

SPECTRA M06A

640×512 Cooled MWIR Infrared Module

Overview

The SPECTRA M06A is a 640×512 cooled mid-wave infrared module built on a 15 μm -pitch detector and an RS058 cryocooler. Advanced built-in image algorithms deliver clear, stable thermal imagery in full darkness and adverse weather, supporting reliable detection of long-range threats and fine detail at close range for security, monitoring and integrated EO/IR payloads. The standard optical configuration is a 15–300 mm / F5.5 continuous-zoom lens (pictured), covering a 35.49°×28.72° to 1.83°×1.47° field of view across 20 switchable steps.



640×512

RESOLUTION



15 μm

PIXEL PITCH



16 mK

NETD



240×115×110 mm

DIMENSIONS

Key Features

Standard-format FPA, wide adaptability

- Built on a 640×512 / 15 μm cooled MWIR detector for stable image quality
- DRC, 2D/3D denoising and EE edge enhancement for sharper imagery

High reliability, high sensitivity

- Cooled MWIR platform with excellent versatility and unit-to-unit consistency
- High thermal sensitivity — NETD down to 16 mK

Easy integration, flexible configuration

- CameraLink video interface with RAW / YUV image data output
- Standard 15–300 mm / F5.5 continuous-zoom lens (pictured); further zoom options available

Typical Applications



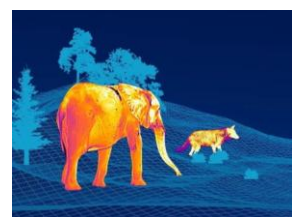
Long-range Surveillance



Aerospace



Integrated EO/IR Systems



Environmental Protection



Technical Specifications

Performance

Resolution	640×512
Pixel pitch	15 μm
Cryocooler	RS058
Spectral band	3.7 $\mu\text{m} \pm 0.2$ – 4.8 $\mu\text{m} \pm 0.2$
NETD (23 °C)	16 mK (F2) / 18 mK (F4)

Image Processing

Frame rate	50 Hz / 100 Hz
AGC	Linear / histogram / hybrid
Digital zoom	1–8× continuous
Image orientation	Horizontal / vertical / diagonal flip
Image algorithms	DRC, 2D/3D denoising, EE

Physical & Environmental

Dimensions	240 × 115 × 110 mm
Weight	≤ 2500 g
Operating temp.	–40 °C to +71 °C
Vibration / shock	High-speed transportation vibration; half-sine shock 40 g, 11 ms, 3 axes × 6 directions × 3 times

Electrical & Interfaces

Standard connector	J30JZ 25-pin
Analog video	PAL / NTSC
Digital video	Standard: DVP / LVDS / USB 2.0 @ 50 Hz Optional: CameraLink / USB 3.0 / GigE / SDI / HDMI / MIPI / SM or MM fiber
External sync	Standard: LV-TTL Optional: RS-422 / LVDS
Communication	Standard: USB 2.0 / LV-TTL Optional: RS-422 / CAN / USB 3.0 / GigE
Power supply	24 V $\pm$ 4 V
Steady-state power (23 °C)	≤ 10 W
Cooldown time (23 °C)	≤ 8 min

Lens Options

Default lens (pictured)	15–300 mm / F5.5 continuous zoom FOV 35.49°×28.72° ~ 1.83°×1.47°, 20 switchable FOV steps
Available lenses	Fixed focal: 25 mm / F2 Continuous zoom: 30–240 mm / F4, 15–300 mm / F4, 45–450 mm / F4, 35–690 mm / F4, 32–730 mm / F4

Specifications subject to change without notice.

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