

Imagine the invisible

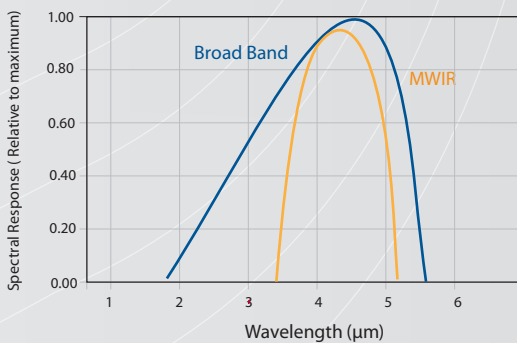
Scientific



Onca-MWIR-InSb

Midwave thermal infrared camera extended into the SWIR

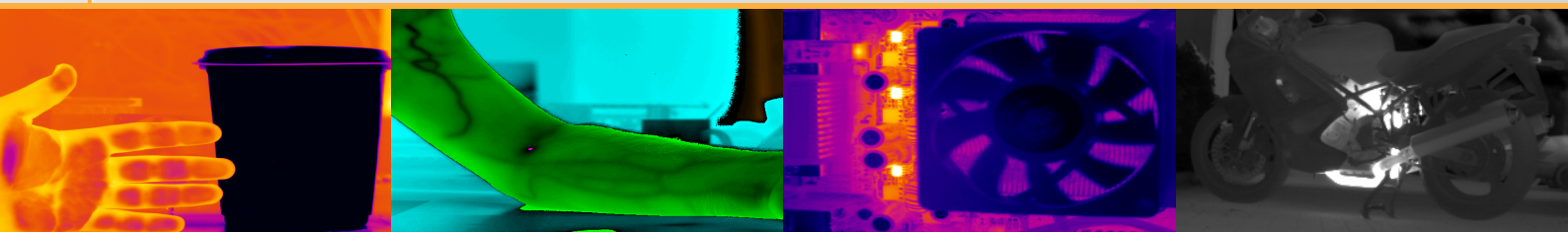
High-detectivity and high-uniformity for accurate analysis



The Onca-MWIR-InSb uses advanced real-time image correction and is equipped with a state of the art 2D InSb array with 640 x 512 or 320 x 256 image resolution. The Onca-MWIR-InSb camera offers 14-bit images at various frame rates. Two speed versions are available: a standard video rate version and a high speed version.

All camera functions can be customized and all settings are stored in nonvolatile memory to enable optimized use. The Onca-MWIR-InSb is optimized for highly stable thermal imaging and thermography applications. Camera control and image acquisition are possible according to two standards: CameraLink and GigE Vision.

Designed for use in



Thermal imaging: cold cup

Medical application: veins

Thermal imaging: electronics circuit

Thermal imaging: engine

Applications

- Thermography
- R&D (LWIR range)
- Non-destructive testing
- Industrial process monitoring

Benefits & Features

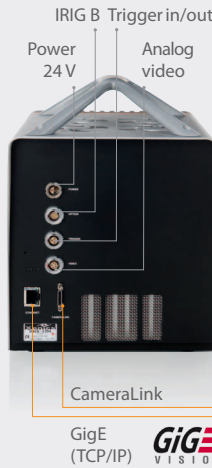
- Access to all camera settings
- Simultaneously over GigE, CameraLink and analog out
- User programmable filter wheel with multiple filters stacking
- TrueThermal to stitch frames with different integration times and temperature measurement accuracy within +/- 1 °C or +/- 1%
- Supporting all-weather and night vision applications with extended spectral range down to 1.0 µm

Broad range of accessories available to simplify your research

▸ Lens & filter options



▸ Inputs



▸ Software



- Xeneth advanced
- Xeneth SDK
- Xeneth Radiometric (optional)
- Thermography Studio (optional)

▸ Outputs

GigE (TCP/IP) **GIGEVISION**

▸ Specifications

Array specifications	Onca-MWIR-InSb-320	Onca-MWIR-InSb-640
Array type	InSb	InSb
Spectral band	3.5 to 5.0 μm (optional: 1.8 - 5.0 μm)	3.5 to 5.0 μm (optional: 1.8 - 5.0 μm)
# pixels	320 x 256	640 x 512
Pixel pitch	30 μm	15 μm
Array cooling	Stirling cooled	Stirling cooled
Sensitivity (NETD)	< 17 mK	< 20 mK
Pixel operability	> 99.5%	> 99.5%
Camera Specifications	Onca-MWIR-InSb-320	Onca-MWIR-InSb-640
Lens (included)		
Focal length	25 mm	
Optical interface	Bayonet	
Imaging performance		
Frame rate: Video rate	60 Hz	30 Hz
High speed	488 Hz	120 Hz
Window of interest	32 x 32	16 x 4
Exposure time range	>1 μs adjustable to full range	
A to D conversion resolution	14 bit	
Interfaces		
Camera control	GigE (GigE Vision or Xeneth API) Serial channel CameraLink (XSP)	
Image acquisition	GigE Vision: 14 bit full frame rate CameraLink: 14 bit full frame rate Analog: PAL or NTSC	
Trigger	Trigger in and out; LVCMOS; pre and post trigger	
Power requirements		
Power consumption	< 50 Watt at room temperature	
Power supply	24 V	
Physical characteristics		
Camera cooling	Forced convection cooling	
Ambient operating temperature	0 °C to 50 °C	
Dimensions	170 W x 190 H x 250 L mm	
Weight camera head	5 kg (Lens not included)	
Hardware specifications		
Filter wheel options	Start – stop mode	
# filters	Up to 5 filters, 25.4 mm diameter, 1.0 mm thickness	

▸ Product selector guide

Part number	# Pixels	Wavelength range (μm)	Frame rate (Hz)	Thermography option
XEN-000178	320 x 256	3.6 to 4.9	60	Yes
XEN-000179			488	Yes
XEN-000180		1.0 to 5.0	60	No
XEN-000181			488	No
XEN-000190	640 x 512	3.6 to 4.9	30	Yes
XEN-000191			120	Yes
XEN-000192		1.0 to 5.0	30	No
XEN-000193			120	No