# Dossier: Knight Aerospace Medical Systems, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,608.00

**Award Date:** 2023-07-07

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Knight Aerospace Medical Systems, LLC specializes in the design, manufacture, and integration of modular, roll-on/roll-off (RORO) medical systems and patient transport solutions for fixed-wing and rotary-wing aircraft. Their primary business focuses on providing rapidly deployable and customizable aeromedical evacuation (AE) capabilities, enabling military and civilian organizations to quickly convert cargo aircraft into mobile intensive care units. Their core mission is to save lives by enhancing the speed and effectiveness of patient transport in challenging environments. They aim to solve the problem of limited AE capacity and the need for standardized, rapidly adaptable medical configurations in various aircraft platforms. Their unique value proposition lies in their ability to offer certified, adaptable, and self-contained medical modules that can be easily installed and removed from a wide range of aircraft, providing significant flexibility and cost-effectiveness compared to dedicated air ambulance fleets or custom aircraft modifications.

**Technology Focus:**

* Development and integration of RORO medical modules, including Intensive Care Units (ICUs), Patient Support Pallets, and Isolation Units, that meet FAA and military airworthiness standards. These modules provide essential medical equipment such as ventilators, monitors, and oxygen systems.
* Design and implementation of integrated power, environmental control, and communication systems within the modules, ensuring independent operation during flight. Their systems are designed for rapid integration and de-integration, with typical conversion times measured in hours, not days.

**Recent Developments & Traction:**

* In May 2023, Knight Aerospace announced a contract with the U.S. Air Force to deliver additional Aeromedical Evacuation (AE) equipment. The specific value and terms of the contract were not publicly disclosed.
* In 2022, Knight Aerospace continued to support the COVID-19 pandemic response by providing isolation units and patient transport solutions to various government and healthcare organizations.
* Knight Aerospace expanded its product offerings to include enhanced telehealth capabilities within its medical modules, enabling real-time remote consultations during patient transport.

**Leadership & Team:**

* Clayton "Clay" Swain, CEO:\*\* Has led Knight Aerospace through significant growth and expansion. Information on his specific prior experience is limited in readily available open-source information, but his leadership has been critical in securing government contracts and partnerships.
* The company's team includes engineers, medical professionals, and former military personnel with expertise in aerospace engineering, medical device design, and aeromedical evacuation operations.

**Competitive Landscape:**

* Stretcher Support Systems (SSS):\*\* SSS offers similar patient handling and support systems, but may not offer the same degree of full-module integration and customization for a variety of aircraft platforms that Knight Aerospace provides.
* LifePort (now part of Sikorsky):\*\* LifePort specializes in medical interiors for aircraft, but Knight Aerospace's RORO modularity offers a distinct advantage in terms of rapid deployment and multi-platform adaptability. Knight's specialization in rapid conversion and adaptability provides a key differentiator.

**Sources:**

1. [https://www.knighthaerospace.com/](https://www.knighthaerospace.com/)

2. [https://www.defenseworld.net/2023/05/08/knight-aerospace-wins-usaf-contract-for-aeromedical-evacuation-equipment.html](https://www.defenseworld.net/2023/05/08/knight-aerospace-wins-usaf-contract-for-aeromedical-evacuation-equipment.html)

3. [https://www.prweb.com/releases/knight\_aerospace\_ceo\_clay\_swain\_named\_to\_the\_san\_antonio\_business\_journal\_s\_2018\_40\_under\_40\_list/prweb15349931.htm](https://www.prweb.com/releases/knight\_aerospace\_ceo\_clay\_swain\_named\_to\_the\_san\_antonio\_business\_journal\_s\_2018\_40\_under\_40\_list/prweb15349931.htm)