

The **Griffin HD8** is a high-definition format (1280x720), cryocooled camera core featuring Attollo Engineering Strained Layer Superlattice (SLS) wideband detector material (1-5.2 μ m). The Griffin HD8 captures snapshot MWIR imagery using Attollo Engineering's high-performance Strained SLS detector material and an 8 μ m pixel 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 HD8 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.



1280x720 with an 8 μ m pixel Camera Core

Highlights

- High Operating Temperature SLS Detector Technology
- Small, 8 μ m Pixel Pitch
- High Sensitivity Imaging and Laser See-Spot Capabilities
- In-Camera Imaging Processing
- Weighs less than 250 grams and displaces 166 cm³

Applications

- Small gimbals and SUAS
- MWIR 3.2 μ m to 5.2 μ m
- MWIR w/SWIR see-spot 0.7 μ m to 5.2 μ m 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

Griffin-HD8 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 – small gimbals, man-portable, pan and tilt.

Specifications

Camera	
Detector Material	Type-II Superlattice (T2SL)
Wavelength Band	3.2 – 5.2 μm Response down to 0.7 μm available
Array Format	1280 x 720
Pixel Pitch	8 μm
Well Capacity	3.3 Me-
F/#	F/3, other F/#s available
Cold Shield Height	19.4 mm 25 mm available
NEDT	< 35 mK (T=300K, F/3, 70% well fill)
Operability	$\geq 99.5\%$
Quantum Efficiency	> 70% (2-5 μm)
Max Frame Rate	30 Hz, 60 Hz
Imaging Mode	Global Shutter
Integration Time	0.001 – 16 ms (at 60 Hz)
Triggering	Sync-In (low-latency for see-spot & range-gating); Sync-Out
Image Processing	Non-Uniformity Correction, Auto Gain and Contrast, Bad Pixel Replacement

Electrical	
Input Voltage	5 V \pm 10%; 12 V \pm 10%
Power Consumption	< 6W steady state, < 10 W peak (during cooldown)
Video Output	Parallel CMOS, Camera Link**, USB3**, MIPI
Command and Control	UART, I2C, SPI

Mechanical	
Volume	102 mm x 50 mm x 50 mm
Weight	<250 grams
Connector	HIROSE DF40-50

Electrical	
Operating Temperature Range	- 40°C to +71°C
Cool Down Time	<4.5 min @ 23°C ambient