PHASEONE

iXM-SP150

Phase One Space Hardened Camera

Taking Space imaging to new heights

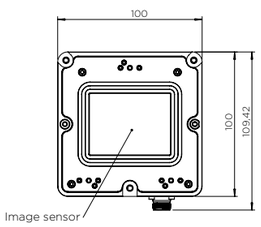
Designed and built to operate in Low Earth Orbit in Space, iXM-SP150 is a snapshot matrix camera, easy to integrate with third party space telescopes and other satellite hardware.

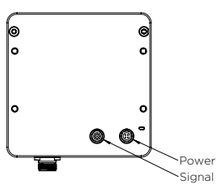
Snapshot matrix cameras are ideal for dynamic satellite tasking purposes such as real-time surveillance, tactical intelligence, disaster response, and fast, accurate AI-driven image processing.

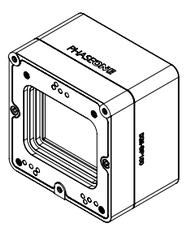
Using a combination of Commercial Off-The-Shelf (COTS) and radiation-hardened components, the iXM SP150 integrates an embedded Fault Detection, Isolation, and Recovery (FDIR) system to manage potential radiation induced errors in real-time. This design makes it ideal for New Space projects that demand high performance, quality, and robustness.

iXM-SP150 offers unmatched wide area, high resolution, high sensitivity and low noise imaging capabilities and at the same time excels in simplicity and cost-efficiency.

iXM-SP150 can be delivered with achromatic and color sensor options and as Engineering or Flight model.







Key benefits and features

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

- 14,204 x 10,652 pixels simultaneously exposed and acquired
- Fast acquisition rate for motion detection
- Fine pixel pitch of 3.76 µm with BSI technology

Proven for use in Low Earth Orbit

- Designed for 5-year Earth Observation missions
- Radiation hardened with built-in redundancy
- Space heritage since mid-2022

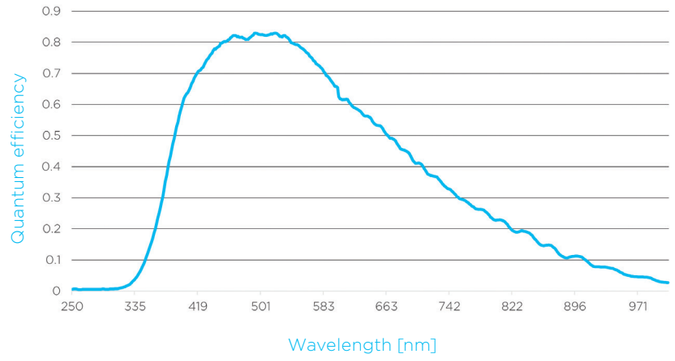
Straightforward integration with satellite hardware

- Radiation protected sensor and control electronics
- Built into a robust camera housing
- Ready for software integration

Imaging specifications	Sensor model	Sony IMX411
	Sensor type	Back-Illuminated CMOS
	Color variants	Achromatic, Bayer color
	Resolution (pixels)	14,204 x 10,652
	Pixel size (µm)	3.76
	Sensor size (mm)	53.4 x 40
	Pixel depth (bit)	16, 14, 12
	Full well capacity (e-)	50,000
	Dark current	1.2 e-/s @ 40°C
	Read noise (e-)	3.4
	Full sensor integration time	14-bit: 225 ms 12-bit: 170 ms
	Min. exposure time (ms)	0.25
	Dynamic range (dB)	83
	Capture rate (fps)	Up to 4*
Environmental specifications	Operating temperature range (°C)	-10 to +40 (camera body)
	Survival temperature range (°C)	-30 to +70 (camera body)

Technology readiness	2022	2023	2025
	TRL 7	TRL 8	TRL 9

System specifications	Metadata	Embedded in image file
	Interface (data & control)	10GigE over fiber
	Image buffer size (MB)	3,000
	Hardware signals	Trigger input, camera status output
	Software interface	Phase One SDK over Linux
	Power supply	15 V DC
	Max. power consumption (W)	17
	Mass (g)	865
	Dimensions (mm)	100 x 100 x 67
	Thermal interface	Cold plate
Radiation hardening	iXM-SP150 uses a mixture of COTS and radiation hardened components. An embedded Fault Detection Isolation and Recovery (FDIR) system manages in real-time potential critical errors caused by radiation.	



*Dependent on image size and compression used.

About Phase One

Phase One is the global leader in digital imaging technology. Our commitment to imaging quality spans for a wide spectrum of applications, from professional photography to heritage digitization, industrial inspections, aerial mapping, security and space.

With over three decades of innovation, Phase One has pioneered core imaging technologies and a range of digital cameras and imaging modules, setting new standards for image quality in terms of resolution, dynamic range, color fidelity and geometric accuracy. Together with its customers, technology partners and its global network of distributors, Phase One drives the imaging industry forward.

We deliver Imaging Beyond Imagination.
www.phaseone.com

Contact your Phase One representative regarding availability of Phase One products in your region.