

THE VALUE OF PERFORMANCE.

**NORTHROP GRUMMAN**

## **Mission Robotic Vehicle (MRV)<sup>TM</sup>**

*A Robotically Enabled Rendezvous Proximity Operation and Docking (RPO&D) Bus For SpaceLogistics*

**T**he Mission Robotic Vehicle (MRV) is Northrop Grumman's next generation commercial servicing vehicle. The MRV leverages the heritage Rendezvous Proximity Operations and Docking (RPOD) system of Northrop Grumman's Mission Extension Vehicle (MEV)<sup>TM</sup> and adds the incremental capability of a robotics module. This unique spacecraft represents an evolution of the MEV product line which expands and addresses new space logistics markets. Northrop Grumman is building these spacecraft for SpaceLogistics, a wholly owned subsidiary of the company.

The primary application of the MRV is to transport and install Mission Extension Pods (MEPs)<sup>TM</sup> or other augmentation payloads to client satellites. The MRV incorporates all of the capabilities of an MEV, including RPOD and life extension, and builds on MEV's capabilities by leveraging its sophisticated robotics module to:

- Perform near transient free installation of MEPs or other augmentation payloads
- Perform basic repairs
- Perform detailed inspections
- Dock with non-standard client spacecraft interfaces

### **Facts At A Glance**

- Robotically installs MEPs
- Detailed robotic inspections
- Robotic repair services

### **Leverages the MEV design**

- Structure
- Avionics
- Propulsion
- Dual Fault Tolerant RPOD

### **Incremental Modifications**

- Robotics Operations Module
- Interfaces to carry 12 MEPs
- Additional Xenon tanks
- Increased communications bandwidth

### **More Information**

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FS002\_18\_1

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