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KAM ZENMUSE H20T Sensor

BY

KAMBILL SYSTEMS PVT. LTD.





ABOUT THE PRODUCT

Multi-sensor payloads that bring a whole new meaning to mission efficiency. The unique intelligence and integrated design provide unprecedented aerial imaging capabilities for a range of commercial drone applications. An integrated laser rangefinder (LRF) measures the distance to an object at up to 1200 m away. A powerful, integrated payload that unleashes advanced intelligent capabilities for KAM industrial drone platforms.

FEATURES

AI SPOT-CHECK



Automate routine inspections and capture consistent results every time. Onboard AI recognizes the pre-marked subject of interest in subsequent automated missions to ensure consistent framing.

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.

SMART TRACK



Identify and follow moving subjects like people, vehicles, and boats with the auto-zoom function, while continuously acquiring the subject's dynamic location.

APPLICATIONS



LAW
ENFORCEMENT



POWERLINE
INSPECTION



OIL AND GAS

CONTACT US



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General

- Weight
 - Zenmuse H20T: 828±5 g
- Dimensions
 - 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
 - $\pm 0.01^\circ$
- Mount
 - Detachable
- Controllable Range
 - Pitch: -120° to +30°
Yaw: $\pm 320^\circ$
- Mechanical Range
 - Pitch: -132.5° to +42.5°
Yaw: $\pm 330^\circ$
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 ∞

- Exposure Mode
 - Auto
- Exposure Compensation
 - ± 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
 - 1920×1080@30fps
- Video Format
 - MP4
- Video subtitles
 - Supported
- Photo Size
 - 4056 x 3040
- Photo Format
 - JPEG

Thermal Camera (Zenmuse 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 ∞
- Digital Zoom
 - 1x, 2x, 4x, 8x
- Video Resolution

- 640×512 @ 30 Hz
- Video Format
 - MP4
- Image Resolution
 - 640×512
- Image Format
 - R-JPEG (16 bit)
- Pixel Pitch
 - 12 μm
- Spectral Band
 - 8-14 μm
- Sensitivity (NETD)
 - ≤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 ≥12m diameter and 20% reflection rate)
- Measurement accuracy
 - ± (0.2 m + D×0.15%)

D is the distance to a vertical surface

Features

- Hybrid Optical Zoom
 - 23× (DFOV : 4°, EQV : 556.2mm)
- Max. Zoom
 - 200× (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 (≤ 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