

IRC900 COMPLETE SERIES

Providing superior resolution, the IRC900 Series scientific cameras are unmatched in sensitivity, ultralow noise and no crosstalk.

The IRC900 Series is based on a closed cycle Stirling cooled sensor engine. Users can quickly and easily vary integration time, frame rate and window size. With a choice of sensor formats and customized Dewar configurations, the IRC900 Series offers customers easy integration and customization for personalized applications.

Providing multiple outputs, users can view imagery directly from the IRC900 Series cameras using HD-SDI, and acquire and display digital data via Camera Link and GigE. Optional IRIG-B timestamp input allows synchronization with other devices, and an optional four position filter wheel provides the ability to select sub-bands for spectrally dependent applications.

Software options include WinIRC and a software developer's kit to allow the user to acquire, display and analyze data from the IRC900 series cameras.



*Optional Warm
Filter Wheel*



CAMERA CAPABILITIES

Choice of LN2 cooled InSb, nBn or SLS sensors

- InSb or nBn with $<1 \mu\text{m}$ to $>5\mu\text{m}$ spectral response
- SLS with 3 - $12\mu\text{m}$ spectral response
- 14-bit digital output

- SuperFraming for extended dynamic range
- Motorized four position filter wheel option
- High frame rates & windowing



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IRC900 Model:	IRC906	IRC906 HS	IRC912	IRC912 nBn	IRC906 SLS	IRC910
Detector Type	Indium Antimonide (InSb)	Indium Antimonide (InSb)	Indium Antimonide (InSb)	nBn	Strained Layer Superlattice	Indium Antimonide (InSb)
Spectral Response	0.9µm to 5.4µm	0.9µm to 5.4µm	0.9µm to 5.4µm	1.0µm to 5.1µm	<3µm - >12µm	0.9µm to 5.4µm
Resolution (pixels)	640 x 512	640 x 512	1280 x 1024	1280 x 1024	640 x 512	1024 x 1024
Pixel Pitch	20µm	12µm	12µm	12µm	20µm	25µm
Imaging Electronics						
Frame rate @ max window size	119 Hz	475 Hz	119 Hz	119 Hz	475 Hz	75 Hz
Integration time	<550 ns to full frame					
Dynamic range	14-bits with 13-bit option to increase frame rate at small window sizes					
Windowing	User defined in 4x1 increments; min width=320, min height=32					
Integration type	Snapshot, automatic selection of integrate while read or integrate then read					
Ultra low latency sync	Sync I/O (<200 ns latency), Integration Out Signals					
Image data	Simultaneous Camera Link & Gig-E, Passive Monitor via HD-SDI					
Communications	Serial over Camera Link & Gig-E					
Non-Uniformity Correction (NUC)	NUC at max frame rate; NUC via software or hardware					
Superframing & States	Cycle between up to 4 integration times per SuperFrame Number of User-defined states limited only by memory; Selective integration times via command					
Software control	Cross Platform GenICam Compliant, WinIRC software, serial command list, and optional Windows SDK					
Performance						
NEdT	< 18mK	< 32mK	< 32mK	< 38mK	< 45mK	< 18mK
Well capacity (electrons)	7M	2M	2M	2M	7M	10M
Operability	99.8%	99.6%	99.6%	99.6%	99.0%	99.0%
Cryocooler	Rotary	Dual Piston Linear	Dual Piston Linear	Rotary	Dual Piston Linear	Dual Piston Linear
Optics						
Camera f/#	f/2, f/2.3 & f/4.0 standard; custom cold shields available on request					
Cold filter	No Cold Filter standard, optional 3.0µm – 5.0µm, CO2, SWIR or custom filters on request					
Lens mount	Bayonet for 7, 13, 25, 50 & 100 mm lenses; bolt hole pattern for non-standard lenses					Bolt Hole Pattern
Optional filter wheel	Motorized four position warm filter wheel; 25.4mm diameter x 1.0mm thick filters					Not Available
General						
Power @ 24 VDC	26 watts	27 watts	27 watts	26 watts	27 watts	27 watts
System weight	8.2 pounds					
Size	4.0"W x 4.8"H x 7.6"L					4.0"Wx4.8"Hx8.8"L
Operating temperature range	-20C to +50C (-4°F to +122°F)					
Storage temperature range	-40C to +70C (-40°F to +158°F)					
Mounting holes	2x 1/4-20, 8x #8-32					