



FOR IMMEDIATE RELEASE

SINGAPORE'S FIRST LOCALLY DEVELOPED SYNTHETIC APERTURE RADAR (SAR) MICROSATELLITE IS READY TO PROVIDE ALL-WEATHER IMAGING

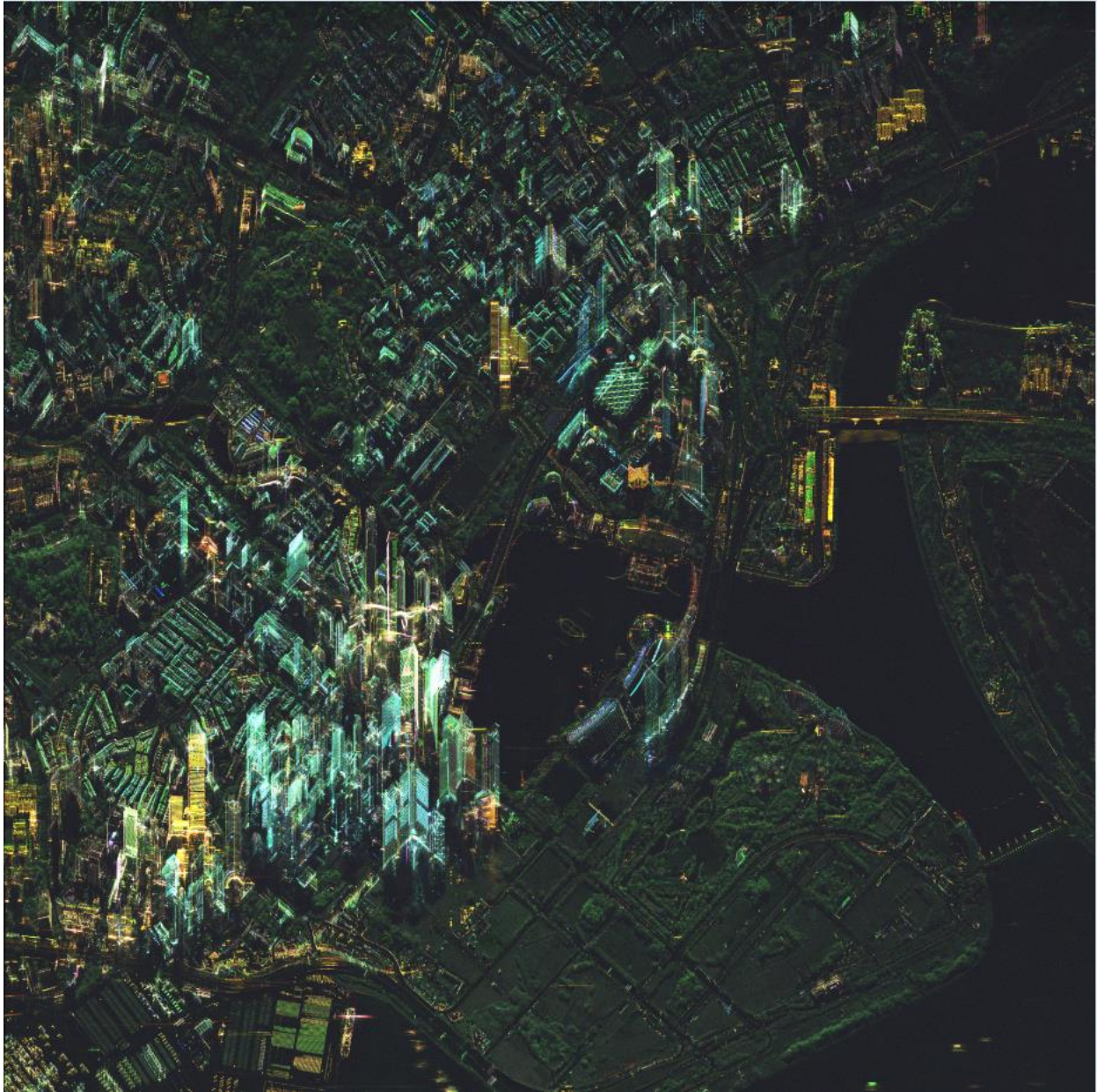
Singapore, 16 September 2022 – Singapore's first high-performance microsatellite (160 kg) with a fully polarimetric Synthetic Aperture Radar (SAR) is now ready to provide all-weather imaging capability. NeuSAR was launched into space on 30 June 2022, and the first image was received eight days later.

Designed and developed by DSO National Laboratories (DSO) along with local space research partners and international industry partners, NeuSAR is supported by Singapore's national space office, the Office for Space Technology & Industry (OSTIn). It is Singapore's first commercial SAR satellite and serves as a pathfinder to explore the commercial potential of a small satellite constellation. ST Engineering Geo-Insights is DSO and OSTIn's industry partner to commercialise NeuSAR's imaging data.

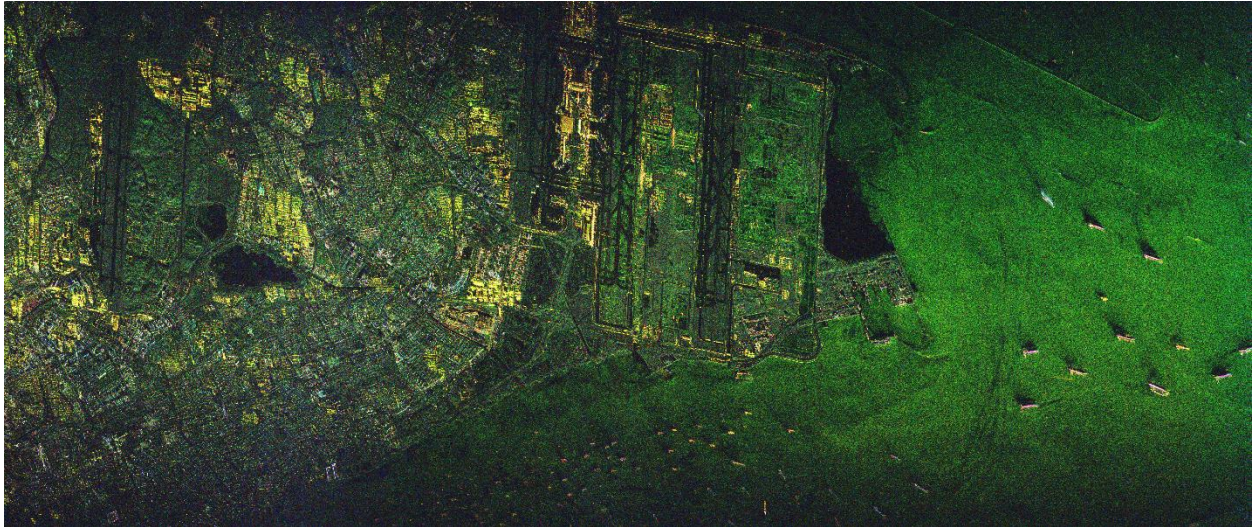
Unlike electro-optical satellites that are generally restricted to day imaging due to the availability of light, a SAR satellite transmits electromagnetic waves to the Earth's surface for 'illumination', and is capable of producing images in both day and night. NeuSAR is also able to image in difficult environmental conditions such as heavy cloud cover, rainfall and even haze. Two imaging modes are possible – the Strip imaging mode used to cover large areas, and Spot imaging mode for high resolution imagery.

NeuSAR is the world's first fully polarimetric small satellite SAR and is able to collect full polarimetric images to provide enhanced details in the imaged scene, including the shape of objects within. With polarimetric images, it is possible to differentiate between man-

made objects and natural backgrounds, as well as between different terrains and vegetation types.

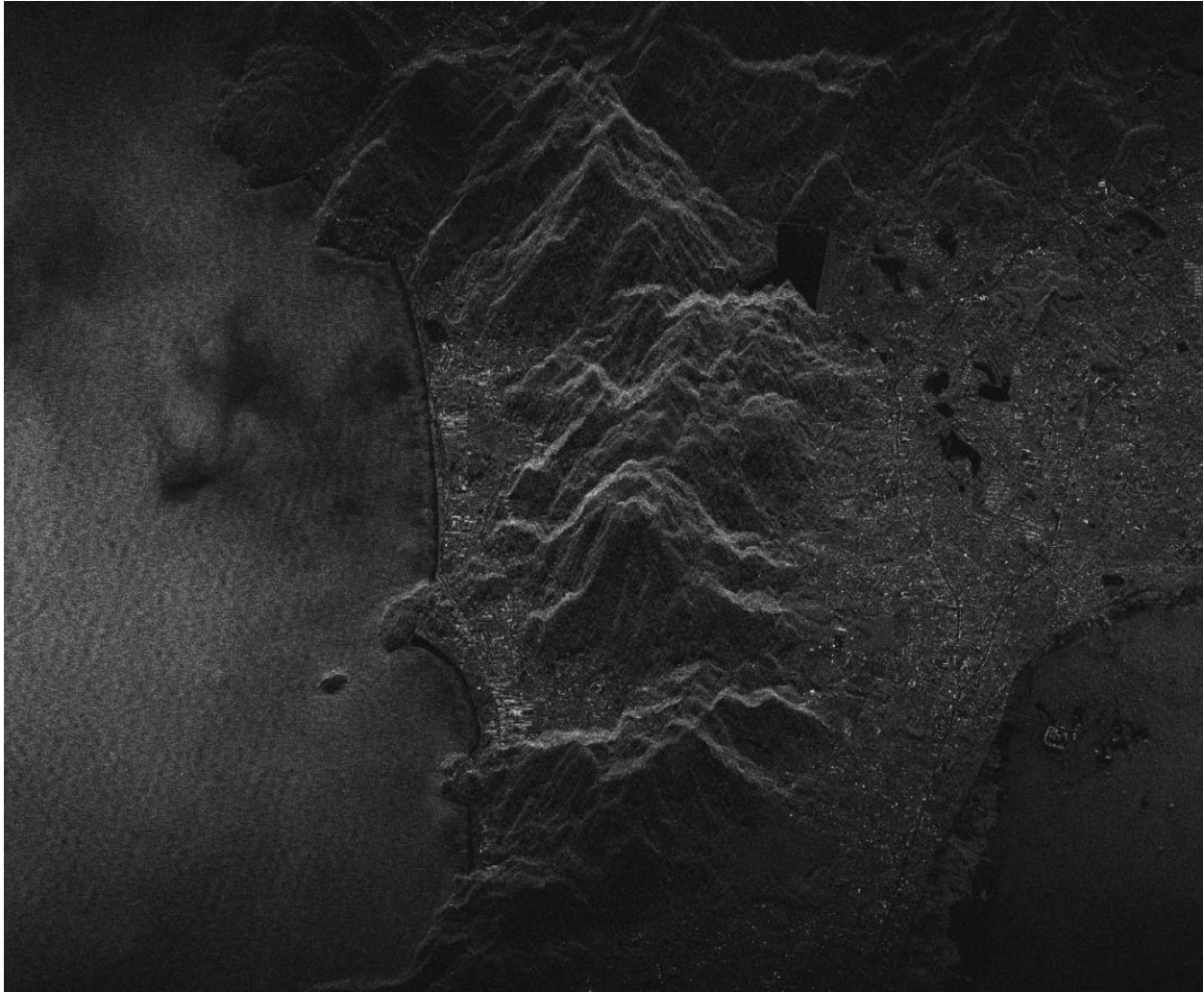


Singapore Downtown, 8 Aug 2022 - Full polarimetric Spot image offering enhanced visual details. (Resolution: 1.5m x 0.5m)



Eastern Singapore, 25 July 2022 - Full polarimetric Strip image demonstrating high quality imaging for both land and maritime applications over a wide area. (Resolution: 3m x 3m)

All the photos shown were captured at night. This demonstrates NeuSAR's all-weather, day-and-night imaging capabilities.



Phuket, Thailand, 16 July 2022 - Single polarimetric image obtained during day-and-night, all-weather with 'see through cloud' conditions. (Resolution: 3m x 3m)

Multiple SAR images can be collected and processed to provide key properties such as the height of a mountain.

“The launch and operationalisation of NeuSAR is an important milestone in the development of Singapore’s indigenous space capabilities. It showcases the ability of Singapore’s space players to offer high-performance solutions that address civil and commercial needs. This further reflects the increasing maturity of Singapore’s space industry, which has grown steadily over the years and now employs over 1,800



professionals across all segments of the value chain” said Mr David Tan, Executive Director of OSTIn.

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About the Office for Space Technology & Industry, Singapore (OSTIn)

OSTIn is Singapore’s national space office. Hosted within the Singapore Economic Development Board (EDB) as an autonomous office, it is responsible for nurturing the development of space technologies to serve national imperatives, growing a globally competitive space industry in Singapore and fostering an enabling regulatory environment for Singapore’s space activities. To support these objectives, OSTIn also seeks to build international partnerships and contribute to strengthening the international governance regime for space activities. In addition, OSTIn also supports the development of talent for Singapore’s space sector and future workforce.

About DSO National Laboratories

DSO National Laboratories (DSO) is Singapore’s national defence research and development organisation. With more than 1,600 research scientists and engineers, DSO investigates emerging technologies, matures promising ones and integrates them into innovative system concepts to meet Singapore’s defence and security needs. For more information, please visit www.dso.org.sg.

High-resolution versions of the above images can be downloaded [here](#).

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