

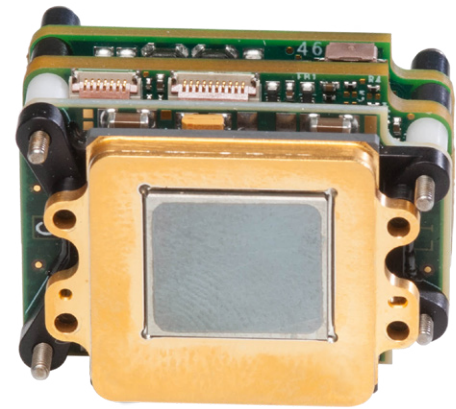
TWV640

12-micron thermal camera core

The TWV640 is the first commercially available uncooled thermal camera core to use 12-micron pixels, enabling system integrators to reduce optic size by 50 percent and optic cost by 20 percent.

The TWV640 brings 12-micron technology to military and commercial OEMs in a high-performance, affordable, thermal imaging module. Designed for systems engineers by systems engineers, the TWV640 reduces system cost and complexity by embedding value with enhanced features. These include display drivers, local image storage, and configurable image enhancement parameters that are accessible through the free MicroIR® graphical user interface and software development kit.

With its ability to capture video at 60Hz, the TWV640 can reveal details in dynamic scenes that competitors' offerings miss. The added speed allows users to navigate complex environments and track fine movements without the disorientation that comes from using slower video.



Key features and benefits

12-micron vanadium oxide pixels enable compact system design

640 x 480 resolution with our industry-leading low noise offers superior image quality

High-speed thermal imagery – up to 60 Hz full frame video – allows for detailed footage of dynamic scenes

Compatibility with standard interfaces and lenses enables affordable performance

Applications

Security and surveillance

Automotive systems

Handheld targeting

Process monitoring

Firefighting

Construction inspecting

12-micron technology enables smaller, lower cost systems

Specifications

Detector

Detector type	Uncooled VOx microbolometer
NETD	<50 mK
Spectral response region	7.5 μm – 13.5 μm
Array format	640 x 480
Pixel pitch	12 μm
Frame rate	Switchable: 60 Hz or 30 Hz

Video processing

Output modes	Black hot, white hot, edge detect, color enhanced (customizable)
Contrast enhancement	AGC or manual, histogram equalization, local area contrast enhancement algorithms available
Sharpness adjustment	Manual control
Custom overlays	User-customizable overlays with embedded display drivers
Digital zoom	.5X, 2X, 4X, 8X
Local image storage	60 frames

Interfaces

Video formats and interface	16-bit parallel digital 2.5V, NTSC/PAL, or USB2
Communications interface	UART or USB
Power consumption	1.1 W
Input voltage	External: 2.0 – 3.8 VDC USB: 5.0 VDC

Operational

Operating temperature	-40°C to +65°C
Storage temperature	-46°C to +71°C

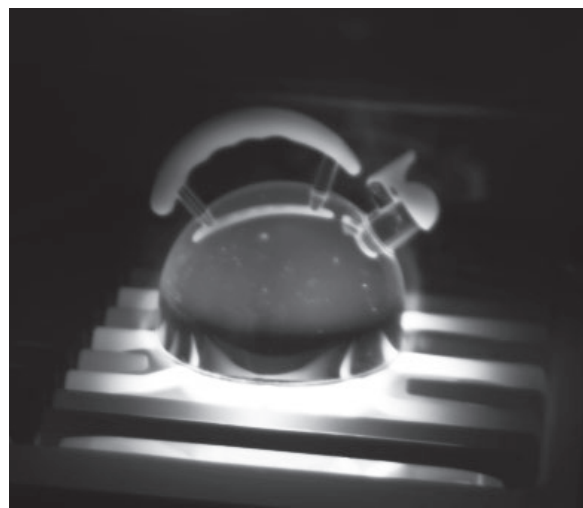
Physical

Size	26.2 mm x 33.3 mm x 22.9 mm
Weight	40 g



17-micron

12-micron



Infrared imagery generated by TWV640



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