



Scientific



# Xeva-2.5-320

Superior performance  
for reliable research

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Infrared Solutions

# Flexible and stable Xeva-2.5-320 for excellent image quality research

In one compact housing, the Xeva-2.5-320 digital camera combines a four stage thermo-electrically cooled HgCdTe detector head and the control and communication electronics.

## High quality, high flexibility

The Xeva-2.5-320 unit is a compact digital camera, operating a HgCdTe detector array (up to 2.5  $\mu\text{m}$ ) with 320 x 256 pixel resolution. It outputs 14 bit data and comes in a 60 Hz or 100 Hz version. The camera interfaces to a PC via standard USB 2.0 or CameraLink and comes with a custom frame grabber card or can interface to standard frame grabber cards such as the NI-1428. Each camera is delivered with a graphical user interface X-Control, which offers direct access to various camera settings such as exposure time and operating temperature. The software tools include two-point uniformity correction and bad pixel replacement.

## Advantages

- Quick highly-stable operating temperatures
- Flexible and easy-to-use
- Spectrometer compatible

## Designed for use in

- R&D (SWIR range)
- Thermal imaging of hot objects (200°C to 800°C range)
- Hyperspectral imaging
- Semiconductor inspection
- Art inspection

## Benefits & Features

### High quality images up to 2.5 $\mu\text{m}$

320 X 256 pixels in the SWIR wavelength range up to 2.5.

### Smallest TE4-cooled camera

Achieve long integration times with 4-stage Peltier Cooler resulting in reduction of noise and dark current.

### USB 2.0 interface

As much as 50 images per second over standard USB 2.0 connection.

### CameraLink and triggering for high speed imaging

Export real time up to 100 fps. Synchronization with external sources is straightforward in triggered applications.

### Scientific image recording and analysis

Easily grab still or dynamic images under optimal performance conditions with X-control.

### Performance optimization

Easy and continuous access to control parameters such as integration time and frame rate.

### Flexible programming in an open architecture

Software Development Kit (SDK) supporting C++, Visual Basic, Labview or Linux.

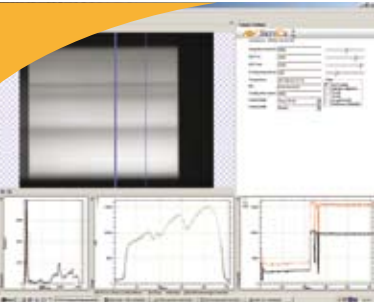
### Exchange of lenses

A variety of wide angle or narrow FOV lenses are available.





Semiconductor inspection



Spectral signature PVC

### Array Specifications

Array Type	HgCdTe
Spectral band	0.85 to 2.5 $\mu\text{m}$
# Pixels	320 x 256
Pixel Pitch	30 $\mu\text{m}$
Array Cooling	TE4-cooled down to 200K
Pixel operability	> 99%

### Camera Specifications

#### Xeva 60 Hz

#### Xeva 100 Hz

#### Lens (included)

Focal length	16 mm f/1.4
Optical interface	C-Mount, spectrograph fixation holes (Broad selection of lenses available)

#### Imaging performance

Frame rate (full frame)	60 Hz	100 Hz
Integration type	Snapshot	
Exposure time range	100 sec up to 20 msec	
Noise level	6 AD counts	
S/N ratio	69 dB	
A to D conversion resolution	14 bit	

#### Interfaces

Camera control	USB 2.0
Image acquisition	CameraLink
Trigger	TTL levels
Graphical User Interface (GUI)	X-control Advanced

#### Power requirements

Power consumption	< 4 Watt, cooler: 30 Watt max
Power supply	12 V - 5 A

#### Physical characteristics

Camera cooling	Forced convection cooling
Cool-down time	< 300 sec
Ambient operating temperature	0 to 50° C
Dimensions	120 x 110 x 90 mm <sup>3</sup>
Weight camera head	App. 1.8 kg
Weight power supply	300 g

## Applicable OS: Windows 2000 (SP4), XP Pro (SP2), VISTA (SP1)



### X-Control Advanced

#### Software control

- Image live view
- Store digital Pictures / Movies
- Image histogram
- Line profiles, Spot meters, Time profiles

- Black hot / White hot
- False color mode with various color palettes

A dynamic link library (DLL) to communicate with the driver has been designed for flexible software development. A well-documented API with sample code in C, Visual Basic and Delphi is supplied, as well as a Linux SDK. Labview device drivers and a sample program (executable) are also available.

## Product Selector Guide

Xeva-2.5-320 Part number	Digital output Interface	Cooling	Frame Rate	ADC
XC403-060Hz	CameraLink	TE4	60 Hz	14 bit
XC403-100Hz	CameraLink	TE4	100 Hz	14 bit

## Accessories

Part number	Type	Description	Available on following cameras
XC602	Trigger	Triad to BNC	All
XC606-5	CL	MDR-26	All
XC605	USB	Mini USB-B	All
XC503-201	Frame grabber	Xenics PCI-CL	All

### Inputs



### Outputs

Information furnished by Xenics is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. This information supersedes all previously supplied information.



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#### ▣ About Xenics

Xenics is a leading developer of innovative infrared detection solutions. We design, manufacture and sell infrared detectors and cameras, both linescan and 2-D, covering the infrared wavelength ranges from 0.4 to 14 micrometers. In addition, Xenics delivers tailor-made solutions produced according to customer-agreed specifications and planning. As a European vendor with a worldwide service and distributor network, we are strategically placed to serve global markets with highly innovative products drawing on a strong science and technology background.

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