

Phase One Space Hardened Camera

iXM-SP150

Designed and built to operate in Low Earth Orbit in Space, iXM-SP150 is a snapshot matrix camera, ready for integration with space telescopes and satellite hardware. iXM-SP150 offers unmatched wide area, high resolution, high sensitivity and low noise imaging capabilities for Earth Observation and Space Domain Awareness applications, with achromatic and color variants.



Key benefits and features



Collect more data in every frame with our 150 MP, snapshot matrix camera

- 14,204 x 10,652 pixels instantaneously collected
- Fine-pitch pixels 3.76 μm
- Signal to Noise Ratio 200:1, read noise 3.5 e-
- Eliminating precision errors associated with line TDI scanners



Proven for use in Low Earth Orbit

- Originally designed for space with system redundancy
- Contains radiation hardened electronic components
- Operating in space since mid-2022



Straight forward integration with satellite hardware

- Sensor and imaging engine in a single space hardened enclosure
- Optional sensor alignment with space telescopes
- Fiber optic 10G ethernet data interface

ixM-SP150

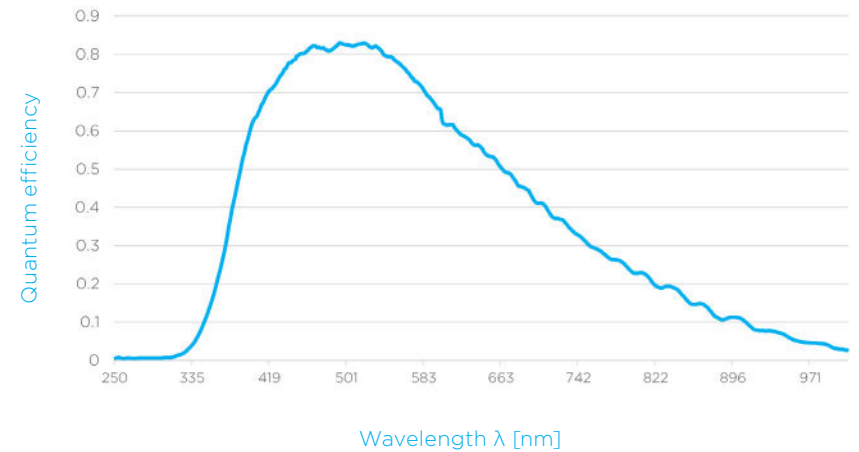
Technical specifications

Imaging specifications		
Resolution (pixels)	14,204 x 10,652	
Pixel size (μm)	3.76	
Pixel depth (bit)	16, 14, 12	
Color variants	Achromatic, Bayer color	
Full well capacity (e ⁻)	50,000	
Read noise (e ⁻)	3.4	
Dark current	1.2 e ⁻ /s @ 40°C	
Region of interest	Definable	
Binning option	2x2 in digital domain (37.7 MP)	
Integration time	250 μs to 1s	
Telescope mount	Customizable	

Environmental specifications		
Operating temperature range (°C)	-10 to +50 (on rear plate)	
Survival temperature range (°C)	-30 to +65 (on rear plate)	

Technology readiness					
	2020	2021	2022	2023	2024
	TRL 5	TRL 6	TRL 7	TRL 8	TRL 9

System specifications		
Compression	Lossless (~1 B/ pixel), Smart (~0.7 B/ pixel)	
Metadata	In image	
Interface	Optical ethernet 10G	
Image buffer size (MB)	1,500	
Image transfer rate to host (MB/s)	500	
Hardware signals	Trigger input, camera ready output	
Camera control interface	Proprietary over camera SDK, provided	
Camera states	Ready, armed, busy	
Power supply	15 V DC	
Max. power consumption (W)	20	
Mass (g)	865	
Dimensions (mm)	100 x 100 x 67	
Thermal interface	Rear plate	



ixM-SP150 Additional benefits and features



Geotagged images



Camera control and Image processing SDK



Ready for remote update



Lightweight and compact



Low power consumption



Redundant operating system

