# Dossier: DB Systems, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,806.00

**Award Date:** 2023-06-20

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

DB Systems, Inc. specializes in the design, development, and manufacturing of advanced radio frequency (RF) and microwave communication systems, primarily serving the defense, aerospace, and telecommunications sectors. Their core mission is to provide high-performance, reliable, and secure communication solutions for challenging operational environments. DB Systems addresses the increasing demand for higher bandwidth, improved spectral efficiency, and enhanced security in modern communication networks, especially those operating in congested and contested electromagnetic spectrum environments. Their unique value proposition lies in their ability to customize and integrate RF and microwave technologies, including filters, amplifiers, converters, and integrated assemblies, to meet specific customer requirements, often involving stringent size, weight, and power (SWaP) constraints.

**Technology Focus:**

* Tunable RF Filters:\*\* Offers a range of electronically tunable RF filters, providing rapid frequency agility and interference mitigation capabilities. These filters can achieve tuning speeds up to 100 microseconds across broad bandwidths (e.g., 2 GHz to 18 GHz) with high selectivity (e.g., 60 dB rejection at 10% offset).
* High-Power Amplifiers:\*\* Develops GaN-based high-power amplifiers (HPAs) for radar, electronic warfare, and communication systems. Their HPAs demonstrate high efficiency (e.g., >50% drain efficiency) and output power levels up to hundreds of watts in compact form factors.

**Recent Developments & Traction:**

* DoD Contract Award (November 2022):\*\* Awarded a $7.5 million contract from the US Department of Defense for the development of advanced RF filtering technology for enhanced spectrum sharing in contested environments.
* Partnership with Lockheed Martin (March 2023):\*\* Announced a strategic partnership with Lockheed Martin to integrate DB Systems’ tunable filters into Lockheed Martin's electronic warfare systems.
* Product Launch: DRF-4000 Series (June 2024):\*\* Launched the DRF-4000 series of digitally controlled RF filters, featuring enhanced tuning speed, wider bandwidth, and improved linearity compared to previous generations.

**Leadership & Team:**

* David Branch, CEO:\*\* Founder and CEO of DB Systems, Inc. Prior to founding the company, he held senior engineering positions at Rockwell Collins, focusing on RF and microwave system design.
* Sarah Jenkins, CTO:\*\* Holds a Ph.D. in Electrical Engineering and has over 15 years of experience in RF and microwave component and system design. Previously led the RF engineering team at a major defense contractor.

**Competitive Landscape:**

* Qorvo:\*\* A major player in RF solutions for various markets, including defense. DB Systems differentiates itself by focusing on highly customized and specialized solutions, particularly tunable filters for demanding applications, while Qorvo offers a broader range of standardized RF components.
* Analog Devices, Inc. (ADI):\*\* Another broad provider of RF solutions. DB Systems distinguishes itself through its emphasis on integrated RF assemblies and its expertise in GaN-based high-power amplifiers specifically tailored for defense applications.

**Sources:**

1. [https://dbsyst.com/](https://dbsyst.com/)

2. [https://www.microwavejournal.com/articles/39754-rf-filter-market-forecasts-to-exceed-5-billion-by-2028](https://www.microwavejournal.com/articles/39754-rf-filter-market-forecasts-to-exceed-5-billion-by-2028) (Provides context on the market DB Systems operates in)

3. [https://www.militaryaerospace.com/rf-microwave/article/14282216/radio-frequency-rf-filters-switch-tunable](https://www.militaryaerospace.com/rf-microwave/article/14282216/radio-frequency-rf-filters-switch-tunable) (Discusses the importance of tunable filters in the defense sector)

4. [Hypothetical News Article: "Lockheed Martin Partners with DB Systems on Next-Gen EW Systems"] (Generated based on trends and DB Systems' capabilities; used to illustrate potential partnership opportunities).