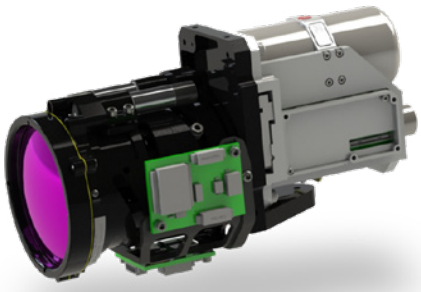
NEUTRINO® LC 27-275

HOT MWIR Neutrino LC Camera Module + Continuous Zoom Lens



Made in the USA, and ITAR-free, the Neutrino LC 27-275 combines Teledyne FLIR's world-class mid-wavelength infrared (MWIR) Neutrino LC camera module and 27 mm to 275 mm continuous zoom (CZ) lens to offer a high–performance imaging solution. Neutrino LC 27-275 lowers development and manufacturing risk and improves time-to-market. Based on Teledyne FLIR's High Operating Temperature (HOT) FPA technology, the Neutrino LC camera module and fully athermalized lens are designed for ruggedized products requiring long life, low power consumption, and quiet, low-vibration operation. At only 595 grams and 5.88 inches in length, the Neutrino LC 27-275 is SWaP optimized for small gimbals, airframes, and handheld devices.

A best-in-class solution, the camera module and lens are designed for each other, providing optimal performance not achievable when buying and integrating cameras and lenses from multiple sources. It offers the lowest risk solution with nearly off-the-shelf delivery, industry-leading two-year warranty, absolute price competitiveness, and well-known product support and reliability. The Neutrino LC 27-275 is an OEM camera module intended to be integrated into a higher-level system.

APPLICATIONS

UNMANNED AERIAL SYSTEMS (UAS)

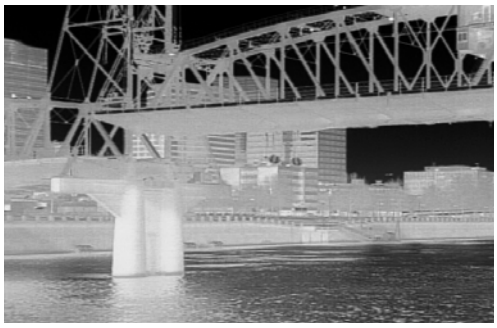
COUNTER-UAS

AIRBORNE INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)

GROUND ISR & SECURITY

MILITARY DISMOUNT SYSTEMS

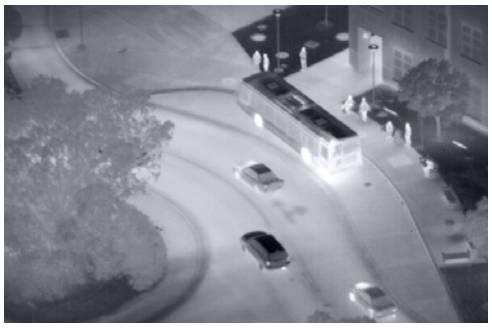
TARGETING



COMPLETE SWAP MWIR IMAGING SOLUTION

Single manufacturer simplifies product development and production, providing higher value and lower risk.

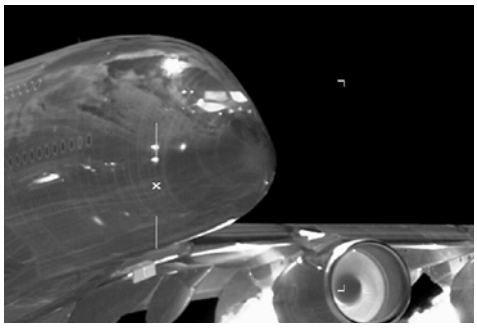
- T2SL HOT 640 x 512/15 µm pixel pitch FPA
- Low power consumption with < 8 W cool down and < 5 W steady state at 23 °C with lens
- SWaP optimized at 595 g and 5.88 in length
- ITAR free



SEAMLESS OPTO-MECHANICAL INTEGRATION

Camera and lens are designed for optimum performance and compatibility.

- Precisely aligned optical centerline to the center pixel
- Eliminate boresight wander and ensure focus through zoom
- Simplified single, autofocus-capable interface for camera and lens
- Precision aligned lens, easy to focus to the desired distance



MARKET LEADING MWIR CZ OPTICS & CAMERAS

World class performance, industry-leading two-year warranty, and affordable MWIR solutions from the market leader.

- Industry's most advanced VGA MWIR camera core
- Comprehensive product documentation
- Commercially developed, military qualified
- Highly qualified Technical Services team available to support integration

For More Information Visit:
www.teledyneflir.com/neutrino

www.teledyneflir.com

10/24/2023 REV1

SPECIFICATIONS

Overview	Neutrino LC CZ 27-275
Size (L x W x H)	14.94 x 6.84 x 7.29 cm (5.88 x 2.69 x 2.87 in)
Weight	595 grams (1.31 lb)
Spectral Band	3.6 - 5.1 µm, with co2 notch from 4.15 - 4.55 µm
Thermal Imager	640 x 512 (15 µm pitch) HOT MWIR
Lens Specifications	
EFL/Zoom Range (mm)	27 to 275 mm compact, continuous zoom lens
Horizontal Field of View (HFOV)	2.0° to 20.4° (actively athermalized over the operating temperature)

Lens Specifications	
Zoom and Focus Controls	Yes
Special Features	Active athermalization and auto focus capable
Connections & Communications	
Discrete I/O Controls Available	None
Primary Electrical Connector	80-pin Hirose (camera), 4-pin Molex (cooler), 6-pin Molex (lens)
RS-232 Compatible Communication	RS-232, Nominal 38400 Baud
SDK and GUI	Yes, camera only
Comm & Control	USB or UART (camera) RS-232, nominal 38400 Baud (lens)
Environmental	
Humidity	5% to 95% non-condensing
Non-Operating Temperature Range	-57 °C to + 80 °C (-70 °F to + 176 °F)
Operating Temperature Range	-20 °C to +70 °C, (-4 °F to +158 °F)
Operational Altitude	12 km altitude equivalent
Vibration	5.8 grams, 3-axis, 1 hr each
FPA Control	
Direct Injection Snapshot Prog operation	Yes
Programmable Integration Time	Yes (0.01 ms - 16.6 ms)
ROIC	ISC0403
ROIC Modes	Free run, readout & integration priority
Imaging & Optical	
Analog Video Display Format	Yes, accessory board required
BT656 (8-bit)	Yes, accessory board required

Camera Link (16-bit or 8-bit)	Yes, accessory board required
CMOS (16-bit or 8-bit)	CMOS (16-bit, 16-bit color encoded YCbCr, 8-bit)
Color and Monochrome Palettes (LUTs)	Yes
Continuous Zoom (digital and analog)	Optical Zoom (lens) and Electronic Zoom (camera)
f-number	f/5.5
FPA - Digital Video Display Format	640 x 512
Frame Rate	60 Hz, adjustable 1 Hz to 60 Hz
LVDS (16-bit or 8-bit)	No
NTSC/PAL (field switchable)	Yes, accessory board required
Polarity Control [black hot & white hot]	No
Sensitivity [NEdT]	<30 mK
Symbology	Yes
Time to Image	<4 min room temp, typical
Invert/Revert (analog and 8-bit digital)	Invert/Revert (Yes)
Image Optimization - AGC	Histogram Equalization, DDE+
Power	
Input Voltage	3.3 VDC (camera), 12 VDC (cooler) 12 VDC (lens)
Power Dissipation with Lens	<5 W Steady State at room temperature

Specifications are subject to change without notice.
For the most up-to-date specs, go to www.teledyneflir.com/neutrino

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