Griffin VGA5-R MWIR Camera Core

Product Datasheet

The Griffin camera is a VGA format (640x512), cryocooled camera core featuring the industry's smallest MWIR VGA sensor. The Griffin captures snapshot MWIR imagery using Attollo Engineering's high-performance Type-II Superlattice (T2SL) detector material and the extremely small pixel pitch of 5 µm enables more pixels on target with a short focal length optic. The Griffin sensor is designed specifically to support broadband imaging along with day and night laser see-spot capabilities. The Griffin VGA MWIR Core is built for low SWaP applications and offers a significant opportunity for cost-savings at the system level compared to competing MWIR cameras. This new miniature camera is ideal for small gimbal integration as well as use in SWaP-constrained handheld and soldier-carried systems. Attollo is also developing this core for attritable missions.

640x512 with a 5µm pixel Camera Core

Highlights

- High Operating Temperature T2SL Detector Technology
- Small 5 µm Pixel Pitch
- High Sensitivity Imaging and Laser See-Spot Capabilities
- In-Camera Imaging Processing
- Weighs 221 grams and displaces 134 cm^3

Applications

- Small gimbals and SUAS
- MWIR 3µm to 5.2µm
- MWIR with SWIR see-spot 0.7µm to 5.2µm available
- Machine vision
- Precision agriculture
- Gas leak detection
- Microscopy
- Medical – tissue analysis
- Structural non-destructive fatigue assessment
- Hyperspectral imaging
- Security / surveillance
- Range-gated imaging
- Covert illuminated imaging
- Laser designator imaging and decode*

*with separate Attollo laser event detector module

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The Griffin is designed and manufactured in Attollo's 34,000 ft^2 facility in Camarillo, California. Attollo specializes in sensors that combine infrared and laser imaging as well as standard and custom IDCA designs for your applications – 5" gimbals, man portable, pan and tilt.

Specifications

Camera	
Detector Material	Type-II Superlattice (T2SL)
Wavelength Band	3.0 – 5.2 µm Response down to 0.7 µm available
Array Format	640 x 512
Pixel Pitch	5 µm
Well Capacity	2.2Me effective
F/#	F/1.8 , F/1.4 and F/1.2 available
Cold Shield Height	9.5mm
NEDT	≤ 30mK
Operability	> 99.5%
Quantum Efficiency	> 70% (2-5µm)
Max Frame Rate	30 Hz, 60 Hz, 120 Hz, 220 Hz, Windowing
Imaging Mode	Global shutter
Integration Time	Presets and user-defined, minimum = 0.1 µs
Triggering	Sync-In (low-latency for see-spot & range-gating); Sync-Out
Image Processing	Non-uniformity correction; bad pixel replacement; AGC

Electrical	
Input Voltage	5 V ± 10%
Power Consumption	≤ 5 W steady state, 10 W peak (during cooldown)
Video Output	Parallel CMOS, Camera Link**, USB3**
Command and Control	UART, I2C, SPI

Mechanical	
Volume	134 cm^3
Weight	221 g
Mounting	Clamp mounting/Custom
Lens Mount	Custom options available
Connector	HIROSE DF40-50

Environmental	
Operating Temperature Range	- 20°C to +71°C
Cool Down Time	3 min

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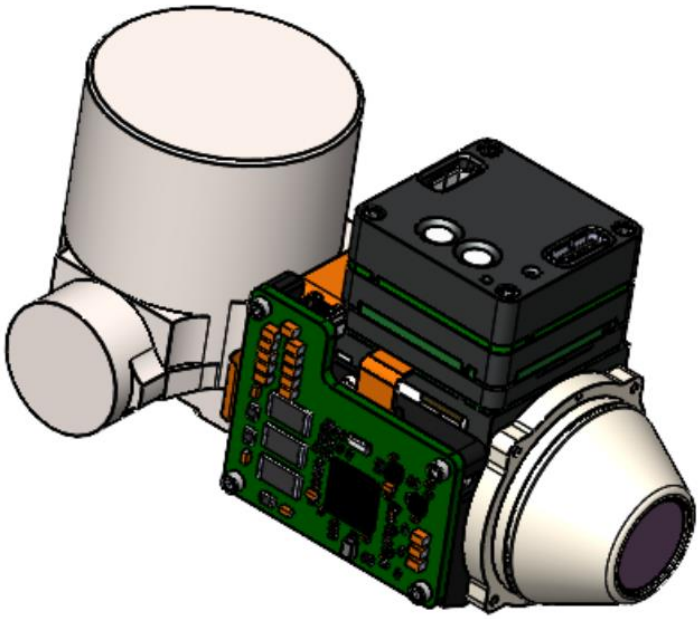

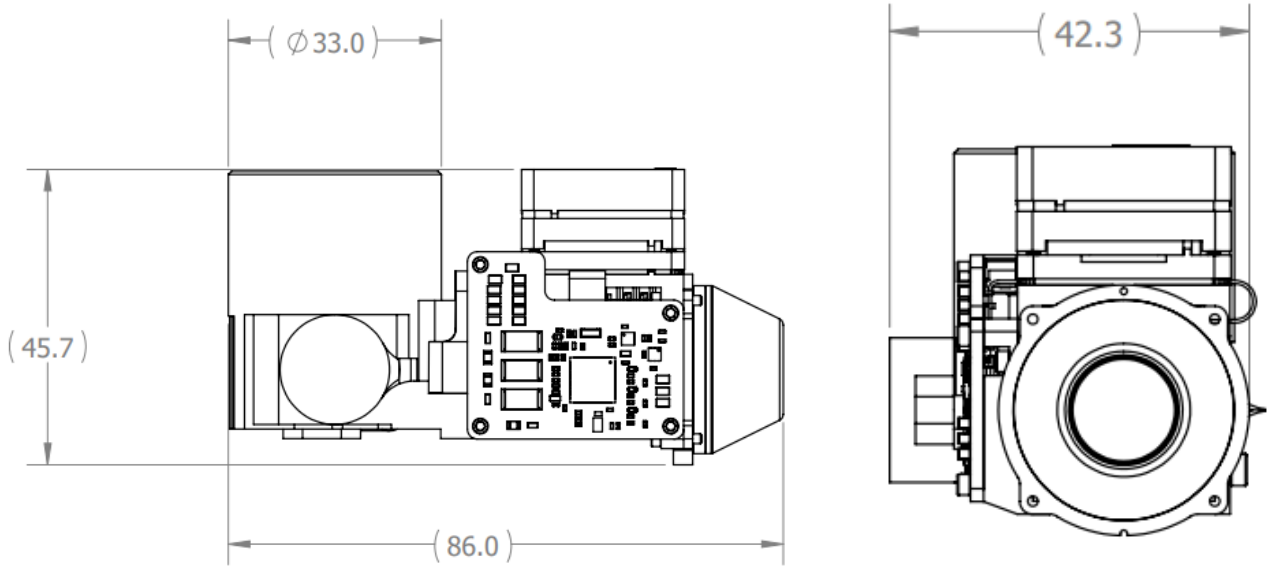

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