

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 Strained Layer Superlattice (SLS) 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 5 μm pixel Camera Core

Highlights

- High Operating Temperature SLS Detector Technology
- Small, 5 μm Pixel Pitch
- High Sensitivity Imaging and Laser See-Spot Capabilities
- In-Camera Imaging Processing
- Weighs 202 grams and displaces 166 cm³

Applications

- Small gimbals and SUAS
- MWIR 3 μm to 5.2 μm
- MWIR w/SWIR see-spot 1.0 μm to 5.2 μm
- 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

Griffin-VGA5 MWIR Camera Core

The Griffin is designed and manufactured in Attollo's 34,000 ft² 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)
Spectral Response	3.0 – 5.2 μm Response down to 0.7 μm available
Array Format	640 x 512
Pixel Pitch	5 μm
F/#	F/1.8 F/1.4 available
NEDT	$\leq 30\text{mK}$
Operability	$> 99.5\%$
Quantum Efficiency	$> 70\%$ (2-5 μm)
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
On-Board Processing	Non-uniformity correction; bad pixel replacement; AGC
Electrical	
Input Voltage	5 V $\pm 10\%$
Power Consumption	≤ 4 W steady state, 10 W peak (during cooldown)
Video Output	Parallel CMOS, Camera Link**, USB3**
Command and Control	UART, I2C, SPI
Mechanical	
Dimensions	166 cm ³
Weight	202 g
Mounting	Clamp mounting/Custom
Lens Mount	Custom options available
Connector	HIROSE DF40-50
Environmental	
Operating Temperature Range	- 40°C to +71°C

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