Propulsion Systems

Multiple Burn, Green and Low-Cost

Sierra Nevada Corporation (SNC) offers safe, green and low-cost propulsion solutions for space vehicles, satellites and small to medium launch vehicle propulsion systems.

SIERRA NEVADA CORPORATION
Space Systems

Propulsion Systems

Multiple Burn, Green and Low-Cost

Propulsion Systems

- *Space Vehicle Propulsion* Hybrid main propulsion 15,000 – 70,000lbf
- *Satellite Propulsion* Orbit insertion and on-orbit integrated systems
- *Small Launch Vehicles* Ground and Air Launched (up to 500 kg payloads)

Launch Vehicles

Our Hybrid stages can provide very low-cost suborbital access and also exceed the existing rail launch systems lift capability. Hybrids are also very well suited as a safe launch vehicle for air launch of satellite payloads from reusable horizontal launch platforms.

Satellite Propulsion

SNC has the capability to adapt existing designs to meet your requirements for orbit insertion as well as satellite station keeping and manuevers. Our integrated propulsion systems can be combined with our available spacecraft buses to provide mission capable systems for your payload needs.

For further information contact:
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SpaceShipTwo Main Propulsion Ground Test

Space Vehicle Propulsion

The primary advantages of SNC's Hybrid rocket technology are: safety, low-cost, rapid development time, scalability, and the ability to restart and throttle the engines for several mission burns. The unparalleled safety of hybrid rocket motors is achieved by the separation of the "green" oxidizer (N2O) from the fuel (HTPB) where detonation cannot take place while under transport or in operational readiness.

SpaceShipOne with SNC's hybrid propulsion has successfully flown several times using N2O/HTPB rocket motors. The SpaceShipTwo hybrid propulsion system has a substantially larger thrust and is currently undergoing ground test hotfires in preparation for flight test. The same technology is baselined as the main engine for the SNC Dream Chaser Orbital vehicle. Its re-start capability and space environment life can support long duration ISS and orbital missions.

Dream Chaser Main Propulsion Ground Test