ARCHINAUT ENABLED SATELLITES AND SPACE STRUCTURES

IN-SPACE MANUFACTURING & ASSEMBLY SYSTEM ENABLING SUPERIOR SPACE SYSTEMS

+

Made In Space, Inc. (MIS) develops state-of-the-art space manufacturing technology to support exploration, national security, and industrialization of the space environment. MIS has worked with NASA, DoD, and various commercial entities on space-related projects.

ARCHINAUT OVERVIEW

Archinaut-progression

Developing technologies that enable on orbit manufacturing and assembly including the ability to 3D print in microgravity and in thermal vacuum, and robotic arm capabilities.

The first Archinaut mission, Archinaut One, creates 20 m^2 (5.2 kW) of solar arrays from an ESPA-class bus by manufacturing 10 m booms on-orbit.

Archinaut can be utilized to provide solar array systems for ESPA-class satellites, large satellites, and other spacecraft.

By improving the packed volumetric efficiency by an order of magnitude and eliminating mass from deployment mechanisms, Archinaut can be utilized to provide solar array systems for ESPA-class satellites, large satellites, and other spacecraft.

Future Archinaut applications include persistent platforms, interferometers, large apertures, and a solar power generationfor a variety of structures.

TECHNOLOGY OVERVIEW

Archinaut as part of NASA's Tipping Point program through. The Phase II effort for Archinaut was awarded in 2019.

Archinaut was awarded in 2019. Archinaut is a free-flying space manufacturing and assembly capability that enables advanced, space-optimized spacecraft and structures to be produced on-orbit.

VALUE OF FUTURE ARCHINAUT ENABLED SPACE STRUCTURES AND SYSTEMS:

+ *Structures manufactured and optimized for the space environment, instead of designed to withstand launch and deploy using traditional mechanisms.*

+ *Eliminated mass from traditional deployment mechanisms resulting in the ability to create larger structures for a reduced cost.*

+ *Solar array structures with more power and significantly less cost than traditional systems.*

+ *Booms, reflectors, antennas that are larger and more efficient than what is possible through SOA traditional deployable options.*