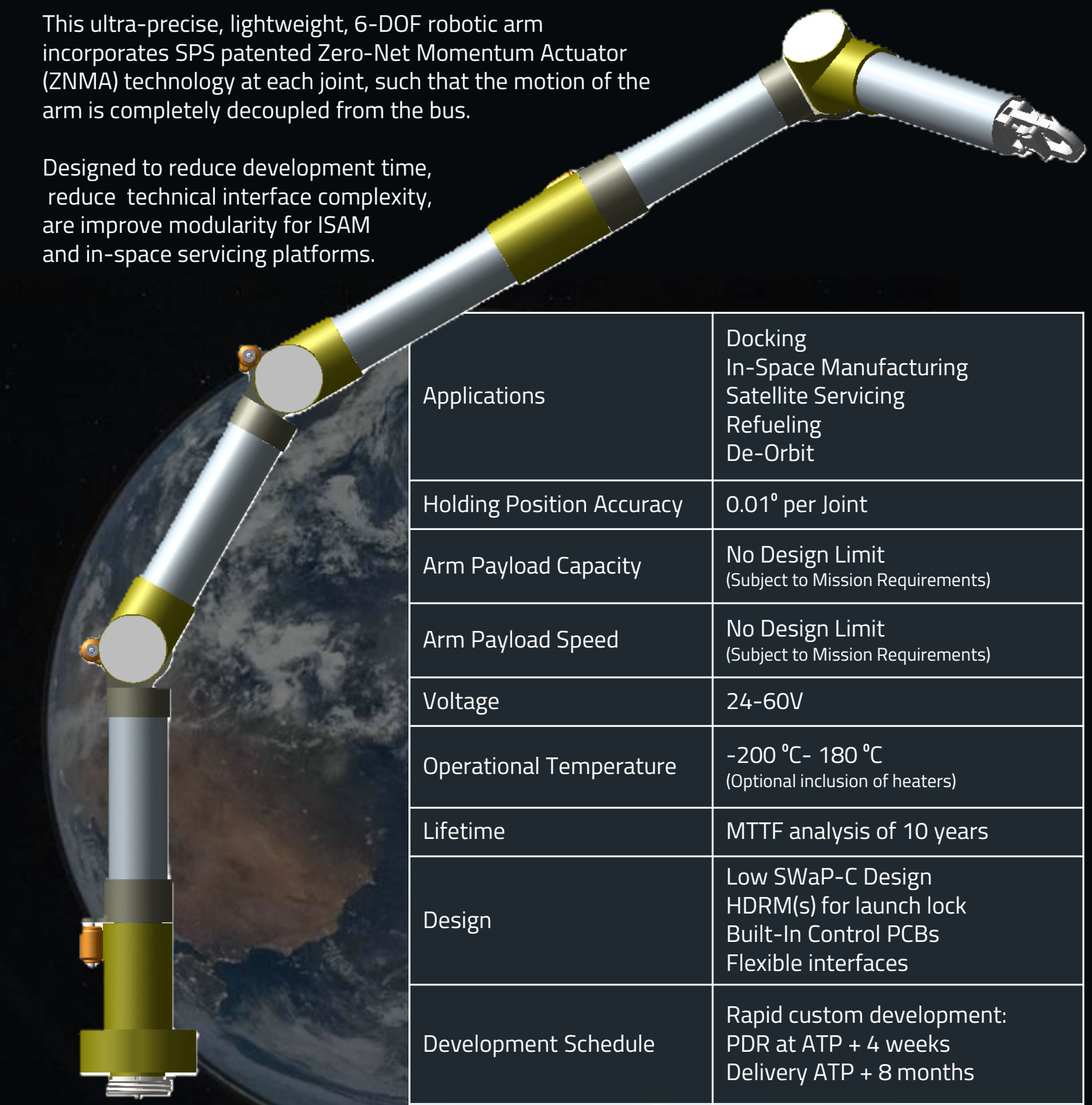
ZNMA Robot Arm

Robotic manipulation with no impact on the bus.

SPACE PRECISION SYSTEMS

This ultra-precise, lightweight, 6-DOF robotic arm incorporates SPS patented Zero-Net Momentum Actuator (ZNMA) technology at each joint, such that the motion of the arm is completely decoupled from the bus.

Designed to reduce development time, reduce technical interface complexity, are improve modularity for ISAM and in-space servicing platforms.



Applications	Docking In-Space Manufacturing Satellite Servicing Refueling De-Orbit
Holding Position Accuracy	0.01° per Joint
Arm Payload Capacity	No Design Limit (Subject to Mission Requirements)
Arm Payload Speed	No Design Limit (Subject to Mission Requirements)
Voltage	24-60V
Operational Temperature	-200 °C- 180 °C (Optional inclusion of heaters)
Lifetime	MTTF analysis of 10 years
Design	Low SWaP-C Design HDRM(s) for launch lock Built-In Control PCBs Flexible interfaces
Development Schedule	Rapid custom development: PDR at ATP + 4 weeks Delivery ATP + 8 months

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Background Photo Credit: NASA