

**WORLD'S FASTEST InGaAs  
AREA-SCAN CAMERA**

**Xenics**  
EXOSENS GROUP

# Cheetah Series



*WORLD'S FASTEST InGaAs AREA-SCAN CAMERA  
WITH HIGH IMAGE RESOLUTION*

## KEY FEATURES



**WORLD'S FASTEST SWIR AREA-  
SCAN IMAGING UP TO 1700 Hz**



**HIGH-QUALITY IMAGE**



**STATE-OF-THE-ART SWIR  
PERFORMANCE**

The Cheetah series is based on an in-house developed, temperature stabilized InGaAs detector with a 640 x 512 pixel resolution. The Cheetah 640 camera with single-stage TE-cooled detector offers high frame rates of either 400 Hz, 800 Hz or 1700 Hz while the version with three-stage TE-cooled detector offers a frame rate of up to 110 Hz.

A visible short-wave infrared (vSWIR) option is available for extension into the visible wavelength band.

# Cheetah Series



## KEY PERFORMANCES

Image format / Pixel pitch	640 x 512 pixels/ 20 $\mu$ m
Detector type	InGaAs photodiode array with CTIA ROIC
Sensor cooling	TE-cooled
Integration type	Snapshot - global shutter
Spectral range	900 - 1700 nm (SWIR); 500 - 1700 nm (vSWIR)
Max frame rate (full frame)	111 Hz / 444 Hz / 865 Hz / 1730 Hz
Power consumption	Up to 25 W or 60 W
Power supply voltage	DC 12 V

## FUNCTIONS & INTERFACES

Command and control	CameraLink
Connector trigger	SMA
Camera dimensions (width x height x length)	143 mm x 137 mm x 95 mm
Optical interface	C-mount
Camera weight	2000 gr

## PRODUCT SELECTOR GUIDE

XEN-000175 (Cheetah 640 TE1 400)	XEN-000045 (Cheetah 640 TE1 400 vSWIR)
XEN-000577 (Cheetah 640 TE1 800)	XEN-000578 (Cheetah 640 TE1 800 vSWIR)
XEN-000176 (Cheetah 640 TE1 1700)	XEN-000046 (Cheetah 640 TE1 1700 vSWIR)
XEN-000271 (Cheetah 640 TE3)	

[advancedimaging@exosens.com](mailto:advancedimaging@exosens.com)



[exosens.com](http://exosens.com)

**EXOSENS**  
REVEAL THE INVISIBLE

**WORLD'S FASTEST SWIR  
InGaAs AREA-SCAN CAMERA**

**Xenics**  
EXOSENS GROUP

# Cheetah+ 640 Series



*WORLD'S FASTEST SWIR InGaAs AREA-SCAN  
CAMERA WITH HIGH IMAGE RESOLUTION*

## KEY FEATURES



**WORLD'S FASTEST SWIR AREA-  
SCAN IMAGING UP TO 1700 Hz**



**HIGH-QUALITY IMAGE**

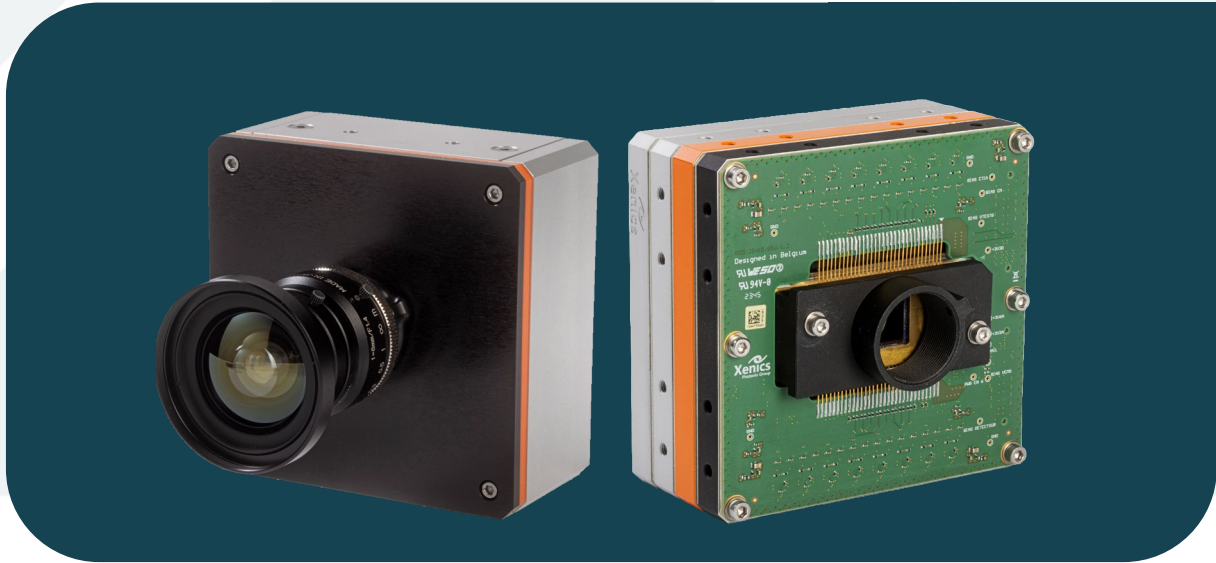


**STATE-OF-THE-ART SWIR  
PERFORMANCE**

The Cheetah+ series is based on an in-house developed, temperature stabilized InGaAs detector with a 640 x 512 pixel resolution. The Cheetah+ 640 offers high frame rates of 1700 Hz.

With its unique features of high-speed, high-resolution, and best sensitivity in a reliable InGaAs array, the Cheetah+ cameras are perfectly suited for high-speed imaging in the SWIR range for a variety of demanding applications.

# Cheetah+ 640 Series



## KEY PERFORMANCES

Image format / Pixel pitch	640 x 512 pixels/ 20 $\mu$ m
Detector type	InGaAs photodiode array with CTIA ROIC
Sensor cooling	TE1
Integration type	Snapshot - global shutter
Spectral range	900 - 1700 nm
Max frame rate (full frame)	1700 Hz
Power consumption (with cooling)	25.2 W (via power supply), 15.3 W (via CXP)
Power consumption (without cooling)	12.5 W
Power supply voltage	DC 24 V

## FUNCTIONS & INTERFACES

Command and control	CXP
Connector trigger	via unified connector
Camera dimensions (width x height x length)	100mm x 100mm x 73mm (OEM) 108mm x 108mm x 73mm (CAM)
Optical interface (optional)	C-mount
Camera weight	875 gr (OEM) 1206 gr (CAM)

## PRODUCT SELECTOR GUIDE

XEN-000946 (Cheetah+ 640 CXP OEM 1700)	XEN-000947 (Cheetah+ 640 CXP CAM 1700)
--	--

[advancedimaging@exosens.com](mailto:advancedimaging@exosens.com)



[exosens.com](http://exosens.com)

**EXOSENS**  
REVEAL THE INVISIBLE