

# Zenmuse H20T

## General

- **Weight**
  - Zenmuse H20: 678±5 g
  - Zenmuse H20T: 828±5 g
- **Dimensions**
  - Zenmuse H20: 150×114×151 mm
  - Zenmuse H20T: 167×135×161 mm
- **Ingress Protection Rating**
  - IP44
- **Operating Temperature**
  - -20° to 50° C (Temperature Measurement is only available between -10° to 50° C)
- **Storage Temperature**
  - -20° to 60° C
- **Laser Safety**
  - Class 1M (IEC 60825-1:2014)
- **Supported Aircraft**
  - Matrice 300 RTK



## Gimbal

- **Angular Vibration Range**
  - ±0.01°
- **Mount**
  - Detachable
- **Controllable Range**
  - Pitch: -120° to +30°
  - Yaw: ±320°

- **Mechanical Range**
  - Pitch: -132.5° to +42.5°
  - Yaw: ±330°
  - Roll: -90° to +60°

## Zoom Camera

- **Sensor**
  - 1/1.7" CMOS, 20 MP
- **Lens**
  - DFOV: 66.6°-4°
  - Focal length: 6.83-119.94 mm (equivalent: 31.7-556.2 mm)
  - Aperture: f/2.8-f/11 (normal), f/1.6-f/11 (night scene)
  - Focus: 1 m to ∞ (wide), 8 m to ∞ (telephoto)
- **Focus Mode**
  - MF/AF-C/AF-S
- **Exposure Mode**
  - Auto, Manual
- **Exposure Compensation**
  - ±3.0 (1/3 increments)
- **Metering Mode**
  - Spot metering, Center-weighted metering
- **AE LOCK**
  - Supported
- **Electronic Shutter Speed**
  - 1 ~ 1/8000 s
- **ISO Range**
  - Video: 100 - 25600
  - Photo: 100 - 25600
- **Video Resolution**
  - 3840x2160@30fps, 1920x1080@30fps
- **Video Format**
  - MP4
- **Video subtitles**
  - Supported
- **Photo Size**
  - 5184 × 3888

- **Photo Format**
  - JPEG

## Wide Camera

- **Sensor**
  - 1/2.3" CMOS, 12 MP
- **Lens**
  - DFOV: 82.9°  
Focal length: 4.5 mm (equivalent: 24 mm)  
Aperture: f/2.8  
Focus: 1 m to  $\infty$
- **Exposure Mode**
  - Auto
- **Exposure Compensation**
  - $\pm 3.0$  (1/3 increments)
- **Metering Mode**
  - Spot metering, Center-weighted metering
- **AE LOCK**
  - Supported
- **Shutter Speed**
  - 1 ~ 1/8000
- **ISO Range**
  - Video: 100 - 25600  
Photo: 100 - 25600
- **Video Resolution**
  - 1920x1080@30fps
- **Video Format**
  - MP4
- **Video subtitles**
  - Supported
- **Photo Size**
  - 4056 x 3040
- **Photo Format**
  - JPEG

# Thermal Camera (Zemuse H20T)

- **Sensor**
  - Uncooled VOx Microbolometer
- **Lens**
  - DFOV: 40.6°  
Focal length: 13.5 mm (equivalent: 58 mm)  
Aperture: f/1.0  
Focus: 5 m to  $\infty$
- **Digital Zoom**
  - 1x, 2x, 4x, 8x
- **Video Resolution**
  - 640x512 @ 30 Hz
- **Video Format**
  - MP4
- **Image Resolution**
  - 640x512
- **Image Format**
  - R-JPEG (16 bit)
- **Pixel Pitch**
  - 12  $\mu\text{m}$
- **Spectral Band**
  - 8-14  $\mu\text{m}$
- **Sensitivity (NETD)**
  - $\leq 50$  mK @ f/1.0
- **Temperature Measurement Method**
  - Spot Meter, Area Measurement
- **Scene Range**
  - -40 °C to 150 °C (High Gain)  
-40 °C to 550 °C (Low Gain)
- **Temperature alert**
  - Supported
- **FFC**
  - Auto/ manual
- **Palette**
  - White hot/Fulgurite/Iron Red/Hot Iron/Medical/Arctic/Rainbow 1/Rainbow 2/Tint/Black Hot

# Laser Rangefinder

- **Wave length**
  - 905 nm
- **Measurement range**
  - 3-1200 m (to a vertical surface with  $\geq 12$ m diameter and 20% reflection rate)
- **Measurement accuracy**
  - $\pm (0.2 \text{ m} + D \times 0.15\%)$ 
    - D is the distance to a vertical surface

## Features

- **Hybrid Optical Zoom**
  - 23x (DFOV : 4°, EQV : 556.2mm)
- **Max. Zoom**
  - 200x (DFOV : 0.5°, EQV : 4800mm)
- **One Click Capture**
  - One click to save the video or picture of 3 cameras (zoom, wide and thermal camera) simultaneously
- **Point to Aim**
  - Double click on the wide/thermal camera view, then the system will automatically move the gimbal to focus on the point of interest
- **High-Res Grid Photo**
  - Frame an area of interest in wide camera view, and the zoom camera will automatically capture a set of 20 MP images of the area. These images are stored together with an overview image that can be viewed in greater detail.
- **Night Scene**
  - Supported (zoom camera)
- **Timestamp**
  - Including GPS, date, and time

## Storage

- **Supported SD Card**
  - MicroSD card (Max capacity: 128 GB, UHS-1 Speed Grade 3 required)
- **Supported File Systems**
  - FAT32 ( $\leq 32$  GB), exFAT ( $> 32$  GB)

- **Recommended Micro SD Cards**

TOSHIBA EXCERIA PRO 32GB micro SD HC II  
SanDisk\_Extreme PRO\_32GB\_3\_A1\_micro SD V30 HC I  
TOSHIBA EXCERIA PRO 64GB micro SD XC II  
SanDisk\_Extreme PRO\_64GB\_3\_A2\_micro SD V30 XC I  
SAMSUNG\_EVO\_128GB\_micro SD 3 XC I  
TOSHIBA EXCERIA M303E 32GB micro SD HC I  
TOSHIBA EXCERIA M303E 64GB micro SD XC I  
TOSHIBA EXCERIA M303E 64GB micro SD XC I  
TOSHIBA EXCERIA M303 128GB micro SD XC I  
SAMSUNG\_EVO\_64GB\_micro SD 3 XC I