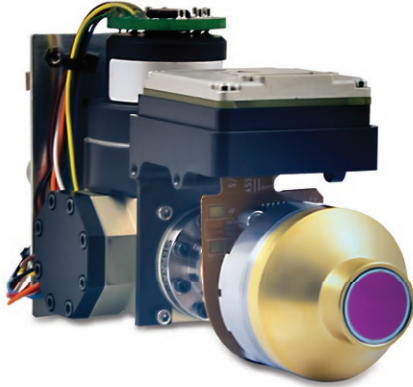




## MIDWAVE INFRARED COOLED CAMERA

# FLIR Neutrino™



Where SWaP are design constraints and midwave infrared (MWIR) performance is desired, Neutrino™ is an ideal solution. The Neutrino offers FLIR's common image processing architecture and a 640x512 InSb array. Weighing in at less than 450 grams (16 oz) and consuming less than 5 watts at steady-state, it is FLIR's balanced MWIR core optimizing performance and ease of integration.

Common industry standard interfaces, simple and powerful software controls, complete product documentation and FLIR OEM technical support reduces product development risk and shortens time to market.

[www.flir.com/neutrino](http://www.flir.com/neutrino)



### SIZE, WEIGHT AND POWER (SWAP) OPTIMIZED

SWaP MWIR cooled core

- 640 x 512 VGA resolution with 15  $\mu\text{m}$  pixel pitch
- Compact and lightweight at 12.9 x 4.9 x 7.4 cm and <450 grams
- Low power consumption with <8 W cooldown and <5 W steady state



### DESIGNED FOR INTEGRATORS

Simplify development and shorten time to market

- 8 or 14 bit digital data via Camera Link, CMOS, BT-656
- Integrate with common software and accessories with FLIR Tau™ 2 camera
- Interface with COTS infrared (IR) optics



### FLIR VALUE AND REPUTATION

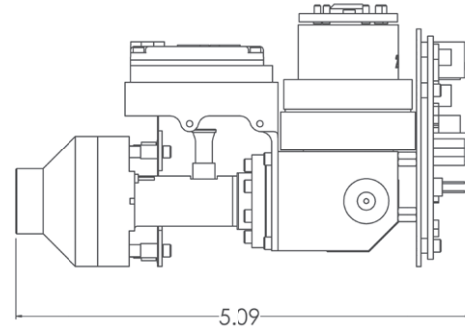
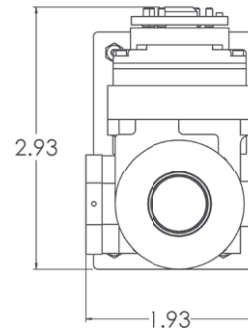
The performance, reliability and support expected from FLIR

- Comprehensive product documentation
- Highly-qualified FLIR Technical Services team available to support integration
- Classified under US Department of Commerce jurisdiction as EAR 6A003.b.4.a

## SPECIFICATIONS

Overview	Neutrino
Size (L x W x H)	12.9 x 4.9 x 7.4 cm (5.1 x 1.9 x 2.9 in)
Spectral Band	3.4 – 5.1 $\mu\text{m}$ Standard
Thermal Imager	640 x 512, (15 $\mu\text{m}$ pitch) MWIR InSb
Weight	<450 grams (<16 oz)
Connections & Communications	
Discrete I/O Controls Available	Custom, configurable at factory
Primary Electrical Connector	50-pin Hirose
RS-232 Compatible Communication	Auto Baud Rate
User Configurability via SDK & GUI	Yes
Environmental & Approvals	
Humidity	5% – 95% non-condensing
Non-Operating Temperature Range	-55°C to +80°C (-67°F to +176°F)
Operating Temperature Range	-40°C to +71°C (-40°F to +160°F)
Operational Altitude	12,192 m (40,000 ft)
Shock	(20 g shock pulse w/ 11 msec half sine)
Vibration	(5.8 grms three axis, 1 hr each)
FPA Control	
Direct Injection Snapshot Prog operation	Yes
Programmable Integration Time	Yes (.01 ms – 32 ms)
ROIC	ISC0403
ROIC Modes	Free run, readout & integration priority
Well Capacity	7 x 10 <sup>8</sup> electrons
Imaging & Optical	
Analog Video Display Format	640 x 512 (PAL), 640 x 480 NTSC
BT656 (8-bit)	Yes
Camera Link (14-bit or 8-bit)	Yes
CMOS (14-bit or 8-bit)	Yes
Color and Monochrome Palettes (LUTs)	Yes
Continuous Zoom (digital and analog)	Yes
f-number	f/4 standard, custom, configurable at factory
FPA – Digital Video Display Format	640 x 512
Frame Rate	30 Hz/25 Hz
Full Frame Rate	30 Hz (NTSC), 25 Hz (PAL)
LVDS (14-bit or 8-bit)	Custom, configurable at factory
NTSC/PAL (field switchable)	Yes
Polarity Control [black hot & white hot]	Yes
Sensitivity [NE $\Delta$ T]	<25 mK
Symbology	Yes (256 gray and 256 color)
Time to Image	<6 min room temp, <10 min at 71°C (160°F)
Invert/Revert (analog and 8-bit digital)	Yes
Image Optimization - AGC	Linear, Histogram, Once Bright, DDE+, etc.
Power	
Input Power	4.75–6 VDC camera, 9–35 VDC cryocooler
Power Dissipation	<8 W cooldown, <5 W steady state

Specifications are subject to change without notice.  
For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)



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NASDAQ: FLIR

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18-2799-OEM-COR Neutrino Datasheet LTR



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