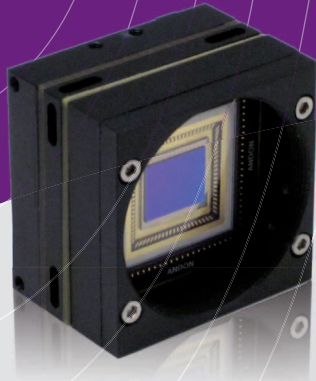**Imagine the invisible**

Xenics
Infrared Solutions
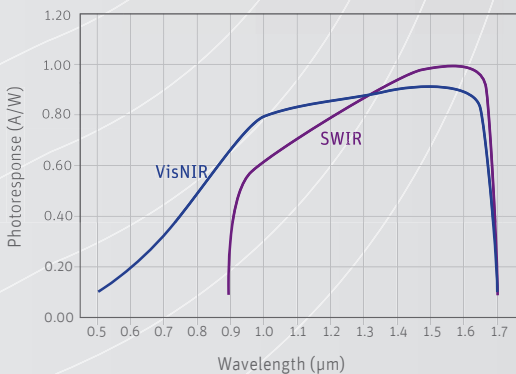
Modules & components

XSW-640

High resolution
TE 1-cooled SWIR OEM module

Ready-to-integrate SWIR OEM module consuming ultra-low-power

Photoresponse (A/W) vs Wavelength (µm), showing VisNIR and SWIR curves.

Xenics' XSW-640 OEM module is extremely compact and versatile for easy and swift integration in your SWIR imaging configuration.

Typical OEM applications include infrared imaging for man–portable and unmanned (airborne and land-based) vehicle payloads, night vision, border security, Search & Rescue (SAR) and more.

The XSW-640 OEM module detects short wave infrared radiation between 0.9 and 1.7 µm with a wide dynamic range and wide operating temperature.

The Thermo Electric (TE) stabilization reduces the dark current and noise levels. Together with on-board image processing you will have best contrast and high image quality.
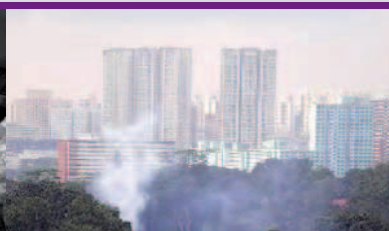
Designed for use in

⋮ Person identification ⋮ Camouflage detection ⋮ Vision enhancement: looking through haze with SWIR
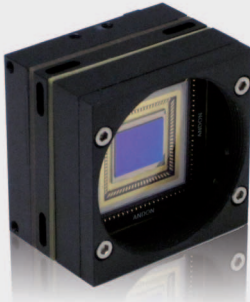
Key features

- Made in Europe
- High resolution
- Easy connectivity
- Small 20 µm pixel pitch

OEM applications

- SWIR sights
- UAV / UGV
- Border security
- Laser detection
- Night vision (passive & active)
- Search & Rescue
- Driver assistance
- Electro optical payloads
- Long range identification
- Enhanced Vision Systems (EVS)

Ready-to-integrate

Specifications

Array Specifications	XSW-640
Array type	InGaAs
Spectral band	0.9 to 1.7 µm (optional 0.6 to 1.7 µm)
# pixels	640 x 512
Pixel pitch	20 µm
Array cooling	TE 1-cooled
Gain mode	CTIA: High and Low Gain
Readout mode	ITR and IWR
Pixel operability	> 99 %

Module Specifications	XSW-640
Lens (not included)	
Optical interface	Fixation holes for multiple lens mount
Imaging performance	
Frame rate	100 Hz
Noise	90 e- (typical)
A to D conversion resolution	14 bit
Interfaces	
Connector type	Samtec 40 pin QTE
Digital output	Digital output following BT.601-6/BT.656-5 standard Parallel uncompressed video data
Digital control	Serial LVCMOS 3 V interface using XSP protocol
Trigger	In and out
Power requirements	
Power consumption	3 W
Power supply	3.3 V
Physical characteristics	
Shock	70 G, 2 ms halfsine profile
Vibration	4.5 G, (5 Hz to 500 Hz)
Ambient operating temperature	-40 °C to 70 °C
Dimensions	45 W x 45 H x 24 L mm³
Weight module	70 g

Product selector guide

Part number	Frame rate (Hz)	Interface	VisNIR
XEN-000295		16bitDV	No
XEN-000304	100	BT.656	
XEN-000098		16bitDV	Yes
XEN-000305		BT.656	

Xenics
Infrared Solutions
ISO 9001:2008 certified