

DHI-TPC-M20 Thermal Monocular Camera



Series Overview

M20 captures sharp thermal images of running targets and moving vehicles at a fast frame rate. It clearly displays targets in high resolution, even if they are moving quickly. Designed to increase situational awareness at any time of day, M20 can detect humans, animals, and objects in complete darkness, haze, or through glaring light, equipping law enforcement professionals, hunters, and outdoor enthusiasts with reliable thermal imaging in tough conditions.

Functions

Advanced Image Processing

Designed to be precise, this monocular produces vivid video images through its enhanced detector and Dahua-developed image processing algorithm.

Video Ranging

With its hassle-free distance measurement feature, simply mark the top and bottom of a target on the screen, and the interface will automatically display the distance of the target from the monocular.

Fire Detection

Fire detection is now available for the first time with this monocular through Dahua's core technology. The monocular can automatically detect fires that break out in the scene and track them in real time.

Simultaneous Multi-user Connections

Multiple phones can connect to the monocular through the Wi-Fi at the same time. Through the mobile phone, you can watch the live view, capture images, record videos and configure parameters.

Diopter Adjustment

By using the diopter adjustment knob, the monocular can be set to match the eyesight of different users, ensuring that each user sees a clear image.

- · Vanadium oxide uncooled focal plane detector.
- Ultra-low power consumption.
- Fire detection and alarm.
- Connects to the mobile app through Wi-Fi.
- · Connects to the external display through the CVBS port.
- Provides a laser for aiming.
- · Calculates distance using video analysis.
- Lightweight and portable.
- IP67 rated.

Laser Eye Protection

The laser pointer is used to indicate a position. To protect the eyes from being injured, the laser pointer is automatically disabled after 10 s.

Portable and Low Power Consumption

With its small and lightweight design, it functions for longer periods while remaining fully charged, making long-term outdoor use more convenient.

Scene

Widely used in outdoor scenarios for hunting, rescue, animal observation, and more.

Technical Specification

| General | | |
|--------------------|---|--|
| Appearance | Thermal Monocular Camera | |
| Туре | Monitor | |
| Thermal | | |
| Detector Type | Vanadium oxide uncooled focal plane detector | |
| Effective Pixels | 256 × 192 | |
| Pixel Pitch | 12 μm | |
| Spectral Range | 8 μm–14 μm | |
| Sensitivity (NETD) | ≤50 mK@f/1.0 | |
| Focal Length | 7.5 mm; 10 mm; 15 mm | |
| Aperture | F1.0 | |
| Field of View | 7.5 mm (H: 24.0°; V: 18.0°) 10 mm (H: 17.3°; V: 13.1°) 15 mm (H: 11.7°; V: 8.8°) | |
| Focus Control | Fixed-focal | |

Outdoor Series | DHI-TPC-M20

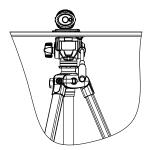
| Close Focus | Distance | 7.5 mm 1 m (3.28 ft) 10 mm 2 m (6.56 ft) 15 mm 3 m (9.84 ft) | | | |
|------------------------------|-----------------|---|--|---|--|
| DRI Detection Distance | Focal Length | Detection Distance | Recognition Distance | Identification Distance | |
| | 7.5 mm | Vehicle: 777 m (2,549.21 ft) Human: 291 m (954.72 ft) | Vehicle: 194 m (636.48 ft) Human: 75 m (246.06 ft) | Vehicle: 97 m (318.24 ft) Human: 37 m (121.39 ft) | |
| | 10 mm | Vehicle: 1,111 m (3,645.01 ft) Human: 416 m (1,364.83 ft) | Vehicle: 277 m (908.79 ft) Human: 107 m (351.05 ft) | Vehicle: 97 m (318.24 ft) Human: 53 m (173.88 ft) | |
| | 15 mm | Vehicle: 1,666 m (5,465.88 ft) Human: 625 m (2,050.52 ft) | Vehicle: 416 m (1,364.83 ft) Human: 160 m (524.93 ft) | Vehicle: 208 m (682.41 ft) Human: 80 m (262.47 ft) | |
| Digital Zoom | | 4 levels | | | |
| Color Palette | Color Palettes | | 4 (white hot; alarm; rainbow; iron red) | | |
| Display | | | | | |
| Video Compression | | H.265 | | | |
| Frame Rate | | 50 Hz | | | |
| Display Screen Dimensions | | 0.2 inch | | | |
| Resolution | | 720 × 540 | | | |
| Function | | | | | |
| Storage | | Micro SD card (Max. 256G) | | | |
| Laser Aiming | | 180 m (590.55 ft), Class 2 (IEC 60825-1) | | | |
| Buzzer | | Yes | | | |
| Intelligen | ce | | | | |
| Fire Detectio | n | Yes | | | |
| Cold/Hot Spo | ot Trace | Yes | | | |
| Port | | | | | |
| Analog Outp | ut | 1 × CVBS output | | | |
| Wi-Fi Hotspo | ot | Yes | | | |
| USB | | Micro USB | | | |
| Power | | | | | |
| Power Supply | y | 5 VDC, 0.3 A or bu | VDC, 0.3 A or built–in battery | | |
| Battery Capa | city Display | Yes | | | |
| Power Consumption | | <1.5 W | | | |
| Battery Life | | >9 h (Wi-Fi hotspot off, @25°C) | | | |
| Charging Time | | <3 h | | | |
| | | | | | |

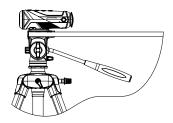
| Environment | | | | |
|--------------------------|--|--|--|--|
| Operating Temperature | -20 °C to +55 °C (-4 °F to +131 °F) | | | |
| Operating Humidity | ≤90% | | | |
| Storage Temperature | -20 °C to +60 °C (-4 °F to +140 °F) | | | |
| Physical Characteristics | | | | |
| Protection | IP67 | | | |
| Product Dimensions | 170.9 mm × 57.6 mm × 58.6 mm (6.73" × 2.27" × 2.31") (L × W × H) | | | |
| Packaging Dimensions | 205 mm × 148 mm × 111 mm (8.07" × 5.83" × 4.37") (L × W × H) | | | |
| Net Weight | 350 g (0.77 lb) | | | |
| Gross Weight | 1 kg (2.20 lb) | | | |
| Installation | Handheld; tripod | | | |
| Power Adapter | Included | | | |
| Lens | Included | | | |
| Bracket | Optional | | | |
| Drop Test Height | 2 m (6.56 ft) | | | |
| Certification | | | | |
| Certification | CE_DHQA-ESH-P21060763B FCC_DHQA-ESH-P21060764B | | | |

Ordering Information

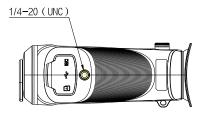
| Туре | Model | Description |
|--------------------------------|-------------------|-----------------------------|
| Thermal Monocular Camera | DHI-TPC-M20-B7-Y | Lens: 7.5 mm; Color: Yellow |
| | DHI-TPC-M20-B10-Y | Lens: 10 mm; Color: Yellow |
| | DHI-TPC-M20-B15-Y | Lens: 15 mm; Color: Yellow |
| | DHI-TPC-M20-B7-G | Lens: 7.5 mm; Color: Black |
| | DHI-TPC-M20-B10-G | Lens: 10 mm; Color: Black |
| | DHI-TPC-M20-B15-G | Lens: 15 mm; Color: Black |

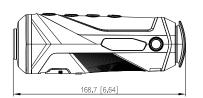
Installation

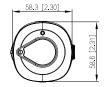




Dimensions (mm[inch])







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