

Satellites
Transversal competencies



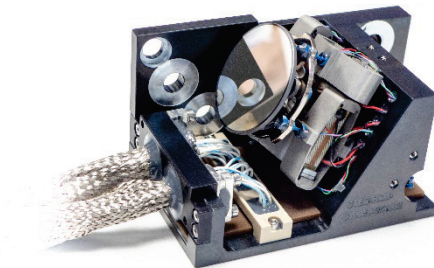
CEDRAT TECHNOLOGIES (CTEC) is a SME specialized in the design, qualification and manufacturing of flight mechatronics and mechanisms for Space, Defense & Optic Instruments.

CTEC takes benefit from its own proprietary space qualified technologies, in the field of magnetic & piezoelectric actuators, sensors & electronics, to provide reliable and high performance mechatronic solutions for static & dynamic control of structure, optic & fluid.

COMPETENCIES & CAPABILITIES

CTEC is expert in the domain of embedded actuators, sensors & mechanisms, with associated electronics. CTEC is able to develop dedicated solutions accounting for operational & environment specs (shock & vibration).

Its knowhow includes expertise in piezoelectric & magnetic materials, long lifetime frictionless mechanics, (flexure bearings & hinges), high precision sensors, tribology (piezo motors friction interface), cleanliness, drive & sensing electronics. CTEC building blocks and CAD & tests facilities (interferometers, cryo, TV, clean room ...) allow to develop many precision functions: micro or nano static & dynamic multi-degrees of freedom positioning, scanning, fluid control.



CEDRAT TECHNOLOGIES

PRODUCTS & SERVICES

CEDRAT TECHNOLOGIES designs, manufactures, and qualifies, flight space solutions on demand including:

- Piezo actuators, especially Amplified Piezo Actuators APA®
- Piezo Motors, such as Stepping Piezo Actuators SPA & FSPA
- Magnetic actuators, such as Solenoids, Voice Coils & MICA™
- Position sensors, such as Strain Gage & Eddy Current Sensors
- Short & Long stroke linear, rotating or multi-dof mechanisms
- Fine or fast Steering Mirrors (FSM) based on Tip Tilts (DTT)

Hold Down & Release Mechanisms (HDRM), as BRUCE

- Valves, pressure regulators, compressor active parts
- Development services under Product Quality assurance include:
- Design justification, FEA, CAD, FMECA
- Precision assembly, metrology, clean room (up to ISO 4)
- Tests: stability (up to 1 nm), vibration & shock, thermal & vacuum (TV), cryogenic (< 30K), lifetime tests.

MAJOR SPACE PROJECTS & REFERENCES

- APA®-based mechanisms from CTEC have flown on past programs such as ROSETTA/MIDAS, ISS/PHARAO, LISA PATH FINDER /OPDA, ATLID/BSA. Customized FSPA piezo electric motors are selected for IASING /BSMA.
- Linear & Rotating Voice Coil Motors, HDRM BRUCE, Eddy Current Sensors ECS are soon to be flown on MTG/FCI/IRS, MTG/SCA, TARANIS, EUCLID/NISP.
- Moving Iron Controllable Actuators MICA™ have been selected in R&T programs for cryocoolers and liquefiers compressors.

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TURNOVER €6m

WORK FORCE 55

SPACE TURNOVER €1,8m

SPACE WORK FORCE 10