



IRCameras

MID WAVE IRC800 COMPLETE SERIES

Utilizing the most advanced Indium Antimonide (InSb) focal plane array technology available, the LN2 cooled IRC800 Mid Wave Series features unmatched sensitivity, ultra-low noise, no blooming and no crosstalk.

The IRC800 Series cameras offer the ultimate in flexibility for researchers and scientists. Camera operators can vary integration time, frame rate and window size. Cold filters can be changed making the camera ideal for spectrally dependent applications. The IRC800 is the perfect instrument for prototyping system development or where application requirements may change.

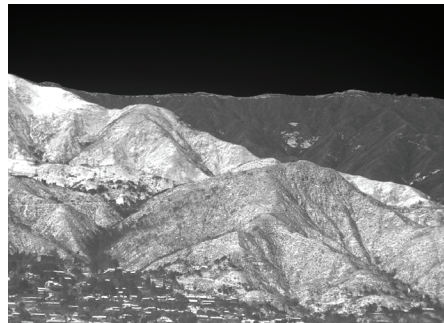
Simultaneous Camera Link, GigE and HDMI outputs are standard. Super-framing allows the cameras to switch among different integration times on a frame by frame basis to capture rapidly changing scenes over a wide dynamic range.

Software options include our WinIRC application and a software developers kit to allow the user to acquire, display and analyze data from the IRC806 high definition camera.



CAMERA CAPABILITIES

- Choice of LN2 cooled InSb sensors
- $<1\ \mu\text{m}$ to $>5\ \mu\text{m}$ 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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Specifications/features subject to change without notice

The products described by this document may require an export license for shipments outside of the United States. IRCameras must be notified at the time of order if the product will be exported so that an appropriate export license may be obtained.

DETECTOR	IRC806	IRC806HS	IRC812
Detector type	Indium Antimonide (InSb)		
Spectral response	< 1.0 μm to 5.3 μm		
Resolution (pixels)	640 x 512	640 x 512	1280 x 1024
Pixel pitch	20 μm	12 μm	12 μm
IMAGING ELECTRONICS			
Frame rate @ max window size	119 Hz	475 Hz	119 Hz
Integration time	<150ns to full frame time		
Dynamic range	14-bit with 13-bit option to increase frame rate at small window sizes		
Windowing	User defined in 4 x 1 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, integration out		
Image data	Simultaneous Camera Link, GigE & HDMI		
Communications	Serial over Camera Link & GigE		
Software control	Cross platform GenICam compliant		
Image data stamp	Optional IRIG, GPS with on-board receiver		
PERFORMANCE			
Cool down time	<15 minutes typical		
NEdT	18 mK	30 mK	30 mK
Well capacity (electrons)	7 M	2 M	2 M
Operability	99.8 %	99.6 %	99.6 %
LN2 hold time	> 8 hours typical, > 4 hours with optional cold filter wheel		
OPTICS			
Camera f/#	f/2.3 & f/4.0 standard; custom cold shields available on request		
Cold filter	3.0 μm - 5.0 μm or no cold filter standard, optional CO2, SWIR or custom filters on request		
Lens mount	Bayonet for 7, 13, 25, 50, 100 & 50/250 mm lenses; bolt hole pattern for non-standard lenses		
Optional filter wheel	Motorized four position cold filter wheel; 25.4 mm diameter x 1.0 mm thick filters		
GENERAL			
Non Uniformity Correction	Up to 12 on board tables		
Power @ 24 VDC	12 watts		
System weight	< 7 pounds		
Size	3.7" x 8.1" x 11.8"		
Operating temperature range	-40° C to +55° C (-40° F to +131° F)		
Storage temperature range	-55° C to +80° C (-67° F to +176° F)		
Environmental rating	IP-51		
Mounting holes	2x 1/4-20 & 4x #10-24		