

# Atom<sup>®</sup> 640S



LYNRED USA

Access to the World's Leading Infrared Technology

640 x 480 - 17  $\mu$  pitch - Microbolometer - with electronics boards



Incorporating an advanced 640x480 thermal image sensor array, the Atom 640S delivers a highly uniform image in a VGA format. The camera core is designed for a wide variety of applications that benefit from its superb image detail and excellent thermal sensitivity, utilizing the new Pico640S sensor with sensitivity <30mK. Because of its small compact size and low power consumption, the Atom 640S is easy to integrate, and ideally suited for a wide range of military and COTS thermal imaging systems.

The Atom 640S' short thermal time constant produces superior thermal image quality even while imaging fast moving objects, making the system an ideal choice for hand held targeting devices, ground and airborne vehicles, UAV, 24/7 surveillance, EOIR platforms, and advanced fusion-based night vision systems.

## TECHNICAL SPECIFICATIONS

Array Size	640 x 480 pixels
Detector Pixel Pitch	17 $\mu$ x 17 $\mu$ microns
Detector Spectral Range	8 - 14 $\mu$ microns
Frame Rate	60Hz / 30Hz / 9Hz
Detector Sensitivity (f/1)	< 30 mK
Time to First Image	< 2 seconds
Video Processing	Non-Uniformity Correction, Auto/Manual Gain, BPR, Digital Zoom, Digital Filtering, Built-In Self Test, Test Patterns, External Synchronization, Image Orientation

## FEATURES

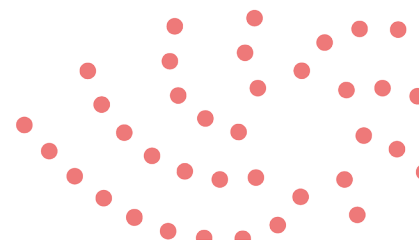
- 640 X 480 resolution with 17 micron pixels
- <30 mK detector thermal sensitivity
- 60Hz / 30Hz frame rate
- <1 Watt (minimum configuration)
- Tested to Mil-Spec 810G

## BENEFITS

- VGA resolution for high performance applications
- Increased range and detection performance
- Smooth motion and detection performance
- Longer battery life
- Ready to integrate into tactical systems

**+** Very Low Power Consumption

**+** Lightweight



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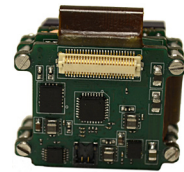
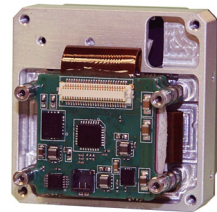


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## ATOM 640 Imager Specifications



Description	Standard with Camera Link & Chassis Option	Standard	Basic
Frame Rate		9Hz/ 30Hz/ 60Hz	
Operating Temp. Range		-40°C to 60°C	
Non-operating Temp. Range		-45°C to 70°C	
8 or 14-bit Digital Output	Camera Link	3.3 V CMOS (Hirose 50 pin connector)	
Analog Video	NTSC or PAL (MCX connector)	NTSC or PAL (Available on Hirose 50 pin connector)	
Serial Control Interface	USB or Camera Link	LVCMOS level UART	
Graphical User Interface	Included	Included (Requires customer furnished interface as COM port)	
Size (lens not included) W x H x L	1.6" x 1.6" x 1.3" w/o M34	1.6" x 1.6" x 1" w/o M34	1.2" x 1.2" x 0.9"
Weight	90g (with M34 without lens)	60g (with M34 without lens)	30g
Lens Mount	M34 (Removable, Other interfaces available)		N/A
Lens Options (Other lenses including continuous zoom available; please call for info)	8mm F1.2 HFOV 68.4° / 14mm F1.2 HFOV 42.5° 19mm F1.2 HFOV 32° / 25mm F1.2 HFOV 24.6° 35mm F1.2 HFOV 17.7°		N/A
Input Voltage	USB 5v (PoCL 12v Available)	4-5.5 VDC (Hirose 50 pin connector)	
Power Consumption	< 1.6 W (USB or PoCL)	<1 W	

### ACCESSORIES

Tripod mount / Camera Link cable / Analog video cable / External sync cable

Lenses are also available as separate items, Calibration for additional lenses

### DESKTOP SOFTWARE

Software Development Toolkit (SDK) for C++ or C#

D\*STAR Digital Storage and Retrieval Image Processing Software Suite for ATOM 640. To be used in thermal imaging R&D applications



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