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Redwire Technology Enables NASA Planetary Defense Test Mission

JACKSONVILLE, Fla.--(BUSINESS WIRE)-- Redwire Corporation (NYSE: RDW), a leader in space infrastructure for the next generation space economy, is providing critical navigation components and Roll-Out Solar Array (ROSA) technology for NASA's Double Asteroid Redirection Test (DART) mission, the world's first planetary defense test mission, which is set to impact the binary asteroid system Didymos on September 26, 2022, at 7:14 p.m. EDT.

Powered by two ROSA wings and guided by digital sun sensors produced by Redwire, DART has successfully traveled roughly 7 million miles over nine months since its launch on November 24, 2021. DART's ROSA wings have performed flawlessly, delivering power to the spacecraft and sensitive guidance instruments throughout the mission. Redwire's ROSA and digital sun sensor technology will continue to power and guide DART until the spacecraft's moment of impact.

"Redwire is proud to have provided critical systems to APL and NASA for this historic endeavor to advance planetary defense capabilities," said Andrew Rush, President and COO of Redwire. "Redwire's innovative, flight-proven power and navigation technology, which have helped enable this first-of-its-kind mission for millions of miles, continues to expand our understanding of the solar system and positively impact our lives on Earth."

Redwire delivered two ROSA wings through a contract with Johns Hopkins Applied Physics Laboratory (APL). The two solar array wings, which measure 28 feet (8.5 meters) long and 4.67 feet (1.42 meters) wide when fully deployed, have been powering the entire spacecraft throughout the mission. Each wing produces 3.39 KW of power at 99 watts per kilogram and a volumetric power density of 50 KW per cubic meter. Both wings also featured Redwire's Flexible Array Concentrator Technology Solar Power Modules as a Transformational Solar Array demonstration. Redwire also delivered a Digital Sun Sensor system consisting of five Digital Sun Sensor heads and one Digital Sun Sensor electronics processing unit, which have been used for attitude control and fail-safe recovery throughout the mission.

DART is currently approaching the binary asteroid system Didymos, where it will impact the moonlet, Dimorphos, to adjust its speed and trajectory. This mission is the first demonstration of the kinetic impactor technique to change the trajectory of an asteroid in space. As the first planetary defense test mission, DART will demonstrate critical technology that could one day be used to protect Earth from a dangerous asteroid or comet.

Redwire's ROSA technology is compact, modular and scalable, making it ideal for use on various spaceflight platforms. Redwire is also producing various modular versions of ROSA for many government and commercial spaceflight applications, including the International Space Station and the Power and Propulsion Element for NASA's Gateway program.

Redwire's Digital Sun Sensor has a rich flight heritage, supporting many missions and

spacecraft, including Mars Pathfinder, Mars Exploration Rovers A and B, Mars Science Lander Curiosity, Mars 2020 Perseverance, IRIS, Parker Solar Probe, STEREO, Cassini-Huygens and many others.

To learn more about Redwire's involvement in this historic mission, visit www.redwirespace.com/missions/dart/

About Redwire

Redwire Corporation (NYSE: RDW) is a leader in space infrastructure for the next generation space economy, with valuable IP for solar power generation and in-space 3D printing and manufacturing. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

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