

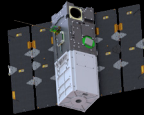


SPACECRAFT BUSES, SYSTEMS & SOLUTIONS

SPACE AWAITS

With our suite of spacecraft services and technology, your team can build, test, launch and operate, all using the revolutionary XB Bus.

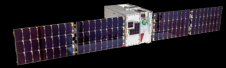
CUBESAT SPACECRAFT SOLUTIONS



XB3



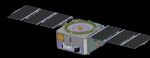
XB6



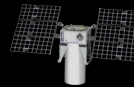
XB12

CLASS	3U	6U	12U
AVAILABLE PAYLOAD VOLUME	1.5U (typical)	4U (typical)	8U (typical)
POINTING ACCURACY	±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	±0.002 deg (1-sigma) 3 axes, 2 Trackers
ENERGY STORAGE	6.8 Ah	6.8 - 20.4 Ah	6.8 - 20.4 Ah
SOLAR ARRAY POWER	27W	92W - 108W	92W - 108W
ORBIT ALTITUDE / ORBIT LIFETIME	LEO > 5 years GEO > 2 years		

MICROSAT SPACECRAFT SOLUTIONS



X-SAT
MERCURY CLASS



X-SAT
VENUS CLASS



X-SAT
SATURN CLASS

CLASS	11.732" Light Band	ESPA-Grande 15" launch vehicle interface	ESPA-Grande 24" launch vehicle interface
PAYLOAD VOLUME	14.0" X 17.0" X 17.0" (launch dependent)	20.5" X 16.4" X 27.0" (1 array) 17.0" X 16.4" X 27.0" (2 array) Larger volume available depending on launch vehicle	30.0" X 30.0" X 40.0" (typical) Larger volume avail- able within rideshare envelope and in ded- icated launch vehicle fairings
POINTING ACCURACY	±0.002° (1-sigma), 3 axes, 2 Trackers		
ENERGY STORAGE	20.4 Ah	10.2 Ah	1 wing: 20.4 or 27.2 Ah 2 wing: 40.8 or 54.4 Ah
SOLAR ARRAY POWER	SADA articulated Arrays 108W	One wing: 222W Two wing: 444W	One wing: 541W Two wing: 1082W
ORBIT ALTITUDE / ORBIT LIFETIME	LEO (> 5 years), GEO (> 2 years), Deep Space (> 2 years)		

COMPONENTS

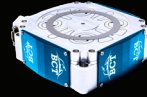
ATTITUDE CONTROL SYSTEMS XACT - 15



SPACECRAFT POINTING ACCURACY ± 0.003 deg (1-sigma) for 2 axes; ± 0.007 deg (1-sigma) for 3rd axis

VOLUME 10 x 10 x 5 cm (0.5U)

REACTION WHEELS RWP500



VOLUME 11 x 11 x 3.8 cm

MAX TORQUE 0.025 Nm

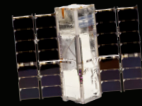
CONTROL MOMENT GYROSCOPES CMG 12



TORQUE 12 Nm

MASS <18kg

SOLAR ARRAYS 3U



SOLAR ARRAY POWER (W) 28 - 42

ARRAY VOLTAGE (VDC) 16.8

STAR TRACKERS FULL EXTENSION NST



ATTITUDE KNOWLEDGE Gen3: 1 asec (cross boresight); 10 asec (about boresight)
Gen2: 6 asec (cross boresight); 40 asec (about boresight)

VOLUME 25 x 10 x 10 cm

MISSIONS OPERATIONS

With access to telemetry anytime, anywhere and from any device, our Mission Operations services provide automated analysis and quick access to spacecraft attitude, position and health. We offer customizable packages of payload and telemetry data for uncompromised delivery to customers.

OUR MISSIONS

RAVAN - Johns Hopkins University Applied Physics Laboratory (JHU/APL)

- Provided: XB3 CubeSat Bus

METHANESAT - MethaneSAT, LLC

- Provided: Saturn-class Microsat Bus

TEMPTEST-D - Colorado State University

- Provided: XB6 CubeSat Bus

BLACKJACK - DARPA

- BCT Providing: A low-Earth orbit constellation of 4-20 Saturn-class Microsat Buses

ASTERIA - NASA's Jet Propulsion Laboratory

- Provided: XACT ADCS System for XB6 CubeSat Bus

TROPICS NASA CUBESAT CONSTELLATION MIT Lincoln Laboratory

- Provided: Constellation of seven XB3 CubeSat Buses