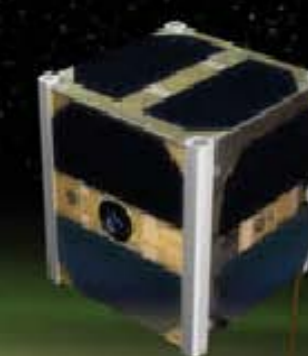




In partnership with



Swiss Cube



Keywords

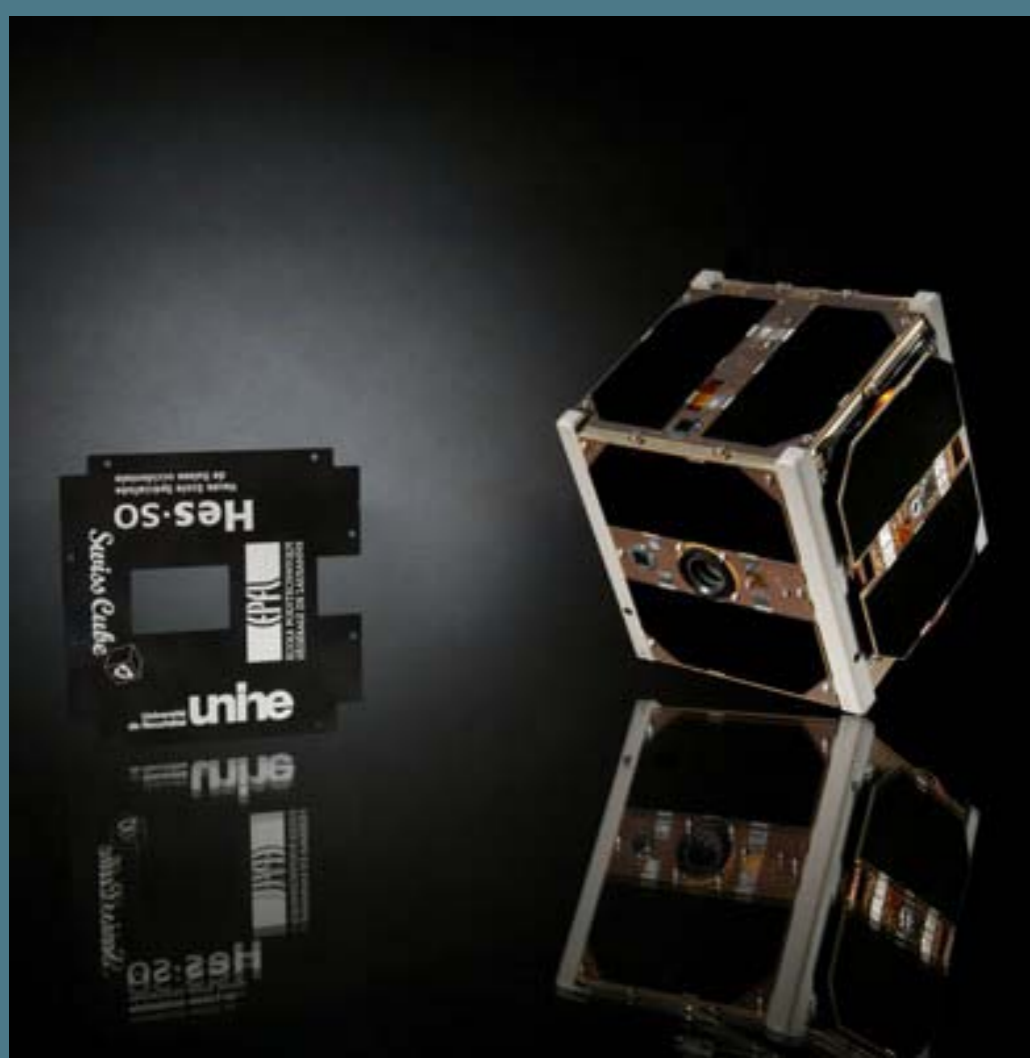
- First swiss satellite
- On board computer
- CDMS

CDMS

Control and Data Management Subsystem

Academic partners

- Systems Engineering Institute, HES-SO Valais
- Haute Ecole Arc, Ingénierie
- EPFL Space Center



HES-SO // Valais

The **Institute of Systems Engineering** of HES-SO Valais deals with objects, devices and mechanisms combining concepts of materials, energy and intelligence.

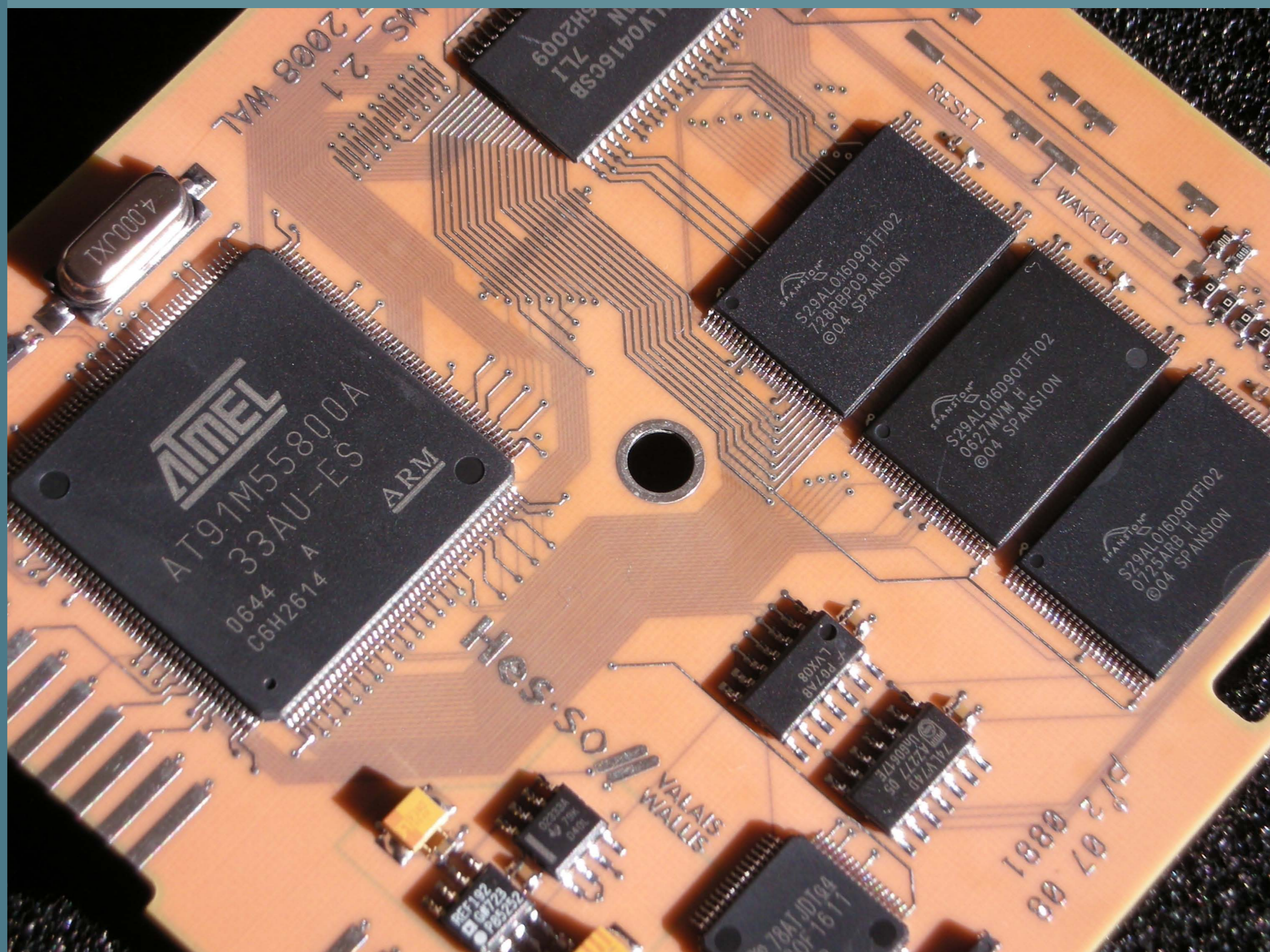
Systems include mechanical devices, sensors, energy conversion and management and data processing units.



HES-SO // Valais Swisscube team



P.-A. Tapparel, O. Walpen (Collaborator), C. Crettaz, J.-M. Carron, C. Bianchi (Professor), L. Lugon-Moulin (not present)



CDMS functions

- Execution of the flight software in order to schedule the spatial mission and moreover to supply computing services for other subsystems.
- Management of the communication between the satellite and the ground station for the purpose of command and control, obtaining spacecraft safety and systems status as well as sensor data transfer.

Main characteristics of the CDMS

- Processor ARM7TDMI AT91M55800
- 2 MB Flash memory for application SW and data storage
- 512 kB SRAM memory for program execution
- 512 kB EEPROM memory for boot program
- 150 mW average power consumption

Status

- One prototype board, one qualification board and two flight models were elaborated by the students of the HES-SO // Valais.

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