IRCameras

NIATROS™ OPTICAL GAS IMAGING MWIR CAMERA CORES

Leak Surveys Inc.

IRC's new Niatros™ MWIR optical gas imaging camera cores, manufactured exclusively for sale by Leak Surveys, Inc., are among the most advanced cooled thermal infrared sensor packages produced today. Available in a choice of FPA formats, our Niatros™ camera cores are equipped with patented technology to optically image and detect hydrocarbon gases.

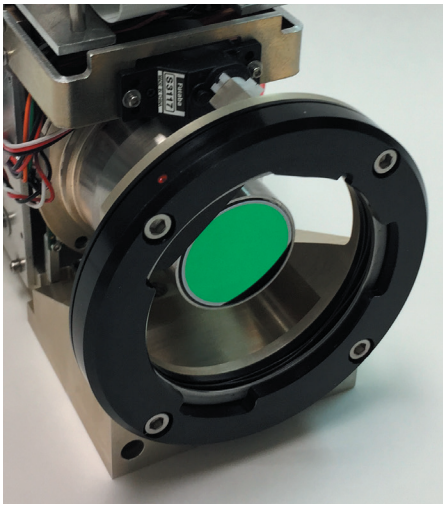
Niatros™ is designed for both fixed and mobile continuous monitoring applications to detect methane and other gas leaks in refineries, pipelines, storage facilities, and other installations. LSI patented technology makes these leaks visible, allowing operators to reduce emissions, increase safety and comply with regulations.

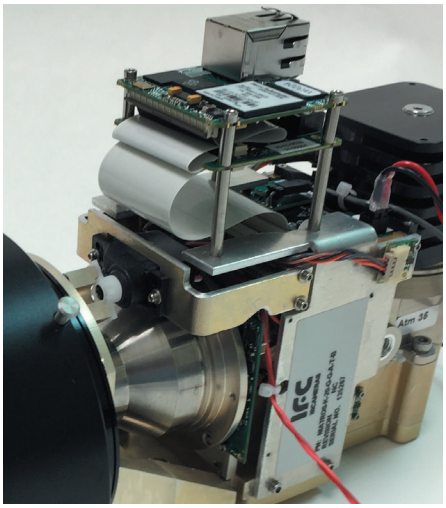
Niatros™ camera cores are available with a choice of digital and analog inputs and outputs including Camera Link, Gigabit Ethernet, H.264, NTSC/PAL video and RS-232/ RS-422. Additionally, Niatros™ InSb gas imaging cores can be configured with a choice of closed cycle Stirling coolers rated for approximately 10,000, 45,000 or 90,000 hours operation

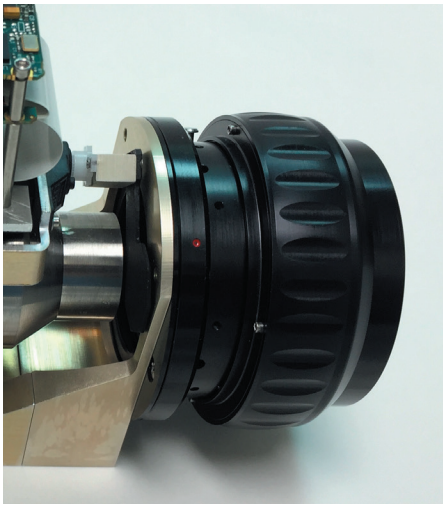
Niatros™ is equipped with advanced image processing features including Local Area Processing-Dynamic Contrast Enhancement (LAP-DnCE) and a noise reduction filter to optimize the detection and imaging of fugitive gas emissions.

KEY PRODUCT FEATURES

- Leak Surveys Inc. patented technology for optical gas imaging
- Choice 320 x 256, 640 x 512 or 1280 x 1024 InSb sensors
- Standard & extended lifetime Stirling cooler options
- 14-bit digital output
- Flexible outputs include Camera Link, Gig-E, H.264 and analog video options
- Image enhancement with LAP and noise reduction filters







IRCameras, LLC • Santa Barbara, CA • 508.668.5650 • sales@ircameras.com

Specifications/features subject to change without notice

DETECTOR	Niatros™ 320	Niatros™ SD	Niatros™ HD
Detector type	Photovoltaic Indium Antimonide		
Spectral response	MWIR		
Resolution (pixels)	320 x 256	640 x 512	1280 x 1024
Pixel pitch	30 µm	20 µm	12 µm
Operability	≥99.5%		
NEdT	<15 mK typical		< 25 mK typical
DEWAR/COOLER			
Cooler type	Rotary or linear Stirling cryocooler		
Detector operating temperature	77 K or 120 K, depending on sensor material		
Cool down time	<6 Minutes @ 23° C - < 8 minutes @ 60° C ambient typical		
Cold shield f#	f/1.5, f/2.0 & f/2.3 standard, others available on request		
Cold filter	LSI patented technology incorporating a narrow bandpass cold filter		
ELECTRONICS			
Display formats	480i or 480p		720p or 1080p
Analog display video	NTSC, PAL (with S Video option)		HD-SDI available
Digital data	CameraLink (standard); Gig-E (optional)		
Video compression	H.264 baseline profile via Ethernet (optional)		
Synchronization modes	Internal/external sync and clock		
Maximum frame rate – full frame	As supported by sensor at up to 80 M pixels/sec on digital stream interface (consult factory for specificonfiation)		
Lens direct technology	Native support for motorized focus and continuous zoom lenses		
IMAGE PRESENTATION			
Processing	Local area processing dynamic contrast enhancement, noise reduction, edge enhancement, AGC/ ALC, electronic zoom, multi-color palettes, symbology, reticle		
GENERAL			
Power	+12 VDC Nominal		
Power consumption	<8 W capable @ 23° C ambient steady state (w/o lens) <12 W capable @ 23° C ambient during cool down (w/o lens)		
Weight	<2 pounds (w/o lens)		
Size	5.5" (l) x 2.85" (h) x 2.5" (w) (Typical w/o lens)		
Operating temperature	-40° C to 65° C		
Storage temperature	-50° C to 70° C		
OPTICS			
Available f/1.5	Consult factory		
Available f/2.3	Fixed focal length 13, 25, 50, 100 mm		
Continuous zoom lenses	Consult factory		
Custom lens options	Consult factory		

U.S. Patents 8,426,813; 8,193,496; Patent Pending

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