



Spacecraft Buses, Systems & Solutions

## XB SPACECRAFT



OPERATIONS



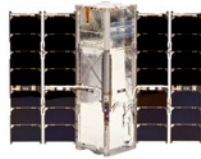
INTEGRATION



TESTING

The BCT XB Spacecraft family provides a complete solution for your payload needs by using a highly integrated, precision spacecraft bus platform, ranging from a 3U to a 70 kg Microsat. This includes: Ultra-high-performance pointing accuracy, robust power system, command and data handling, RF communications, optional propulsion, and multiple flexible payload interfaces. Precision attitude determination and control is provided by dual star trackers, and supports high-accuracy propagation of multiple target objects, with flexible pointing commands to enable a wide range of missions. The XB Flight Software and Simulation environment can host user-developed flight applications unique to your mission. XB spacecraft can optionally be configured to include propulsion systems to accomplish closed-loop momentum dumping, orbit adjust, and thruster-based attitude control.

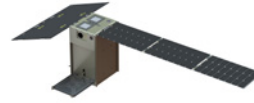
# XB Spacecraft



**XB3**



**XB6**



**XB12**



**XB Micro-Sat**

	<b>XB3</b>	<b>XB6</b>	<b>XB12</b>	<b>XB Micro-Sat</b>
<b>Class</b>	3U	6U	12U	Up to 70 kg
<b>Available Payload Volume</b>	2U	5U	11U	40 x 40 x 60 cm
<b>Pointing Accuracy</b>	±0.002° (1-sigma), 3 axes, 2 Trackers			
<b>Pointing Stability</b>	1 arc-sec over 1 sec			
<b>Maneuver rate</b>	10 deg/sec (typical 3U)	3 deg/sec (typical)	3 deg/sec (typical)	5 deg/sec (typical)
<b>Orbit knowledge</b>	4m, 0.05m/s	4m, 0.05m/s	4m, 0.05m/s	4m, 0.05m/s
<b>Data Interfaces</b>	Serial, LVDS, Spacewire, HDLC, I2C or SPI available			
<b>Onboard Data Storage</b>	16 Gbytes	16 Gbytes	16 Gbytes	16 Gbytes (1 TB option)
<b>System Bus Voltage</b>	9 – 23 V (battery and array dependent)	9 – 23 V (battery and array dependent)	9 – 23 V (battery and array dependent)	9 – 36 V (battery and array dependent)
<b>Energy Storage</b>	Standard: 25Whr, expandable	Standard: 50Whr, expandable	Standard: 75Whr, expandable	Standard: 125Whr, expandable
<b>Solar Panels</b>	Customer or BCT Provided (Details available per request)	Customer or BCT Provided (Details available per request)	Customer or BCT Provided (Details available per request)	Customer or BCT Provided (Up to 200W)
<b>High Current Capability</b>	Unregulated up to 60W	Unregulated up to 140W	Unregulated up to 140W	Sized for program specific needs
<b>Frequency</b>	UHF, Sband, Xband			
<b>Uplink</b>	CCSDS, SGLS, NSGLS			
<b>Downlink</b>	Up to 15 Mbps	Up to 15 Mbps	Up to 15 Mbps	150 Mbps option
<b>Mass / Volume for Avionics</b>	1.5 kg / 10 cm x 10 cm x 14 cm	1.5 kg / 10 cm x 10 cm x 14 cm	2.0 kg / 10 cm x 10 cm x 20 cm	25 kg / 40 cm x 40 cm x 20 cm
<b>XACT-Bus Nominal Power</b>	< 6.3W (Excluding RF Comm)	< 6.3W (Excluding RF Comm)	< 6.3W (Excluding RF Comm)	< 10W (Excluding RF Comm)
<b>Orbit Altitude / Orbit Lifetime</b>	LEO / > 5 years			



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