

WHO

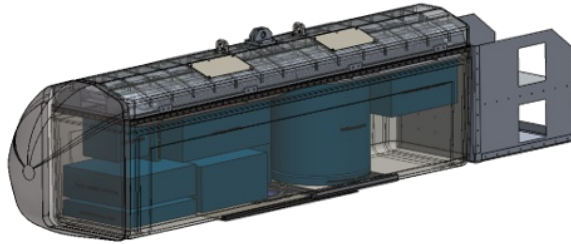
SYSCOM: NAVAIR

Sponsoring Program: PMA 264, Air ASW Systems

Transition Target: Air Platform Sensors

TPOC:
(301)342-2034

Other transition opportunities:



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WHAT

Operational Need and Improvement: With movement toward Unmanned Aerial Vehicles (UAV) as new platforms for sensors and weapons, the practice of a design for each new sensor is unrealistic and highlights the need for an innovative and lightweight, modular solution. All systems to be carried by UAV's must carefully consider the size and weight restrictions imposed by the UAV's limited capacities. Novel approaches for mounting sensor components, and system packaging, and assembling could lead to the use of extremely light weight, modular sensors. Versatility, cost of manufacture, vibration dampening, strength, durability and low coefficient of thermal expansion are all important considerations of a new, light weight packaging approach.

Specifications Required: Maintain an internal temperature of 70° F +/- 10 °F; Maintain positive nitrogen pressure; Modular mounting of payload; Pod must weigh less than 125 lb empty; Pod must be able to continuously reject 2000 watts of heat when sensor is in operation; Must attenuate vibrations to payload.

Technology Developed: Developed a Lightweight Sensor Pod for the MH-60R Capable of Supporting NAVAIR Provided Electrical Equipment, Including a Laser System High Strength-to-Weight (125 lb Weight Empty, 175 lb Payload) Highly Effective Heat Rejection Without Direct Contact to Ambient Air All Key Technologies Tested in Lab Prior to Deployment

Warfighter Value: Optimal Sensor Environment and Sensor Viewing to Provide Superior Sensor Performance
Detection of Naval Mines Utilizing NAVAIR Deep Penetrating Laser System
High Geo-physical Detection by Mitigation of Error Caused by Vibration
Reconfigurable Electronic Enclosure with Environmental Protection and Temperature Control

WHEN

Contract Number: N68335-19-C-0012 **Ending on:** January 15, 2022

Milestone	Risk Level	Measure of Success	Ending TRL	Date
CONCEPTUAL DESIGN	N/A	TRADE ON COMPETING REQUIREMENTS AND VALIDATE APPROACH	2	December 2018
PRELIMINARY DESIGN REVIEW	N/A	MODEL AND PRELIMINARY ANALYSIS	2	September 2019
CRITICAL DESIGN REVIEW	N/A	DRAWINGS AND ANALYSIS	2	January 2020
MANUFACTURING AND ASSEMBLY	Med	TESTWORTHY ARTICLE	2	October 2020
TESTING	Med	TEST PLANS AND REPORTS	3	November 2020
FINAL REPORT (BASE+OPTION)	Med	FINAL REPORT AND DELIVERY	3	January 2022

HOW

Projected Business Model: License design to OEM or low-scale in house fabrication.

Company Objectives: Develop a multiple use electronic store for a variety of payloads to serve DOD and other customer needs.

Potential Commercial Applications: Intelligence, Surveillance and Reconnaissance (ISR) or test article for novel systems developed at research institutions, terrain mapping, urban mapping and planning, and agriculture and forest mapping.