

VAYU HD



SIERRA-OLYMPIC
Technologies Inc.

Unparalleled 1920 x 1200 LWIR Imagery

Featuring the world's first full HD 1920 x 1200 x 12 μm uncooled microbolometer array, Vayu HD delivers superior image clarity and situational awareness in a SWaP-optimized package.

- + Highest resolution LWIR on the market
- + Custom 25, 50 and 87 mm optic options
- + Standard Video Outputs: HDMI, IP VIDEO (H.264/H.265), USB3.0-UVC (raw 16 bit)
- + Low-SWaP integration (450 / 500 grams)



Details

Available in 25 mm, 50 mm and 87 mm lens models, the Vayu HD is the highest-resolution uncooled LWIR camera on the market. This camera will bring a small area into focus with high level of detail allowing the user to more accurately read an image from a further distance. With 87 mm model weighing < 1 kg this camera maintains low-SWaP capability while producing a highly detailed image making it excellent for aerial integration.

You can connect this camera to your current equipment with the USB3.0 raw video output for universal compatibility. All users will benefit from an onboard image processor that provides H.264/H.265 encoded RTP output and advanced image processing functions. The F/1.2 lenses are coated with a high-durability AR coating and calibrated for optical performance. This camera also retains the ability to add optional features like object tracking and detection with telemetry, NMEA metadata packaging and more.



Applications

- + **Low-SWaP aerial integration**
- + **Navigation, surveying**
- + **Wide Area Surveillance**
- + **Driver Vision**
- + **Aerial Mapping**
- + **Unmanned Vehicles**
- + **Wildlife, wildfire, S&R**
- + **Film production**

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Feature Specs

DETECTOR

Detector type Uncooled VOx Microbolometer

Array format 1920 x 1200

Pixel pitch 12 μm

Spectral response LWIR

Frame rate 60 Hz

Bit depth 16-bit

SYSTEM

Video formats HDMI (1080p), IP, USB3-UVC (RAW 16 bit)

IP video H.264/H.265 MPEG

Image enhancement Linear Histogram AGC, CLAHE, LAP, Sharpen, De-noise, Electronic image stabilization, user color palettes/LUT

Camera control Ethernet, RS-422

Other interfaces Serial in/out for telemetry, GPIO

1-point NUC Scene or mechanical shutter

Onboard storage 32 GB std., expandable to 512 GB

ENVIRONMENTAL

Size (L x W x H)
25 mm: 150 mm x 77 mm x 72 mm
50 mm: 139 mm x 77 mm x 72 mm
87 mm: 169 mm x 88 mm x 88 mm

Weight (approx)
25 mm: 504g (1.1 lbs)
50 mm: 500g (1.1 lbs)
87 mm: 997 g (2.2 lbs)

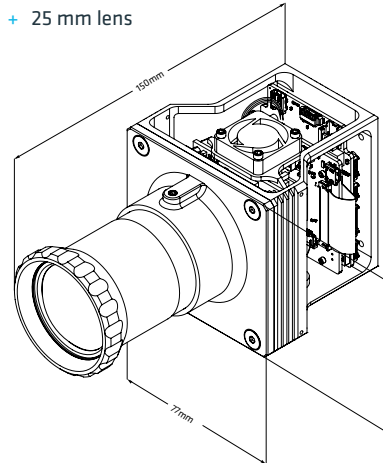
Mounting ¼-20 and M4 tapped mount points

Input voltage 11-14VDC

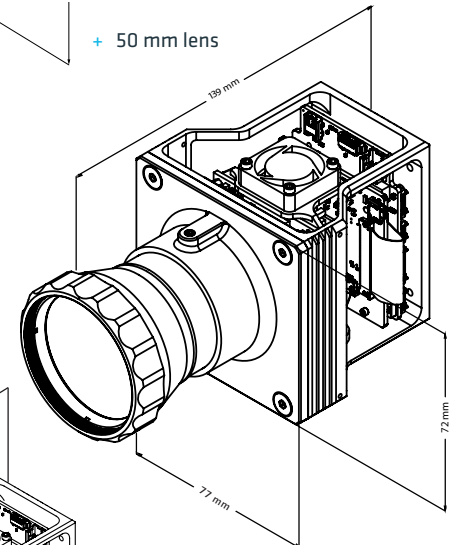
Power 12 W typical at room temperature, 13.5W maximum

Operating temperature -0°C to +45°C

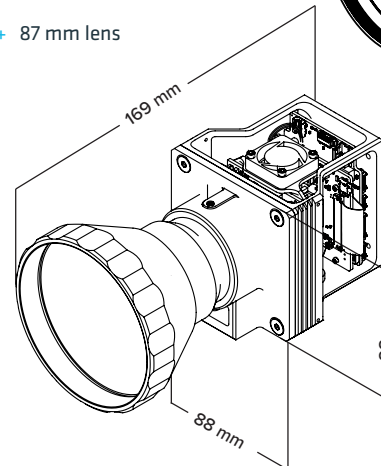
+ 25 mm lens



+ 50 mm lens



+ 87 mm lens



LENS

EFL 25 mm / 50 mm / 87 mm lens models

F# 1.2

Focus Manual

FOV
25 mm: 49.5° x 32.1°
50 mm: 25.9° x 16.4°
87 mm: 15.1° x 9.46°

Environmental Athermalized, High-performance AR Coating

Export Classification: Dual Use