Hypersonic Propulsion

Northrop Grumman is ushering in a new era for faster, more survivable and highly capable weapons with our critically important hypersonic propulsion solutions.

1 Ballistic	2 Boost Glide	3 Scramjet
Developed for either short-range or intercontinental use, ballistic missiles use a solid- or liquid-fueled rocket for propulsion, and a self-guided system to follow a predictable flight path to a predetermined target.	Designed to attack close-range targets with maneuverability at the core, hypersonic boost glide propulsion vehicles briefly exit and reenter the atmosphere before gliding at hypersonic speeds to their targets. These unique distinctions make a boost glide vehicle extremely difficult to track and therefore an effective fast-attack method.	Scramjet propulsion advances speeds greater than Mach 5 and maneuverability never seen before in traditional missiles, and it also leads to a smaller form factor missile while offering more capability. This means platforms can carry more weapons in less space.

Features

Northrop Grumman brings together technology, capabilities, and existing and new facilities to design, test and produce multiple hypersonic propulsion solutions.

Missions We Support

- Extended long range air-to-ground missiles
- High-speed and hypersonic solutions for long range strike and air-to-air missiles

In Production

- Scramjet propulsion systems for first-of-its-kind hypersonic weapon

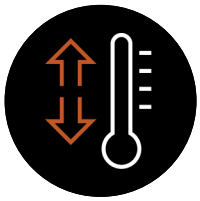
Our Advanced Weapons Edge

- 550-acre campus provides advanced propulsion manufacturing, development and testing for propulsion (including high performance solid propellant boosters, controllable-thrust propulsion, and hypersonic ramjet and scramjet propulsion systems), and electronic subsystems for thrust vectoring and attitude control systems
- Construction of a first-of-its-kind Hypersonics Capability Center in Elkton, Maryland, designed to provide full lifecycle production, from design and development to production and integration for hypersonic weapons
- Only defense company with integrated fuze and warhead design to maximize effectiveness and performance
- In-house aerothermal testing up to Mach 8

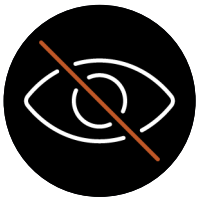
Benefits

- Extreme range extension
- Small form factor
- Platform agnostic
- Advanced materials

>Mach 5 Speeds



Withstands Extreme Temperatures



Difficult to Detect

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For more information, please contact:
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