NEUTRINO® IS SERIES - SXGA

HOT MWIR Neutrino SX8 Camera Module + Continuous Zoom Lens

Neutrino IS series combines Teledyne FLIR's world-class mid-wavelength infrared (MWIR) camera modules and continuous zoom (CZ) lenses to offer high-performance imaging solutions with various FPA resolutions and CZ zoom/FOV ranges. Neutrino IS lowers development and manufacturing risk and improves time-to-market. Cutting-edge HOT FPAs, long life and low-vibration linear coolers, common camera interfaces, and fully athermalized lenses make for the best-in-class solution. Each camera module and lens are designed for each other, providing optimal performance not achievable when buying and integrating cameras and lenses from multiple sources.

Teledyne FLIR Neutrino IS series is simply the best technical solution available. With nearly off-the-shelf delivery, industry-leading two-year warranty, real price competitiveness and well-known product support and product reliability, it offers the lowest risk solution. The Neutrino IS is an OEM camera module that is intended to be integrated into a higher level system.

APPLICATIONS

UNMANNED AERIAL SYSTEMS (UAS)

COUNTER-UAS

AIRBORNE INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)

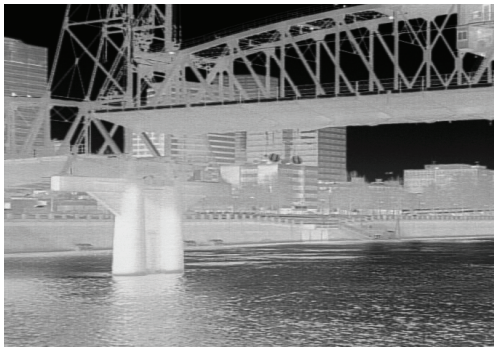
GROUND ISR & SECURITY

MILITARY DISMOUNT SYSTEMS

TARGETING

Neutrino SX8 CZF 30-300

Neutrino SX8 CZ 15-300



MULTIPLE MWIR IMAGING SOLUTIONS

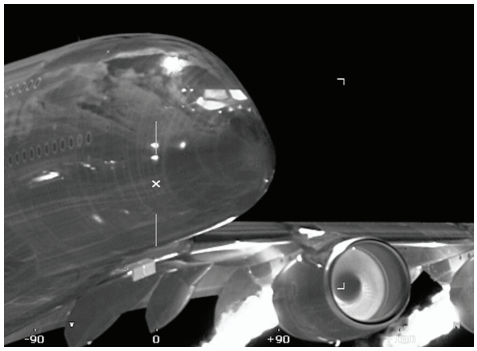
Multiple configurations from one manufacturer simplifies product development and production, providing higher value and lower risk.

- T2SL HOT 1280 x 1024/8 µm pixel pitch FPA
- Low power consumption with <12 W cooldown, <8 W steady state @ 23°C with lens
- SWaP optimized saves space, weight and power
- ITAR free

SEAMLESS OPTO-MECHANICAL INTEGRATION

Cameras and lenses designed for each other for optimum performance and compatibility.

- Precisely aligned optical centerline to the center pixel
- Eliminate boresight wander and ensure focus through zoom
- Simplified single 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 SXGA 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

07/06/2021 REV1

SPECIFICATIONS

Overview	Neutrino SX8 CZF 30-300	Neutrino SX8 CZ 15-300
Size (L x W x H)	17 x 13.5 x 19 cm (6.69 x 5.31 x 7.48 in)	19.25 x 9.91 x 9.96 cm (7.58 x 3.90 x 3.92 in)
Weight	1770 grams (3.90 lb)	1337 grams
Spectral Band	3.4 - 5.1 µm standard	3.4 - 5.1 µm standard
Thermal Imager	1280 x 1024 (8 µm pitch) HOT MWIR	1280 x 1024 (8 µm pitch) HOT MWIR
Lens Specifications		
EFL/Zoom Range (mm)	30 to 300 mm (± 5%) compact, folded continuous zoom lens	15 to 300 mm (± 5%) compact, continuous zoom lens
Horizontal Field of View (HFOV)	1.96° - 19.37° (actively athermalized over the operating temperature range)	1.9° to 37.6° (actively athermalized over the operating temperature range)

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 SAMTEC, ST4-40-2.50-L-D-P-TR
RS-232 Compatible Communication	RS-232, Nominal 38400 Baud
SDK and GUI	Yes, Camera only
Comm & Control	UART (115.2K baud) 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) limited by the lens
Operational Altitude	12 km (40,000 ft) altitude equivalent
Vibration	5.8 grms, 3-axis, 1 hr each
FPA Control	
Direct Injection Snapshot Prog operation	Yes
Programmable Integration Time	Yes (0.01 ms - 16.6 ms)
ROIC	ISC1601
ROIC Modes	Free run, readout & integration priority
Imaging & Optical	
Analog Video Display Format	No
BT656 (8-bit)	No

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/3 (SX8 CZF 30-300) f/4 (SX8 CZ 15-300)
FPA - Digital Video Display Format	1280 x 1024
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]	<38 mK
Symbology	Yes
Time to Image	<5 min room temp, typical
Invert/Revert (analog and 8-bit digital)	Invert/Revert (Yes)
Image Optimization - AGC	Linear, Histogram Equalization, DDE+
Power	
Input Voltage	5.0 VDC (camera), 12 VDC (cooler), 12 VDC (lens)
Power Dissipation with Lens	<8.5 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

SANTA BARBARA
Teledyne FLIR LLC, Inc.
6769 Hollister Ave.
Goleta, CA 93117
PH: +1 805.690.6602

EUROPE
Teledyne FLIR LLC, Inc.
Luxemburgstraat 2
2321 Meer
Belgium
PH: +32 (0) 3665 5106

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