

Imagine the invisible

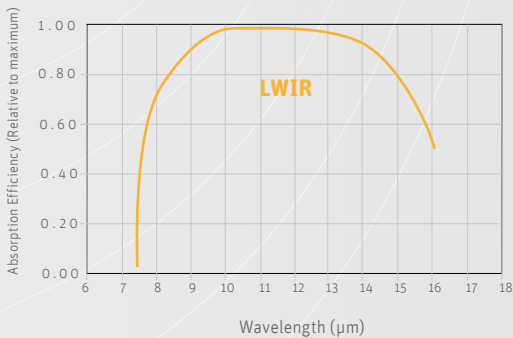
Research & Development

Gobi-640-GigE

High resolution uncooled thermal GigE Vision camera



Fast transfer of high resolution images with accurate thermal analysis



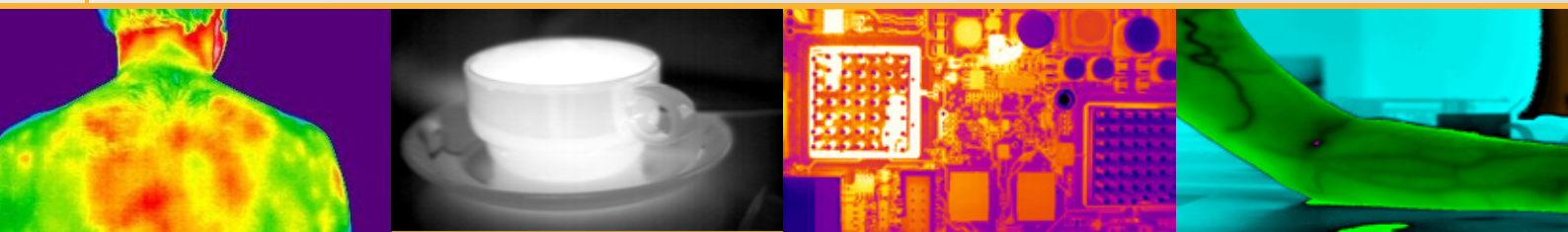
You will enter a new era of easy connectivity and system set-up with the ultra-compact Gobi-640-GigE. The powerful GigE Vision interface enables real-time control of the camera parameters and delivers immediate communication with a broad range of vision software packages.

pitch and low 50 mK NETD with germanium window. Together with the on-board image processing algorithms you will have the most versatile R&D tool on the market with excellent image quality, high thermal resolution (0.05 °C) and accurate thermal analysis capabilities.

The high performance thermal imaging camera reaches frame rates up to 50 Hz at full 640 x 480 image resolution or higher in windowing mode. The detector features a small 17 µm pixel

Need for customizing? A variety of interchangeable lenses and industry standard accessories are available.

Designed for use in



Medical: infection detection

Stress analysis

PCB inspection

Thermal imaging: Veins

Applications

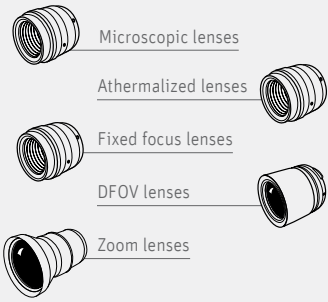
- Hot spot detection
- Bio medical imaging
- NDT: Lock-in thermography
- Accurate temperature measurement
- Quality control and quality assurance
- Real-time process control and monitoring

Benefits & Features

- Ultra-compact R&D LWIR camera
- Wide operating temperature range
- Advanced on-board image processing for excellent analytics
- Best image quality with high sensitivity and low noise values
- Communication with broad range of vision software packages
- Ease of use with GigE Vision interface and interchangeable lenses
- High frame rates of 50Hz and higher in Window Of Interest (WOI) mode

Broad range of accessories available to simplify your research

▶ Lens & filter options



> Discover our Lens Selector Guide
www.xenics.com/LSG

▶ Inputs



▶ Software



- Xeneth
- Xeneth SDK
- Xeneth LabVIEW SDK (optional)

▶ Outputs

▣ Specifications

Camera specifications	Gobi-640-GigE
Lens (included)	
Focal length	18 mm f/1, HFOV 34.8°, standard manual focus
Optical interface	Lens mount supporting multiple lenses
Imaging performance	
Frame rate (full frame)	50 Hz
Window of interest	Minimum size 160 x 120
Integration time	1 μs - 80 μs
Shutter	Yes
Temperature stabilization	No ThermoElectric Cooling required (TEC-less)
Integration type	Rolling shutter
A to D conversion resolution	16 bit
On-board image processing	Non-Uniformity Correction (NUC), auto-offset and auto-gain
On-board functionality	Self-starting and trigger possibilities
Interfaces	
Camera control	GigE Vision: GigE
Image acquisition	GigE Vision
Trigger	In or out (configurable)
Operating mode	Stand-alone or PC-controlled
Power requirements	
Power consumption	< 4.5 W
Power supply	12 V DC
Physical characteristics	
Shock	40 g, 11 ms according to MIL-STD810G
Vibration	5 g (20 Hz to 2000 Hz) according to MIL-STD883J
Ambient operating temperature	- 40 °C to 60 °C (industrial components)
Storage temperature	- 45 °C to 85 °C (industrial components)
Dimensions (W x H x L mm ³)	49 x 49 x 79 (lens not included)
Weight camera head	263 g (lens not included)

Array specifications	Gobi-640-GigE
Array type	Uncooled microbolometer (a-Si)
Spectral band	8 μm to 14 μm
# pixels	640 x 480
Pixel pitch	17 μm
NETD	50 mK @ 30°C with F/1 lens
Array cooling	Uncooled
Pixel operability	> 99%

▣ Product selector guide

Part number	NETD (mK)	Frame rate (Hz)	Interface
XEN-000065	50	50	GigE Vision

▣ Thermography calibrations*

Part number	Temperature range
ASY-001301	-20 °C to 120 °C (included)
ASY-001302	50 °C to 400 °C
ASY-001333	300 °C to 1200 °C
ASY-001334	1000 °C to 2000 °C

*Thermography accuracy +/- 2 °C or +/- 2 % (whichever is the highest)
 $T_{detector}$ of 25 °C to 50 °C.