

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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ESAT, A HANDS-ON TRAINING SATELLITE

Abstract

ESAT is an educational satellite designed for hands-on learning for all education levels: STEM education, university studies and professional training. It is a 10x10x10 cm nanosatellite based on the successful CubeSat standard, weighing less than 1 kg.

ESAT is perfectly fitted to train on design, manufacture, integration, validation and operation of satellites.

ESAT has the typical spacecraft subsystems:

· Electrical Power · Command and Data Handling · Attitude Determination and Control · Structure

The user can choose to focus and work on each subsystem independently or to practice with the fully integrated satellite. ESAT features a Wi-Fi communication system allowing the connection with a PC, where the ESAT GUI allows an easy operation of the satellite.

It has been developed with the idea that the users should be able to expand it if they want, and it is possible to build on it. ESAT allows to integrate and test new user developments, both SW and HW.

ESAT features will be introduced.