CRYO-1024

1024×768 HOT Cooled MWIR Module

Product Overview

A 10 µm, 1024×768 HOT cooled MWIR imaging module with a 144 mm athermalized lens, Camera Link output, ≤40 mK NETD, and compact 200×77×62 mm packaging.



1024×768	10 µm	≤40 mK	3.7±0.2–4.8±0.2 µm
RESOLUTION	PIXEL PITCH	NETD	SPECTRAL RANGE

Product Features

Engineering profile

- The standard specification uses Camera Link video and RS422 command control.

Key capabilities

- Detector: HOT cooled MWIR
- Resolution: 1024×768 @ 25±0.5 Hz
- Pixel pitch: 10 µm
- Spectral band: 3.7±0.2–4.8±0.2 µm
- Thermal sensitivity: NETD ≤40 mK

Image processing and control

- White-hot and black-hot polarity, manual or automatic gain/contrast/brightness, edge enhancement, shutter or background non-uniformity correction, crosshair overlay, state retention, self-test, and 2× electronic zoom are available through serial control.

Typical Applications



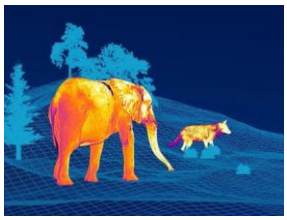
Long-range Surveillance



Aerospace



Integrated EO/IR Systems



Environmental Protection

Technical Specifications

Detector & Optics

Detector	HOT cooled MWIR
Resolution	1024×768
Pixel pitch	10 µm
Spectral band	3.7±0.2–4.8±0.2 µm
Thermal sensitivity	NETD ≤40 mK
Lens configuration	144 mm athermalized, F/3.0
Field of view	≥4°×3°; distortion ≤3%
Focus range	200 m to infinity
Defective pixels	≤0.5%, no clusters in central area

Video & Interfaces

Video output	Camera Link
Control interface	RS422
Frame rate	25 ±0.5 fps
Recognition range	≥5 km (standard vehicle target)
Image processing	NUC, white/black-hot, AGC, edge enhancement, crosshair, 2× digital zoom
Optical-axis stability	≤0.1 mrad

Power & Physical

Power supply	DC 18–32 V
Power consumption	Average <12 W; start-up <22 W
Start-up / readiness	≤3 min typical; ≤6 min full temperature range
Dimensions	≤200×77×62 mm
Weight	≤0.8 kg
Operating temperature	−40 to +60 °C
Storage temperature	−50 to +70 °C
Continuous operation	≥8 h
MTBF	≥1200 h (mature stage)
Service life	≥10 years
Protection	Over-current & reverse-polarity

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