

Cost-Effective Space Access

RSA Structure



RSA Structure with example Payloads

Battery box & Deployment Sequencer Electronics



Poly-Picosatellite Orbital Deployer (P-POD) for CubeSat-class P/Ls

More Responsive and Affordable Access to Space for All Payloads

The Falcon class RideShare Adapter (RSA) developed by Design_Net Engineering under contract from Space Access Technologies and in partnership with Astronautics Technologies SB (ATSB) and SpaceX provides cost effective, rapid integration rideshare for science, technology, and education payloads. The RSA is a versatile, scalable structure with standardized interfaces, and its own “smart” and configurable deployment electronics. It enables multi payload manifesting with an interface to the primary that is identical to the launch vehicle. The RSA accepts payloads as small as a CubeSat and as large as a “half ESPA”. It promotes contract to launch times of less than one year.

Payload Type	Capability	Quantity per RSA Launch
“Primary”		
Stand-alone spacecraft bus	Mass: up to 440lb (200kg) (TBR) Size: ≤ 48” (121.92cm) O.D. x 36” (91.44cm) height Location: Sits on top of RSA	1
“Secondary”		
“Half ESPA”	Mass: up to 198lb (90kg) (TBR) Size: ≤ 24” (60.96cm) x 24” x 19” (48.26cm) Location: Stowed within the RSA	1
Nanosat-class	Mass: <66lb (30kg) Size: <18.7” (47.5cm) O.D. x 18.7” (47.5cm) height cylinder to fit CAPE mechanism Location: Stowed within the RSA	1
“FalconSAT”-class	Mass: < 44lb (20kg) Size: <14” (35.56cm) cube Location: Stowed within the RSA	2
RocketPod-class	Mass: <4.4lb (2kg) Size: <3.94” (10cm) “standard CubeSat” <3.94 x 3.94 x 5.51” (~10 x 10x 14 cm) “CubeSat-Plus” Location: Stowed within the RSA or Mounted around the RSA	Up to 8
CubeSat-class	Mass: 1U: <2.2lb (1kg) 2U: < 4.4lb (2kg) 3U: <6.6lb (3kg) Size: Meets normal CubeSat ICD specification Location: Mounted around the RSA circumference	Up to 24 1U CubeSats (8 P-PODs)

RSA also designed to be compatible with mechanical interface of the designated LV conical adapter as well as with the 38.8” (985.52mm) Motorized Lightband (MLB) deployment system

