Nanoracks brings CubeSats, Nematodes, and Blockchain Technology to the International Space Station

Dec 10, 2019 – On December 8, 2019, the SpaceX Dragon cargo ship arrived at the International Space Station carrying another mission full of unique payloads and experiments from Nanoracks' customers. Along with around 5,700 pounds of cargo, Nanoracks delivered four CubeSats, Pheronym's nematode research, and blockchain hardware wallet technology from startup SpaceChain.

Part of Nanoracks 17th CubeSat deployment mission using the Company's commercially operated satellite deployers were four CubeSats from a variety of customers. The CubeSats delivered in this mission included: SORTIE (Astra LLC), CryoCube (Sierra Lobo Incorporated/NASA), QARMAN (von Karman institute), and notably, AzTechSat-1, a collaborative program between NASA Ames and Universidad Popular Autónoma del Estado de Puebla (UPAEP) in Mexico.

AzTechSat-1 is the first satellite built by students in Mexico for deployment from the Space Station, and is part of NASA's CubeSat Launch Initiative, which offers universities, high schools and non-profit organizations the opportunity to fly small satellites. The satellite is a technology demonstration mission testing communication within a satellite network.

"At Nanoracks, we pride ourselves on providing opportunities for emerging space programs,' says Nanoracks Senior Mission Manager, Tristan Prejean. "It was an honor to work with UPAEP and NASA on this historic satellite mission. Having the leaders of the Mexican Space Agency and the students who worked on this mission all with us and our partners at NASA at last week's launch was remarkable, and we look forward to seeing what comes next from these incredible students!"

Also, on this mission is a Nematode experiment from Pheronym. In collaboration with the United States Department of Agriculture (USDA), Pheronym launched nematodes, or microscopic roundworms, to the Space Station for an investigation focused on environmentally friendly agricultural pest control. Without pest control farmers could lose up to 80% of their crops, and entomopathogenic nematodes are beneficial because of naturally occurring bacteria in their gut that kills problematic insects and lowers the need for broad-spectrum chemical insecticides.

Lastly, on this mission is the first-ever blockchain technology demonstration that has reached the International Space Station. SpaceChain is a community-based space platform that combines space and blockchain technologies to build the world's first open-source blockchain-based satellite network, allowing users to develop and run decentralized applications in space.

SpaceChain is running a technology demonstration mission inside a Nanoracks NanoLab, where they will test establishing receipts, authorizations, and retransmissions of a blockchain transaction, commonly known as multisig transactions. This demonstration solely interacts within Nanoracks' commercial platform on Station

“This launch yet again shows the depth of opportunities that the commercial pathway to low-Earth orbit can provide,” says Nanoracks Director of Payloads Conor Brown. “This launch was a fantastic way to round out 2019, and we’re looking forward to keeping the Space Station crew busy as ever in 2020 with some incredible research.”

To stay updated on Nanoracks on-orbit activities, be sure to follow @Nanoracks on Twitter.

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About Nanoracks

Nanoracks LLC, an XO Markets company, is the world’s first commercial space station company with an existing customer base. Nanoracks believes commercial space utilization will enable innovation through in-space manufacturing of pharmaceuticals, fiber optics – and more, allow for transformational Earth observation, and make space a key player in finding the solution to Earth’s problems.

Today, the company offers low-cost, high-quality solutions to the most pressing needs for satellite deployment, basic and educational research, and more –in over 30 nations worldwide. Since 2009, Texas-based Nanoracks has truly created new markets and ushered in a new era of in-space-services, dedicated to making space just another place to do business.

In 2017, the Company announced their long-term plans via the Nanoracks Space Outpost Program. This program is dedicated to the repurposing of the upper stages of launch vehicles in-space and converting these structures into commercial habitats, both humanly and robotically tended, throughout the solar system.

XO Markets, the world’s first commercial space holding company, includes Nanoracks LLC, DreamUp, Nanoracks Space Outpost Europe (Nanoracks-Italy), and Nanoracks UAE.