Kambill

KAM Zenmuse H2ON

Sensors

BY
KAMBILL SYSTEMS PVT. LTD.

Kambill

ZENMUSE H20N

Vision Beyond Darkness
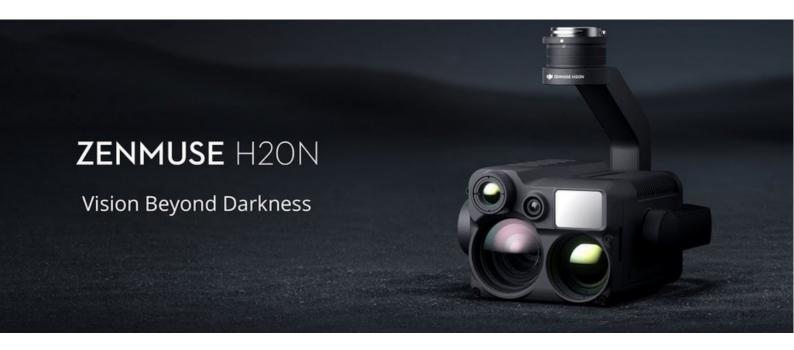
ABOUT THE PRODUCT

The KAM Zenmuse H20N is a multi-sensor payload designed for professional drones. It combines a 20MP zoom camera, a 12MP wide camera, and a laser rangefinder. This versatile payload is tailored for various industrial applications, such as mapping, surveying, and inspection, providing high-quality imagery and precise distance measurements from the air.

APPLICATIONS

- Aerial Surveying and Mapping

- Infrastructure Inspection

- Environmental Monitoring

CONTACT US

FEATURES

INFRARED ZOOM
Two thermal cameras respectively provide 2× and 8× zoom, together enabling up to 32× zoom. Find hotspots and inspect in close detail after zoom-in.

SEE THE BIG PICTURE
Night Vision Wide Camera
Starlight Sensor: 2MP
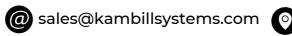Stronger Low-Light Performance

TEMP. ALARM
Receive instant notifications in KAM Pilot when object temperatures exceed your preset alert values.

General

- Product Name
  - Zenmuse H20N
- Dimensions
  - 178x135x161 mm
- Weight
  - 878±5 g
- Protection Rating
  - IP44
- Laser Safety
  - Class 1M (IEC 60825-1:2014)
- Supported Aircraft
- Matrice 300 RTK

Gimbal

- Angular Vibration Range
  - ±0.01°
- Mount
  - Detachable
- Controllable Range
  - Pan: ±320°
  - Tilt: -120° to +60°
- Mechanical Range
  - Pan: ±330°
  - Tilt: -132.5° to +68°
  - Roll: -90° to +60°
- Max Control Speed
  - Pan: 90°/s
  - Tilt: 90°/s

Zoom Camera

- Sensor
  - 1/1.8" CMOS; Effective Pixels: 4M
- Lens

- Focal Length: 6.8-119.9 mm (equivalent: approximately 32.7-574.5 mm)
  Aperture: f/1.6-f/11
  Focus: 1 m to ∞ (wide); 8 m to ∞ (tele)
- Focus Mode
  - MF/AF-C/AF-S
- Exposure Mode
  - Manual, Auto
- Exposure Compensation
  - ±3.0 (1/3 increments)
- Metering Mode
  - Spot Metering, Average Metering
- AE Lock
  - Supported
- Electronic Shutter Speed
  - Photo: 8-1/8000 s
  Video: 1/30-1/8000 s
  Video (Night Scene Mode, Enhanced Noise Reduction Off): 1/10-1/8000
  Video (Night Scene Mode, Enhanced Noise Reduction On): 1/5-1/8000 s
- ISO Range
  - Video: 100-102400
  Photo: 100-102400
- Video Resolution
  - 2688×1512@30fps
  1920×1080@30fps
  1920×1080@10fps (Night Scene Mode, Enhanced Noise Reduction Off)
  1920×1080@5fps (Night Scene Mode, Enhanced Noise Reduction On)
- Video Format
  - MP4
- Video Caption
  - Supported
- Max Image Size
  - 2688×1512
  - Photo Format
  - JPEG

Wide Camera

- Sensor
  - 1/2.7" CMOS; Effective Pixels: 2M
- Lens
  - DFOV: 73.6°
  - Focal Length: 4.5 mm (equivalent: approximately 29 mm)
  - Aperture: f/2.8
  - Focus: 1 m to ∞
- Exposure Mode
  - Auto
- Exposure Compensation
  - ±3.0 (1/3 increments)
- Metering Mode
  - Spot Metering, Average Metering
- AE Lock
  - Supported
- Electronic Shutter Speed
  - Photo: 0.8-1/8000 s
  - Video: 1/30-1/8000 s
  - Video (Night Scene Mode, Enhanced Noise Reduction Off): 1/10-1/8000
  - Video (Night Scene Mode, Enhanced Noise Reduction On): 1/5-1/8000 s
- ISO Range
  - Video: 100-102400
  - Photo: 100-102400
- Video Resolution
  - 1920×1080@30fps
  - 1920×1080@10fps (Night Scene Mode, Enhanced Noise Reduction Off)
  - 1920×1080@5fps (Night Scene Mode, Enhanced Noise Reduction On)
- Video Format
  - MP4
- Video Caption
  - Supported
  - Max. Image Size
  - 1920×1080
- Image Format
  - JPEG

Get in touch:

Tele Infrared Thermal Camera

- Thermal Imager
  - Uncooled VOx Microbolometer
- Lens
  - DFOV: 12.5°
  - Focal Length: 44.5 mm (equivalent: approximately 196 mm)
  - Aperture: f/1.2
  - Focus: 45 m to ∞
- Equivalent Digital Zoom
  - 16x, 32x
- Video Resolution
  - 640×512@30fps
- Video Format
  - MP4
- Image Resolution
  - 640×512
- Image Format
  - R-JPEG* (16 bit raw included)
- 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
  - -20° C to 150° C (High Gain)
  - 0° C to 500° 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

Get in touch:

Wide Infrared Thermal Camera

- Thermal Imager
  - Uncooled VOx Microbolometer
  - Lens
  - DFOV: 45.5°
  Focal Length: 12 mm (equivalent: approximately 53 mm)
  Aperture: f/1.0
  Focus: 5 m to ∞
  - Equivalent digital zoom rate
    - 4x
  - Video Resolution
    - 640×512 @ 30 fps
  - Video Format
    - MP4
  - Image Resolution
    - 640×512
  - Image Format
    - R-JPEG (16 bit raw included)
  - 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
    - -20° to 150° C (High Gain)
    0° to 500° C (Low Gain)
  - Temperature Alert
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    - Auto/Manual
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    - White Hot/Fulgurite/Iron Red/Hot Iron/Medical/Arctic/Rainbow 1/Rainbow 2/Tint/Black Hot

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Laser Range Finder

- Wavelength
  - 905 nm
- Maximum Power
  - 3.5 mW
- Single Pulse Width
  - 6 ns
- Measuring Accuracy
  - ± (0.2 m + target distance x 0.15%)
- Measuring Range
  - 3-1,200 m (0.5 x 12 m vertical surface with 20% reflectivity)

Storage

- Supported microSD Cards
  - Supports a UHS-I Speed Grade 3 microSD card with a capacity of up to 128 GB
- Supported File System
  - exFAT

Environment

- Operating Temperature
  - -20° to 50° C (-4 to 122°F)
- Storage Temperature
  - -20° to 60° C (-4 to 140°F)

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