# Dossier: TERASENSE, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,800,038.53

**Award Date:** 2024-09-11

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

TeraSense, Inc. is a US-based company specializing in the development and manufacturing of terahertz (THz) imaging and sensing technology. Their primary business revolves around providing compact, high-speed THz imaging solutions for a variety of applications, including non-destructive testing (NDT), security screening, medical diagnostics, and industrial process control. TeraSense’s core mission is to make terahertz technology accessible and practical for widespread use by overcoming previous limitations of THz imaging, such as size, speed, and cost. The company aims to solve the problem of detecting concealed objects and material characteristics without the use of harmful radiation, offering a safer and more efficient alternative to X-ray imaging and other conventional methods. Their unique value proposition lies in their compact, fast, and relatively affordable THz imaging systems, which can be integrated into various industrial and security platforms.

**Technology Focus:**

* Tera-ASIC technology:\*\* They offer THz imaging cameras based on proprietary Application-Specific Integrated Circuit (ASIC) technology. These cameras boast high frame rates (up to thousands of frames per second), allowing for real-time imaging and inspection applications. Specific camera models offer resolutions up to 320x240 pixels.
* THz sources and detectors:\*\* TeraSense develops and manufactures a range of THz sources and detectors, including IMPATT diodes and Schottky diode-based detectors, optimized for use with their imaging systems and other THz applications. These components are designed for high performance, compact size, and efficient THz radiation generation and detection.

**Recent Developments & Traction:**

* Product Updates & Innovations (2023-2024):\*\* TeraSense has released updated versions of its THz imaging cameras, showcasing improvements in sensitivity and resolution. The specifics of these product updates (model numbers, performance specifications) require more granular search within their product catalogue and press releases.
* Industry partnerships:\*\* TeraSense has collaborated with various companies to integrate their THz imaging technology into specialized solutions for security, medical, and industrial applications. Detailed publicly available information on these specific partnerships is currently lacking in easily accessible sources beyond generic partnership claims.
* Conferences & Exhibitions:\*\* TeraSense actively participates in international conferences and exhibitions, showcasing their technology and products to potential customers and partners. Specifics on presentations or keynote speeches are not readily available.

**Leadership & Team:**

* While detailed information about the leadership team is limited to generic roles (e.g. CEO) on their website, further in-depth research is needed to ascertain specific names, qualifications and track records.

**Competitive Landscape:**

* Advantest:\*\* While Advantest offers a broader range of semiconductor testing equipment, they also have a division focusing on THz technology. TeraSense differentiates itself by focusing primarily on THz imaging systems and offering a more compact and accessible solution compared to Advantest's larger-scale systems.
* Picometrix:\*\* Picometrix offers time-domain terahertz spectrometers and imaging systems. TeraSense differentiates itself through its compact camera design and its focus on high-speed imaging applications using its ASIC technology.

**Sources:**

1. [https://terasense.com/](https://terasense.com/) - TeraSense Official Website

2. [https://terasense.com/products/thz-imaging-cameras/](https://terasense.com/products/thz-imaging-cameras/) - TeraSense THz Imaging Cameras Page

3. [https://www.photonics.com/Companies/TeraSense\_Inc\_C51888](https://www.photonics.com/Companies/TeraSense\_Inc\_C51888) - Photonics Media Company Listing