Imagine the invisible

Industrial

Xenics
Infrared Solutions

Serval-640-GigE

High resolution
IP67 LWIR camera

Smallest ruggedized LWIR camera withstanding harsh industrial environments

Serval fulfils a growing demand for rugged and reliable end-user ready cameras for industrial imaging applications without the need for third-party enclosures.

Serval is directed at demanding indoor use, such as in-line process and quality control in harsh and hot industrial environments. In this highly specialized field, system integrators are looking for new solutions in terms of easy and maintenance-free

installation as well as long-term stability.

Serval is designed for long-term stable and reliable operation under difficult ambient conditions. Its compact form factor provides front window protection to protect the lens and avoid costly repair or replacement, plus optionally an air purge system of the encapsulated optics to allow permanent use in dust-loaded atmospheres.
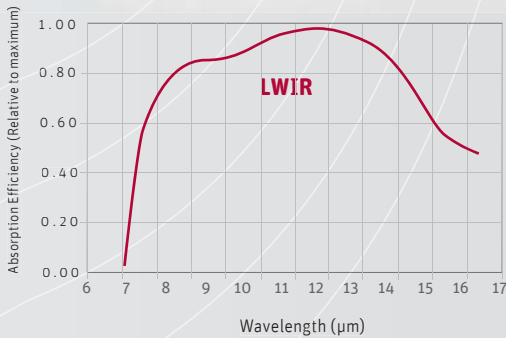
Designed for use in
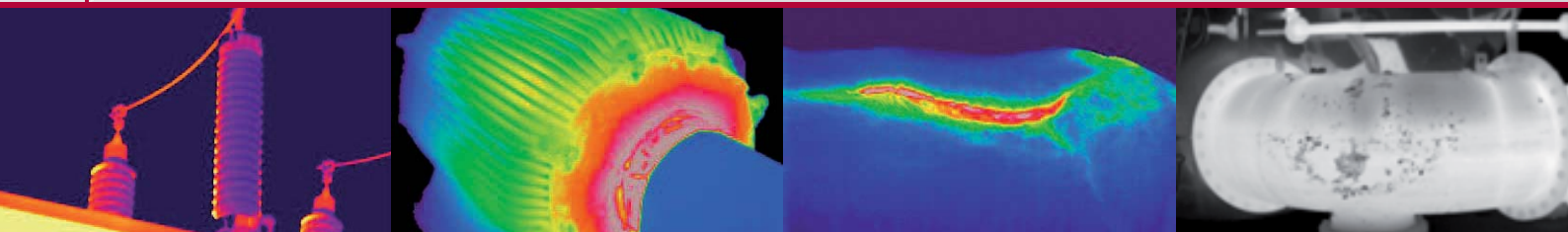
⋮ Maintenance   ⋮ Monitoring of critical installations   ⋮ Waste combustion   ⋮ Pipeline monitoring

Applications

- In-line process and quality control in harsh environments
- Crucial hot-spot, fire or smoke detection

Benefits & Features

- High resolution
- Easy-to-integrate
- Small form factor
- Large operating temperature range
- Reliable ruggedized (IP67) with window protection
- Small GigE interface resulting in a ultra-compact industrial LWIR camera

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Broad range of accessories available to simplify your set-up

Lens configurations

Manual focus lenses
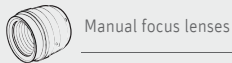
> **Discover our Lens Selector Guide**
> **www.xenics.com/LSG**

Inputs

Power 12 V
Trigger in/ out

Gigabit Ethernet

Outputs

Software

- Xeneth Advanced
- Xeneth SDK (optional)
- Xeneth LabVIEW SDK (optional)

Specifications

Camera specifications	Serval-640-GigE
Lens (included)	
Focal length	One fixed lens configuration per camera part number More information is included the product selector guide
Imaging performance	
Frame rate (full frame)	50 Hz
Window of interest	Minimum size 160 x 120
Exposure time range	1 µs - 80 µs
Temperature stabilization	No thermoelectric cooling required (TEC-less)
Integration type	Rolling shutter
On-board image processing	NUC (Non-Uniformity Correction) Auto-offset and auto-gain with selectable region of interest Histogram equalization
A to D conversion resolution	16 bit
Interfaces	
Camera control	GigE Vision
Image acquisition	GigE Vision
Trigger	In or out (configurable)
Power requirements	
Power consumption	< 4.5 W
Power supply	12 V
Physical characteristics	
Shock	40 G, 11 ms according to MIL-STD810G (preliminary)
Vibration	5 G (20 Hz to 2000 Hz) according to MIL-STD883J (preliminary)
Protection rating	IP67
Case temperature during operation	0 ºC to 60 ºC (preliminary)
Storage temperature	- 20 ºC to 80 ºC (preliminary)
Dimensions (W x H x L mm³)	55 x 55 x 129,5 * (preliminary)
Weight camera head	Depending on selected lens

(*) Depends on lens configuration

Array specifications	Serval-640-GigE
Array Type	Uncooled microbolometer (a-Si)
Spectral band	8 µm to 14 µm
# pixels	640 x 480
Pixel Pitch	17 µm
NETD	75 mK @ 30ºC with F/1 lens
Array Cooling	Uncooled
Pixel operability	> 99%

Product selector guide

Part number	Fixed lens	NETD (mK)	Frame rate (Hz)	Interface
XEN-000542	10 mm			
XEN-000544	18 mm	75	50	GigE Vision
XEN-000546	25 mm			
XEN-000548	40 mm			

Accessories	Description	Optional
ASY-000915	Sunshield	
ASY-000916	Mounting plate	Yes
ASY-000917	Air purge	
ASY-000918	I/O kit	

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