

NEUTRINO[®] SERIES

AVAILABLE ACCESSORIES



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cameras.com

 **TELEDYNE
FLIR**

Phone: 1-888-919-2263 | Outside the U.S.: +1-845-343-4077 | Fax: +1-845-343-4299
Address: P.O. Box 4242 Middletown, New York 10941 USA

CHALLENGES WITH MWIR INTEGRATION

TIME TO MARKET

The typical project timeline for a system integrator to develop a MWIR imaging platform averages 12 to 28 months when buying and integrating third party commercial-off-the-shelf (COTS) components. It can require even longer for programs where developers need to design to specific customer requirements, such as with traditional government contract programs.

MULTIPLE COMPLEX SUBSYSTEMS

An MWIR imaging system consists of multiple subsystems. The optics collect and focus the MWIR energy onto the detector. Zoom optics provide the field of view or optical magnification to the camera. The detector includes a focal plane array (FPA), readout integrated circuit (ROIC), and integrated detector cooler assembly (IDCA). Imaging electronics control the FPA, cooler and create an image. A development team has to consider multiple variables, including pixel size, frame rate, vacuum packaging, and much more.

MULTIPLE COMPONENT PROVIDERS

Development teams are challenged when acquiring and integrating subsystems from two or more providers. Reduced system performance and reliability are likely when integrating “stand-alone” components due to compatibility tradeoffs. This can also lead to efficiency loss and added complexity in the system development process, procurement, manufacturing, and eventual system support.

BOLD PERFORMANCE AND INTEGRATION SUPPORT

SWAP+C OPTIMIZED SENSOR ENGINE

SWaP+C optimized design saves space, weight, and power, resulting in operational and cost benefits and the ability to integrate into smaller spaces.

- T2SL HOT FPA provides superb MWIR imagery
- Tight optics-to-camera tolerances minimize optics size and mass
- Best-in-class power consumption

RELIABLE LINEAR COOLER

Designed from the ground up for optimum performance and reliability minimize cost of ownership and maximize operational uptime.

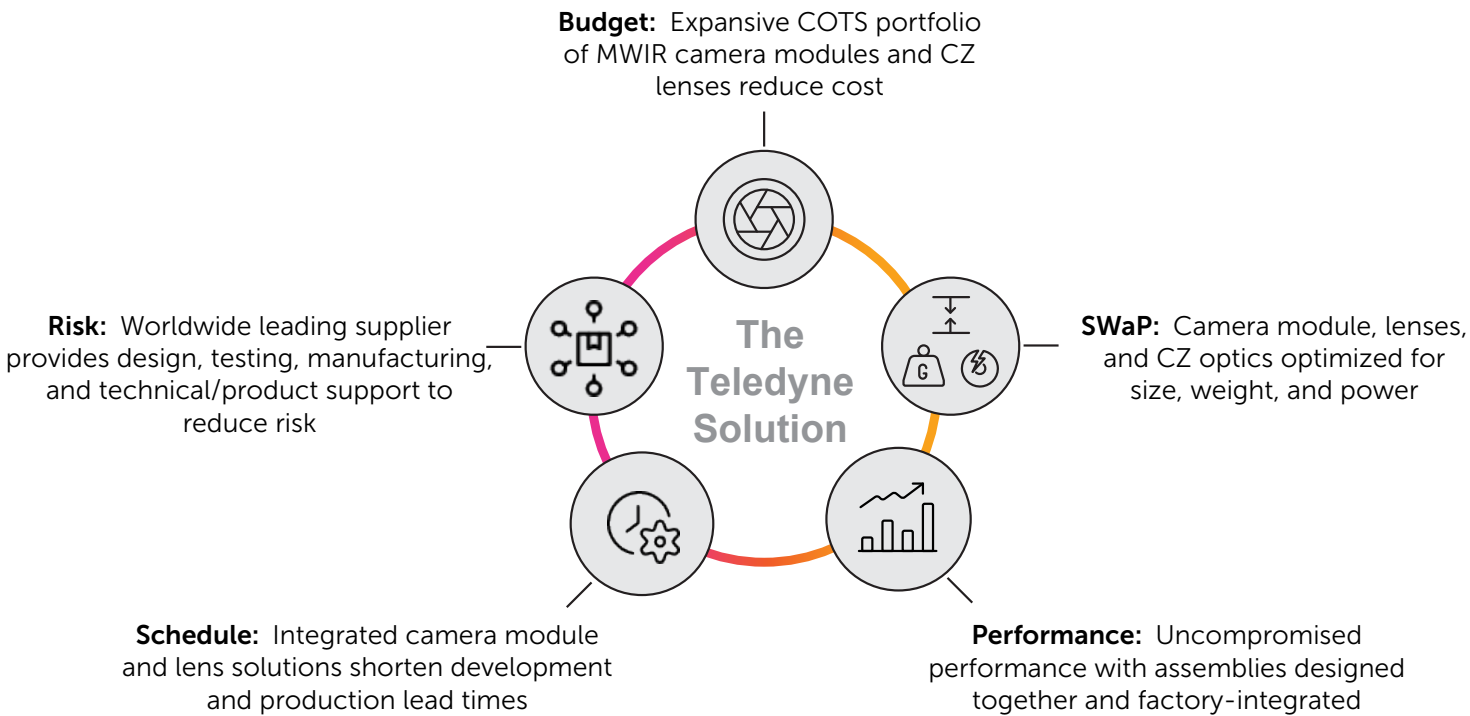
- Increased reliability and low-vibration
- 2x faster time to image
- Reduce user fatigue and operate for longer periods
- Comprehensive product documentation

MARKET LEADING THERMAL OPTICS

Integrated SWaP optimized lens provides instant clear imaging able to withstand every rugged environment.

- Smooth continuous zoom
- Precision aligned camera and lens with a collimator and sophisticated test equipment
- Highly qualified Teledyne FLIR Technical Services team available to support integration

ADVANTAGES OF MWIR INTEGRATION WITH TELEDYNE FLIR



THE AFFORDABLE TOTAL PACKAGE REVOLUTIONIZING MWIR IMAGING

Teledyne FLIR is the first integrated solutions provider capable of supplying high-performance MWIR camera modules and continuous zoom optic assemblies. Teledyne FLIR accelerates time to market for MWIR imaging platform developers with vertically integrated, size-weight-and-power (SWaP)-optimized camera modules and zoom optics. When developers can work with a single solutions provider to produce all of the subsystems necessary for a complete platform—including the IR detector, zoom optics, electronics and packaging—the results are shorter design cycles, streamlined procurement, increased reliability, and reduced end-item lead time.



ACCESSORIES



Neutrino LC USB VPC Kit (421-0061-01)
The USB Video Power Connector (VPC) kit turns the Neutrino LC camera into a webcam. Power, digital video, and comm are all via USB2. The kit includes a USB-A to USB-C cable.



Neutrino LC USB/Analog VPC Kit (421-0062-01)
The USB VPC kit with an additional custom 6-foot cable with a BNC pigtail provides an additional analog video signal (NTSC-compliant).



Neutrino LC Camera Link Accessory (250-0609-00)
The Camera Link accessory converts CMOS video signal into a Camera-Link-compliant output via SDR-26 receptacle. Communication and power are provided via a standard USB-3 micro-B.



Neutrino LC Utility Kit (421-0074-00)
Provides all output options on a single PCB. Includes a wire harness to the cooler interface. The accessory board converts video signal into a Camera-Link-compliant output via a SDR-26 receptacle.



Neutrino LC Development Kit (421-0071-00)
Provides all output options on a single PCB and easy access to the full 80-pin camera interface for development. Includes a flex cable between the board and the camera and a wire harness to the cooler interface.



Neutrino LC Demonstration Lens (322-0487-00)
A 22 mm fixed focal length, f/5.5 lens provides a 25° horizontal field of view (HFOV). Includes a mechanical housing for the lens and allows for focus capability via keyed lens barrel and threaded barrel/housing.



Neutrino SX8 Accessory Board (421-0085-00)
The Utility Kit provides Camera link and HDMI video output to a single development electronics board. The kit includes a wire harness for camera and cooler power. Communication and power to the Neutrino SX8 camera electronics is provided via a USB driver to a virtual COM port. External sync input/output signals are provided with standard MCX connectors. A header connector is provided for RS-422 lens control.



Neutrino SX8 Demonstration Lens (2402-300)
A 30 mm fixed focal length, f/2.5 lens provides a 32° HFOV. Includes a mechanical housing for the lens and allows for focus capability via keyed lens barrel and threaded barrel/housing.

NEUTRINO SOFTWARE GUI

The Neutrino Demo Application or graphical user interface (GUI) allows developers to quickly start streaming video from the Neutrino LC or the Neutrino SX8. The GUI provides access to functions available within the SDK and uses a x64 Windows 10 program. It connects to the camera module via an accessory board and provides access to a number of image appearance, NUC calibration, and system settings to help with development. Example interfaces include and are not limited to CMOS and HDMI video mode, LVDS/Camera Link, NUC threshold, NUC gain, image stats controls, and FFC controls.

The interface also provides access to a wide range of diagnostic features such as diagnostic control and the status panel useful for quick troubleshooting. It can load and save configuration files to and from the Neutrino camera module.



Please visit www.oemcameras.com/neutrino for more information.

For FLIR Sales and Service contact us at:



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