

## **XMID-FPA-640**

Stirling cooled MWIR InSb imaging camera (1 up to 5  $\mu\text{m}$ )



# The XenICs Solution

## High quality

XenICs infrared detectors are characterized by high detectivity, good stability and high uniformity.

## High flexibility

XenICs' series of infrared cameras is characterized by the high degree of flexibility that these cameras offer in terms of frame rate, user interface and temperature range. Our cameras combine high speed with high sensitivity at low cost.

In addition, XenICs delivers custom products according to the agreed specification and planning, combining stringent technology requirements with application-dependent user needs to deliver fast custom-based solutions, even for small volumes.



## XMID-FPA-640

The XMID-FPA-640 camera is a mid-infrared imaging camera that is perfect for stand-alone thermal imaging applications where performance is critical. It uses advanced real-time signal processing and is equipped with a state of the art 2D InSb array with 640 x 512 pixel resolution. The XMID-FPA-640 camera can offer 14-bit images at various frame rates. Two versions are available: 25 Hz and 90 Hz full frame rate. All camera functions can be customized and all settings are stored in non-volatile memory to enable optimized use.

**Imagine** the invisible  
the invisible

## Key features

- InSb array
- 640 x 512 pixels
- Spectral range: 3.0 (1.0) – 5.0  $\mu\text{m}$
- 14-bit real time images
- Maximal full frame rate: 90Hz
- Region of interest readout
- Flexible integration time setting
- NETD < 25 mK
- CameraLink interface
- Trigger input & output

## XMID applications

- Security and surveillance
- Search and rescue
- Industrial process monitoring
- Thermography
- Non-destructive testing
- Night-time vision enhancement
- Infrared signature detection

ARRAY SPECIFICATIONS	
Array Type	InSb
Spectral Band	3.0 to 5.0 $\mu\text{m}$ (optional: extended range 1.0 - 5.0 $\mu\text{m}$ )
# Pixels	640 x 512
Pixel Pitch	20 $\mu\text{m}$
Array Cooling	Stirling cooled
NETD	< 25 mK
Pixel operability	> 99,5%
Cold stop F number	F/2.5

CAMERA SPECIFICATIONS	XMID-25Hz	XMID-90Hz
	Optical interface	<ul style="list-style-type: none"> <li>• Bayonet</li> <li>• Anti-condensing construction</li> </ul>
Camera control	USB 2.0	
Image acquisition	CameraLink / USB 2.0	
Trigger interface	TTL level triggers	
Frame rate (full frame, uncorrected images) <sup>1</sup>	25 fps	90 fps
Window of interest	Smallest window 128x8	Smallest window 128x8 Max frame rate > 900 fps
Integration type	Snapshot	
Exposure time range	> 5 $\mu\text{s}$	
Total dynamic range	14 bit	
Cool-down time	120 to 180 s	
Camera cooling	Forced convection cooling	
Power consumption	< 50 Watt	
Ambient operating temp range	0 to 50°C	
Humidity	Non condensing	
Dimensions	130 x 140 x 220 mm <sup>3</sup>	
Weight camera head	App. 3 kg	
Weight power supply	300g	
Power supply	28 V – 3.5 A	

<sup>1</sup> Camera frame rate; display speed depends on pc

