ADEPT TURNKEY
The Machine Vision and Imaging Specialists
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1280 × 1024 Resolution, 8-micron, SWaP-Optimized LWIR Camera Module

BOSON SX8

Boson® SX8 is the world's first high-volume production, ITAR-free and NDAA-compliant uncooled longwave infrared (LWIR) camera module to deliver SXGA (1280 × 1024) resolution with an 8-micron (µm) pixel-pitch microbolometer. Engineered to minimize size, weight, and power (SWaP), Boson SX8 improves situational awareness in a compact, integration-ready form factor.

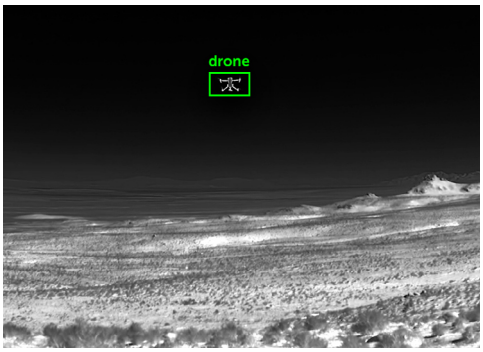
Purpose-built for industrial, commercial, and defense integrations, Boson SX8 delivers 4× more pixels than a 640 × 512 VGA module, extending detection, recognition, and identification (DRI) range and providing clear imagery at long distances. Multiple lens options, including a factory-integrated continuous zoom lens, support a wide range of platforms, from uncrewed systems and counter-UAS to seekers, perimeter security, visual augmentation, and handheld devices. With high-speed performance and SXGA output, Boson SX8 helps operators see more, see farther, and do more.

Boson SX8 helps accelerate development and reduce integration risk with an available graphical user interface (GUI), germanium-free lens configurations, and compatibility with Teledyne FLIR OEM's Prism™ intelligent digital products. Manufactured at scale in the USA, it offers lower supply-chain risk, high reliability, and world-class support from a trusted volume supplier—setting a new standard for SWaP-optimized thermal imaging.

SEE THE BIGGER PICTURE WITH SXGA LWIR

High-performance 1280 × 1024 clarity in a SWaP-optimized package

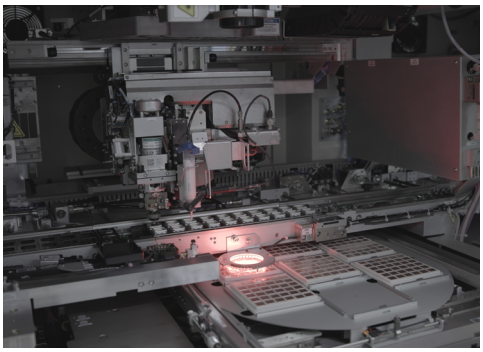
- New SWaP-optimized 8 µm pixel pitch
- Market-leading 1280 × 1024 (SXGA) resolution
- 30 Hz and 60 Hz with roadmap to higher frame-rate options



STREAMLINE SMART THERMAL CAMERA DEVELOPMENT

Integration-ready design that is AI-ready

- Boson SX8 GUI available
- Multiple lens options, including Ge-free models
- Compatible with intelligent Prism digital products
- Compact, factory-integrated CZ lens option



TELEDYNE FLIR BRAND PROMISE AND TRUSTED MANUFACTURING

A trusted development partner and low-risk volume supplier

- World-class support and service
- ITAR-free and NDAA-compliant
- High-volume manufacturing in the USA
- Classified under U.S. Department of Commerce jurisdiction as EAR 6A003.b.4.b

For more information visit:
oem.flir.com/bosonsx8

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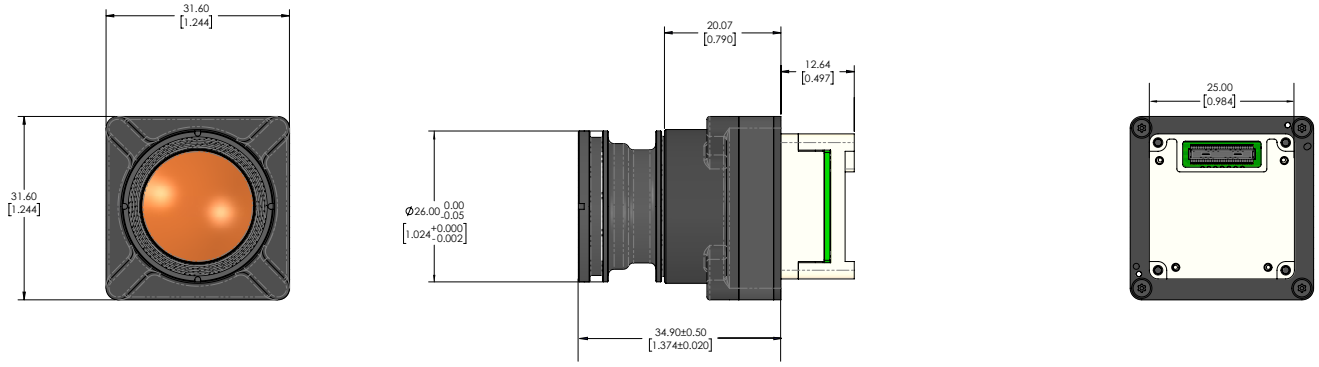
06/11/2026 REV1

SPECIFICATIONS

THERMAL IMAGER	
Resolution	1280 x 1024
Pixel Pitch	8 µm
Spectral Band	Longwave infrared; 8 µm – 14 µm
Sensitivity [NEdT]	Industrial: ≤ 35 mK; Professional: ≤ 45 mK *(factory filters enabled)*
Frame Rate	60 Hz (30 Hz using averager or frame-skip)
Non-uniformity Correction (NUC)	Factory calibrated; updated FFCs with FLIR Silent Shutterless NUC (SSN™)
Solar Protection	Yes, when integrated with factory lens.
LENS OPTIONS	
Horizontal Field of View (HFOV); Effective Focal Length	24°; 24 mm
	32°; 18 mm
	50°; 12 mm
	More coming soon
PHYSICAL ATTRIBUTES	
Size	31.6 x 31.6 x 19.9 mm (1.24 x 1.24 x 0.78 in) without lens
Weight	22.5 g (0.79 oz) without lens
Precision Mounting Holes	Heatsink: M1.2 x 0.25; Accessory: M1.6 x 0.35
INTERFACING	
Input Voltage	3.3 VDC (nominal, ±5 %)
Power Consumption	<2.25 W (full camera, configuration- and temperature-dependent)
Video Channels	MIPI CSI-2 v1.2 (D-PHY v1.2); 2 data lanes @ 720 Mbps/lane (4-lane planned)
Camera Control Channels	I^2C (Fast 400 kbps; Fast+ 1 Mbps optional)
Frame Sync	Free-running or external sync (runtime selectable)
Connector	Hirose DF40C-50DP-0.4V(51), 50-pin board-to-board
ENVIRONMENTAL	
Operating Temperature Range	-40 °C to 80 °C (-40 °F to 176 °F)
Non-Operating Temperature Range	-50 °C to 85 °C (-58 °F to 185 °F)
Shock	1,500 g @ 0.5 ms; 500 g @ 0.8 ms; 250 g @ 1.5 ms (half-sine, all 6 axes)
Vibration	Transportation profile, 4.3 g_{oms}
ESD	EN 61000-4-2 Level 4 (8 kV direct, 15 kV air-gap)
Humidity	93 % non-condensing
Operational Altitude	12 km (max altitude of a commercial airliner or airborne platform)
IP Rating	IP67

Specifications are subject to change without notice.
For the most up-to-date specs, go to oem.flir.com/bosonsx8



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