

Wildcat+ 640 Series



HIGH-RESOLUTION SWIR CAMERA

KEY FEATURES



HIGH-RESOLUTION SWIR IMAGING



INDUSTRY PROVEN CAMERA DESIGN



**FLEXIBLE OPTICAL MOUNT &
LENS OPTIONS**

The Wildcat+640 series is based upon a state-of-the-art InGaAs detector with 640x512 pixels and 20 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 on-board image processing.

The Wildcat+640 camera outputs full frame images up to 300 Hz via either a CameraLink or USB3 Vision interface.

Camera Specifications	Wildcat+ 640 CL 300	Wildcat+ 640 U3V 300
Mechanical specifications		
Dimensions (width x height x length) [mm]	55 x 55 x 72	55 x 55 x 91.5
Weight [gr] – excluding lens	316	358
Optical interface	C-mount or M42	
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 case temperature [°C]	From -40 to 70	
Storage temperature [°C]	From -40 to 85	
Power consumption [W]	< 7	
Power supply voltage	DC 12 V	
Shock	40g, 11ms, according to MIL-STD810G	
Vibration	5g (20 to 2000 Hz), according to MIL-STD810G	
IP rating	IP40	
Regulatory compliance	CE	
Electro-optical specifications		
Image format [pixels]	640x512	
Pixel pitch [µm]	20	
Detector type	InGaAs photodiode array with ROIC	
Sensor temperature stabilization	TE-cooler	
Integration type	Snapshot - global shutter	
Active area and diagonal [mm]	12.8 x 10.24 (diagonal 16.4)	
Optical fill factor	100%	
Spectral range [nm]	900 - 1700	
Quantum efficiency	~80% (typical peak value)	
Gain modes	High Gain (HG) & High Dynamic Range mode (HDR)	
Full well capacities [electrons]	65k (HG) & 550k (HDR)	
Read noise [electrons]	45 (HG) & 200 (HDR)	
Dark current [electrons/second]	< 100k	
Read out modes	ITR/IWR	
Pixel operability	>99.5%	
Preconfigured exposure time range [ms]	HDR ITR: 0.5 ms; HG ITR: 0.5 ms & 5 ms; HG IWR 0.5 ms & 3 ms; TrueNUC ITR HG&HDR 0.1-20ms; TrueNUC IWR HG 3-20ms	
Max frame rate [Hz] (full frame)	300	
Region of interest	Yes	
Min region size [pixels]	8 x 8 (step size 8 pixels in X & 8 pixels in Y)	
Max frame rate [Hz] (min region size)	>20 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; CameraLink trigger in	Connector: 2 trigger in & 2 trigger out - LVCMOS 3.3 V; CameraLink trigger in
Product selector guide		
Part number	XEN-000874	XEN-000873

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