

# Eagle-3

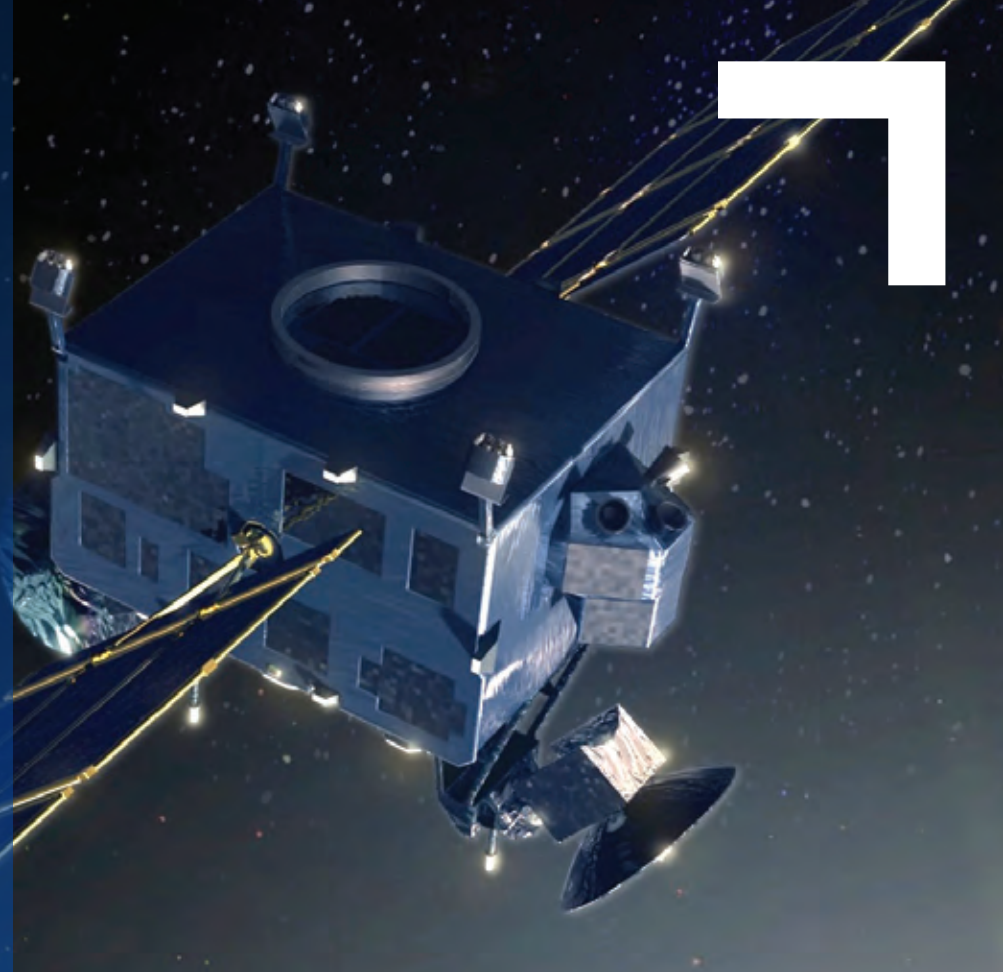
## A HIGHLY RELIABLE, RESILIENT SPACECRAFT FOR THE MOST CHALLENGING AND ESSENTIAL MISSIONS

From national security to science and exploration, Eagle-3 serves Class A and B missions, where failure is not an option.

This platform meets stringent integration and operational requirements for large payloads. It is also capable of providing the precision pointing and agility required by missile warning, strategic communications and other critical missions.

Eagle-3's electronics and thermal systems can be hardened to endure the most extreme environments, making it ideal for any orbit. Its proven hardware, software and reliable avionics ensure mission continuity.

Eagle-3 is part of a family of Northrop Grumman spacecraft buses that serve a full range of space system needs.



## ROBUST AND AGILE PAYLOAD ACCOMMODATIONS

Eagle-3's scalable, composite structure can accommodate up to 3000 kg of payload mass. Having successfully flown some of the most sensitive payloads ever built, Eagle-3 is ideal for missions that require custom thermal, electromagnetic and structural isolation. The shorter, stackable Eagle-3 variant supports multi-vehicle launches for missions requiring less payload volume.

## HIGH VALUE MISSION CAPABILITIES

- Proven guidance, navigation and control sensors, drive electronics, and software, enable precise internal attitude and ephemeris information without GPS.
- Reaction wheel, control moment gyro, magnetic torque rod and thruster options enable accurate pointing and high agility.
- Modular propulsion system provides up to 2600 m/s of delta v.
- Monopropellant, bipropellant, dual-mode and electric propulsion options achieve final orbit injection, maneuvering, attitude control and station keeping.

# Eagle-3

Meeting Critical Mission Needs



## High-Precision Attitude Control



**Delta V**  
260 to 2600 m/s (chemical, storable), optional electric propulsion



**Bus Features**  
Tailored to mission with active support subsystems



**Comms**  
SGLS, USB TT&C, Ka-band > 1 Gbps, plus options for other bands, cross links, trusted optical, etc.



**Payload Power**  
Up to 6.4 kW regulated or 11 kW battery-clamped, higher power available



**Launch Vehicle**  
Falcon 9/9H, Atlas V, Vulcan, Ariane 5/6, New Glenn



**Reliability**  
Class A or B



**Payload Mass**  
Up to 3000 kg



**Orbit**  
LEO, MEO, HEO, GEO, cis-Lunar, or planetary



**Design Life**  
5 to 15 years

## Eagle-3 Bus: Proven Reliability and Resiliency

- Meets highest mission assurance standards.
- Tailored for national missions.
- Adaptable to any orbit with electronics hardened for harsh environments.
- Full cross-strapped / redundant avionics / power design based on flight-proven avionics.
- Proven "dead bus" auto recovery.
- Agile, wide band communications, nuclear radiation hardening and other options.
- Precision ephemeris without GPS dependence.

## Tailorable Options & Variants

- Proven hardware components, processes and software - combined with its modular structure and subsystems-enable Eagle-3 variants tailored to any mission.
- Avionics and software suite offers tailorable command, control, communications and payload interface capabilities.
- On-orbit design life variable with redundancy and component qualification levels selected to meet cost and mass requirements.

## Five Eagle-3 variants offer a wide range of critical mission capabilities

More than 10 vehicles are proving Eagle-3's reliability on orbit, with additional units in development. High quality design, integration, assembly, test sets, facilities, and rigorous processes support Class A or B spacecraft requirements.



### E-3A

Full capability for national security missions, with resilience and survivability.



### E-3B

Smaller payloads for critical missions and minimum height bus, stackable up to four per launch.



### E-3C

USSF missions, Integrated SIS equipment, centralized payload manager.



### E-3D

Tailored to cis-lunar and deep space missions operations and payloads.



### E-3E

Environmental observation, weather, civil, and commercial Earth-orbit missions.

More Information:  
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## Heritage of reliability built in a first-in-quality facility

Our modernized factory ensures maximum production efficiency that helps make Class A and B Eagle-3s affordable, while decreasing build times to accommodate shorter schedules.