

Product datasheet

QVGA resolution Thermal Cores

Model: IRI-5000 Series

A range of standard resolution thermal Imaging cameras offering outstanding image performance for night vision and surveillance applications.



Key Features

- Uncooled Micro bolometer
- 384 x 288 resolution
- High sensitivity
- Digital zoom with pan and tilt
- RS232 and RS485 control protocols
- Multiple image response schemes and colour palettes
- Standard or Compact case
- Manual control option
- Choice of screw fit lenses
- Non ITAR

Description

The IRI-5000 series offers outstanding imaging performance for night vision and surveillance applications. Featuring an uncooled 384 x 288 sensor, the cameras combine performance with flexibility and minimal cost of ownership. Available with a standard or compact enclosure and a screw fit lens, the module is designed to appeal to OEMs and systems integrators alike.

Based on an advanced Silicon Microbolometer the imager's 384 x 288 resolution allows fine images to be produced and maximises the detection capability of a small target at long range.

Flexible controls through RS232 or RS485 allow the view to be tailored to suit the application including colour palettes, polarity, digital zoom, pan and tilt. Picture response schemes include Automatic Level/Span (gain/contrast) and Advanced Histogram to provide a consistent background for applications using Video Content Analysis. Published protocols allow OEMs to integrate the camera commands with their control systems.

For specialised applications, manual controls are available including level/span, and shutter. The IRI-5000 series is designed for ease of physical integration; the standard case module features a small footprint and industry standard connectors. The compact version offers OEMs a shorter case and miniature connectors for applications where space is at a premium.

Technical Summary – IRI-5000 series

Detector	Uncooled Silicon Microbolometer	
Number of pixels	384 x 288 pixels	
Image refresh rate	8.3Hz PAL, 7.5Hz NTSC, 25Hz* PAL, 30Hz* NTSC	
Spectral response	8µm to 14µm	
Thermal sensitivity- model dependant	70mK @20°C ambient and 30°C scene temperature	
- Standard	50mK @20°C ambient and 30°C scene temperature	
- High		
High sensitivity option		
Video output	Analogue 1V p-p composite video PAL or NTSC	
Controls		
Control interface	RS 485 - Pelco D, or RS232 – Irisys	
Colour palette	18 palettes including: Greyscale black hot, Greyscale white hot, Ironbow, Rainbow, Isotherm, Hot metal, Red-black, Green-black, High contrast and Blue-black	
Gain and offset	Auto or manual	
Shutter	Auto or manual, manual trigger	
Digital zoom	Electronic zoom to any fixed magnification. Smooth continuous zoom to any magnification	
Pan and tilt	Electronic pan and tilt while zoomed	
Mechanical		
Housing	Aluminium	
Dimensions	(L x W x H) excluding connectors and lens Standard case - 52mm x 53mm x 53mm Compact case – 42mm x 53mm x 53mm	
Weight	Standard case – 160g Compact case – 150g	
Mounting	2 x M4 screws (base) 2 x M3 screws (front)	
Electrical connections		
Standard case	Video – BNC Power/data – pluggable terminal strip	
Compact case	Video/power – miniature multi-pole socket Data – miniature multi-pole socket	
Power supply requirements	Supply voltage: 5 – 14VDC Typical supply current 200mA @ 12VDC	
Environmental		
Operating temperature	-15°C to +60°C	
Storage temperature	-20°C to +70°C	
Humidity	10% - 90% non-condensing	
CE Mark	Standard Case models only	
Vibration	MIL-PRF-28800F class 2 sec 4.5.5.3.1	
Shock	MIL-PRF-28800F class 2 sec 4.5.5.4.1	
IP rating	IP42	
Lenses		
Lens options available	<u>IRI-5600/5700</u> 15mm f1.0, FOV 35.5° x 26.6° 18.5mm f1.0, FOV 29.1° x 21.8°	<u>IRI 5800</u> FOV 24.6° x 18.4° FOV 20.0° x 15.0°

	25mm f1.0, FOV 21.7° x 16.3° 35mm f1.0, FOV 45mm f1.0, FOV 12.2° x 9.1°	FOV 14.9° x 11.2° FOV 10.7° x 8.0° FOV 8.3° x 6.2°
Weight	15mm lens – 75g 18mm lens – 86g 25mm lens – 160g 35mm lens – 108g 45mm lens – 165g	
Shipping data		
Shipping weight	Camera and lens weight + 300g	
Shipping dimensions	(L x W x D) 33.5mm x 19mm x 12mm	

Note: Data sheet may change without notice.

*Subject to export control