



Modular Space Vehicle Bus

*Rapid, multi-mission
spacecraft bus development*



THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

Modular Space Vehicle Bus

Rapid response to space

Combatant commanders need enhanced space operations for the warfighter now and in the future. Northrop Grumman is supporting the DoD's Operationally Responsive Space (ORS) office, Kirtland Air Force Base, N.M., in its efforts to achieve rapid access to space through Modular Space Vehicles (MSV).

The concept for Operationally Responsive Space is to meet new requirements of Joint Force Commanders within months — quickly developing and delivering new capabilities into warfighters' hands on the battlefield.

In collaboration with the ORS office and Rapid Response Space Works at Kirtland AFB and NASA's Ames Research Center, Moffett Field, Calif., the Northrop Grumman-led team will evolve reconfigurable, modular bus architectures into hardware development, demonstrations and operations for rapid deployment on ORS missions.

Modular bus development

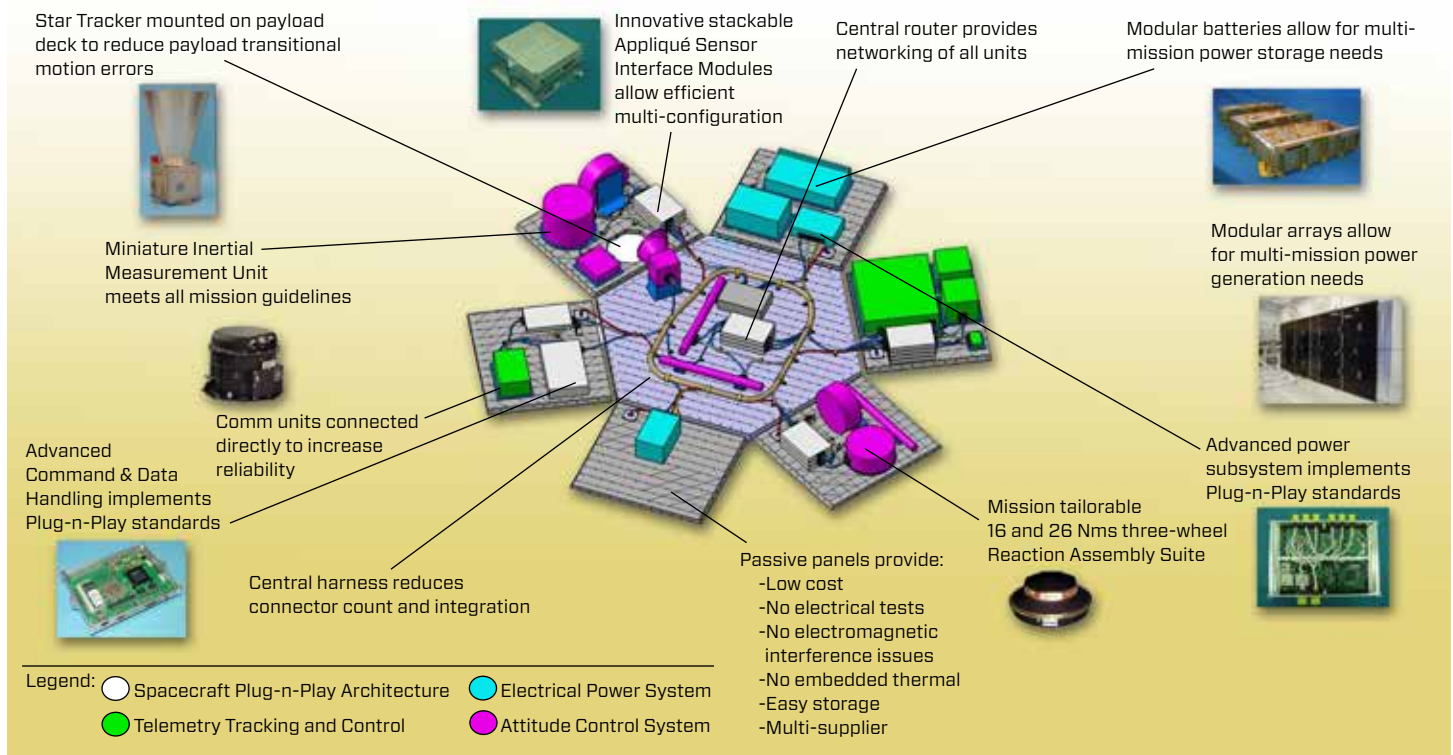
Northrop Grumman is building a multi-mission spacecraft bus architecture that employs a Modular Open System Approach (MOSA), using Plug-n-Play technology to allow for rapid manufacturing, integration and testing. This approach provides innovative, affordable and expedient solutions for the U.S. combatant commanders and opens new solution possibilities to additional customers.

The MSV bus offers the warfighter responsive multi-mission capabilities, with modular RF and electro-optical payloads for:

- Communications
- Tactical persistent intelligence, surveillance and reconnaissance
- Tactical electronic support
- Space situational awareness

The 30-month schedule includes developing, building and delivering the bus to Rapid Response Space Works for payload integration and space vehicle integration and test. The bus is designed to be assembled and integrated with the payload in a matter of days rather than months. Northrop Grumman will also provide launch and on-orbit mission support.

The MSV bus addresses the challenges of fast turnaround, rapid prototyping and development, and lower costs, providing responsive space capabilities that fit the more immediate needs of our military forces.



MSV Spacecraft Bus Architecture Features

www.northropgrumman.com/aerospacesystems

© 2014 Northrop Grumman Systems Corporation

Printed in USA

Marcom Space Park

12-0334 • AS • 100 • 12/13 • 55540

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN