

Regional manufacturing SMEs supporting small SAR satellite technology

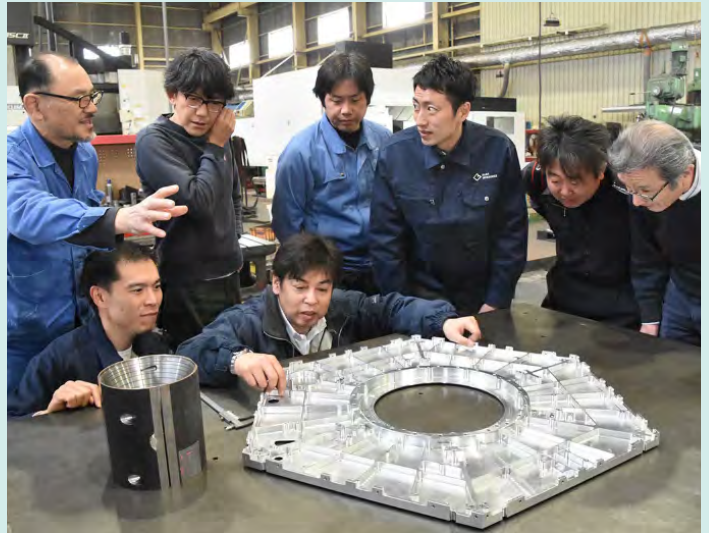
NPO Enjin Space Engineering Team (e-SET)

Case Overview

Manufacturing SMEs based in the Kurume region of Fukuoka Prefecture have entered the space business as a team, leveraging their respective strengths. They have collaborated from the conceptual stage in the production of QPS-SAR, a small SAR satellite developed by iQPS Inc. with world-class performance. As of the end of December 2025, 14 QPS-SAR satellites have been launched, and participating companies are working to establish mass production systems for components in preparation for future satellite constellation deployment. They are also actively engaged in developing the next generation of space talent, making a significant contribution to promoting the space business in the region.

Key points regarding receiving the award (Comments from the selection committee)

Manufacturing SMEs have entered the space industry by leveraging their respective strengths, supporting the development of small SAR satellites by iQPS Inc. and enabling the company to achieve global success. This initiative represents a strong role model for SME participation in Japan and is highly commendable for its contribution to the advancement of the regional space industry.



Development scene (Courtesy of iQPS Inc.)

Concrete Results

1. Contribution to creating new areas for space development and utilization

e-SET's entry into the space business is a highly distinctive case in which collaboration with Kyushu University enabled the accumulation of technology and expertise, the establishment of partnerships with regional startups, and ultimately participation in the manufacturing of small SAR satellites with world-class performance. The member companies brought their respective strengths to bear on the specifications required by iQPS Inc., iterating through extensive trial and error to identify feasible solutions, and provided strong support for the development of QPS-SAR in less than one year. Furthermore, rather than entering individually, SMEs formed a cross-industry team to achieve entry into the space sector. Their efforts began as early as 2007, ahead of the recent expansion of the space business environment, reflecting a forward-looking commitment. Sharing the vision of "establishing a space industry in Kyushu" with Professor Emeritus YASAKA of Kyushu University, founder of iQPS Inc., and his successor President Onishi, they have extended their activities beyond satellite manufacturing to include the development of next-generation talent, aiming to broaden the base of the space industry.

2. Contribution to expanding the space development and utilization market

Currently, most of the space-related products manufactured by e-SET member companies are supplied to iQPS Inc., and the expansion of QPS-SAR directly drives their business growth. A total of 14 QPS-SAR satellites had been launched by the end of December 2025, and in March 2025, iQPS Inc.'s new R&D facility, "Q-SIP," commenced full-scale operations. Ultimately, plans are in place to increase production from four to ten satellites per year, which is expected to further expand e-SET's revenues. Also, e-SET is advancing discussions on the importance of promoting to space-related companies its role in the QPS-SAR supply chain and its accumulated expertise in satellite component manufacturing. To this end, it is actively engaging in outreach activities, including participation in technology proposal events organized by Fukuoka Prefecture, aimed at acquiring new clients.

3. Contribution to the advancement of the economy and society

QPS-SAR, which e-SET is involved in manufacturing, offers world-class performance, and its data is expected to support a wide range of services.

Ultimately, the goal is a 36-satellite constellation enabling near-real-time observation of almost any location on Earth within an average of 10 minutes. In the future, this is expected to drive new services in areas such as disaster prevention and infrastructure management, contributing significantly to public safety and security. e-SET also actively promotes awareness and new entry into the space business by sharing its experience and challenges at outreach events, contributing to the expansion of regional space industry players.

4. Contribution to technology

e-SET member companies are advancing their respective technologies. For example, Murai Kohki Co., Ltd. improved productivity by standardizing machining center systems across multiple factories to achieve significantly shorter lead times and respond rapidly to frequent design revisions in support of QPS-SAR mass production, achieving a 22% reduction in lead time. In addition, Ogawa Kiko Co., Ltd. conducted R&D to replace aluminum alloys commonly used in satellite structures with CFRP, achieving a lighter, high-rigidity, and cost-effective solution while maintaining structural rigidity. Furthermore, from 2024, e-SET members and external engineers have initiated a project to design and launch their own small satellite, evolving from a component supplier into an organization capable of providing technical guidance to emerging space startups.

5. Contribution to promoting public understanding and human resource development

QPS-SAR is sometimes referred to as a "Shitamachi Satellite," inspired by the TV drama "Shitamachi Rocket." e-SET aims to demonstrate that even a small local factory can contribute to world-class satellite development, inspiring younger generations. In collaboration with iQPS Inc. and others, it actively supports the development of next-generation space talent in Kyushu. Key initiatives to date are as follows:

- Hosting workshops for primary school students, explaining satellites in an easy-to-understand way and building smartphone stands using satellite components to convey the appeal of manufacturing.
- Holding special lectures for high school students, sharing firsthand experience in satellite design and fabrication to emphasize the importance of perseverance and taking on challenges.

