

## Arkisys Releases Spacecraft Visiting Vessel Handbook for Outpost

Arkisys Releases Visiting Spacecraft Operations Handbook for The Port

LOS ALAMITOS, CA, UNITED STATES, November 4, 2021 /EINPresswire.com/ -- <u>Arkisys</u> has released the initial version of its Visiting Vessel Handbook for its orbital outpost architecture, the Port. The Arkisys Port System provides a long duration platform capable of enabling commercial hosting and precision mission services from Low Earth Orbit (LEO) out to cislunar space. Each Port operates independently depending upon the orbit, and supports the transfer of payload and cargo to and from the platform while managing the arrivals and departures of spacecraft capable of maneuvering and operating in close proximity (or attached) to a Port Module.

Arkisys is building the world's first autonomous robotically enabled Commercial Space Outpost for Assembly, Integration and Resupply. Led by a renowned team of space industry pioneers, Arkisys is assembling the first incremental space infrastructure step through an agile aggregatable platform that directly supports customer needs today, with services to expand and create new markets tomorrow. Through adaptive hardware and software interfaces, cloud-native operations, a low cost service menu and options for fast launch and data transport, the Port (https://www.arkisys.com/the-port) is the first on-orbit commercial nexus able to host arrivals and departures of visiting vessels with new cargo/payloads and provide multiple capabilities and services for business expansion into Space.

The sequence of arrival or rendezvous and proximity operations (RPO) at the Port consists of a common sense set of phases as a function of the vehicle or payload distance from the Port, its velocity relative to the Port, and declared activity. Declared activities within the Port's control volume include: arrival planning, arrival, hold, cargo transfer, dock/undock, preparing to depart, or and departure from the Port.

"Developing the standard procedures for visiting spacecraft operating in proximity and transferring payloads to and from the Port, is a key milestone that highlights the program's transition from concept drawings to an orbital platform for commerce. The Port's initial operations manual provides the necessary framework to start the detailed work with both orbital logistics and payload hosting customers and coordinate with regulatory organizations to ensure safety of flight." - Dr. Darren Garber, NXTRAC

A critical milestone for the company and the industry, the requirements detailing the necessary

coordination, capabilities, fiducials, timelines and anomaly responses for objects operating in proximity to the Port to ensure safety of flight are specified in the handbook manual. In all cases, the RPO activities are preplanned with explicit contingencies detailed prior to launch of the object client's cargo with the Port Ground. The VVH is meant for orbital transfer vehicles (OTV's), tugs, RPO capable satellites, maneuverable upper stages, etc.

Targeting a launch date in 2023, the initial Port Module will be the first capable commercial platform of its kind. Designed, manufactured, and launched in the US, this first LEO Port is meant to support international customers, through launch and orbital vessels from national/ international departure points around the globe. This past year, the Port successfully ran a detailed day in the life (DITL) scenario against its design for validation and verification of operations, and recently unveiled its first "wedge" that makes up a Port Module systems architecture for interoperability and aggregation.

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About Arkisys, Inc.

Arkisys, Inc., located in Los Alamitos, California with locations in France, Argentina, and Singapore, is a provider of advanced spacecraft architectures, structures and platform solutions. Arkisys is building the Port which is a robotic Space Outpost that provides multiple capabilities and services for a global customer base. For more information, visit <u>https://www.arkisys.com</u>.

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