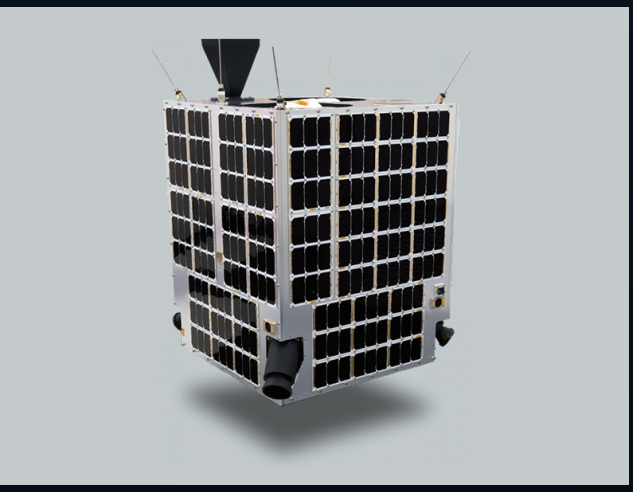
GRUS-1

The Next Generation of Earth-Observation Satellites



Client	: Axelspace Corporation
Dimentions	: 600 x 600 x 800 mm (Excluding Protrusions)
Mass	: 100Kg
Orbit	: Sun-Synchronous 600Km Altitude

GRUS-1A

Launch Date	: December 27, 2018 11:07:18 AM (Japan Standard Time)
Launch Vehicle	: Soyuz-2
Current State	: Operational

GRUS-1B, 1C, 1D, 1E

Launch Date	: March 22, 2021 15:07 (Japan Standard Time)
Launch Vehicle	: Soyuz-2
Current State	: Operational

GRUS is a next-generation remote-sensing microsatellite, the building block of Axelspace's Earth observation constellation. Even with its mass of around 100kg, it will enable us to obtain images with 2.5m ground resolution. The first satellite was launched in 2018 followed by many more in the oncoming years, making high-frequency Earth monitoring a reality.
GRUS-1D is the code name of Fukui Prefectural Satellite "SUISEN".
GRUS-1ABCDE: Normal Operation in orbit

At that time, satellite imagery of the Earth had always involved high costs and very limited freedom in capture timing. The main reason for this problem was the use of large, expensive remote-sensing satellites. The huge manufacturing costs of the spacecraft affected that of the imagery and made it impossible to build and launch high numbers of units. With so few satellites, the users who requested the imagery were forced to wait in line, and the revisit times of the desired locations were inevitably long. Furthermore, image request opportunities were mostly taken up by highly-specialized "heavy users" who left little room for requests by broader, more generic markets.

GRUS is our response to this situation. We will leverage the low costs of microsatellite technology to build a vast network capable of high-frequency observation of most of the Earth's dry land. Users will use our AxelGlobe platform to access always-up-to-date, affordable and complete imagery data.

GRUS will produce images in the panchromatic (grayscale) spectrum with 2.5 m of ground resolution, i.e. the minimum discernible distance between two separate objects. Additionally, it will take multispectral (color) photographs in the blue, green, red, "red edge" (useful for vegetation analysis) and near-infrared bands. Despite being a microsatellite, GRUS will use the latest in optical and sensor technology to deliver images spanning more than 50 km in width, allowing for highly efficient coverage of the planet.

The large constellation of GRUS satellites will update the imagery of the Earth every day, enabling new and more meaningful uses in industries like agriculture, forestry, fishing, mapping, GIS and disaster monitoring. High-frequency data will allow not only for the traditional "assessment of the present", but also for the observation of trends and the prediction of future phenomena. The first GRUS satellite reached orbit in 2018. After that, we will keep on launching more of them at a high pace.

Corporate Outline

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