



Radiation hard CMOS sensor for satellite instrument

SI Sensors (Cambridge, UK) are developing a custom silicon image sensor for an Asian government agency meteorological satellite instrument, which is planned to enter geostationary orbit.



Image caption: Meteorological satellite employing new radiation hard CMOS image

The satellite

will house multiple radiation hard imaging payloads, enabling high precision space environment monitoring and early weather warning services from an altitude of 36,000km above the Earth's surface.

Philip Brown, General Manager of SI Sensors

said "We were delighted to be selected to deliver the high-performance image sensor that will lie at the heart of the planned groundbreaking satellite payload. With detection optimised for near infrared wavelengths, our 4-megapixel CMOS image sensor is being designed to operate at a high frame rate (>300FPS) over a wide dynamic range. Our ultra-low power consumption custom image sensor includes anti-blooming and global shutter operation with correlated double sampling to deliver low read noise. Its radiation hard design and planned qualification will enable a planned satellite operational lifetime of 7 years".



Mr Brown concluded

“In addition to the silicon image sensor design, we have developed a package concept which houses the image sensor chip and meets the satellite’s challenging electrical, optical, mechanical and thermal interface requirements whilst withstanding the stringent environmental testing required for space qualification and flight. This package design includes >330 electrical connections (PGA) and a hermetically sealed Sapphire window with coatings optimised to minimise reflections for the spectral range of interest”. For further information on custom CMOS image sensor design and production please visit www.si-sensors.com or contact SI Sensors on +44-1442-827728 or info@si-sensors.com.

SI Sensors Ltd.

is a division of Specialised Imaging Ltd. focused on the development of advanced CMOS image sensors. Specialised Imaging Ltd is a dynamic company focused on niche imaging markets and applications, with particular emphasis on high-speed image capture and analysis. Drawing upon over 20 years’ experience, Specialised Imaging Ltd today are market leaders in the design and manufacture of ultra-fast framing cameras and ultra high-speed video cameras

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