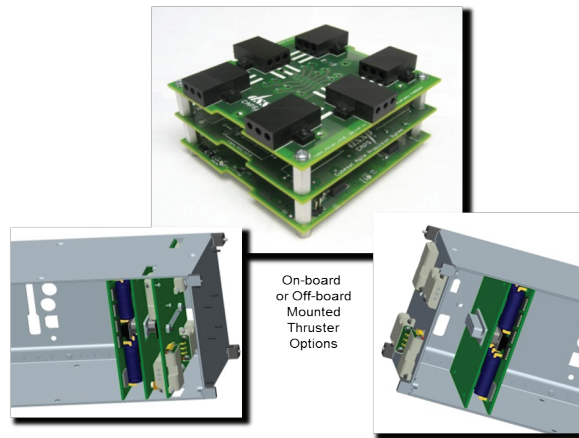


CAPS-3

CAPS is a flexible and modular CubeSat propulsion system that employs DSSP's electric solid propellant technology. The system can fire up to 12 different micro-thruster elements, each having a lifetime exceeding 250 pulses. Ignition power is delivered via capacitor discharge, which results in an extremely high power, short duration impulse. The CAPS controller is a mini, bi-level PCB stackless than 2.25" in height. Thrusters can be board-mounted on a third stacking PCB or be installed in modular housings that wire to the controller. CAPS accepts a 5V to 12V DC supply and has a simple SPI communication interface. Power consumption is dependent on the user-programmable arm rate and varies over the range of .1 and 2.3 Watts.



SPINSAT was launched from within the International Space Station

CAPS-3 is currently in orbit on the SPINSAT Mission launched by the Naval Research Laboratory!

Technical specifications on back



Technical Specifications

THRUST PERFORMANCE

Average Thrust (mN).....	~300
Thrust Duration (ms)	2
Minimum Impulse Bit (mN-s)	0.21
Maximum Impulse Bit (mN-s).....	0.84
Effective specific impulse (sec).....	Up to 900
Thrust Variability (from thrust curve).....	+/- 10%
Tested Lifetime (# of pulses per thruster).....	>250
Thruster Total Impulse (N-s).....	0.125

POWER PROCESSING UNIT (PPU)

Power Supply Range (VDC).....	5-12
Arming Power (W).....	0.1
Standby Power (W).....	0.01
Minimum Arm Time (sec).....	20
Maximum Shot Frequency (Hz).....	0.04
Number of Thrusters Controlled by a Single PPU.....	12
Mass (g).....	475
Height (U).....	0.5

THRUSTER DIMENSIONS

Thrusters per pack.....	3
Pack Mass (g).....	23.3
Pack Height (mm).....	9.2
Pack Width (mm).....	27.9
Pack Length (mm).....	41.6

TEMPERATURE LIMITS

Operation (C).....	-20° to 50°
On Orbit Survival (C).....	-30° to 60°

PROPELLANT TYPE: HIPEP-501A

PRODUCTION STATUS: Flown on SPINSAT

SHIPPING CLASSIFICATION: DOT Class 1.4S

www.dsspropulsion.com