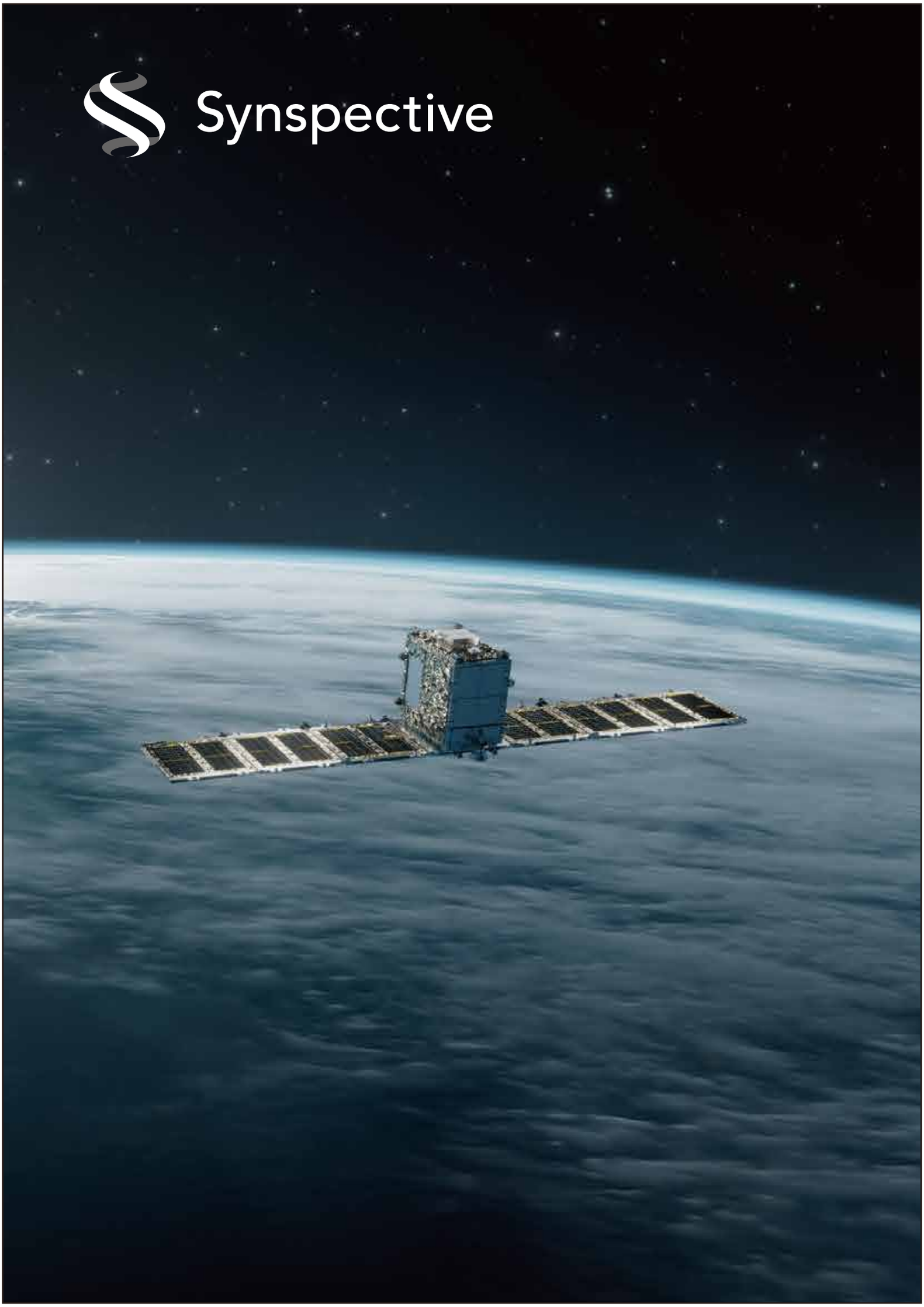
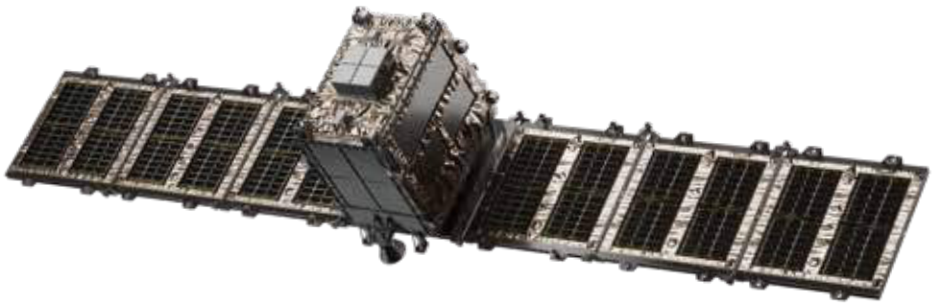
Synspective



StriX SAR Satellite



Mass	100kg class
Size (m)	0.8×1.0×0.8
	Before antenna deployment
	5.0×1.0×0.8
	After antenna deployment
Mission Life	Approx. 5 years
Center Frequency	9.65 GHz (X-band)
Polarization	VV
Off-Nadir Angle	15 – 45 degrees
Orbit Type	Sun-synchronous orbit, inclined orbit
Orbit Height	500 - 561 km
Orbit Angle	43 - 97.7 degree
Revisit period	1 - 7 days

StriX is a small SAR (Synthetic Aperture Radar) satellite that applies the results of the ImPACT program, a government-supported Innovative R&D Promotion Program.

High Quality Image

Topographic and structural data can be acquired at any time, regardless of weather conditions and time. SAR provide clear images and enable monitoring of millimeter-scale changes in the earth's surface.

Wide Coverage

Capable of imaging an area of more than 1000km at a time with a resolution of less than 3m. Various observation modes with less than 25cm resolution to meet diverse customer needs.

High Revisit Rate

We aim to build a constellation of 30 small SAR satellites by the late 2020s. Combining inclined and sun-synchronous orbits will enable near-real-time image acquisition any time, anywhere.

Successful launch and operation of six small SAR satellites

Starting with StriX-α in December 2020, six satellites have been launched and operated. As of January 2025, StriX-α and StriX-β have completed their roles, and four satellites are currently in operation.

2020.12

2022.3

2022.9

2024.3

2024.8

2024.12

Full scale operations at Yamato Technology Center

The Yamato Technology Center in Kanagawa Prefecture aims to produce 12 small SAR satellites annually. With the start of full-scale operations in September 2024, a robust production system is in place to realize our goal of building a constellation of 30 small SAR satellites by the late 2020s.

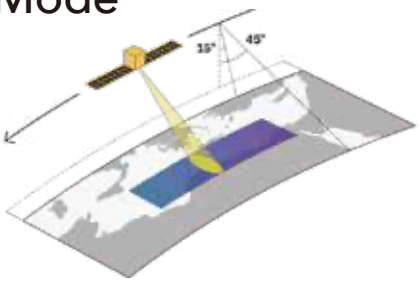
SAR Satellite Data

We identify and assess risks related to natural disasters, environmental destruction, and security by utilizing SAR satellites, which enable high-frequency and high-resolution earth observation.

Observation Modes

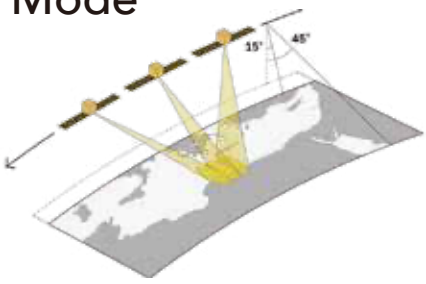
StriX has three observation modes, each of which can be used differently depending on the application. There are imaging modes that cover a wide area and allow more detailed observations.

Stripmap Mode



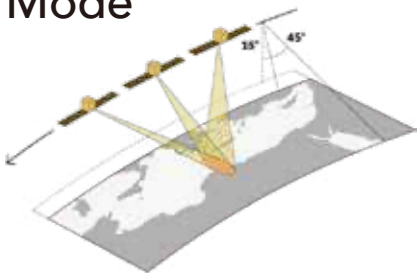
Nominal swath width: 0-30km (Nominal 20)
Nominal product length: 50-70km
Resolution [m] Ground 3.6 × Azimuth 2.6

Sliding Spotlight Mode



Nominal swath width: 10km
Nominal product length: 10km
Resolution [m] Ground 0.9 × Azimuth 0.9

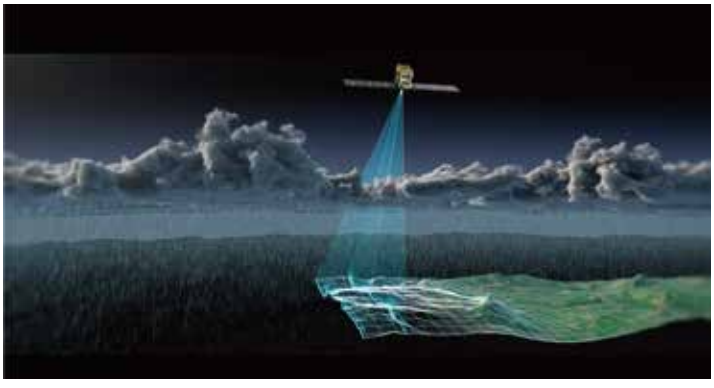
Staring Spotlight Mode



Nominal swath width: 10km
Nominal product length: 3km
Resolution [m] Ground 0.9 × Azimuth 0.25

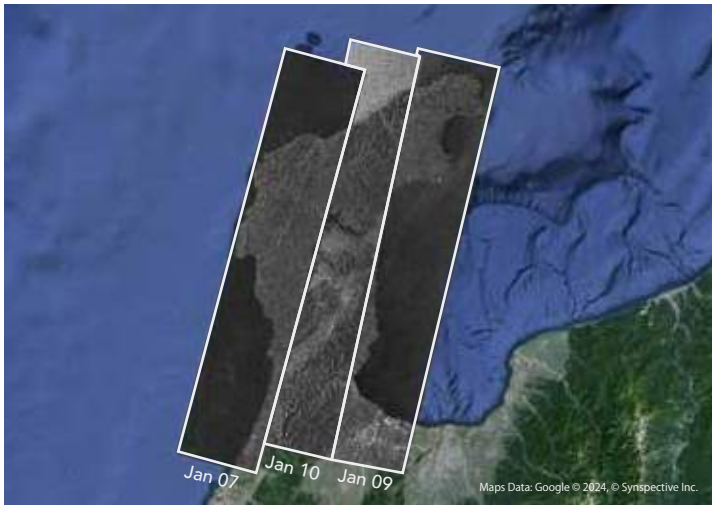
Observe day and night in any weather conditions

SAR satellites use radio waves to observe the Earth's surface. Microwaves have long wavelengths and can penetrate clouds, making it possible to observe the Earth's surface below the clouds. It can capture images regardless of the time of day or weather conditions. For disaster management, Strix is used to observe earthquakes, floods, and landslides and provide images to governments and the private sectors.



Observation of the Noto Peninsula Earthquake of 2024

After the Noto Peninsula earthquake at the beginning of 2024, we deployed StriX to capture images of the region over several days. Within three days, we successfully imaged the entire Noto Peninsula. In areas where archived images were available, we analyzed changes in the ground surface that were extracted before and after the disaster. We provided our SAR data at no cost for disaster response, reporting, and research.
Our strength is capturing images of a wide area in one shot with high resolution.



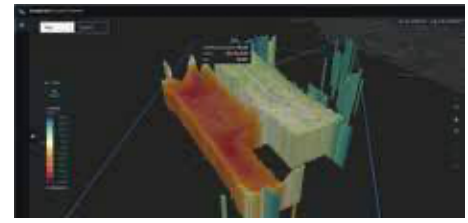
Our Solutions

Synspective provides cloud-based satellite data solutions by analyzing acquired data using data science and machine learning. Depending on the client's challenges, we analyze our own SAR satellite data and a combination of third-party satellite and map data.

LDM

Land Displacement Monitoring

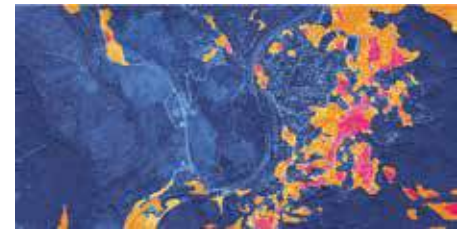
Ground risk measured in millimeters.
Assessing safety and security from landslides and subsidence is essential for roads, tunnels, and bridges. LDM solutions use InSAR analysis technology with continuous satellite monitoring to detect ground deformation in mm over broad areas.



DDA

Disaster Damage Assesment

Capture and analyze damaged locations.
Assessing the extent of damage and changes caused by natural disasters such as earthquakes and floods is necessary. Ground surface observations by SAR satellites, which are not subject to weather conditions or time constraints, can remotely and extensively assess the damages.



FDA

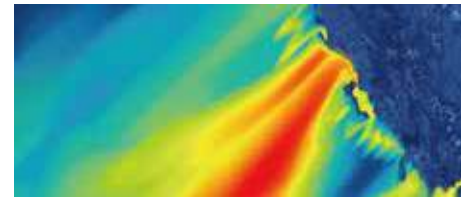
Flood Damage Assessment

Quick assessment of flood damage.
The FDA's all-weather surface observations from SAR satellites allow us to quickly assess flood damage over a wide area, regardless of weather conditions or time of day.

OWW

Offshore Wind and Wave

Optimize offshore wind power generation.
SAR satellites can observe and analyze measured wave heights and wind power over a vast ocean area. Satellite information can assist in the design and operation of offshore wind turbines.



FIM

Forestry Inventory Management

Forest maintenance and monitoring.
FIM combines various satellite observation technologies to provide data to estimate biomass, detect deforestation, and calculate CO2 sequestration.

30+ partners in 25 countries and regions

Starting with contracts with the Japanese government, we have expanded our business globally. We will continue accelerating the expansion by collaborating with partners in over 25 countries and regions worldwide.

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3-10-3 Miyoshi Koto-ku Tokyo, JAPAN

Yamato Technology Center (SAR Satellite Mass-Production Site)
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