JOINT PRECISION AERIAL DELIVERY SYSTEMS MICROLIGHT WEIGHT (JPADS MLW)

OVERVIEW:

Joint Precision Aerial Delivery Systems (JPADS) is a family of systems that autonomously controls the system through its descent to the target. The JPADS primarily consist of a high-glide ram air Parafoil and Autonomous Guidance Unit (AGU) and are capable of delivering between 10 to 42,000lbs from altitudes as high as 24,500ft. The JPADS family include a variety of Science and Technology systems, which have seen multiple rapid fielding initiatives and urgent releases, and include three Programs of Record; Product Manager Force Sustainment System's (PdM FSS) JPADS 2,200 lbs (JPADS 2K), PdM FSS's 10,000 lbs (JPADS 10K), and US Marine Corp's (USMC) JPADS UltraLight Weight (JPADS ULW).

MLW Drop from Tigershark UAS

JPADS provides the ability to be deployed from high altitudes and at significant horizontal distance from the target which reduces surface to air threats to the aircraft and allow for stealthy insertion or resupply. JPADS' accuracy and reliability allow for critical resupply in austere locations while consistently maintaining its accuracy across a wide operating altitude and weight range. This accuracy reduces ground dispersion and minimizes ground personnel exposure during airdrop recovery.

MLW in flight

The JPADS have been designed to operate independent of any support equipment and can be deployed with minimal user input. In addition, the systems are compatible with the U.S. Air Force JPADS Mission Planner that is used when deploying from USAF aircraft. The JPADS mission planner consists of the Consolidated Airdrop Tool (CAT) software, used to assimilate various weather profiles to generate the Launch Acceptability Region (LAR); a Dropsonde and Dropsonde receiver, used to gather near real time wind information; and a GPS rebroadcast system, used to provide the JPADS systems with GPS in the aircraft prior to deployment.

DESCRIPTION:

NSRDEC's JPADS Microlight Weight (JPADS MLW) project supports a weight range 10-170lbs suspended and utilizes an AGU and Parafoil unique to the weight class. The JPADS MLW supports the unique ability to provide critical medical supplies/equipment including blood to the battlefield, demonstrated during the Joint Medical Distributed Support Evacuation (JMDSE) Joint Capability Technology Demonstration (JCTD); be compatible with "smart" payloads, such as Unattended Ground Sensors (UGSs) or Unmanned Ground Vehicles (UGVs), allowing for the stealthy insertion of this equipment and/or increasing the UGS/UGV's mission's "reach;" and provide a flexible aircraft deployment interface, allowing services the self-supporting ability to perform aerial resupply with aircraft/Unmanned Aerial Vehicles (UAVs)/unmanned helicopter available to them.

NSRDEC's JPADS MLW project was stood up as a technology demonstration and there is no formal requirement. However, NSRDEC can support a variety of additional customer unique requirements that may not yet be formalized in a requirement.

POINT OF CONTACT:

US Army Natick Soldier Research, Development & Engineering Center
Aerial Delivery Directorate
COMM: (508) 233-4495
Email: usarmy.natick.rdecom-nsrdec.mbx.nati-amsrd-nsc-ad-b@mail.mil

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