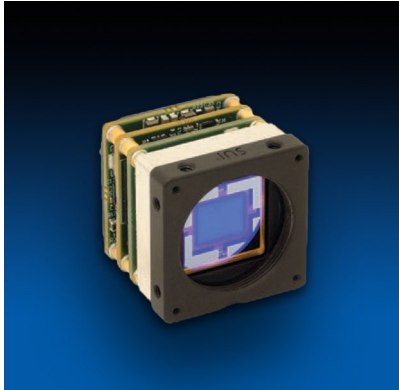


Sensors Unlimited: Micro-SWIR 640CSX MMT



Mil-rugged, high-sensitivity, InGaAs ALPD camera

The Sensors Unlimited Micro-SWIR™ 640CSX MMT SWIR camera core with high-resolution video for laser tracking and decoding of multiple asynchronous sources simultaneously.

BENEFITS

- Laser tracking and decoding of multiple asynchronous sources, simultaneously, day and night
- High sensitivity, MIL-rugged design
- Covert out-of-band NIR/SWIR imaging (0.7 to 1.7 μm)
- Full-FOV tracking of PRF/LRF sources with full NATO code resolution
- Image through haze, dust and smoke
- Enhanced battle damage assessment
- Reduce fratricide and collateral damage
- Compact and lightweight
- Snapshot exposure
- No false detections, immune to sun glint
- 100% duty cycle
- Multi-mode: SWIR imaging and ALPD detect/decode
- Daytime see-spot and pulse detection with no spectral filtering

The 640CSX-MMT camera is the most advanced SWIR sensor to date, specifically designed for the warfighter with cutting-edge laser tracking and decoding of multiple asynchronous sources, simultaneously.

Equipped with a highly sensitive focal plane array (FPA), the camera ensures three-point parametrized nonuniformity corrections (PNUC) which significantly enhance image quality and performance across full temperature ranges.

Its full field-of-view (FOV) laser pulse detection supports multimode tracking and asynchronous laser pulse detection (ALPD), enabling rapid identification of battlefield targeting lasers, including covert eye-safe wavelengths.

SUI's patented pixel architecture maximizes signal capture with an unparalleled 99.9% duty cycle, across infinite analog gain states. This innovative method, combined with MMT laser pulse detection circuitry, allows for precise identification of laser aim points on the battlefield, even with slow repetition rates or narrow pulse width lasers.

The camera enhances coordination with air, amphibious, and ground combat

units engaged in designating, marking, and transferring targets using coded lasers. It also enables operators to monitor targets and associated laser energy during the deployment of laser-guided munitions.

Applications

- Ground vehicles (EO systems)
- Handheld targeting/weapon sights
- Air wing (gimbals and targeting PODS)
- Seeker heads
- High-precision electro-optical platforms (PTZ)
- Next-generation laser warning with Identification, Friend or Foe (IFF)-enabled with 1550 nm

Sensors Unlimited: Micro-SWIR 640CSX MMT

Mechanical specifications

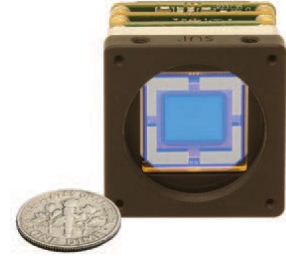
Model	SU640CSX-MMT
Dimensions (width x height x depth) (excluding connectors and lens)	1.252" W x 1.252" H x 1.35" D; 31.8 W x 31.8 H x 34.3 D mm
Weight	≤60 g
Lens mount	C-mount standard
Camera link connector	Digital output ST4 board-to-board connector
Pixel pitch	15 μm
Focal plane array format	640 x 512 pixels
Active area	9.6 mm x 7.68 mm (12.29 mm diagonal)

Environmental and power specifications

Operating case temperature	-40°C to +70°C
Storage temperature	-54°C to +85°C
Humidity	95% relative humidity – non-condensing
Power requirements: AC adapter supplied DC voltage	DC voltage: +4.5-6V
Power	Typical power <3 W Maximum power ≤6.5 W
Functional shock, random vibration	MIL-STD-810G-compliant design

Electrical specifications

Optical fill factor	100%
Spectral response	NIR/SWIR, 0.7 μm to 1.7 μm
Quantum efficiency	NIR/SWIR, ≥65% from 1.0 μm to 1.7 μm
Digital output frame rate	30 fps / 60 fps Imaging; contact factory for ALPD rates
ALPD FAR %	Contact factory for detail
Image correction	Three point parameterized non-uniformity corrections (PNUC), pixel by pixel, user selectable
Scan mode	Continuous
Output format	12-bit base Camera Link®
Pulse detection	
Pulse detection dead time	None



Specifications subject to change without notice.



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