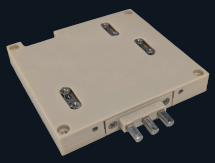
XB1 CUBESAT AVIONICS







Since the launch of its first hardware in 2015, we have been proving that big discoveries start small. A decade later with more than 80 CubeSats launched, our industry-leading CubeSat technology is available to buy as a standalone compoent for your mission.

Our XB1 CubeSat avionics is a precision CubeSat bus solution in an integrated, compact (<2U) system. The XB1 is configured to support 6U, 12U and 16U CubeSats and includes guidance, navigation and control subsystems, electrical power subsystems, command and data handling and a thermal control system.

Included with the XB1 are three coarse sun sensors and a triple inhibit switch.





	XB1 P015	XB1 P050
MASS	2.8 kg	3.2 kg
VOLUME	1.5U	2U
LEO DOWNLINK	S-Band 2 Mbps with optional radio	
SUPPLY VOLTAGE	14.5 V – 34 V	
OAP POWER DRAW	11 W	
BATTERY	Li-ion 6.8 Ahr, expandable to 13.6 Ahr	
PAYLOAD POWER INTERFACES	3.3 V regulated, 5 V regulated, 12 V unregulated	
PAYLOAD DATA INTERFACES	UART (3.3 V, 2.5 V LVDS, RS-422, RS-485), SpaceWire, 3.3 V I/O, PPS	
PAYLOAD DATA STORAGE	4 GB	
C&DH ARCHITECTURE	Linux OS - Base	
ACS	3-axis reaction wheel control	
STAR TRACKERS	1 star tracker	
GPS	1 GPS receiver	
TIMING ACCURACY	20 ns with GPS lock, 5 µsec without GPS lock	
ATTITUDE KNOWLEDGE	4 arcsec (1-sigma) for 2 axes; 8 arcsec (1-sigma) for 3rd axis	
ATTITUDE CONTROL ACCURACY	17 arcsec (1-sigma) per axis	
MOMENTUM CAPABILITY	0.015 Nms per axis	0.050 Nms per axis
SURVIVAL TEMPERATURE RANGE	-30˚ C to +70˚ C	
OPERATIONAL TEMPERATURE RANGE	-20˚ C to +60˚ C	
DESIGN LIFETIME	5 years LEO, 2 years GEO/Lunar/Deep Space	
POSSIBLE ORBITAL REGIMES	LEO, GEO, Lunar, Cislunar, Deep Space	
TRL	9	

Note: This data is for information only and subject to change. Please contact us for current design data.

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