

Minotaur IV – Lite

Long-Range Suborbital Launch Vehicle

FACT SHEET



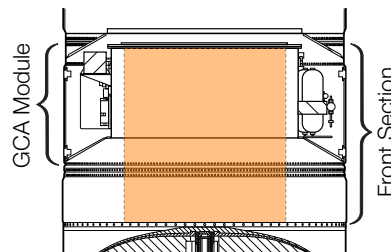
Mission Description

The flight proven Minotaur IV-Lite launch vehicle provides the ability to deliver payloads up to 3,000 kilograms on long range, suborbital trajectories for various U.S. Government-sponsored applications. It utilizes residual Peacekeeper solid rocket motors combined with Orbital ATK's commercial launch vehicle technologies.

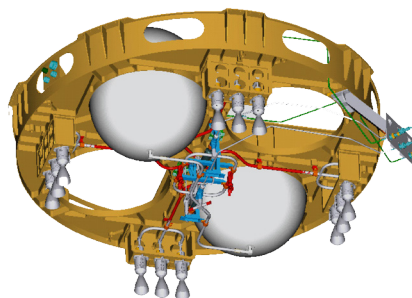
The Minotaur IV – Lite is designed to be adaptable to a variety of potential payloads. An optional mono-propellant hydrazine propulsion fourth stage provides precision trajectory control to support the high-accuracy delivery of target or reentry systems for technology demonstration. Multiple adapters and separation systems enable a variety of options for payloads.

The combination of thoroughly proven motors and Orbital ATK's extensively flight proven commercial subsystems results in a uniquely reliable, cost-effective solution. All vehicles in the Minotaur family have common avionics architectures, software, ground support equipment, and processes, providing the benefits of a shared heritage and continuity across multiple vehicle configurations. The Minotaur family also benefits from Orbital ATK's unique background in the integration of surplus motors and state-of-the-art systems, a depth of experience spanning several decades.

The Minotaur family of launch vehicles are provided via the Orbital/Suborbital Program (OSP) and managed by the U.S. Air Force Space and Missile Systems Center (SMC), Launch Enterprise, Experimental Launch and Test Division (LE/LEX), Rocket Systems Launch Program (RSLP) located at Kirtland Air Force Base, New Mexico.



The interior area within the front section provides mission development flexibility.



Optional monopropellant hydrazine upper stage provides precise insertion capability within the Minotaur IV – Lite GCA.

FACTS AT A GLANCE

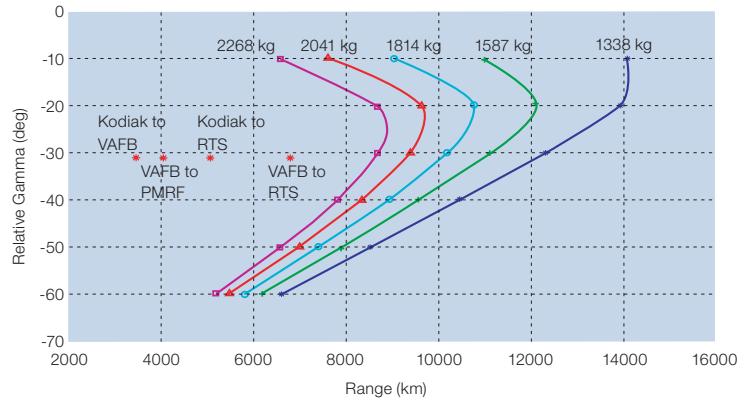
System Features

- Avionics and software architecture common with all Minotaur family launch vehicles
- Flexible design, readily configured to support varied target requirements, including ascent heated payloads, non-separating configuration, and deployment of multiple objects
- Mission success is ensured by mature systems and processes that include Orbital ATK's rigorous mission assurance program and categories of mission assurance to meet customers' needs
 - Categories range from a basic FAA licensed launch to full Government insight and independent assessment
- Minimal infrastructure requirements and portable ground support allow launch from multiple existing government launch ranges as well as austere sites
- Responsive launch solutions available

Minotaur IV – Lite

Performance

- 3,000 kg delivered over 5,000 km downrange
- Optional monopropellant hydrazine post-boost propulsion for precision targeting and multiple payload delivery
- Support for pre-separation payload attitude control, multiple payload deployments, and payload telemetry re-radiation
- Standard 2.34 m (92 in.) diameter fairing

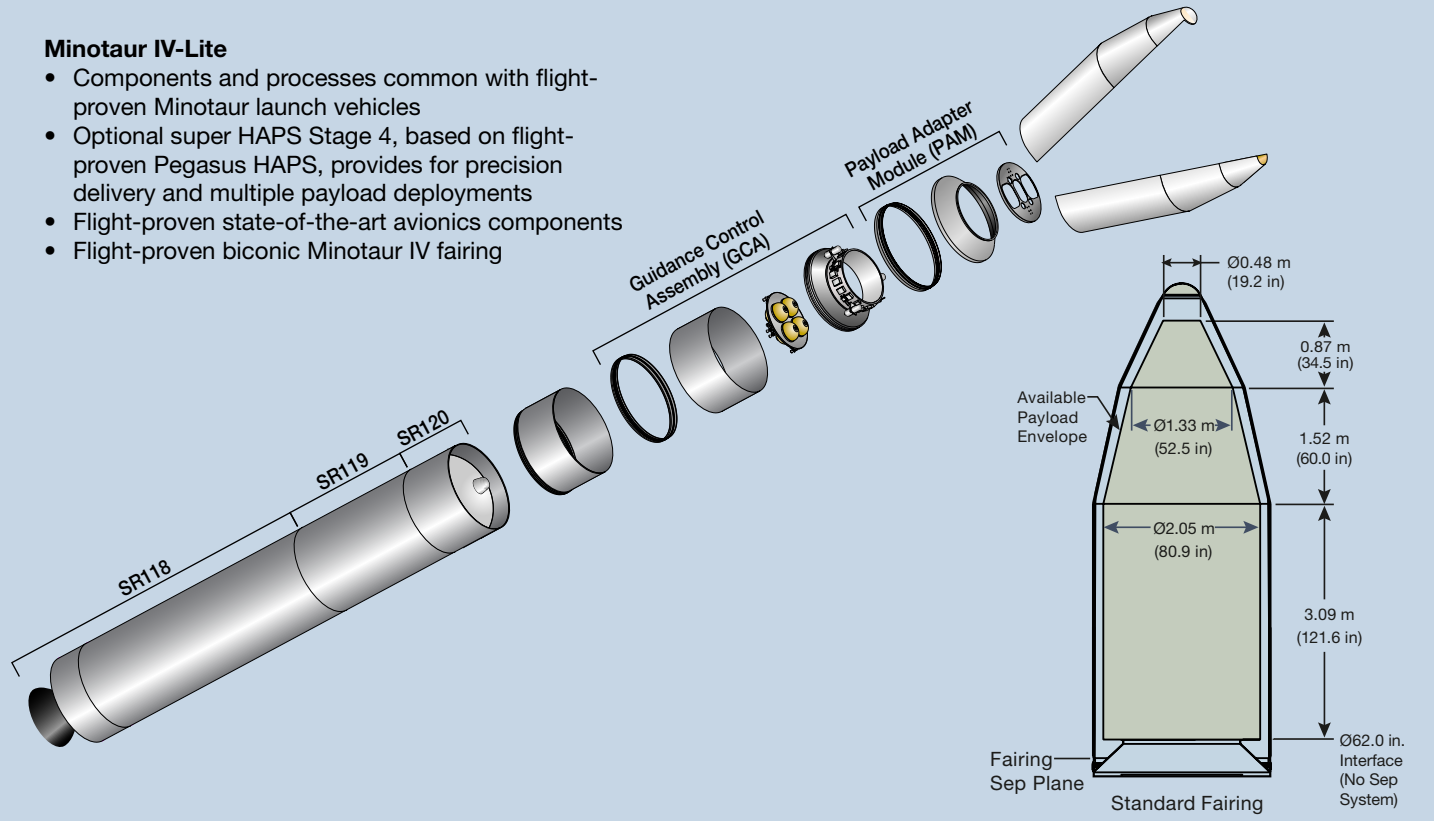


Minotaur IV-Lite Vehicle Mission History

| Flight # | Launch Date | Payload | Result |
|----------|-----------------|--------------------|---------|
| 17 | April 22, 2010 | HTV-1 (Suborbital) | Success |
| 22 | August 11, 2011 | HTV-2 (Suborbital) | Success |

Minotaur IV-Lite

- Components and processes common with flight-proven Minotaur launch vehicles
- Optional super HAPS Stage 4, based on flight-proven Pegasus HAPS, provides for precision delivery and multiple payload deployments
- Flight-proven state-of-the-art avionics components
- Flight-proven biconic Minotaur IV fairing



Technical Details

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