

Imagine the invisible

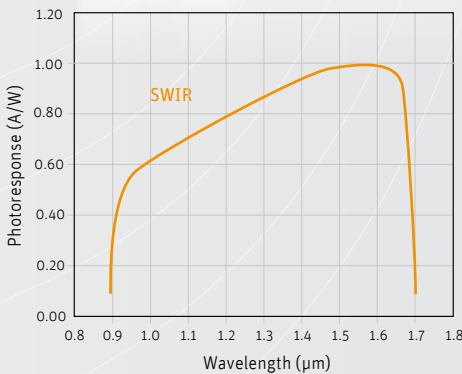
Research & Development



# 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.

### 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)

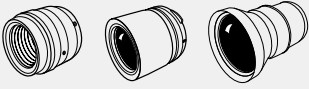
### Benefits & Features

- 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

# Broad range of accessories available to simplify your research

## ▶ Lens & filter options

Various focal lengths available



> Discover our Lens Selector Guide  
[www.xenics.com/LSG](http://www.xenics.com/LSG)



## ▶ Inputs



## ▶ Outputs

## ▶ Software



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

## Specifications

Camera Specifications	60 Hz	100 Hz	350 Hz
<b>Imaging performance</b>			
Maximum frame rate	60 Hz	100 Hz	346 Hz
Window of Interest (WoI)	Yes		
Exposure time range	Up to several seconds (high gain mode)		
Integration type	Snapshot		
Readout mode	Integrate Then Read (ITR)		
Noise	High gain: 180 e- Low gain: 1400 e-		
Dynamic range	High gain: 60 dB Low gain: 68 dB		
A to D conversion resolution	12 bit over USB 14 bit over CameraLink		
<b>Interfaces</b>			
Optical interface	C-Mount, spectrograph fixation holes (Broad selection of lenses are available)		
Camera control	USB 2.0		
Image acquisition	CameraLink	USB 2.0* CameraLink	CameraLink
Trigger	Trigger In or Out (configurable) TTL levels		
<b>Power requirements</b>			
Power consumption	< 4 W without TEC operation; Max. 30 W with TE-cooling		
Input voltage	12 V		
<b>Physical characteristics</b>			
Camera cooling	Forced convection cooling		
Ambient operating temperature range	0 to 50 °C		
Dimensions	90 W x 110 H x 110 L mm <sup>3</sup>		
Weight camera head	1.8 kg		

\* Image acquisition USB 2.0: Only recommended for part number XEN-000100

## Array Specifications

Array type	InGaAs Focal Plane Array (FPA) ROIC with CTIA* topology
Resolution	320 x 256
Pixel size	30 µm x 30 µm
Spectral band	Standard: 0.9 to 1.7 µm Optional: 0.4 to 1.7 µm*
Peak quantum efficiency	80%
Pixel operability	> 99%
Array size	9.6 mm x 7.68 mm; 12.29 mm diagonal
Array cooling	TE1 (optional TE3 **)
ROIC noise	High gain: 70 e-; low gain: 700 e-
Dark current	0.19 x 10 <sup>6</sup> e-/s at 280 K
Full well	High gain: 1.7 x 10 <sup>5</sup> e-; low gain: 3.5 x 10 <sup>6</sup> e-

\* For more product information you can consult the Xeva-1.7-320 VisNIR datasheet

\*\* For more product information you can consult the Xeva-1.7-320 TE3 datasheet

## Product selector guide

Part number	Digital interface	Analog interface	Frame rate (Hz)	Cooling
XEN-000100	USB 2.0	No	100	TE1
XEN-000104	Camera Link	No	60	
XEN-000105			100	
XEN-000107			350	