



ROBINSON
AEROSPACE SYSTEMS

EDUCATIONAL CUBESAT KITS TO INSPIRE THE NEXT GENERATION

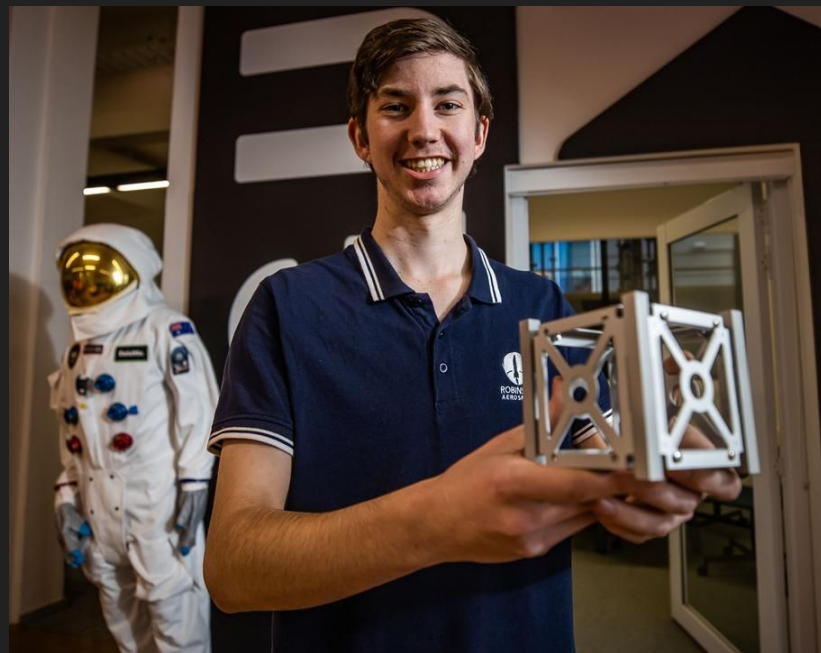


Robinson Aerospace

Founded in April 2022, RAS has a mission to educate secondary students on space technology, ultimately inspiring them to pursue careers in Australia's rapidly growing space industry.

The Australian Space Agency estimates there will be over 20,000 more jobs created in our space industry by 2030. As a result, it is critical that we educate students on space technology and the various STEM career opportunities.

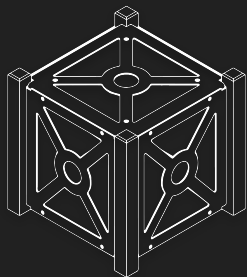
We are responding to this by developing RASCube, a desktop satellite kit designed to maximise students' learning and engagement in STEM subjects.



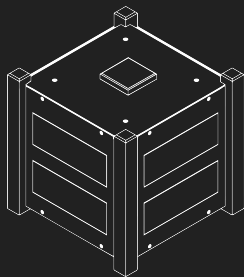
Educational CubeSat Kit (RASCube)

A flat pack desktop satellite designed with expandability in mind

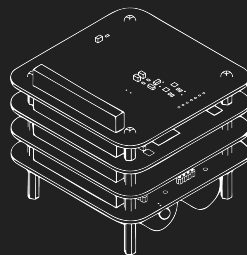
Engineered to look, feel, function and assemble just like a real satellite, maximising students' learning and providing an exciting hands-on experience



1. Assemble the durable aluminium frame



2. Screw on the external solar panels and top antennae



3. Install the internal satellite-style electronics stack



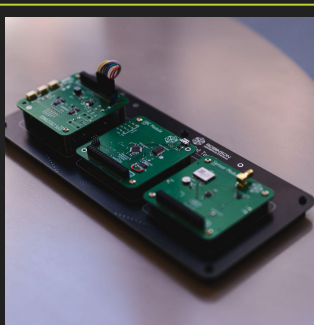
4. Plug in the wireless USB receiver to start collecting data

RASCube Features



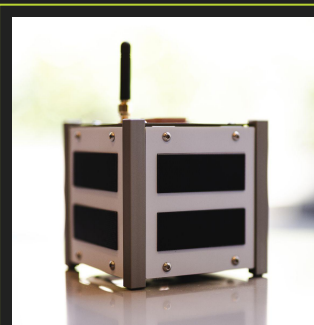
Durable Aluminium Structure

RASCube's iconic aluminium structure prioritises accuracy and durability.



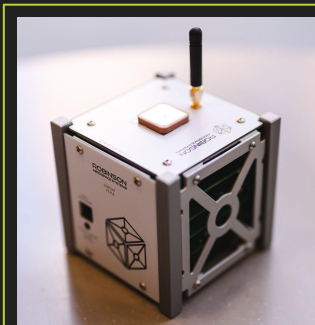
Working Internal Electronics

RASCube's internal electronics 'stack' looks and functions the same as a real CubeSat.



Solar Battery Charging

What's a satellite without solar panels? RASCube includes solar cells to charge its batteries.



Wireless Communication

RASCube wirelessly sends sensor data to a computer, to be displayed graphically on-screen.

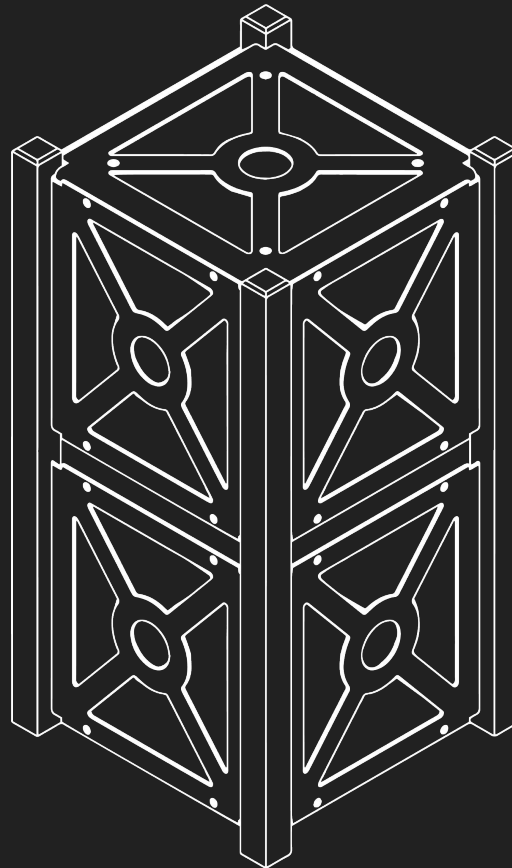
Designed with expandability in mind

Add-on modules add functionality to the satellite, allowing students to continue learning more. Some possible examples include:

- Deployable solar arrays
- Deployable antenna
- Reaction wheels
- IoT connectivity
- Cameras
- Advanced sensors
- Larger structures

Add-on modules will eventually be available from the RAS website, or students can develop them using provided documentation

Expandability



Pre-orders for RASCube's Pilot Program are Available Now

We are limiting pre-orders to just 75x units in total, allowing us to work closely with customers to provide support and receive feedback. The Pilot Program is targeted to begin in March 2023 and will be conducted over a three-month period.



What's Included in Each Kit?

RASCube includes everything that educators and students need to start using RASCube, fast.

All Aluminium Pieces

All Circuit
Boards

All Other
Hardware

Tools

Batteries

Access to Learning
Resources

Quick Start
Guide

Preloaded
Software

Learning/Teaching Resources Included

Educators will have online access to lesson plans and learning resources, as well as workshop plans for when RASCube is not being used in-class. Examples include:

- Testing the satellites systems
- Writing software through Arduino
- Wireless data transmission
- Deep dive into each circuit board
- Making your own basic circuit board
- Physics experiments

All lesson plans are mapped to the Australian Curriculum, with consideration for individual states included.



“Our mission is to educate hundreds of thousands of secondary students on space and CubeSat technology, ultimately inspiring them to pursue careers in Australia’s rapidly growing space industry”

www.robinson-aerospace.com

Appendix

Further information to ensure everything makes sense and answer your burning questions



What support will be offered during RASCube's Pilot Program?

We are viewing RASCube's Pilot Program as a way for us to demonstrate our dedication to customer service and satisfaction. Whenever you need assistance, contact us and we will respond with information within 1 business day. If required, we will also schedule an online video meeting to discuss the problem in more detail.

What happens if there are major delays for RASCube's dispatch or if the final product is not as advertised?

If RASCube's dispatch is going to be significantly delayed, you will be contacted with the option for a full refund or to wait until further notice.

If RASCube's finalised form largely differs from the advertised product and you are not satisfied with the product that you received, please contact RAS and we will form a solution to ensure you are satisfied with your experience. In some cases, this may involve a full refund.

What does RASCube do?

RASCube is designed to mimic a real space-grade CubeSat. Its five internal circuit boards work together to acquire data from sensors and transmit it wirelessly to a nearby computer.

Some examples of this data include GPS position, orientation, acceleration, compass headings, temperatures and altitude, as well as general status information such as voltages and power consumption.

Can the satellite go to space?

The short answer is no... this kit cannot go to space. It is not designed to survive in the harsh environment of LEO. However, RAS is aiming to eventually send a similar satellite into space and allow students to access its data in real time.