# Dossier: INTRABAND, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $836,335.00

**Award Date:** 2022-11-23

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

INTRABAND, LLC is a precision manufacturing and engineering firm specializing in the production of high-performance, miniaturized RF and microwave filters and custom integrated assemblies for defense, aerospace, and commercial applications. Their core mission is to provide unparalleled signal processing capabilities in constrained size, weight, and power (SWaP) environments. They aim to solve the growing problem of spectrum congestion and the increasing demand for smaller, more efficient electronic warfare, communication, and radar systems. Their unique value proposition lies in their ability to design and manufacture highly customized filter solutions that meet exacting customer specifications while pushing the boundaries of miniaturization and performance, using advanced manufacturing techniques such as 3D printing and thin film deposition.

**Technology Focus:**

* Micro-machined and 3D-printed RF filters operating at frequencies up to 60 GHz, offering significant size and weight reductions compared to traditional filter technologies. Specific performance metrics often include low insertion loss (e.g., <1 dB), high selectivity (e.g., >60 dB attenuation), and compact dimensions (e.g., < 1 cubic inch).
* Custom integrated microwave assemblies combining filters with other components (amplifiers, mixers, switches) to provide complete signal processing solutions. They specialize in hermetically sealed packages for harsh environments.

**Recent Developments & Traction:**

* In August 2023, INTRABAND was awarded a Phase II Small Business Innovation Research (SBIR) contract from the U.S. Air Force to develop advanced filter technology for next-generation radar systems.
* In 2022, they announced the commercial availability of their line of miniaturized Ka-band filters aimed at satellite communication applications.
* They have been actively promoting their services at industry conferences such as the IEEE International Microwave Symposium (IMS) and the Association of Old Crows (AOC) annual symposium, highlighting their advancements in 3D-printed RF components.

**Leadership & Team:**

* Dr. Matthew Radmanesh (President & CEO): Possesses extensive experience in microwave engineering and holds multiple patents in filter design.

**Competitive Landscape:**

* Reactel, Incorporated: While Reactel offers a broad range of filter products, INTRABAND's key differentiator is their specialization in highly miniaturized and customized solutions, particularly leveraging 3D printing technology.
* K&L Microwave: Similar to Reactel, K&L Microwave provides a diverse filter portfolio, but INTRABAND focuses on pushing the boundaries of size and performance through advanced manufacturing techniques not as prominently featured by K&L.

**Sources:**

1. [https://www.intraband.com/](https://www.intraband.com/) (Company Website)

2. [https://www.sbir.gov/sbirsearch/detail/2328633](https://www.sbir.gov/sbirsearch/detail/2328633) (SBIR Award Information)

3. [https://www.microwavejournal.com/events/3890-international-microwave-symposium-ims2023/exhibitors?searchword=intraband](https://www.microwavejournal.com/events/3890-international-microwave-symposium-ims2023/exhibitors?searchword=intraband) (IMS Exhibitor Listing - Confirmation of participation and technology focus)