

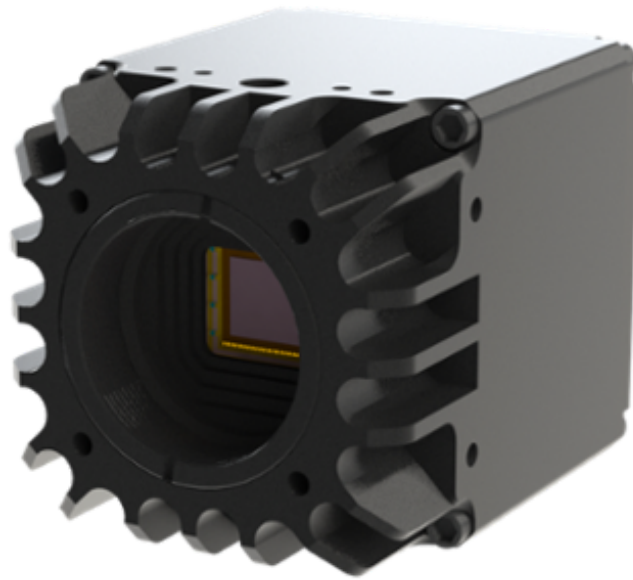
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WiDy SenS Lin/Log Gated InGaAs

- Low SWap InGaAs camera
- Linear mode for sensitivity (50e- readout noise)
- Logarithmic mode for dynamic range (>120dB)
- High shutter efficiency with 100 ns min exposure
- TEC1 cooling
- 640 x 512 with 15µm pixel pitch
- ITAR-free



(<https://axiom-optics.myshopify.com/collections/swir-cameras>)

Description	Specifications	Applications	Options	Accessories	Videos
<p>All USB3.0 & GigE Vision cameras come with WiDyVISION software + SDK for C++ (C# upon request). USB Linux driver available upon request.</p> <p>All CameraLink cameras are using CL base interface with serial communication protocol over SerTFG and SerTC. HMI available for Imperx and all Dalsa Xcelera frame grabbers.</p> <p>All GigE Vision cameras come with on-board image processing / NUC correction.</p>					
Interface		USB3.0, CameraLink (base) or GigE Vision			
Resolution		640(H)x512(V)			

Sensor format	1 inch
Pixel pitch	15 μ m
Partial reading mode	True AOI (fps increases in both directions X,Y)
TEC	3 modes <ul style="list-style-type: none"> • Low current < 1W • Middle current < 2W • High current < 4W
Cooling capacity	$\Delta T = 30^{\circ}C$ (Tmin -15 $^{\circ}C$ / Tmax +48 $^{\circ}C$)
Mode	Global shutter
Exposure time	<u>Standard mode:</u> 10us to 220ms in ITR 100us to 220ms in IWR Maximum in Log mode: 10ms <u>Gated mode:</u> 100ns to 9us
Spectral response	0.9 to 1.7 μ m
Dynamic range	<u>Standard mode:</u> 120dB typical in Log 63dB typical in CTIA (Low Gain) 49dB typical in CTIA (High Gain) <u>Gated mode:</u> Low Gain: 58 dB High Gain: 44 dB
Full well capacity (in CTIA)	<u>Standard mode:</u> >17ke- (High Gain) >380ke- (Low Gain)

	<p><u>Gated mode:</u> > 230 ke- (Low Gain) > 17ke- (High Gain)</p>
Sensor Noise	<p>Readout noise: <u>Standard mode:</u> 50e- (with CDS) in High Gain 270e- in Low Gain 340e-in Log <u>Gated mode:</u> Low Gain < 290e- High Gain < 125e- Dark current: 105k e-/s @ +25C or 6,000 e-/s @-15C</p>
ADC	14 bits
Frame rate	Up to 230fps full frame
Trigger	IN/OUT (LVTTTL), Selectable Trigger delay
Power Consumption	<p><u>Standard mode:</u> < 2,5W (TEC OFF)< 4W (TEC ON) <u>Gated mode:</u> < 4W</p>
Power Range	5V (USB) – 12V (CameraLink & GigE Vision)
Dimension – Weight	46 x 46 x 57 mm – < 215g
Lens Interface	C-Mount native
Shock & Vibration	MIL STD 810-F certified
Temperature Range	0°C to +65°C

Resolution	max FPS (Log or CTIA,	max FPS (Gated mode, 100
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	ITR, 10μs)	ns)
640 x 512	230	233
640 x 256	442	462
320 x 256	635	678
128 x 128	1.53k	1.81k
64 x 64	2.78k	3.82k
32 x 32	4.16k	7.03k
16 x 16	5.35k	11.24k

Related Products & Applications



C-RED 1: Ultra Low Noise Fast SWIR Camera
[\(https://axiomoptics.com/llc/c-red-ultra-low-noise-high-speed-swir-camera/\)](https://axiomoptics.com/llc/c-red-ultra-low-noise-high-speed-swir-camera/)



C-RED 2: Low-noise High-Speed Cooled SWIR InGaAs Camera
[\(https://axiomoptics.com/llc/c-red-2-high-speed-cooled-swir-ingaas-camera/\)](https://axiomoptics.com/llc/c-red-2-high-speed-cooled-swir-ingaas-camera/)

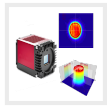


C-RED3: High Speed, Compact, TECless SWIR InGaAs Camera
[\(https://axiomoptics.com/llc/c-red-3-high-speed-tecless-swir-ingaas-camera/\)](https://axiomoptics.com/llc/c-red-3-high-speed-tecless-swir-ingaas-camera/)



WiDy SWIR HDR InGaAs camera
[\(https://axiomoptics.com/llc/widy-swir-ingaas-camera/\)](https://axiomoptics.com/llc/widy-swir-ingaas-camera/)

CinCam InGaAs/Goldeye SWIR



(<https://axiomoptics.com/lbp/cincam-ingaas-laser-beam-profiler/>)



QI-SWIR-HD10: High-definition (HD) miniature SWIR Camera

(<https://axiomoptics.com/llc/qi-hd-swir-camera/>)



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