

TEN μ m



SIERRA-OLYMPIC
Technologies Inc.

High-performance ten-micron pixel pitch LWIR



The Tenum 640 represents the smallest pixel pitch LWIR camera core on the market. It delivers striking detail and sensitivity in a compact and cost-effective package.

- + 10 μ m 640 x 512 uncooled VOx microbolometer sensor
- + Multiple lens options available
- + Sensitivity <30 mK NETD
- + 60 Hz frame rate (9 Hz option available)
- + Uncooled, compact, light, durable

Details

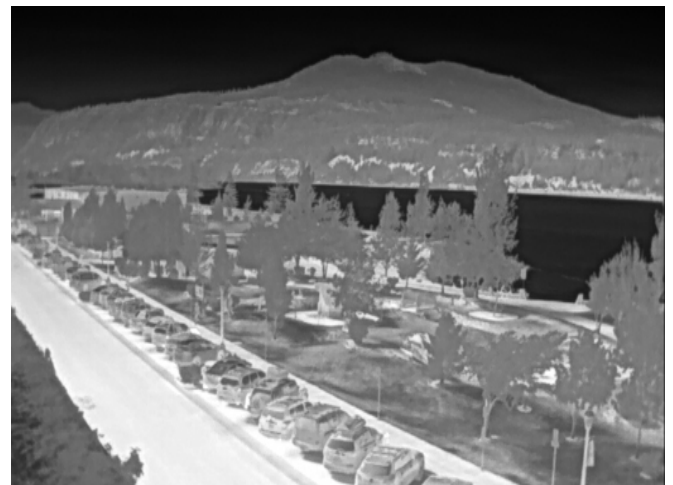
The Tenum 640 is a cutting-edge, competitively-priced camera core that delivers exceptional imagery and is supported by a respected team of industry experts.

With a 10 μ m pixel pitch and <30 mK NETD sensitivity, the Tenum 640 represents the latest evolution in low SWaP long-wave infrared technology. Made in the USA by Leonardo DRS, industry pioneers in high-sensitivity microbolometer technology, the series of 640 x 512 resolution cameras is distributed and supported in North America exclusively by Sierra-Olympic Technologies, Inc.

As a trusted supplier and OEM partner, Sierra-Olympic works directly with Tenum 640 customers to ensure successful systems integration, out-of-box operation, and follow-up support.

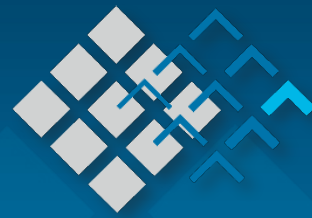
Applications

- + Security and surveillance
- + Unmanned vehicles
- + Machine vision
- + Traffic monitoring
- + Search and rescue
- + Precision agriculture
- + Law enforcement
- + Medical imaging
- + OEM integration



7.7 mm and 20 mm sample images





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20 mm, 15 mm and 7.7 mm lens models

Feature Specs

DETECTOR

Detector Type	Uncooled VOx Microbolometer
Array format	640 x 512
Pixel Pitch	10 μ m
Spectral response	LWIR
Frame Rate	60 Hz (9 Hz option available)
Sensitivity (NE Δ T) @ f/1.0	<50 mK
Sensitivity w/ 3-D noise filter	<30 mK

SYSTEM

Analog Video	NTSC/PAL (requires feature board)
Digital Video	14-bit/8-bit LVCMOS or Camera Link [®]
Command Interfaces	UART/RS-232; USB 2.0
Image Enhancement	Image Contrast Enhancement (ICE [™]) with gain and level bias controls
External Sync	Yes
Color	24-bit RGB and YUV (4,2,2) Superframe
3-D Noise Filter	User option to enable < 30 mK NETd
Custom lens calibration (optional)	5 custom lenses / 5 operating temperatures
Digital Zoom and Pan	Region of Interest, E-zoom from 1X - 4X
Non-Uniformity Correction	1-point with shutter or through lens
Time to First Image	< 3.0 seconds

ENVIRONMENTAL

Input Voltage	3 - 5.5 V Base Configuration 4.5 - 18 V with Feature Board
Power Dissipation (nominal)	< 1.2 W Base Configuration < 1.4 W with Feature Board
Power over USB	Requires Feature Board
Operating Temp Range	-40°C to +70°C (-40°F to +158°F)



LENS MODELS

EFL	FOV (H° X V°)	F/#	WEIGHT (GRAMS)	DIMENSIONS * (H X W X D) (\pm 0.5) MM
No Lens	No Lens	N/A	29 g	31.3 x 28.8 x 27.2 mm
7.7 mm	49° x 40°	1.3	39 g	31.3 x 28.8 x 34.2 mm
15 mm	25° x 20°	1.2	45 g	31.3 x 28.8 x 41.0 mm
20 mm	18° x 15°	1.2	48 g	31.3 x 28.8 x 43.2 mm

* without feature board

This is a product of Leonardo DRS, for which Sierra-Olympic Technologies, Inc. is the exclusive North American distributor. Specifications and descriptions subject to change without notice.