XB3 SPACECRAFT



CLASS
3U

POINTING ACCURACY
< 5 arcsec (1-sigma), 2 axes; < 14 arcsec,
3rd axis, 1 star tracker
< 5 arcsec (1-sigma), all axes; 2 star tracker (option)

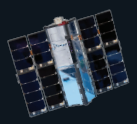
SOLAR ARRAY POWER
27 W

AVAILABLE PAYLOAD VOLUME
1.5U (typical)

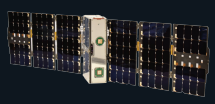
ENERGY STORAGE
6.8 Ah

ORBIT ALTITUDE / ORBIT LIFETIME
LEO > 5 years | GEO/Lunar/Deep Space > 2 years

CUBESAT SUMMARY



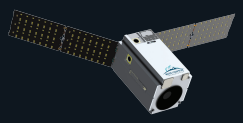
XB3



XB6



XB12



XB16

CLASS	3U	6U	12U	16U
AVAILABLE PAYLOAD VOLUME	1.5U (typical)	4U (typical)	8U (typical)	12U (typical)
POINTING ACCURACY	< 5 arcsec (1-sigma), 2 axes; < 14 arcsec, 3rd axis, 1 star tracker < 5 arcsec (1-sigma), all axes; 2 star tracker (option)			
POINTING STABILITY	< 1 arcsec over 1 sec (1-sigma),per axis			
AGILITY	> 10 deg/sec	> 6 deg/sec	> 5 deg/sec	> 3 deg/sec
ORBIT KNOWLEDGE	L1: Position < 6 m, Velocity < 0.1 m/s (1-sigma) per axis L1/L2: Position < 3 m, Velocity < 0.1 m/s (1-sigma) per axis			
PAYLOAD DATA INTERFACES	UART (Configurable Baud Rate over Single-Ended 3.3V, LVDS, RS-422, or RS-485), SpaceWire (Configurable Link Rate over LVDS), GPIO (Configurable direction, Single-Ended 3.3V or LVDS), Pulse Per Second (Single-Ended 3.3V or LVDS)			
ONBOARD DATA STORAGE	4GB with expandable beyond for the 6U, 12U and 16U (by adding the high speed data recorder)			
ENERGY STORAGE	6.8 Ah	6.8 – 20.4 Ah	6.8 – 20.4 Ah	6.8 – 20.4 Ah
SOLAR ARRAY POWER	27 W	92 W - 108 W	92 W - 108 W	92 W - 108 W
PROPULSION	Multiple electric and chemical propulsion systems available			
PAYLOAD POWER	3.3 V, 5.0 V, 12 V, 28 V (available in 6U, 12U and 16U)			
LEO UPLINK	Nominal 100 Kbps, CCSDS formatting			
LEO DOWNLINK	S-Band 2 Mbps standard	S-Band 2 Mbps standard X-Band up to 10 Mbps	S-Band 2 Mbps standard X-Band up to 10 Mbps	S-Band 2 Mbps standard X-Band up to 10 Mbps
ORBIT ALTITUDE / ORBIT LIFETIME	LEO > 5 years | GEO/Lunar/Deep Space > 2 years			

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

MDA SPACE

2550 Crescent Drive
Lafayette, CO 80026

MDASPACEUSA.COM

REV 1/2027