convenient for data analysis.
6. With 3.5-inch LCD capacitive touch screen and battery quick-release design, it also supports tripod mounting and portable use.
7. With laser indication, it can quickly locate the measurement target; High and low temperature intelligent alarm in the full frame and custom alarm temperature are available. Support custom alarm temperature, time-lapse image capture and alarm image capture.

8. Support isotherm, the user can set self-defined temperature measurement range for image inspection in a certain temperature range.
9. Support H.264 video capture without temperature and .irv video capture with temperature, time interval of temperature video capture can be set, the range is 0.05~100s.

Thermal Module	
Detector Type	VOx Uncooled FPA detector
Resolution of Detector	384*288
Response Band	8~14μm
Pixel	12μm
NETD	35mK
IFOV	1.31mrad
Detector Frame Frequency	30Hz
Focus	9.1mm
FOV	27°*20°
Focus Mode	Manual focus
Temperature Measuring Range	-20 °C~ 150 °C ; 100°C~ 650 °C
Temperature Measuring Accuracy	±2% or ±2°C, the larger value shall prevail

Camera Functions	
Temperature Measuring Mode	Center point/hot and cold spot tracking and temperature display
Custom Point/Line/Area Temperature Measurement	Movable point/line/area temperature measurement; supports up to 10 points, 10 areas, 10 lines
Temperature Measuring Unit	Celsius, Fahrenheit, Kelvin
Emissivity Settings	Adjustable between 0.01 and 1.0, step 0.01
Ambient Temperature Settings	-10°C~50°C, step 1°C
Distance Settings	1~20m, step 1m
Image Mode	Thermal, visible light, PIP, visible and thermal fusion

Palettes	10
Digital Zoom	×1, ×2, ×4, ×8
Temperature Alarm	Alarm is triggered when the temperature is above the highest temperature and below the lowest temperature in the full frame
Alarm Type	Image alarm
Temperature Scale	Manual/Auto temperature range
Laser Indicator	Available
Visible Light Camera	5 MP
Image/video Storage	XX-IR.jpg (thermal image with temperature) and XX-DC.jpg (Visual image); videos without data
Annotation Function	Make voice annotation via microphone
Language	English, Polish, Russian, Korean, Hungarian, Brazilian Portuguese, German, French, Spanish, Italian, Turkish, Traditional Chinese
Screen	3.5-inch touchscreen (480*640)
Image Naming	Auto naming, scan the QR code naming and manual naming
Storage Card	32GB MicroSD card, extendable to 512GB
Battery Type	Rechargeable and detachable Lithium battery
Power Interface	USB Type-C
Connecting Methods	USB, Wi-Fi
Charging Time	About 3hours
Operation Time	About 4hours
Battery Management	Automatic shutdown: 5 minutes, 10 minutes, 20 minutes, off)

Others	
Analysis Software	PC (Infrared analysis software) & mobile (IOS/Android APP)
Tripod Mounting	Yes, 1/4"-20-UNC
Operation Temperature	-10°C ~ +50°C
Storage Temperature	-20°C ~ +60°C
Relative Humidity	10% ~ 95%, non-condensing
Drop Test	2m
Encapsulation	IP54 (IEC 60529)
Shock and Vibration	Shock 25g(IEC 60068-2-27); Vibration 2.5g(IEC 60068-2-6)
Dimensions(L*W*H)	258.4x105.1x102.3mm
Weight	683.5g (incl. battery)
Certifications	CE/FCC/UKCA/RoHS/TELEC/NCC/TSCA/WEEE/ metrological certification
Accessories	5V 3A power adaptor, USB cable, SD card, battery × 2, QSG, calibration certificate, battery charger, package list

3. Structural Drawings

