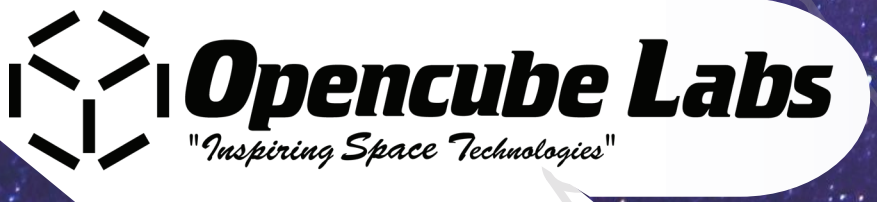
CanSat Development Program

Build Your Own Satellite



CANSAT

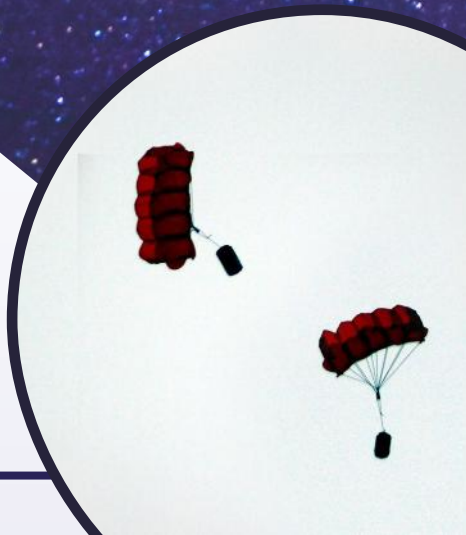
The concept of CanSat was proposed by Prof. Robert Twiggs (currently in Morehead State University) at the University Space Systems Symposium (USSS) held in Hawaii. The proposal was to fit the entire components of a satellite into a Soda can (of around 350ml) and launch it using a balloon to a height of hundreds of meters or kilo-meters.

As the CanSat does a controlled descent using a parachute, it captures the interesting data as per the payload on-board and transmits it to the ground station. This concept was mainly targeted at the students and universities to give them a low-cost access to complete space engineering at the sametime retaining the complexity of actual orbital satellites.

Over the period of time, this concept has become popular among the students and research community due to its educational advantages and also potential applications in various areas.

Cansat Development Program

Opencube Labs' CanSat Development Program is designed to give the experience of small scale space missions to every student in India. At the end of this 2-day workshop, we guarantee that each of the participants will become an expert in CanSat oriented project and research works and you could independently conduct the future CanSat missions for your experiments.



About Us

Opencube Labs(OCL) promotes Space Research and Technology. In the wake of India leaving its footprint in the space race, the OCL strives to reach the young minds of our country by providing forums for discussion and interaction with the pioneers, and the leading minds of our country. OCL achieves this by providing hands on experience with the help of state-of-the-art training kits to better facilitate learning.

Our team consists of various expertise having achievements from NASA, MIT, California Institute of Technology, and IBM.

Advantages to Students/universities

- Scope for working on interesting CanSat payloads.
- Very helpful as part of thesis or research work
- A low-cost mechanism for universities to collect various atmospheric and terrain data for research work.
- This is truly a multidisciplinary field, the patents and the publications can come from every engineering department

Workshop Details

Day 1

Morning session

- Key note on the workshop
- Introduction to CanSat and its history
- CanSat system overview

Afternoon session

- Overview of the CanSat development kit
- Introduction to Arduino
- Overview of all modules used in the CanSat development like communication, tracking, sensors/payloads, interfaces(I2C,serial port) and others

Day 2

Morning session

- Session on parachute design
- Demo on integration of all modules by OCL team
- Integration of all modules by each team

Afternoon session

- Session on sounding balloons and its launching.
- Launch session of CanSat's developed

CanSat Certification

At the end of the 2 day workshop, the participants will be provided a verifiable certificate and they will be in a position to conduct their own CanSat missions independently.

Eligibility

The workshop is open to all space enthusiasts. Little knowledge of programming and electronic circuits is an added advantage, though not compulsory.

CanSat Development Kit

- **CanSat development board**
- **Attitude determination system –** Accelero plus gyro module
- **Communication system –** RF transreciever module
- **Micro SD data logging unit**
- **Payloads –** Light and temperature
- **Power unit –** 9V batteries
- **Descent control system –** Plastic parachute and thread
- **CanSat structure**
- **Knife and scissors,Insulation tape**
- **and double sided tape**
- **Multimeter,Resistor Box,Capacitor box**
- **Wires,Breadboard**

You could contact us at the below details for further clarifications

Suraj Kumar Jana (Founder)
+91-8553236639
suraj@ocl.space
opencubelabs@gmail.com