Xenics
Infrared Solutions

WILDCAT+ 1280 SERIES

- High resolution SWIR imaging camera with CameraLink (CL) or USB3 Vision (U3V) interface
- 1280x1024 pixels
- 5 µm pixel pitch
- USB3 Vision, CameraLink

HIGH-RESOLUTION, SWIR MEGAPIXEL CAMERA

The Wildcat+ 1280 series is based upon a state-of-the-art InGaAs photodiode array with 1280x1024 pixels and 5 µm pixel pitch. The camera offers superior, high resolution SWIR imaging capabilities, comes in a versatile and industry-proven Wildcat camera package (GenICam compliant), and offers advanced onboard image processing.

The Wildcat+ 1280 camera outputs full frame images at 120 Hz via either a CameraLink or USB3 Vision interface.

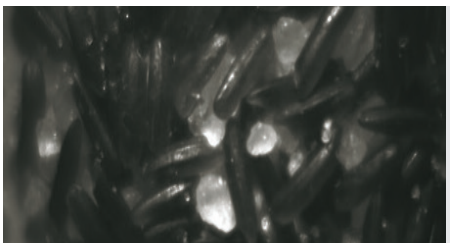
DESIGNED FOR USE IN

- Semiconductor wafer or chip and solar wafer inspection
- Scientific & Advanced Research
- Display inspection - mobile phone & TV
- Microscopy
- Laser beam analysis

ADVANTAGES

- Compact and industry-proven camera design
- High-resolution SWIR imaging
- Advanced on-board image processing performance
- GenlCam compliant
- Flexible optical mount and lens options

Art inspection



Food inspection

Semiconductor inspection

SPECIFICATIONS

Camera Specifications	Wildcat+ 1280 CL	Wildcat+ 1280 U3V
Mechanical specifications		
Dimensions (width x height x length) – excluding lens [mm] (approx.)	55 x 55 x 72	55 x 55 x 91.5
Optical interface	C-mount or M42	
Camera weight [gr] (excluding lens)	345	385
Connector USB	NA	USB 3.0 type micro-B
Connector CameraLink	Standard SDR	NA
Connector power	Lemo 1B.308 (unified connector)	
Connector trigger	Lemo 1B.308 (unified connector)	
Connector serial command	Lemo 1B.308 (unified connector)	
Environmental & power specifications		
Operating temperature range (housing temperature) [°C]	From -40 to +70	
Storage temperature [°C]	From -40 to +85	
Power consumption [W]	<7	
Power supply voltage	DC 12 V	
Shock	40 g, 11 ms, MIL-STD810G	
Vibration	5 g (20 to 2000 Hz), MIL-STD810G	
IP rating	IP40	
Regulatory compliance	CE	
Electro-optical specifications		
Image format [pixels]	1280x1024	1280x1024
Pixel pitch [µm]	5	5
Detector type	InGaAs photodiode array with ROIC	InGaAs photodiode array with ROIC
Sensor temperature stabilization	TE-cooler	TE-cooler
Integration type	Snapshot - Global Shutter	Snapshot - Global Shutter
Active area and diagonal [mm]	6.4 x 5.12 (diagonal 8.2)	6.4 x 5.12 (diagonal 8.2)
Optical fill factor	100%	100%
Spectral range [nm]	400 - 1700	400 - 1700
Quantum efficiency	~77% (typical peak value)	~77% (typical peak value)
Gain modes	Single gain	Single gain
Read noise [electrons]	200	200
Full well capacities [electrons]	160k	160k
Dark current [electrons/second]	<3k	<3k
Read out modes	IWR (< 7.5 ms) & ITR	IWR (< 7.5 ms) & ITR
Pixel operability	>99.5%	>99.5%
Pre-configured exposure time range	0.5 ms & 5 ms & 7.5 ms	0.5 ms & 5 ms & 7.5 ms
Max frame rate [Hz] [full frame]	120	120
Region of interest	Yes	Yes
Min region size [pixels]	4 x 8 (step size 4 pixels in X & 8 pixels in Y)	4 x 8 (step size 4 pixels in X & 8 pixels in Y)
Max frame rate [Hz] (min region size)	>3 kHz	>3 kHz
Command and control	CameraLink Base	USB3 Vision
Digital output format	CameraLink Base (16 bit)	USB3 Vision (16 bit)
Trigger	Connector: 2 trigger in & 2 trigger out - LVCMOS 3.3 V	Connector: 2 trigger in & 2 trigger out - LVCMOS 3.3 V; CameraLink trigger in
Product selector guide		
Part number	XEN-000814	XEN-000815