

UoS³

University of Southampton Small Satellite

Aleksander Lidtke

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Why build a CubeSat at UoS

- Education of students
 - All branches of engineering (Space Systems, Mechanical, Software, Electrical...)
 - Future satellite data users (Physics, Geography, Oceanography...)
- Science and technology demonstration
- Fun

Primary

1. Design, build, test and operate a CubeSat using primarily resources from the University of Southampton.
2. Obtain photographs of Europe and transmit them to the ground for public relations and outreach purposes.
3. Generate data to validate space object re-entry prediction software.

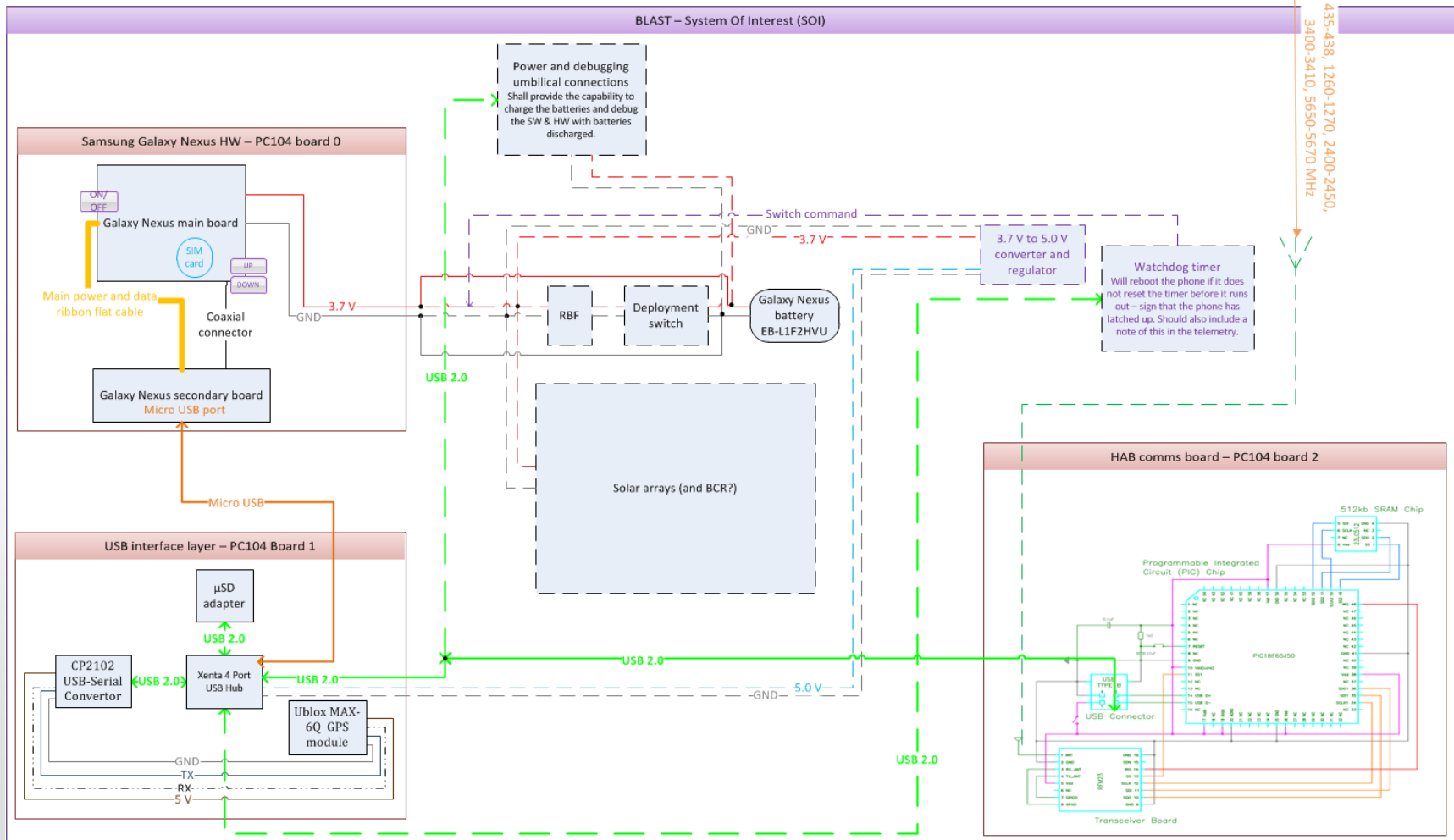
Secondary

1. Develop a CubeSat platform based on smartphone technology.
2. Test fly parts of the internal structure that have been 3D printed.

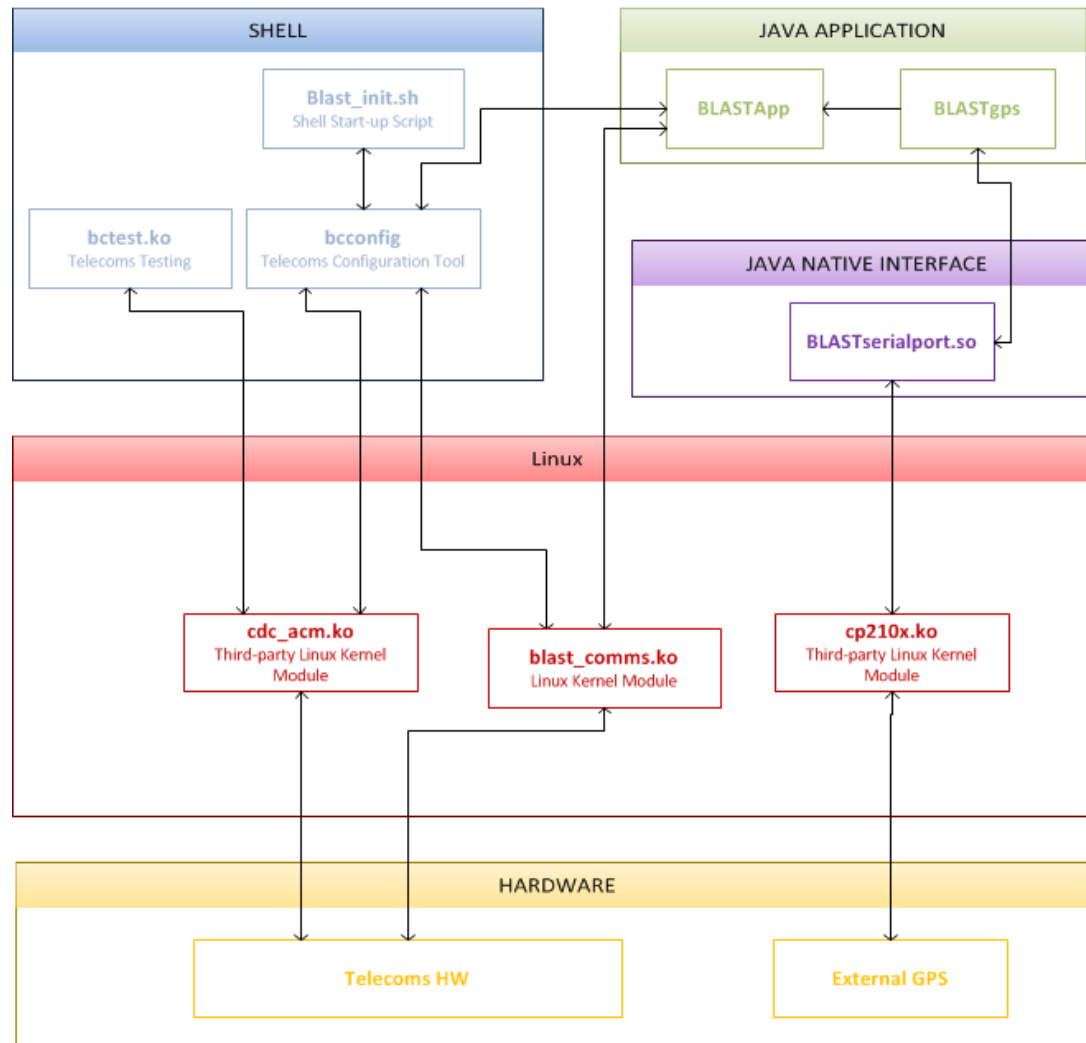
Existing hardware



How it all fits together



Software



Smartphone CubeSat Summary

- + Relatively cheap
- + Easy and fast to program
- + Plenty of readily integrated sensors and other HW
- Difficult to HW modify
- Susceptible to radiation
- May not survive launch or vacuum
- Narrow thermal limits

Thank you

Questions?

Contact:

Aleksander Lidtke
Astronautics Research Group
Faculty of Engineering and the Environment
University of Southampton
Southampton SO17 1BJ
United Kingdom

E: al11g09@soton.ac.uk
M: +44 (0) 7936 987 688