

M20



HIKMICRO M20 handheld thermography camera is specially designed for professional inspections. It's equipped with a 256 × 192 resolution thermal detector and an 8MP resolution visual camera. The high resolution 3.5-inch touch screen displays crisp, clear images and streamlines camera operations. Imaging modes include thermal, visual, picture in a picture of the optical and thermal view, and fusion of both channels. The M20 quickly identifies potential faults, quantifies the impact with accurate temperature measurement, provides detailed documentation to complete your inspections efficiently.

#### Features

- High sensitivity thermal module with 256 × 192 resolution
- Supports multiple palettes
- High quality optical module with 8 MP resolution
- Bi-spectrum image fusion, picture-in-picture preview
- Wide temperature measurement range: -20 650° C
- High temperature measurement accuracy: Max ±2°C for 0 to 100°C, ±2% for 100 to 600°C, ±4% for 600 to 650°C at the ambient temp. 15 to 35°C
- 640 x 480 resolution 3.5" LCD touch display
- Long-distance laser light supplement for thermography targets
- LED light supplement makes the device a torch in required scenarios
- 1.0x to 8.0x continuous digital zoom
- Supports remote album access, download and quick report with APP

# Specification

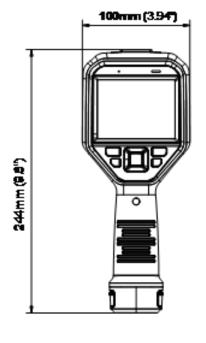
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Infrared Image	
IR Resolution	256 × 192 (49,152 pixels)
SuperIR	512 × 384 (196,608 pixels)
NETD	<40 mK (@ 25 °C, F#=1.0)
Image Frequency	25 Hz
Detector Pitch	12 μm
Spectral Range	7.5 to 14 µm
Focal Length	6.9 mm
F-number	F1.0
Field of View (FOV)	25° × 18.8°
Spatial Resolution (IFOV)	1.74 mrad
Min. Focus Distance	0.1 m (0.33 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	1.0x to 8.0x continuous
Color Palettes	White Hot, Black Hot, Rainbow, Ironbow, Red Hot, Fusion, Rain, Blue Red,
	Condensation Alarm
Focus Mode Palette	Above/Below/Interval
Color Alarm	Above/Below/Interval/Insulation
Image Modes	Thermal/Visual/Fusion/PIP/Blending
Measurement and Analysis	
Object Temperature Range	Range -20°C to 150°C (-4°F to 302°F)
	Range 100°C to 650°C (212°F to 1202°F)
Accuracy	Max $\pm 2^{\circ}$ C for 0 to 100°C, $\pm 2\%$ for 100 to 600°C, $\pm 4\%$ for 600 to 650°C at the
	ambient temp. 15 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 Communicat	ion
Image Storage Capacity	Approx. 60,000 Images (8MP)
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. 160h;
	Radiometric video max. 50h
Video File Format	MP4 video and radiometric video

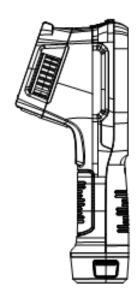
Radiometric Infrared-Video Streaming (Compressed) Extendable Memory Card Extendable 32 GB Micro SD Card  General  Wi-Fi 802.11 b/g/n (2.4 GHz and 5 GHz) Bluetooth Bluetooth 4.2 USB Interface USB Type-C Battery Type Interchangeable and rechargeable Li-ion battery Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW Battery Operating Time Approx. 6 hours Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft) Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-7  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC 1/4" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.  Power Saving Mode		
Extendable Memory Card  General  Wi-Fi 802.11 b/g/n (2.4 GHz and 5 GHz)  Bluetooth Bluetooth 4.2  USB Interface USB Type-C  Battery Type Interchangeable and rechargeable Li-ion battery  Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time Approx. 6 hours  Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-7  Working Temperature Range -10°C to 50°C (-4°F to 152°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.		Over UVC, Wi-Fi
Wi-Fi 802.11 b/g/n (2.4 GHz and 5 GHz)  Bluetooth Bluetooth 4.2  USB Interface USB Type-C  Battery Type Interchangeable and rechargeable Li-ion battery  Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time Approx. 6 hours  Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 152°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ¾" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	,	
Wi-Fi 802.11 b/g/n (2.4 GHz and 5 GHz)  Bluetooth Bluetooth 4.2  USB Interface USB Type-C  Battery Type Interchangeable and rechargeable Li-ion battery  Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time Approx. 6 hours  Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ¾" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Extendable Memory Card	Extendable 32 GB Micro SD Card
Bluetooth Bluetooth 4.2  USB Interface USB Type-C  Battery Type Interchangeable and rechargeable Li-ion battery  Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time Approx. 6 hours  Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	General	
USB Interface  Battery Type  Interchangeable and rechargeable Li-ion battery  Laser  Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time  Approx. 6 hours  Battery Charging Time  Approx. 4 hours fully charged  LED Light  Yes  Protection Level  IP54  Drop Test Height  2 m (6.56 ft)  Safety  IEC 61010-1  EMC  EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration  1 g, IEC 60068-2-6  Shock  15 g, IEC 60068-2-27  Working Temperature Range  -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range  -20°C to 70°C (-4°F to 158°F)  Relative Humidity  <95% non-condensing  Weight  Approx. 660g (1.46 lb)  Dimension  244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting  UNC 1/4" -20  Warranty  3 years for the full product, 10 years for the detector, and 2 years for the battery.	Wi-Fi	802.11 b/g/n (2.4 GHz and 5 GHz)
Battery Type Interchangeable and rechargeable Li-ion battery  Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time Approx. 6 hours  Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-7  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Bluetooth	Bluetooth 4.2
Laser Yes, Class II, Wavelength: 635 nm; Power: <1 mW  Battery Operating Time Approx. 6 hours  Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	USB Interface	USB Type-C
Battery Operating Time Approx. 6 hours  Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½″ -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Battery Type	Interchangeable and rechargeable Li-ion battery
Battery Charging Time Approx. 4 hours fully charged  LED Light Yes  Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½4" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Laser	Yes, Class II, Wavelength: 635 nm; Power: <1 mW
LED Light         Yes           Protection Level         IP54           Drop Test Height         2 m (6.56 ft)           Safety         IEC 61010-1           EMC         EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3           Vibration         1 g, IEC 60068-2-6           Shock         15 g, IEC 60068-2-27           Working Temperature Range         -10°C to 50°C (-4°F to 122°F)           Storage Temperature Range         -20°C to 70°C (-4°F to 158°F)           Relative Humidity         <95% non-condensing	Battery Operating Time	Approx. 6 hours
Protection Level IP54  Drop Test Height 2 m (6.56 ft)  Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ½4" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Battery Charging Time	Approx. 4 hours fully charged
Drop Test Height $2 \text{ m} (6.56 \text{ ft})$ Safety IEC 61010-1  EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration $1 \text{ g}$ , IEC 60068-2-6  Shock $15 \text{ g}$ , IEC 60068-2-27  Working Temperature Range $-10^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $-4^{\circ}\text{F}$ to $122^{\circ}\text{F}$ )  Storage Temperature Range $-20^{\circ}\text{C}$ to $70^{\circ}\text{C}$ ( $-4^{\circ}\text{F}$ to $158^{\circ}\text{F}$ )  Relative Humidity $-20^{\circ}\text{C}$ in $-20^{\circ}\text{C}$ ( $-4^{\circ}\text{C}$ to $-20^{\circ}\text{C}$ ( $-4^{\circ}\text{C}$ to $-20^{\circ}\text{C}$ to $-20^{\circ}\text{C}$ to $-20^{\circ}\text{C}$ ( $-4^{\circ}\text{C}$ to $-20^{\circ}\text{C}$ to $-2$	LED Light	Yes
Safety       IEC 61010-1         EMC       EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3         Vibration       1 g, IEC 60068-2-6         Shock       15 g, IEC 60068-2-27         Working Temperature Range       -10°C to 50°C (-4°F to 122°F)         Storage Temperature Range       -20°C to 70°C (-4°F to 158°F)         Relative Humidity       <95% non-condensing	Protection Level	IP54
EMC EN 50130-4, EN 55032, EN IEC 61000-3-2, EN 61000-3-3  Vibration 1 g, IEC 60068-2-6  Shock 15 g, IEC 60068-2-27  Working Temperature Range -10°C to $50$ °C (-4°F to $122$ °F)  Storage Temperature Range -20°C to $70$ °C (-4°F to $158$ °F)  Relative Humidity <95% non-condensing  Weight Approx. $660g$ (1.46 lb)  Dimension $244 \times 100 \times 104$ mm (9.6 $\times 3.9 \times 4.1$ in)  Tripod Mounting UNC $\frac{1}{4}$ " -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Drop Test Height	2 m (6.56 ft)
Vibration1 g, IEC 60068-2-6Shock15 g, IEC 60068-2-27Working Temperature Range $-10^{\circ}$ C to $50^{\circ}$ C ( $-4^{\circ}$ F to $122^{\circ}$ F)Storage Temperature Range $-20^{\circ}$ C to $70^{\circ}$ C ( $-4^{\circ}$ F to $158^{\circ}$ F)Relative Humidity $<95\%$ non-condensingWeightApprox. $660g$ ( $1.46$ lb)Dimension $244 \times 100 \times 104$ mm ( $9.6 \times 3.9 \times 4.1$ in)Tripod MountingUNC $\frac{1}{4}$ " $-20$ Warranty3 years for the full product, 10 years for the detector, and 2 years for the battery.	Safety	IEC 61010-1
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Working Temperature Range -10°C to 50°C (-4°F to 122°F)  Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity 495% non-condensing Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC ¼" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Vibration	1 g, IEC 60068-2-6
Storage Temperature Range -20°C to 70°C (-4°F to 158°F)  Relative Humidity <95% non-condensing  Weight Approx. 660g (1.46 lb)  Dimension 244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)  Tripod Mounting UNC 1/4" -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Shock	15 g, IEC 60068-2-27
Relative Humidity <95% non-condensing  Weight Approx. $660g (1.46 \text{ lb})$ Dimension $244 \times 100 \times 104 \text{ mm } (9.6 \times 3.9 \times 4.1 \text{ in})$ Tripod Mounting UNC $\frac{1}{4}$ " -20  Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Working Temperature Range	-10°C to 50°C (-4°F to 122°F)
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Tripod Mounting UNC 1/4" -20 Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Weight	Approx. 660g (1.46 lb)
Warranty 3 years for the full product, 10 years for the detector, and 2 years for the battery.	Dimension	244 × 100 × 104 mm (9.6 × 3.9 × 4.1 in)
	Tripod Mounting	UNC 1/4" -20
Power Saving Mode Yes	Warranty	3 years for the full product, 10 years for the detector, and 2 years for the battery.
	Power Saving Mode	Yes

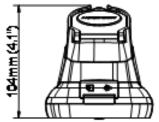
### Available Model

HM-TP22-7QF/W-M20

#### Dimension







## Packing List









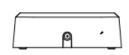
**QSG** (×1)

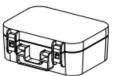
USB 2.0 A to USB Type-C Cable (×1)

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











Battery (× 2)

Two-bay Battery Charger (× 1)

Hard Carrying Case (× 1)

Wrist Strap (× 1)



**Calibration Certificate** 

- Accessory
- Optional



**COMPLIANCE NOTICE**: The thermal series products might be subject to export controls in various countries or regions, including without limitation, the United States, European Union, United Kingdom and/or other member countries of the Wassenaar Arrangement. Please consult your professional legal or compliance expert or local government authorities for any necessary export license requirements if you intend to transfer, export, re-export the thermal series products between different countries.







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\*Note: Specifications are subject to change without notice. For the current specs, please go to www.hikmicrotech.com