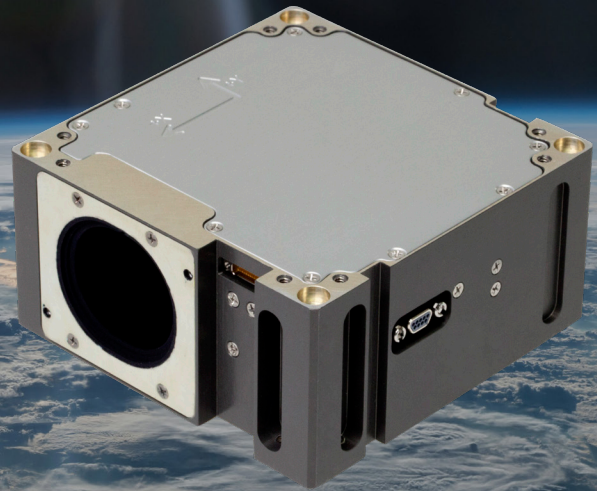




Spacecraft Buses, Systems & Solutions

ATTITUDE DETERMINATION CONTROL SYSTEMS



BCT's XACT and FleXcore products are currently operating on-orbit, providing turnkey attitude control in support of successful customer missions.

The Blue Canyon Technologies stellar-based attitude solution provides a reliable, high-performance design compatible with a variety of satellite configurations. This architecture leverages a powerful processing core with BCT's Micro-Reaction Wheel assemblies to enable a new generation of highly capable, affordable miniaturized spacecraft.

FEATURES INCLUDE

- Precise attitude knowledge & control
- Complete ADCS in a Micro-package
- Low jitter micro-reaction wheel design
- User-friendly software supports simulation, integration, and customization

Attitude Determination Control Systems



XACT

The XACT unit uses high-performance components that can be used for a wide range of missions. Our integrated attitude control solution enables CubeSats to point with much higher accuracy than previously available CubeSat attitude control systems.



XACT-50

XACT-50 improves the capability of XACT by incorporating larger reaction wheels and torque rods.



FLEXCORE

Bringing the advantages of CubeSats to MicroSats with our XACT-based electronics and control software with multiple external sensors and larger actuators. Provides a low-cost and high-performance, modular ADCS system that is scalable to a wide range of bus sizes and mission requirements.

Spacecraft Pointing Accuracy	± 0.003 deg (1-sigma) for 2 axes; ± 0.007 deg (1-sigma) for 3rd axis	± 0.003 deg (1-sigma) for 2 axes; ± 0.007 deg (1-sigma) for 3rd axis	± 0.002 deg (1-sigma), 3 axes, 2 Trackers
Mass	0.91 kg	1.23 kg	0.85 kg
Volume	10 x 10 x 5 cm (0.5U)	10 x 10 x 7.54 cm (0.75U)	10 x 10 x 5 cm (0.5U)
Electronics Input Voltage	12V	12V	5V
Typical Data Interface	RS-422	RS-422	RS-422
Slew Rate	≥ 10 deg/sec (4kg, 3U CubeSat)	≥ 10 deg/sec (14kg, 6U CubeSat)	Application Dependent
Spacecraft Lifetime		5 Years (LEO)	



5330 Airport Blvd
Ste 100
Boulder, Colorado 80301
www.BlueCanyonTech.com