Xenics
Infrared Solutions

Scientific

Xeva-1.7-320

Advanced research
in SWIR imaging

Cooled and stable Xeva-1.7-320 for excellent image quality research
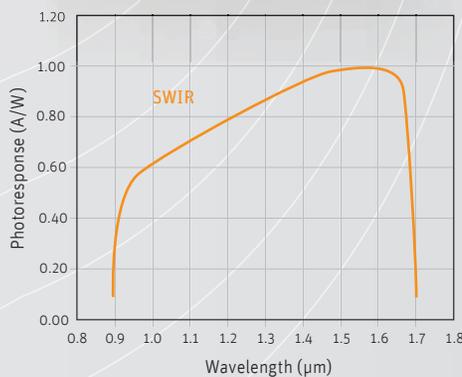
In one compact housing, the Xeva-1.7-320 digital camera combines a thermo-electrically cooled InGaAs detector head and the control and communication electronics.

The Xeva-1.7-320 unit is available with standard (up to 1.7 µm) InGaAs detector arrays and comes in various speed versions: 60 Hz, 100 Hz and 350 Hz. It allows you to choose the most suitable detector-camera configuration for your specific application.

The camera head interfaces to a PC via standard USB 2.0 or CameraLink.

Each camera is delivered with a graphical user interface Xeneth, which offers direct access to various camera settings such as exposure time and operating temperature. The software tools include two-point non-uniformity correction and bad pixel replacement.

Photoresponse (A/W) vs Wavelength (µm) — SWIR

Designed for use in
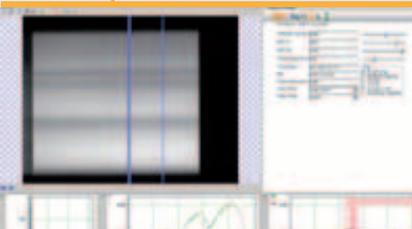
⫶ R&D SWIR   ⫶ Food inspection   ⫶ Art inspection

Applications

- R&D (SWIR range)
- Hyperspectral imaging
- Semiconductor inspection
- High temperature thermography
  (300°C to 1200°C range or up to 2000°C)

Benefits & Features

- Spectrometer compatible
- Thermal imaging of hot objects
- High sensitivity for low-light conditions
- Extending SWIR imaging to the visible
- Cooled operation for low light-level imaging
- Flexible programming in an open architecture
- CameraLink and triggering for high speed imaging

Lens & filter options

- 8 mm lens
- 12.5 mm lens
- 16 mm lens
- 25 mm lens
- 35 mm lens
- 50 mm lens
- 75 mm lens
- 100 mm lens
- 200 mm lens

Inputs

Trigger

Power 12 V

TRIGGER USB POWER

USB 2.0

CameraLink

Outputs

Software

- Xeneth advanced
- Xeneth SDK
- Xeneth radiometric (optional)

Specifications

Array specifications	Xeva-1.7-320
Array Type	InGaAs
Spectral band	Standard: 0.9 to 1.7 µm Optional: 0.4 to 1.7 µm*
# Pixels	320 x 256
Pixel Pitch	30 µm
Array Cooling	TE1-cooled down to 263K Optional TE3-cooled down to 223K**
Pixel operability	> 99%

* For more product information you can consult the Xeva-1.7-320 VisNIR brochure
** For more product information you can consult the Xeva-1.7-320 TE3 brochure

Camera specifications	60 Hz	100 Hz	350 Hz
Lens (included)			
Focal length	Visible lens 16mm f/1.4		
Optical interface	C-Mount, spectrograph fixation holes (Broad selection of lenses are available)		
Imaging performance			
Frame rate	60 Hz	100 Hz	350 Hz
Integration type	Snapshot		
Exposure time range	1 µs up to 100 seconds (TE3; Low gain)		
Noise level: Low gain 　　　　　　High gain	6 AD counts on 14 bit 15 AD counts on 14 bit		
S/N ratio: Low gain 　　　　　High gain	68 dB 60 dB		
A to D conversion resolution	12 bit or 14 bit		
Interfaces			
Camera control	USB 2.0		
Image acquisition	USB 2.0 / CameraLink		
Trigger	TTL levels		
Graphical User Interface (GUI)	Xeneth Advanced		
Power requirements			
Power consumption	< 4 Watt, cooler: 30 Watt max		
Input voltage	12 V		
Physical characteristics			
Camera cooling	Forced convection cooling		
Ambient operating temperature	0 to 50 ºC		
Dimensions	90 W x 110 H x 110 L mm³		
Weight camera head	App. 1.8 kg		
Weight power supply	300 g		

Product selector guide

Part number	Digital Interface	Analog Interface	ADC	Frame rate (Hz)	Cooling
XEN-000100	USB 2.0	N/A	12 bit	100	TE1
XEN-000102	USB 2.0	PAL	12 bit	100	TE1
XEN-000159	USB 2.0	NTSC	12 bit	100	TE1
XEN-000158	USB 2.0	Gated	12 bit	100	TE1
XEN-000104	Camera Link	N/A	14 bit	60	TE1
XEN-000105	Camera Link	N/A	14 bit	100	TE1
XEN-000107	Camera Link	N/A	14 bit	350	TE1

Xenics
Infrared Solutions