

ASTRANIS

COMMUNICATIONS SERVICES PROJECT PARTNERSHIP

NASA is commercializing satellite relay services for future robotic science missions in low Earth orbit. The Communications Services Project is leading agency efforts by investing in the U.S. satellite communications industry to develop and demonstrate powerful services for science missions launching as early as 2031.

Astranis Space Technologies Corp. (Astranis) has partnered with the Communications Services Project through a Nonreimbursable Space Act Agreement to grow the U.S. satellite communications market and expand service offerings for future missions.

VISION

Astranis builds and operates small satellites in high orbits, providing broadband connectivity and position, navigation, and timing services. Their approach to support future spaceflight missions incorporates an integrated space and ground segment to relay data between spacecraft in near-Earth orbit and mission operation centers on Earth.

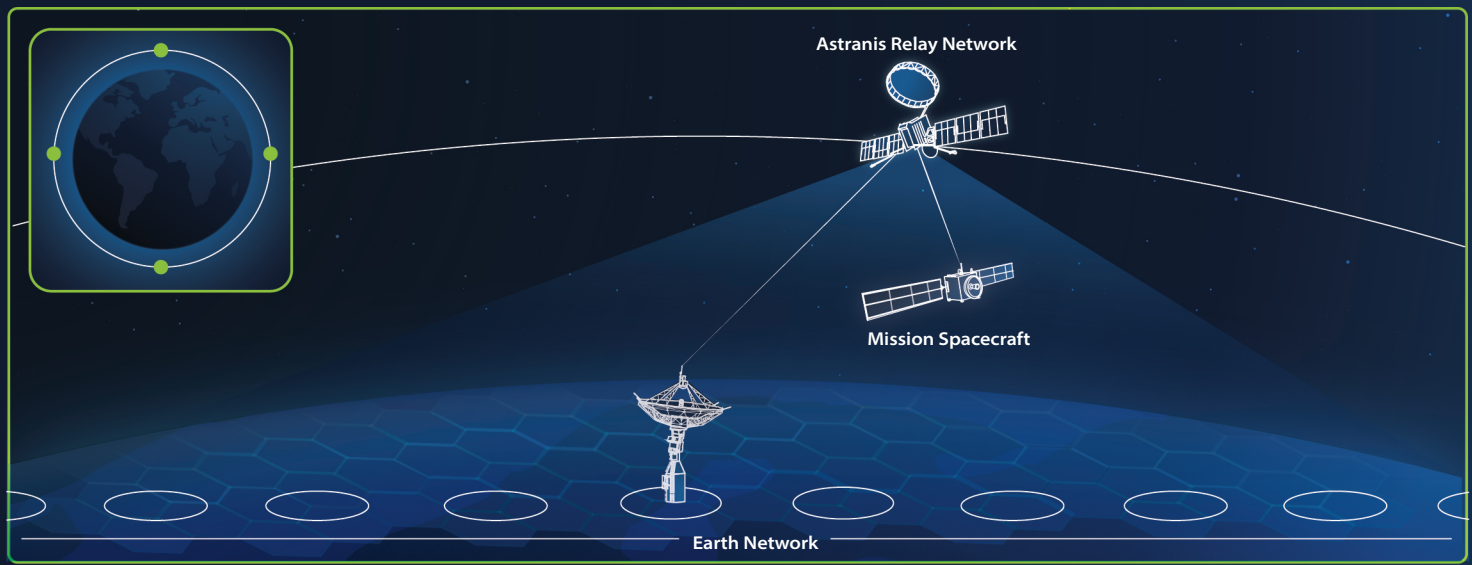
Astranis currently operates its MicroGEO Prime spacecraft for commercial and government users to provide high throughput satellite communications services for global customers. Astranis is also developing

a second generation of MicroGEO called Omega, with significantly increased capacity to support growing global demand.

The Omega spacecraft will play a key role in Astranis' approach to offer cost-effective, high-throughput, end-to-end relay services covering low Earth orbit to geosynchronous orbit. Through a nonreimbursable partnership with NASA, Astranis will explore new ways to leverage advanced satellite relay capabilities to support future spaceflight users.



NETWORK ARCHITECTURE



Satellite relay services will be enabled by clusters of Astranis Omega spacecraft, spaced approximately 90 degrees apart in geostationary orbit, providing completed global coverage.

KEY FEATURES

- Radiation-hardened design leveraging a rapid satellite design and build cycle
- Software-defined radio payload allowing for dynamic bandwidth and power
- Geostationary network enabling flexible coverage using lower cost satellites and ease of operations
- Dedicated bandwidth as a service for terrestrial and mobility users, ranging from MHz lease to a full, end-to-end service

LEARN MORE

The Communications Services Project is managed by NASA's Glenn Research Center, under the direction of the SCaN (Space Communications and Navigation) Program within NASA's Space Operations Mission Directorate. SCaN operates and manages the communications and navigation systems that are critical to every NASA missions, while facilitating a seamless transition from near-Earth government-owned communications assets to commercial alternatives.

To engage with NASA's Communications Services Project, contact scan@nasa.gov.

