

Enhancing Community Engagement through Improved Documentation: BIRDS Open- Source Updates and Research Insights

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BIRDS Open-Source Webinar

11th June 2025



Background



CubeSats are transforming space research/education with:

- Low-cost, modular designs.
- Standardized bus architectures.

BIRDS Bus Is An Open Source Bus System for Academic Satellites

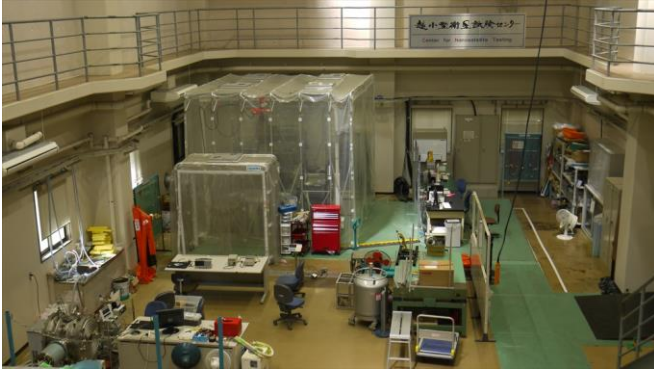
Background



BIRDS Vision: empower emerging spacefaring nations to jumpstart their space sectors by adopting and adapting the BIRDS bus system

BIRDS Bus Is An Open Source Bus System for Academic Satellites

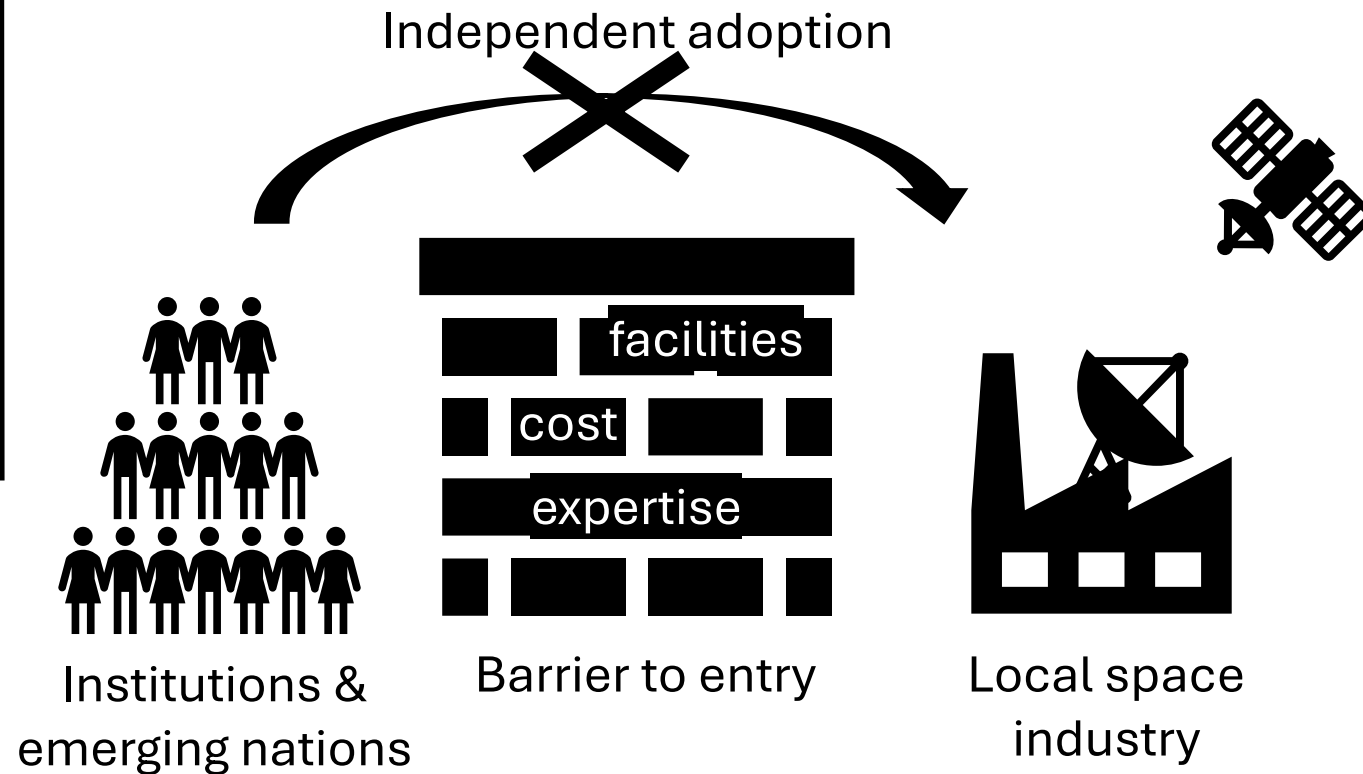
Background



Users prefer to collaborate with Kyutech to leverage its facilities and the expertise of its trained staff due to limited experience with CubeSat development.

BIRDS Bus Is An Open Source Bus System for Academic Satellites

Background



A key barrier to independent adoption of the full BIRDS package (hardware and software) has been identified as the lack of clear, comprehensive, and accessible technical documentation.

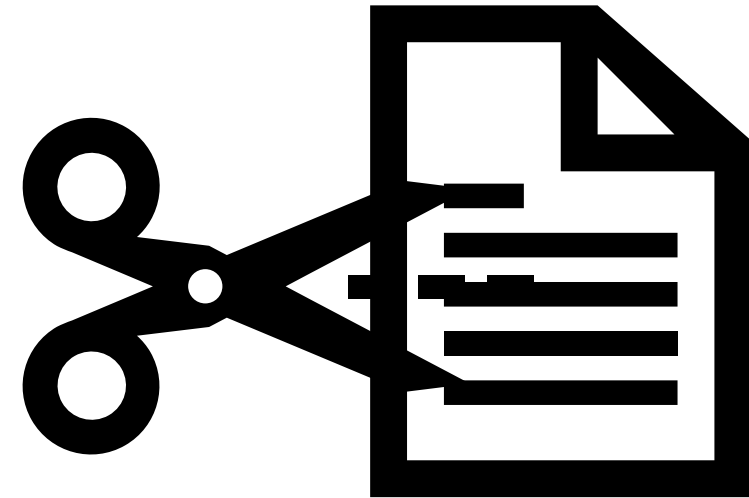
BIRDS Bus Is An Open Source Bus System for Academic Satellites

Challenges



Fragmented, text-heavy documentation.

On GitHub, more than 35 repositories are used to store resources and information.



Better docs

**Faster
onboarding**

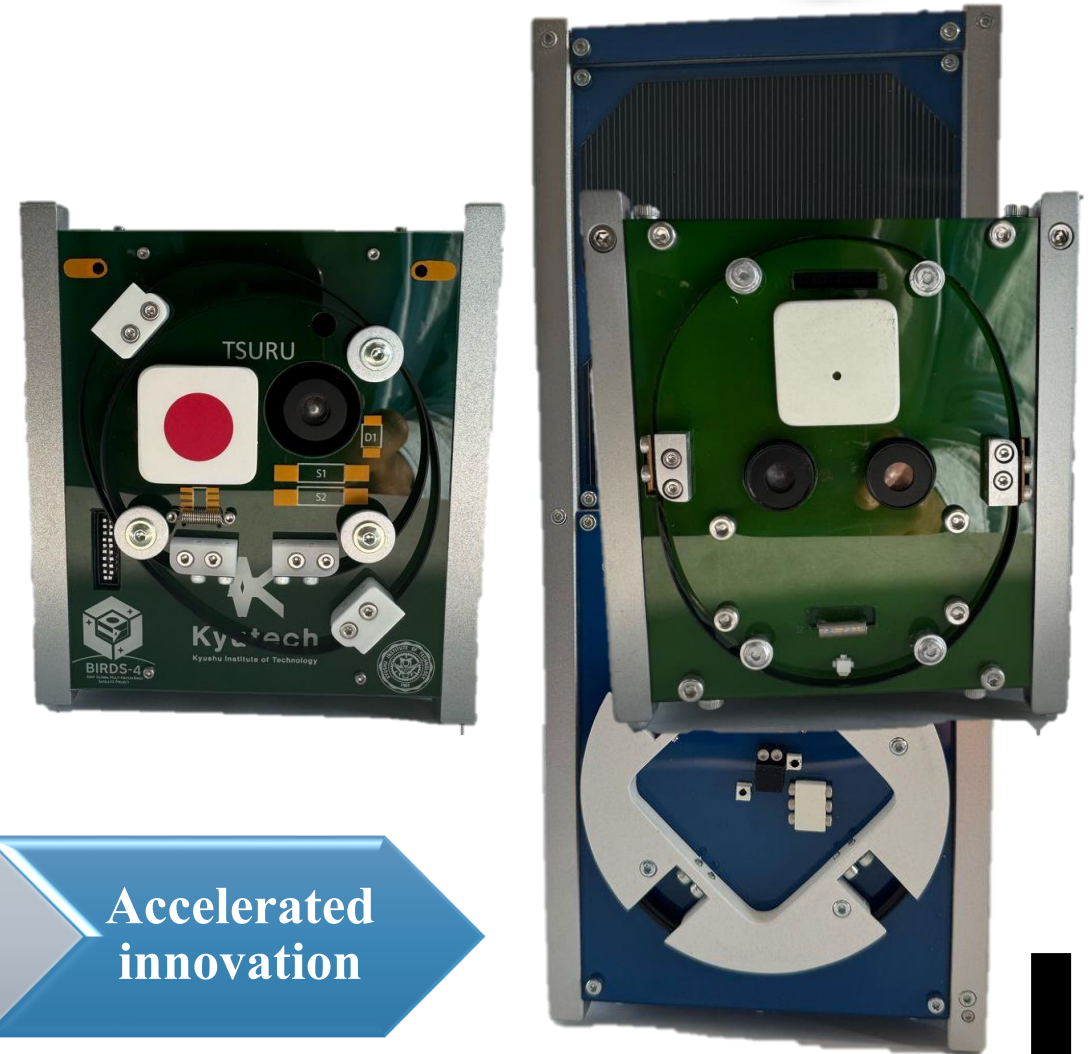
More reuse

**Accelerated
innovation**

Challenges

No change tracker between models

Changes are not always clearly documented, and there is often no official changelog to track differences between satellite models.



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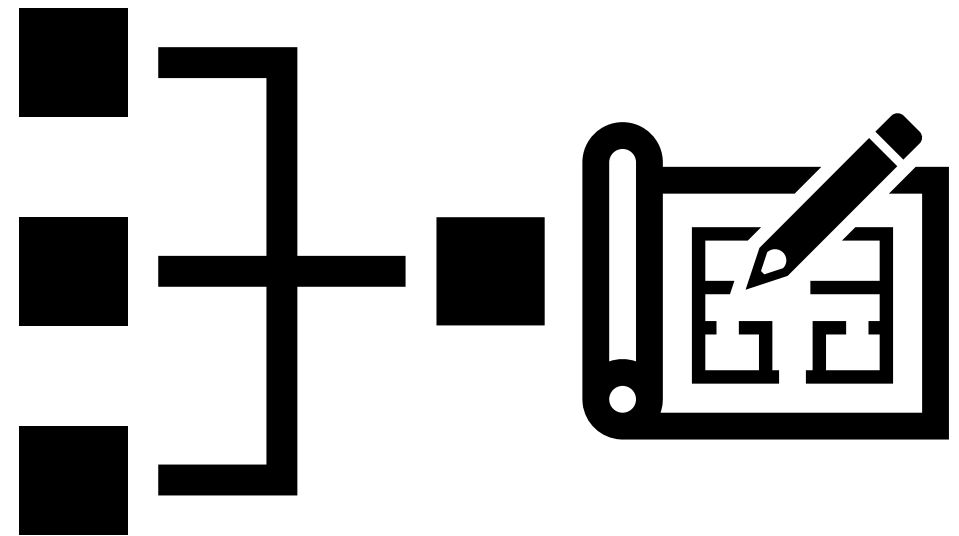
Accelerated
innovation

Challenges



Ignores systems engineering approach

There is a lack of templates, examples, and guidance on the correct sequence of steps to use the resources effectively.



Better docs

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onboarding**

More reuse

**Accelerated
innovation**

Challenges



Inconsistent style

Documentation suffers from inconsistencies in style and design. Naming conventions of files and folders vary between projects.



Better docs


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More reuse

**Accelerated
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Updates Overview



**BIRDSOpenSource**Unfollow

Popular repositories

BIRDSOpenSource.github.io Public
HTML ☆ 4 🍴 2

BIRDS4-OBC Public
Documentation for the On Board Computer used in the BIRDS4 satellite
C ☆ 4 🍴 1

BIRDS-GS_software Public
Documentation for the ground station software used for the BIRDS satellites.
C# ☆ 2 🍴 1

BIRDS5-CAD Public
Documentation and source files for the CAD of the BIRDS5 satellite
☆ 2

BIRDS3-OBC Public
Documentation for the On Board Computer used in the BIRDS3 Satellite
C ☆ 1 🍴 1

BIRDS5-Source_Codes Public
Documentation for the different source codes used in the BIRDS5 satellite
C ☆ 1 🍴 1

People

This organization has no public members. You must be a member to see who's a part of this organization.

Top languages

C C# HTML PLSQL

Report abuse



BIRDS Project, Kyushu Institute of Technology

An Open Source Bus System for Academic Satellites · 九州工業大学 · 宇宙システム工学科 · 革新的宇宙利用実証ラボラトリの公開リポジトリ

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README .md

Welcome to the BIRDS Open Source Project

The BIRDS program, developed by Kyushu Institute of Technology, is an educational initiative focused on CubeSat development. This repository serves as a central hub for open-sourcing files, code, and designs from the BIRDS program, enabling other entities to utilize and contribute to the advancement of CubeSat technology. The BIRDS Open Source project is committed to demonstrating lean satellite development that is well documented, easy to adapt and debug, and that caters to the needs of the entire satellite development workflow, from satellite design configurations to ground station data collection and analysis.

Take a peek at [the website for building a satellite with the BIRDS bus](#) for more information that may be relevant to you. We also have a to discuss various issues related to the satellite bus, past webinar recordings and presentations [can be found here](#).

You can click this button to [join the monthly webinars](#)

About the BIRDS Program:

The BIRDS program provides hands-on training in satellite engineering, project management, and cross-cultural teamwork. Through the development of CubeSats^[1], students from non-space-faring nations gain practical experience and contribute to global capacity building in space technology.

View as: **Public**

You are viewing the README and pinned repositories as a public user.

You can [hide the tasks we've suggested](#) on this page and bring them back later.

Top discussions this past month

Discussions are for sharing announcements, creating conversation in your community, answering questions, and more.

[Start a new discussion](#)

Repositories

BIRDSTRM-SourceCodes Private

HTML ☆ 0 Updated 4 hours ago

BIRDSOpenSource.github.io

JavaScript ☆ 7 Updated 2 weeks ago

Updates Overview



BIRDSource.github.io Public

Watch 1 Fork 2 Star 4

main 1 Branch 0 Tags

Go to file Add file Code

About

No description, website, or topics provided.

Readme Activity Custom properties 4 stars 1 watching 2 forks Report repository

Releases

No releases published

Packages

No packages published

Deployments 24

github-pages 2 years + 23 deployments

Languages

HTML 100.0%

README

Some info just to test

- Some stuff

BIRDSource.github.io Public

Edit Pins Watch 2 Fork 4 Star 7

main 6 Branches 0 Tags

Go to file Add file Code

About

Guides and tutorials designed to help low budget teams quickly get started with building cube satellites from zero using the BIRDS bus.

birdsopensource.github.io/

github-pages documentation birds cubesat cubesatellite kyutech

Readme

README MIT license

gem version 0.10.1 CI passing

BIRDS Cubesat Bus Documentation Site

A comprehensive guide for designing, building, testing, and launching a small satellite. Whether you're a beginner or an experienced developer, our documentation is structured to assist you at every stage of the satellite development process.

Easily hosted on GitHub Pages with few dependencies.

[See it in action!](#)



Live Walkthrough



Feedback