

MT-MicroCAM4-SW6415

4th Generation SWIR Camera



640 x 512 SWIR Camera with TEC and Shutter

MT-MicroCAM4-SW6415 is a compact SWIR camera. It has an InGaAs based FPA working in the 900nm-1700nm SWIR spectral band. The FPA is built using our low-noise **CTIA ROIC** called **MT6415CA**. The FPA has a format of **640 × 512** and pixel pitch of **15μm** with an active imaging area of 9600μm × 7680μm. The camera has a compact camera electronics built using one of the industry's lowest power and noise ADC. This allows development of compact, low-power, and low-noise SWIR cameras. The SWIR camera has a **Shutter** and **TEC** (Thermo Electric Cooler). The camera is built with industrial components (-40/+85°C). The camera measures **58 mm × 58 mm × 80 mm** without optics. It weighs less than **410 grams** without optics. The camera has a C-mount lens interface and comes with a 50mm f/1.4 SWIR lens. Different lens options can be provided upon request.

Application Areas

- Driver Vision Enhancement (see through fog)
- Industrial Control (see through plastic, paint, and glass)
- Traffic Control
- Scientific Imaging
- Security and Surveillance
- Drone and UAV-based Imaging



Detailed Technical Specifications

MT-CL-MicroCAM4-SW6415

Electrical Specifications

| | | |
|----------------------|---|----------------------------|
| Array Size | Format: 640 × 512 | Pitch: 15 µm |
| Active Area | 9.60 mm × 7.68 mm | |
| Detector Type | InGaAs | Spectrum: 900 nm - 1700 nm |
| Sensor Core | ROIC: MT6415CA | ADC |
| Video Output | Camera Link® Base Configuration (26-pin SDR Connector) Digital Video Port (Parallel data with syncs) | |
| Camera Control | UART | |
| Frame Rate | ≤ 50 fps (100 and 200 fps options are available) | |
| Integration Time | Programmable from 500ns to 1s in 100ns steps | |
| Gain | High Gain (HG) | FWC: 10 K e- |
| | Low Gain (LG) | FWC: 350 K e- |
| Input Referred Noise | ≤ 15 e- rms for High Gain | |
| Supply Voltage | 5V-24VDC | |
| Power Dissipation | ≤ 4W (with TEC disabled) | |

Mechanical Specifications

| | |
|------------|---------------------------------|
| Dimensions | 58mm × 58mm × 80mm (w/o optics) |
| Weight | ≤ 410 grams (w/o optics) |
| Mounting | 2 holes with M2.5 size |

Optical Specifications

| | |
|-------|-----------------------------|
| Lens | SWIR Optimized, f/1.4, 50mm |
| Mount | C-Mount |

