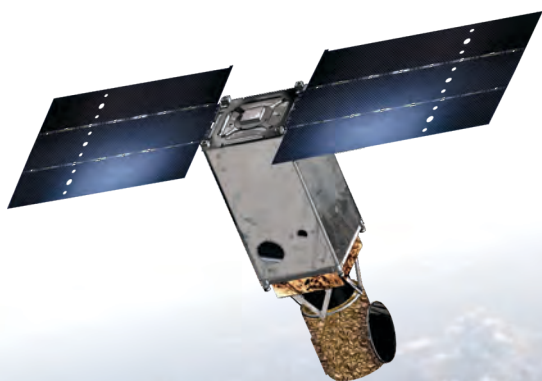


Coral

Comtech AeroAstro's Coral nanosat provides a flexible and affordable, yet highly capable platform to support a variety of small science and technology, or quick-reaction operational missions. Our robust, flexible and reconfigurable satellite design is optimized through the use of high-performance components, standardized and non-proprietary interfaces, and proven software architectures—while still complying with all CubeSat and Poly-Picosatellite Orbital Deployer (P-POD) specifications and requirements.

Our Coral spacecraft can provide unobstructed payload volumes up to 1.3U and 1.972 kg in mass, and continuous payload power of 5W (peak), 3.8W (OAP), and space vehicle power from 38W to 42W (peak). The attitude determination and control subsystem features excellent agility / stability performance (slew rates up to 0.5° / second) and pointing accuracy (better than 0.1° accuracy), enabled by Comtech AeroAstro's developed Miniature Star Tracker.

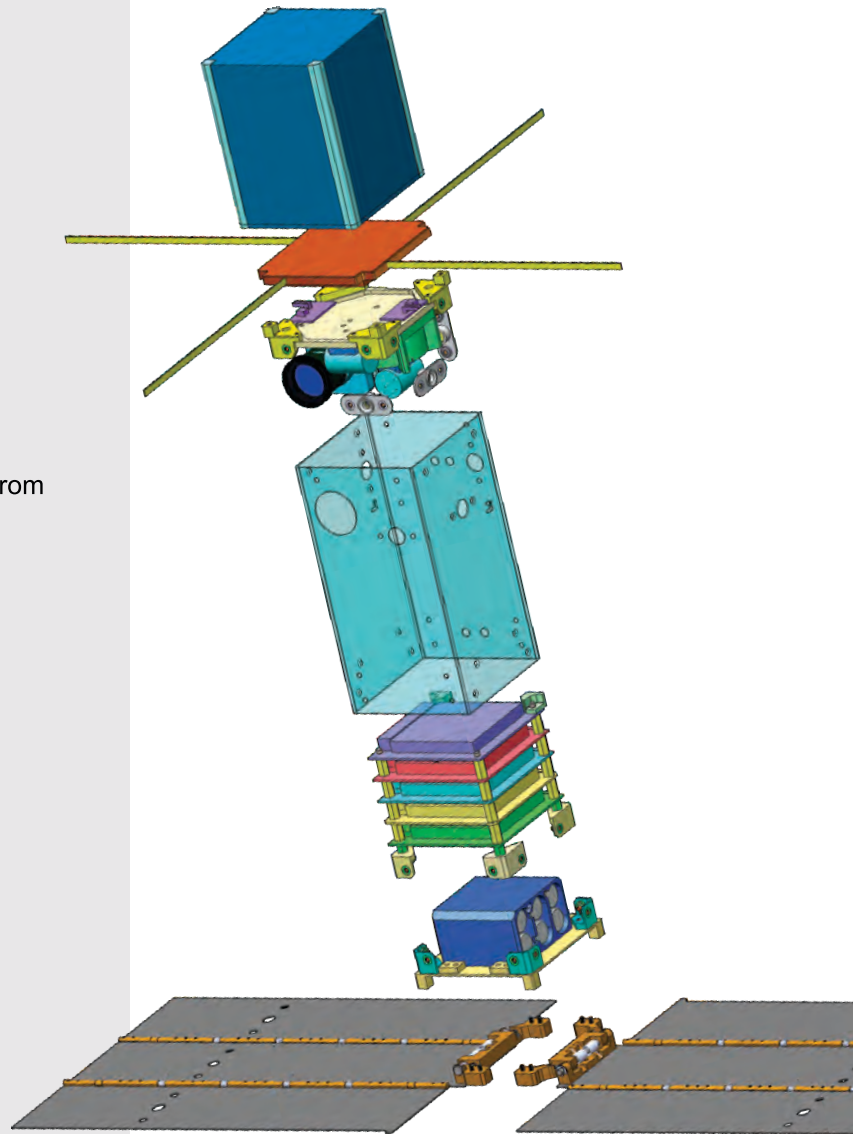
The bus design meets stringent requirements of electro-optical or space situational awareness missions, as well as higher payload power requirements for communications or synthetic aperture radar missions. The power design features two deployed solar array wings along with a Lithium-Ion battery that provides significant payload power during all mission timeframes.



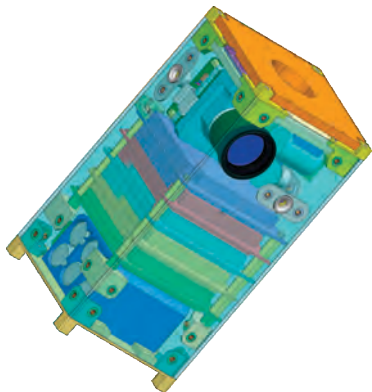
Coral's communications system features a high data rate transceiver, and the avionics subsystem communicates over a high bandwidth, standardized bus that provides a number of external interface options to the payload. The command and data handling software architecture allows rapid integration of any payload hardware or software option with little or no impact to the bus architecture design at any point within the program timeline.

Coral facilitates rapid assembly and disassembly of the spacecraft while providing clear access to external interfaces at all times.

Missions:	Earth and Space Science, Space Weather
Orbit Altitude:	400 to 800 km
Orbit Inclination:	28 to 90°
Launch Mass:	5 kg
Payload Mass Capability:	≤1.972 kg
Payload Volume:	1.3U (100 × 100 × 130 mm)
Payload Power Capability:	5W (peak), 3.8W (OAP)
Launch Vehicle Compatibility:	Deployed as a secondary payload from almost any launch vehicle
Space Vehicle Power:	38W to 42W (peak)
SV Lifetime:	≥1 year
Stabilization Method:	3-axis, momentum biased
Pointing Modes:	Nadir, inertial point, sun point, Safe
Pointing Control:	0.5°
Pointing Knowledge:	0.3°
Slew Rate:	Up to 0.5° / second in axis
Bus Voltage:	15V
Communication Frequencies:	UHF or S-Band uplink / downlink
Encryption:	AES-256 bit
Command Uplink:	2.4 to 100 kbps
Telemetry Downlink:	Up to 4.5 Mbps
Onboard Storage:	128.0 MB (expandable)



Our Innovative Coral Bus Design Enables
Mission / Payload Flexibility with
High-Heritage, Flight-Proven Components



Uses Miniaturized but Sophisticated Components
(many developed by Comtech AeroAstro)



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