

## Pre-MIC4 Application (Resource Provider)

### Provider Information

**Name (point of contact):** Dennis Elgaard

**Organization/Company:** GomSpace Aps

**Address:** Alfred Nobelsvej 21C, 9220 Aalborg East, Denmark

**Email:** [del@gomspace.com](mailto:del@gomspace.com)

**Website (URL):** [www.gomspace.com](http://www.gomspace.com)

**Local representation in Japan by:**

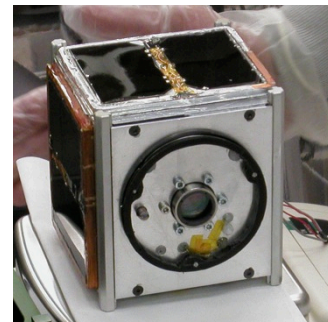
**Name (point of contact):** Akira Yamamoto

**Organization/Company:** NASAM, Inc.

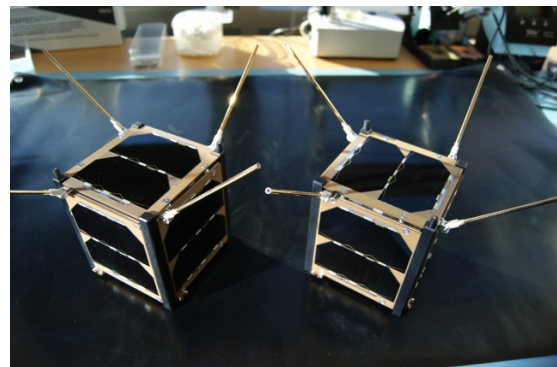
**Email:** [ayamamoto@nasam.com](mailto:ayamamoto@nasam.com)

### Resources that you can provide

At GomSpace we have been working with Nano-satellites and CubeSats since 2001; first as students at the university of Aalborg in Denmark and from 2007 as the commercial company we are today. GomSpace's mission is to maintain a leading position as a driving force in the emerging market for Nano-satellites and demonstrate new applications of NanoSats. Our products and services help teams across the globe to realize their goals in space.



- **GomSpace can provide cost-effective reliable subsystems and platform solutions to the emerging Nano-satellite and CubeSat markets.**
- **We do research in new technologies and mission concepts suitable for Nano-satellites.**
- **We implement pre-operational demonstration missions of new Nano-satellite based services that can be spun out as individual service businesses.**



At GomSpace we provide an extensive portfolio of commercially available off the shelf subsystems and software components for Nano-satellites. Our product offerings include: power

systems, batteries, solar panels, on-board computers, communication systems, attitude determination and control systems, optical payloads, radio payloads, command and data-handling software and attitude control software.

Besides the various parts and subsystems for a NanoSat, GomSpace can provide technical support for the mission and in particular for the complete design of the NanoSat. To enable faster development of Nano-satellites we also provide a number of pre-defined payloads, that all have a proven flight heritage. Examples of such payload are:

- 1U 3Mpixel Camera colour sensor with 10bit resolution
- SDR Based AIS receiver for Maritime Domain Monitoring (requires VHF antenna)
- ADS-B receiver with deployable helical antenna for Air Traffic Monitoring

When developing a NanoSat, especially for the first time, there is a pretty steep learning curve for all the subsystems and the architecture in general. GomSpace has therefore developed a NanoSat training kit and even a FlatSat kit. The Training kit is a complete 2U reference satellite with a scaled down Ground station enabling full training and hands on experience with understanding and controlling the satellite. This package comes with all the necessary software packages in binary to activate and control the satellite.

The Flatsat kit is focused on understanding the inner workings of the satellite. Here the user can focus on a particular subsystem, i.e. Power Management, and have a custom setup defined on the basis of the general FlatSat board. The FlatSat board allows the user easy access to all the boards and external interfaces to everything from the debugging to the CubeSat Stack Interface.

For both the Training Kit and the FlatSat Kit GomSpace is offering custom defined workshops with hands on training and exercises. These workshops can be executed at the GomSpace premises or on-site at the customer facilities.