



# $\mu$ LAD CAMERA CORE

Single-And Dual-Band Micro Low-Cost Advanced Dewar:  
1280 X 1024 Pixel, 8 $\mu$ m, 60 Hz

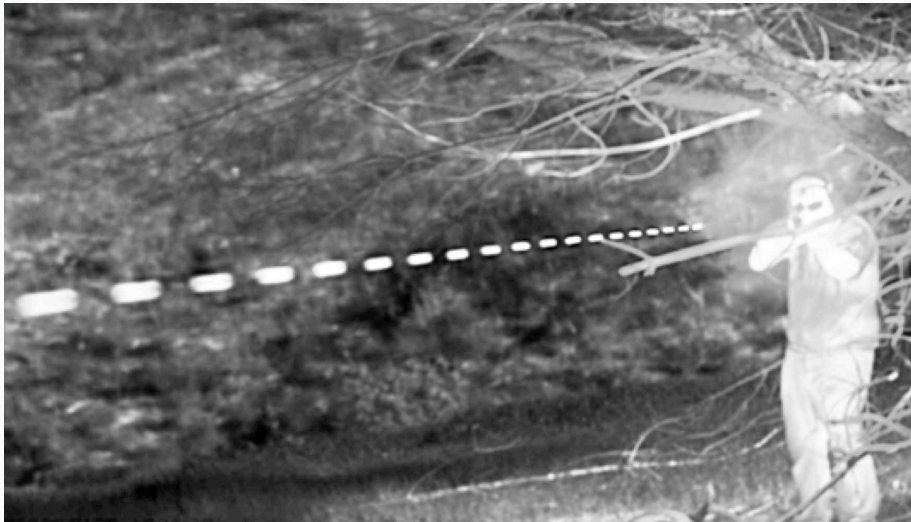
# μLAD CAMERA CORE

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Lockheed Martin's 1.3 megapixel μLAD camera core delivers the performance of a cooled mid-wave infrared (MWIR) camera with the broad band and multi-color versatility of HgCdTe in a low-cost package that is small, light, and low-power. Powered by Santa Barbara Focalplane's large format, small pixel nBn detector technology, it offers proven performance that is superior to current thermal imagers.

## VERSATILE CORE FOR SWAP APPLICATIONS

The compact μLAD is designed to easily integrate with a multitude of systems and platforms. It is ideally suited for applications that demand high performance in a low size, weight and power (SWAP) configuration. These range from missile seekers, weapon sights and remote weapon stations to small gimbal or gimbal-less (e-stab) platforms and tactical air and land sensor systems for OEM and military unmanned aerial vehicles (UAVs). Other applications include hand-held, man-portable missions, missile warning/threat detection systems and electro-optical payloads.



PD152-0002

μLAD high-speed real-time image bullet tracking projector.

## Contact Information

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## FEATURES

- Dual-band, short-or mid-wave IR versatility
- Highest-performance MWIR nBn in industry
- Digital read out integrated circuits (ROIC) offer low-noise, low-power, high-speed performance
- High dynamic range and sensitivity through frame rate stacking
- Innovative design for low-cost production
- Onboard non-uniformity correction (NUC) and processing for image enhancement

## SPECIFICATIONS

### Camera System

- ROIC: 13-bit digital high speed up to 10 Gbps
- Detector: High operating temperature, full MWIR nBn, high MTF, 100% fill factor
- Resolution: 1280 × 1024 pixels (1.3 megapixels); can window to smaller regions
- Pixel pitch: 8 μm
- Integration time: <0.1 μs to 200s
- F#: 2.3
- Video: Base camera link standard, with optional external sync
- Command and control: RS-422 serial interface over camera link
- Cooler: Stirling split linear closed-cycle
- Input voltage: 5V and 12V, 12W steady state

### Mechanical

- Size: 3.75 W × 3.7 H × 3.4 L inches
- Weight: 1.5 lb
- Lens mount: Twist-lock bayonet or per customer specification

### Camera Performance

- Operability: >99.9%
- Frame rate: 60 Hz (180 Hz FPA output stacked 3×)
- Well capacity: 4.8 million electrons
- 26 mK noise equivalent differential temperature (NEDT) at 300K

### Options

- High-speed data capabilities include gimbal-less (e-stab), hostile fire detection and scene-based NUC
- High-speed camera performance:
  - Frame rate option: 60 Hz (360 Hz FPA output stacked 6×)
  - Well capacity: 9.6 million electrons
  - 18 mK NEDT at 300K



PD152-0007

The compact μLAD readily integrates with low SWAP platforms.

SANTA BARBARA  
**Focalplane**