

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 $9600\mu\text{m} \times 7680\mu\text{m}$. 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 μ m
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	\leq 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	\leq 15 e- rms for High Gain	
Supply Voltage	5V-24VDC	
Power Dissipation	\leq 4W (with TEC disabled)	

Mechanical Specifications

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

Optical Specifications

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

