

Product Datasheet - Technical Specifications



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M31T Thermographic Handheld Camera



The HIKMICRO M31T handheld thermal imaging camera is engineered for high-precision temperature monitoring within critical ranges. Equipped with a 384×288 resolution, advanced calibration algorithms, it enables rapid identification of temperature anomalies in dynamic environments. With real-time temperature tracking at $\pm 0.5^{\circ}\text{C}$ accuracy (ambient temperature: $5^{\circ}\text{C}\sim 40^{\circ}\text{C}$), the device supports informed decision-making and enhances safety.

• Features

- High sensitivity thermal module with 384×288 resolution
- Supports multiple palettes
- High quality optical module with 8 MP resolution
- Bi-spectrum image fusion, picture-in-picture preview
- Wide temperature measurement range: $5^{\circ}\text{C}\sim 40^{\circ}\text{C}$
- High temperature measurement accuracy: Max ($\pm 0.5^{\circ}\text{C}$), for the ambient temp. 15°C to 35°C
- 640×480 resolution 3.5" LCD touch display
- LED light supplement makes the device a torch in required scenarios
- Supports 1.0× to 8.0× continuous digital zoom

• Specification

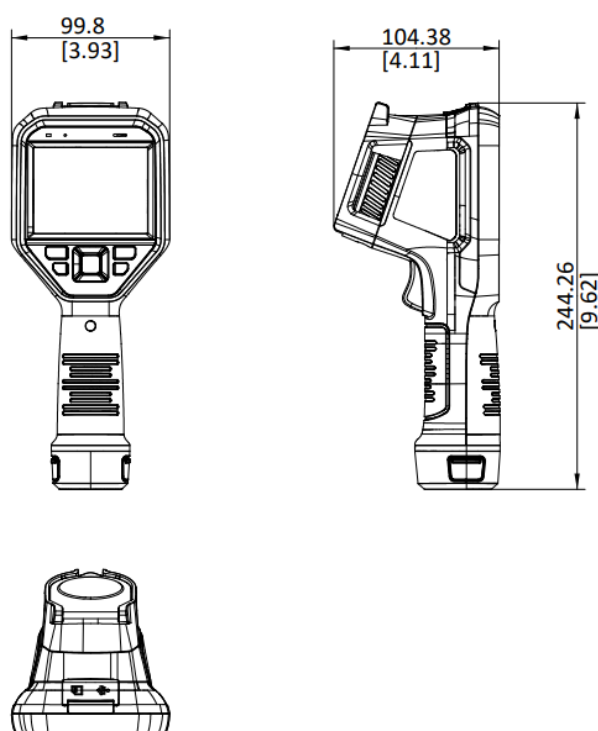
Infrared Image	
IR Resolution	384×288 (110,592 pixels)
SuperIR	768×576 (442,368 pixels)
NETD	< 35 mK (@ 25°C, F#=1.0)
Image Frequency	30 Hz
Detector Pitch	12 μm
Spectral Range	7.5 to 14 μm
Focal Length	6.4 mm
F-number	F1.0
Field of View (FOV)	41.1°×30.5°
Spatial Resolution (IFOV)	1.87 mrad
Min. Focus Distance	0.1 m (0.32 ft)
Focus Mode	Manual Focus
Image Display	
Visual Camera	3264×2448 (8 MP)
Display	640×480 Resolution, 3.5" LCD Touch Screen
Screen Brightness	Manual
Digital Zoom	1.0× to 8.0× continuous
Color Palettes	White Hot, Black Hot, Rainbow, Ironbow, Red Hot, Fusion, Rain, Blue Red
Focus Mode Palette	Above/Below/Interval
Color Alarm	Above/Below/Interval
Image Modes	Thermal/Visual/Fusion/PIP/Blending
Measurement and Analysis	
Object Temperature Range	Range 5°C to 40°C (41°F to 104°F)
Accuracy	Max (±0.5°C), for the ambient temp. 15°C to 35°C
Measurement Tools	Center Spot, Hot Spot, Cold Spot User-definable: 10 spots, 1 line, 5 rectangles, and 5 circles
Level and Span Mode	Auto/Manual/1-Tap Touch-screen
Data Storage and Communication	
Image Storage Capacity	Approx. 100,000 Images (8 MP)
Annotations	Voice note: max. 60 seconds; Text note: max. 200 characters; QR Code note; Picture note; Tag note; Sketch;
Video Storage Capacity	MP4 video max. 400 h; Radiometric video max. 50 h
Video File Format	MP4 video and radiometric video
Radiometric Infrared-Video Streaming (Compressed)	Over UVC, Wi-Fi
Extendable Memory Card	Extendable 64 GB Micro SD Card
General	
Wi-Fi	802.11 b/g/n (2.4 GHz and 5 GHz)
Bluetooth	Bluetooth 4.2
USB Interface	USB Type-C
LED Light	Yes

Laser	Yes, Class II, Wavelength: 635 nm; Power:< 1 mW
Battery Type	Interchangeable and rechargeable Li-ion battery
Battery Operating Time	Approx. 4 hours
Battery Charging Time	Approx. 4 hours fully charged
Power Saving Mode	Yes
Protection Level	IP54
Drop Test Height	2 m (6.56 ft)
Safety	IEC 61010-1
EMC	EN 301489-1, EN 301489-17, EN IEC 61000-6-2, EN IEC 61000-6-3, EN 61326-1
Vibration	2 g, IEC 60068-2-6
Warranty	3 years for the full product, 10 years for the detector, and 2 years for the battery.
Shock	25 g, IEC 60068-2-27
Working Temperature Range	5°C to 40°C (41°F to 104°F)
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)
Relative Humidity	< 95% non-condensing
Weight	Approx. 720g (1.59 lb)
Dimension	244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)
Tripod Mounting	UNC ¼"-20

▪ Available Model

HM-TP23A-7QF/W-M31T

▪ Dimension



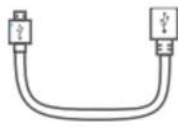
Unit: mm [inch]

SCALE 1:1

▪ Packaging List



QSG (× 1)



**USB 2.0 A to USB Type-C Cable
(× 1)**



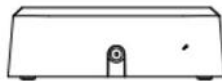
**Power Supply for
Battery Charger (× 1)**



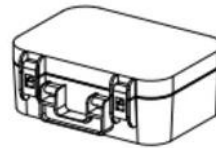
**International Use
Plugs (US/EU/UK/AU)
for Power Supply**



Battery (× 2)



Two-bay Battery Charger (× 1)



**Hard Carrying Case (×
1)**



Wrist Strap (× 1)



Calibration Certificate

▪ Accessory

▪ Optional

**E097-13-1S1P26650
M Series Battery**



**HM-5202ZC
M Series Charging
Base**



**HM-SP01-POUCH
M/G/SP Series Pouch**



▪ COMPLIANCE NOTICE:

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