Imagine the invisible

**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.

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 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.

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
**Specifications**

**Camera specifications**

- **Lens (included)**
  - Focal length: 18 mm f/1, HFOV 42.6°, 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

- **Camera control**
  - GigE Vision
- **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-STD883
  - 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): 49 x 49 x 79 (lens not included)
  - Weight camera head: 263 g (lens not included)

**Array specifications**

- **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%

**Output**

- **Gigabit Ethernet**

**Product selector guide**

**Part number**

- **NETD (mK)**
  - XEN-000065: 50

**Part number**

- **Temperature range**
  - MSC-000001: -20 °C to 120 °C (included)
  - MSC-000004: 50 °C to 400 °C
  - MSC-000002: 300 °C to 1200 °C
  - MSC-000043: 1000 °C to 2000 °C

**Thermography calibrations**

- **Part number**
  - MSC-000001
  - MSC-000004
  - MSC-000002
  - MSC-000043

**Inputs**

- **Power 12 V**

**Software**

- **Xeneth Radiometric**
- **Xeneth SDK**
- **Xeneth advanced (optional)**
- **Xeneth LabVIEW SDK (optional)**