

## SP120H Handheld Thermal Camera



The HIKMICRO SP120H high-performance handheld thermal camera is an excellent choice for industrial, predictive, oil and gas, and utility maintenance inspections. It features a high-sensitivity HIKMICRO VOx detector (NETD < 20 mK) with a resolution of 1280 x 1024 and can measure temperatures up to 2200°C. This flexible and ergonomic thermal imager includes an electronic viewfinder and a 180° rotating lens, simplifying long outdoor inspections. Advanced features such as GPS and compass annotations, continuous digital zoom, and 1-Tap level and span make it easy for professionals to survey equipment and detect malfunctions. With the HIKMICRO Viewer App or HIKMICRO Analyzer software, users can transfer, analyze, and share images, as well as generate reports for free.

### ▪ Features

- Thermal resolution: 1280 x 1024 (1 310 720 pixels), NETD : < 20 mK (@ 30 °C, F#=1.0)
- Temperature measurement range : -40°C to 2200°C (-40°F to 3992°F)
- Accuracy: Max. (±1°C (±1.8°F): 0 to 100°C (32 to 212°F); ±1%: 100 to 150°C (212 to 302°F))
- The 90° rotating screen and the 180° rotating lens design
- 1024 x 768 OLED electronic viewfinder and auto-brightness 5.1-inch color LCD display
- 1.x to 12.x continuous digital zoom
- Manual, automatic, and 1-Tap Level and Span
- GPS & compass annotation functions
- 30 Hz image frequency
- Up to 4 hours continuous running

## ▪ Specification

| Infrared Image            |                                                                                                            |
|---------------------------|------------------------------------------------------------------------------------------------------------|
| IR Resolution             | 1280 × 1024 (1,310,720 pixels)                                                                             |
| SuperIR                   | 2560 × 2048 (5,242,880 pixels)                                                                             |
| NETD                      | < 20 mK (@ 30 °C, F#=1.0)                                                                                  |
| Image Frequency           | 30 Hz                                                                                                      |
| Detector Pitch            | 12 μm                                                                                                      |
| Spectral Range            | 7.5 to 14 μm                                                                                               |
| Focal Length              | L8: 112.2 mm; L12: 72.9 mm; L25: 35 mm; L50: 17.6 mm                                                       |
| F-number                  | L8: F1.3; L12: F1.2; L25: F1.1; L50: F1.1                                                                  |
| Field of View (FOV)       | L8: 7.9° × 6.3°; L12: 12° × 9.6°; L25: 25° × 20°; L50: 50° × 40°                                           |
| Spatial Resolution (IFOV) | L8: 0.11 mrad; L12: 0.17 mrad; L25: 0.34 mrad; L50: 0.68 mrad                                              |
| Min. Focus Distance       | L8: 5m (16.4 ft); L12: 1.65m (5.41 ft); L25: 0.3m (0.98 ft); L50: 0.2m (0.66 ft)                           |
| Focus Mode                | Laser Assisted AF/Continuous AF/AF/Manual Focus/Touch AF                                                   |
| Image Display             |                                                                                                            |
| Visual Camera             | 4208 × 3120 (13 MP)                                                                                        |
| Display                   | 1920 × 1080 Resolution, 5.1" OLED Touch Screen, Lv 360 Cd/m <sup>2</sup>                                   |
| Screen Brightness         | Manual/Auto                                                                                                |
| Viewfinder                | 1024 × 768 pixels OLED                                                                                     |
| Digital Zoom              | 1.x to 12.x 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/Insulation/Condensation                                                               |
| Image Modes               | Thermal/Visual/Fusion/PIP/Blending                                                                         |
| Measurement and Analysis  |                                                                                                            |
| Object Temperature Range  | Range -40~150°C (-40 ~ 302°F)                                                                              |
|                           | Range 100~650°C (212~1202°F)                                                                               |
|                           | Range 300~2200°C (572~3992°F)                                                                              |
| Accuracy                  | Range -40~150°C (-40 ~ 302°F) :                                                                            |
|                           | -40~0°C (-40 ~ 32°F) : ±2°C (±3.6°F)                                                                       |
|                           | 0~100°C (32 ~ 212°F) : ±1°C                                                                                |
|                           | 100~150°C (212 ~ 302°F) : ±1%                                                                              |
|                           | Range 100~650°C (212~1202°F) : ±2%                                                                         |
|                           | Range 300~2200°C (572~3992°F) : ±2%                                                                        |
| Measurement Tools         | Center Spot, Hot Spot, Cold Spot<br>User-definable: Delta T, 10 spots, 1 line, 5 rectangles, and 5 circles |
| Level and Span Mode       | Auto/Manual/1-Tap Touch-Screen                                                                             |

|                                                   |                                                                             |
|---------------------------------------------------|-----------------------------------------------------------------------------|
| Inspection Route                                  | Yes                                                                         |
| <b>Data Storage and Communication</b>             |                                                                             |
| Storage Media                                     | Removable 128 GB SD Card                                                    |
| Image Storage Capacity                            | Approx. 30,000 Images                                                       |
| Annotations                                       | Voice note: max. 60 seconds;<br>Text note: max. 200 characters              |
| Video Storage Capacity                            | Approx. 130 Hours (MP4 video)                                               |
| Video File Format                                 | MP4 video<br>and radiometric video                                          |
| Image Format                                      | Radiometric JPEG                                                            |
| Radiometric Infrared-Video Streaming (Compressed) | Over UVC, Wi-Fi                                                             |
| <b>General</b>                                    |                                                                             |
| Wi-Fi                                             | 802.11 b/g/n (2.4 GHz and 5 GHz)                                            |
| Bluetooth                                         | Bluetooth 4.2                                                               |
| USB Interface                                     | USB Type-C                                                                  |
| HDMI Interface                                    | HDMI-D                                                                      |
| LED Light                                         | Yes                                                                         |
| Laser Pointer                                     | Yes                                                                         |
| Laser Distance Meter                              | Indoor distance: 50 m (164 ft);<br>Outdoor distance: 15 m (49 ft).          |
| Laser                                             | Yes, Class II, Wavelength: 635 nm; Power: < 1 mW                            |
| Battery Type                                      | Interchangeable and rechargeable Li-ion battery                             |
| GPS & Compass                                     | Yes                                                                         |
| Battery Operating Time                            | Approx. 4 hours                                                             |
| Battery Charging Time                             | Approx. 2.5 hours fully charged                                             |
| Power Saving Mode                                 | Yes                                                                         |
| Programmable Buttons                              | 2                                                                           |
| Protection Level                                  | IP54, IEC 60529                                                             |
| Drop Test Height                                  | 1 m (3.28 ft), IEC 60068-2-31                                               |
| Safety                                            | IEC 61010-1                                                                 |
| EMC                                               | EN 301 489-1, EN 301 489-17, EN IEC 61000-6-2, EN IEC 61000-6-3, EN 61326-1 |
| Vibration                                         | 2 g, IEC 60068-2-6                                                          |
| Shock                                             | 25 g, IEC 60068-2-27                                                        |
| Working Temperature Range                         | -20°C to 50°C ( -4°F to 122 °F)                                             |
| Storage Temperature Range                         | -20°C to 60°C ( -4°F to 140°F)                                              |
| Relative Humidity                                 | < 95% non-condensing                                                        |
| Weight                                            | Approx. 1550 g (3.42 lb) (Without lens)                                     |
| Dimension                                         | 220.5 × 151.9 × 88.1 mm (8.68 × 5.98 × 3.47 in) (Without lens)              |
| Tripod Mounting                                   | UNC ¼" -20                                                                  |

## Warranty

3 years for the full product, 10 years for the detector, and 2 years for the battery.

## ▪ Available Model

HM-TP9CH-W/W-SP120H-L25

HM-TP9CH-W/W-SP120H-L8

HM-TP9CH-W/W-SP120H-L12/25

HM-TP9CH-W/W-SP120H-L12

HM-TP9CH-W/W-SP120H-L12/50

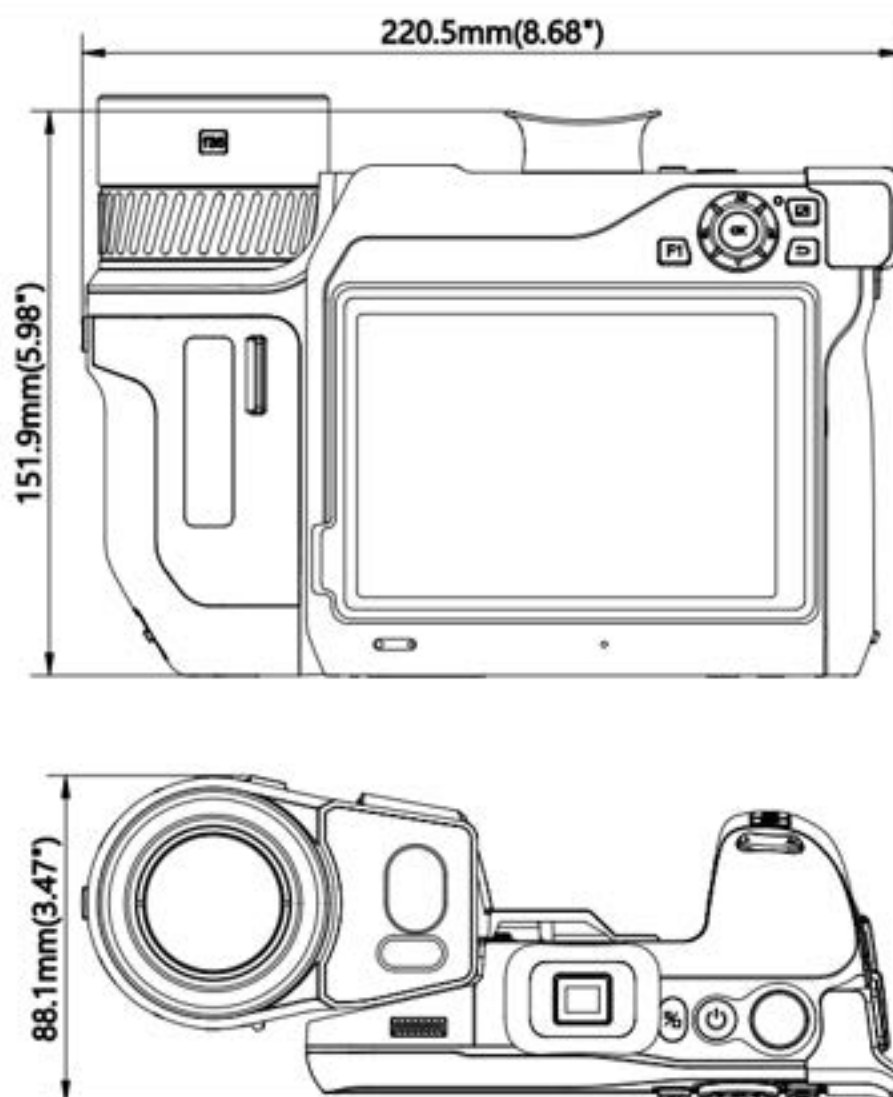
HM-TP9CH-W/W-SP120H-L50

HM-TP9CH-W/W-SP120H-L8/25

HM-TP9CH-W/W-SP120H-L25/50

HM-TP9CH-W/W-SP120H-L8/12/25

## ▪ Dimension



## ▪ Packaging List



Camera(x1)



Hard Carrying Case(x1)



QSG(x1)



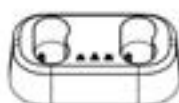
Non-Dust Cloth(x1)



Lens Caps(x1)



Adapter(x1)



Charging Base(x1)



USB Cable(x2)



Wrist Strap(x1)



Adapter Plug(x4)



Battery(x2)



HDMI Cable(x1)



Neck Strap(x1)

## ▪ Accessory

### ▪ Optional

HM-20322ZC  
SP Series Battery  
Charger



HM-7250DC  
SP Series Battery



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



