MODO-SW-640-50

640×512 InGaAs SWIR Imaging Module

Overview

A 640×512 InGaAs SWIR imaging module covering 0.9–1.7 µm with a 15 µm pixel pitch, 50 Hz Camera Link output, and global exposure from 20 µs to 19 ms.



640×512

RESOLUTION

15 µm

PIXEL PITCH

0.9–1.7 µm

SPECTRAL RANGE

Key Features

Engineering profile

- Camera Link provides 50 Hz digital output in Y8, Y16, or X16 formats, while RS422 handles configuration.

Key capabilities

- Detector: InGaAs SWIR
- Resolution: 640×512 @ 50 Hz
- Pixel pitch: 15 µm
- Spectral band: 0.9–1.7 µm
- Lens configuration: 25 mm athermalized, F/1.4–16

Image processing and control

- Temporal and spatial filtering, detail enhancement levels 0–7, internal/external synchronization, brightness and contrast adjustment, horizontal/vertical flip, 1×/2×/4× electronic zoom, crosshair overlay, test patterns, bad-pixel handling, firmware upgrade, and polarity selection are supported.

Typical Applications



Machine Vision



Industrial Inspection



Night Vision Observation



Law Enforcement

Technical Specifications

Detector & Optics

Detector	InGaAs SWIR
Resolution	640×512
Pixel pitch	15 µm
Spectral band	0.9–1.7 µm
Lens configuration	25 mm athermalized, F/1.4–16
Field of view	21.7°×17.4°; distortion <1.5%
Exposure	Global, 20 µs–19 ms

Video & Interfaces

Video output	Camera Link
Output format	Y8 / Y16 / X16
Control interface	RS422
Digital zoom	1× / 2× / 4×
Detail enhancement	0–7 levels
Sync	Internal / external
Test pattern	Gradient / checkerboard
Firmware upgrade	Serial port

Power & Physical

Power supply	DC 6–19 V; 12 V typical
Power consumption	<4.5 W
Dimensions	45×45 mm-class; project confirmation
Weight	Project confirmation
Control protocol	Project-specific command set
Operating temperature	Per project configuration
Storage temperature	Per project configuration

Specifications reflect the supplied technical document. Lens, connector, mechanical, and environmental options may be finalized for the target program.
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