

Defense Alpha

RF & Communications Emerging Company Report

February 05, 2026

20 Prospects | Proprietary & Confidential

Data Sources:

- 5,147 DoD contracts from USASpending.gov (2020-2025)
 - 1,653 SBIR awards with semantic embeddings
 - 1,979 SEC Form D filings
- Proprietary composite scoring across 13 signal types

This report was generated from Defense Alpha's database, not general AI knowledge.

Executive Summary

This report identifies the 20 most promising emerging companies in the RF, communications, and electronic warfare sector of the U.S. defense industrial base. Companies were surfaced through semantic search over 1,653 SBIR award titles, then filtered and ranked using Defense Alpha's proprietary composite scoring system, which weighs 13 intelligence signal types including SBIR phase progression, contract wins, private capital raises, multi-agency interest, and risk indicators.

The ranking blends technology relevance (55%) with composite signal strength (45%), ensuring prospects are both on-topic for RF/communications and backed by strong momentum indicators. Only startups with at least one positive signal and a net-positive composite score are included. Major defense primes are excluded.

Top 5 Recommended Prospects

1. HAVENLOCK INC

Seed / Early | Composite: 4.96 | Relevance: 0.645

Highest RF relevance among signal-rich companies; mesh radio SBIR with Phase II graduation and VC backing.

2. LOOKING GLASS FACTORY INC.

Series A | Composite: 6.05 | Relevance: 0.403

Strongest composite score in cohort; 3D RF spectrum visualization with 5 positive signals and \$16.9M raised.

3. ASTRANIS SPACE TECHNOLOGIES CORP

Growth / Scale-up | Composite: 3.65 | Relevance: 0.693

Top technology relevance (0.693); proliferated GEO SATCOM with \$358M in private capital at growth stage.

4. PHASE SENSITIVE INNOVATIONS INC

Series A | Composite: 5.47 | Relevance: 0.370

Radar disruption systems with fastest SBIR-to-contract transition (279 days) and \$8.9M contract win.

5. PICOGRID, INC.

Series A | Composite: 4.92 | Relevance: 0.384

Seven SBIR awards across C2 and protection platforms; \$12.3M VC raise with fast Phase II graduation.

Ranked Prospect List

#	Company	Stage	Score	Relev.	Key Signal	Latest
1	HAVENLOCK INC	Seed / Early	4.96	0.645	SBIR + VC Raise	2024-08-13
2	LOOKING GLASS FACTORY INC.	Series A	6.05	0.403	SBIR + VC Raise	2024-09-17
3	ASTRANIS SPACE TECHNOLOGIES	Growth / Scale-up	3.65	0.693	SBIR + VC Raise	2024-06-14
4	PHASE SENSITIVE INNOVATIONS	Series A	5.47	0.370	SBIR->Contract	2024-09-01
5	PICOGRID, INC.	Series A	4.92	0.384	SBIR + VC Raise	2024-08-15
6	ARRAY LABS, INC.	Seed / Early	4.81	0.389	SBIR + VC Raise	2025-05-07
7	SMALL BUSINESS CONSULTING CO	Seed / Early	4.12	0.460	SBIR->Contract	2024-07-22
8	r4 Technologies, Inc.	Series A	4.70	0.353	SBIR + VC Raise	2024-05-13
9	TETRATE.IO, INC.	Seed / Early	3.28	0.502	SBIR Phase II	2024-08-01
10	ZENITH AEROSPACE INC	Series A	3.60	0.412	SBIR + VC Raise	2024-08-26
11	NANTRAK TACTICAL LLC	Seed / Early	3.25	0.460	SBIR Phase II	2024-09-11
12	HawkEye 360, Inc.	Growth / Scale-up	3.50	0.418	SBIR + VC Raise	2024-06-25
13	ALPHACORE INC	Seed / Early	3.42	0.418	SBIR Phase II	2024-09-30
14	K2 SPACE CORPORATION	Series A	3.25	0.424	SBIR + VC Raise	2024-09-18
15	THRUST AI LLC	Seed / Early	3.17	0.427	SBIR Phase II	2024-08-28
16	GRAVITICS INC	Series A	3.55	0.372	SBIR + VC Raise	2024-05-23
17	ADVANCED SPACE LLC	Seed / Early	3.33	0.402	SBIR Phase II	2024-08-27
18	SOLSTAR SPACE COMPANY	Seed / Early	2.05	0.574	SBIR Phase II	2024-05-14
19	Exos Aerospace Systems & Tec	Series A	3.60	0.361	SBIR + VC Raise	2025-02-06
20	INFORMATION SYSTEMS LABORATO	Seed / Early	2.05	0.572	SBIR Phase II	2024-09-23

Detailed Prospect Profiles

1. HAVENLOCK INC

Location: NASHVILLE, Tennessee

Stage: Seed / Early

Composite Score: 4.96 (+5.0 / 0.0)

Technology Relevance: 0.645

Technology Focus:

- Deployable Security Solution with Networked Mesh Radios for Expeditionary Security & Communicat
- Enhancing AFSFC Security Infrastructure with Haven Lockdown and Alarm.com

Intelligence Signals:

- [+] SBIR + VC Raise (+1.50)
- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.06)
- [+] Funding Velocity (+1.05)

Financial Summary:

- 2 SBIR awards (\$1.8M)
- Private capital: \$2.4M

Recent Activity:

- Latest SBIR: 2024-08-13
 - Latest Reg D filing: 2023-02-17
-

2. LOOKING GLASS FACTORY INC.

Location: BROOKLYN, New York

Stage: Series A

Composite Score: 6.05 (+6.0 / 0.0)

Technology Relevance: 0.403

Technology Focus:

- Enhancing Spaceport Efficiency: Advanced 3D Visualization for RF Spectrum Analysis with Looking
- Revolutionize 3D No Headset Required for Training
- Revolutionize Immersive Reality with a 2D and 3D Display. No Headset

Intelligence Signals:

- [+] SBIR + VC Raise (+1.60)
- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.27)
- [+] Funding Velocity (+1.12)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 3 SBIR awards (\$2.5M)
- Private capital: \$16.9M

Recent Activity:

- Latest SBIR: 2024-09-17
 - Latest Reg D filing: 2021-08-04
-

3. ASTRANIS SPACE TECHNOLOGIES CORP

Location: SAN FRANCISCO, California

Stage: Growth / Scale-up

Composite Score: 3.65 (+3.6 / 0.0)

Technology Relevance: 0.693

Technology Focus:

- Proliferated Geostationary Earth Orbit (GEO) Satellite Communications (SATCOM)

Intelligence Signals:

- [+] SBIR + VC Raise (+1.60)
- [+] Funding Velocity (+1.35)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 1 SBIR awards (\$3.3M)
- Private capital: \$358.3M

Recent Activity:

- Latest SBIR: 2024-06-14
 - Latest Reg D filing: 2021-03-19
-

4. PHASE SENSITIVE INNOVATIONS INC

Location: NEWARK, Delaware

Stage: Series A

Composite Score: 5.47 (+5.5 / 0.0)

Technology Relevance: 0.370

Technology Focus:

- RADS - Radar Disruption Systems
- Broadband Optical Combs in Thin Film Lithium Niobate

Intelligence Signals:

- [+] SBIR->Contract (+2.70)
- [+] Fast Time-to-Contract (+1.42)
- [+] SBIR Phase II (+1.35)

Financial Summary:

- 2 SBIR awards (\$2.0M)
- 1 contracts (\$8.9M)

Recent Activity:

- Latest SBIR: 2024-09-01
 - Latest contract: 2024-07-30
-

5. PICOGRID, INC.

Location: EL SEGUNDO, California

Stage: Series A

Composite Score: 4.92 (+4.9 / 0.0)

Technology Relevance: 0.384

Technology Focus:

- Digital Spaceport: Mission Support Command and Control (MSC2)
- Platform for Active Protection and Reconnaissance (PAPR)
- Adapting Picogrid Platform FireOps as Military & Civil Authorities Integration Dashboard (AID)

Intelligence Signals:

- [+] SBIR + VC Raise (+1.70)
- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.17)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 7 SBIR awards (\$5.9M)
- Private capital: \$12.3M

Recent Activity:

- Latest SBIR: 2024-08-15
 - Latest Reg D filing: 2024-01-10
-

6. ARRAY LABS, INC.

Location: PALO ALTO, California

Stage: Seed / Early

Composite Score: 4.81 (+4.8 / 0.0)

Technology Relevance: 0.389

Technology Focus:

- Next Generation Cubesat High Bandwidth Communications
- Novel Protective Satellite Coatings - Effects on Aerodynamics and Solar Panel Efficiency

Intelligence Signals:

- [+] SBIR + VC Raise (+1.60)
- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.16)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 2 SBIR awards (\$1.3M)
- Private capital: \$2.0M

Recent Activity:

- Latest SBIR: 2024-05-22
 - Latest Reg D filing: 2025-05-07
-

7. SMALL BUSINESS CONSULTING CORPORATION

Location: SHREVEPORT, Louisiana

Stage: Seed / Early

Composite Score: 4.12 (+4.1 / 0.0)

Technology Relevance: 0.460

Technology Focus:

- Bomber Pilot and Weapon System Officer (WSO) Enhancement Project

Intelligence Signals:

[+] SBIR->Contract (+2.70)

[+] Fast Time-to-Contract (+1.42)

Financial Summary:

- 1 SBIR awards (\$242K)
- 1 contracts (\$4.2M)

Recent Activity:

- Latest SBIR: 2023-10-19
 - Latest contract: 2024-07-22
-

8. r4 Technologies, Inc.

Location: Ridgefield, Connecticut

Stage: Series A

Composite Score: 4.70 (+4.7 / 0.0)

Technology Relevance: 0.353

Technology Focus:

- r4 XEM: Leveraging AI/ML Predictive Analytics to Enhance Air Force Special Warfare Recruiting
- Fight or Flight: AI-Based Predictive Analytics to Reduce Airmen Turnover Using r4 XEM Platform

Intelligence Signals:

[+] SBIR + VC Raise (+1.60)

[+] SBIR Phase II (+1.35)

[+] Funding Velocity (+1.05)

[+] High-Priority Tech (+0.70)

Financial Summary:

- 2 SBIR awards (\$1.3M)
- Private capital: \$15.8M

Recent Activity:

- Latest SBIR: 2024-05-13
 - Latest Reg D filing: 2023-09-15
-

9. TETRATE.IO, INC.

Location: MILPITAS, California

Stage: Seed / Early

Composite Score: 3.28 (+3.3 / 0.0)

Technology Relevance: 0.502

Technology Focus:

- Fortifying the Digital Battlefield: Implementing Secure Technical Implementation Guide (STIG) f
- Tetrade Ambient Mesh: A Critical Tool for the United States Air Force in Maintaining Secure and
- Tetrade TACFI

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.12)
- [+] High-Priority Tech (+0.80)

Financial Summary:

- 4 SBIR awards (\$3.3M)

Recent Activity:

- Latest SBIR: 2024-08-01
-

10. ZENITH AEROSPACE INC

Location: BELMONT, California

Stage: Series A

Composite Score: 3.60 (+3.6 / 0.0)

Technology Relevance: 0.412

Technology Focus:

- High Bandwidth Air-to-Air and Air-to-Ground Networked Communications for Unmanned Aerial System
- Stratospheric Long Range UAS

Intelligence Signals:

- [+] SBIR + VC Raise (+1.70)
- [+] Funding Velocity (+1.20)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 2 SBIR awards (\$2.5M)
- Private capital: \$9.7M

Recent Activity:

- Latest SBIR: 2024-08-26
 - Latest Reg D filing: 2024-04-04
-

11. NANTRAK TACTICAL LLC

Location: FRANKLIN, Virginia

Stage: Seed / Early

Composite Score: 3.25 (+3.2 / 0.0)

Technology Relevance: 0.460

Technology Focus:

- TANGOTRAK 40mm Satellite Navigation Warfare & Communications Decoy Electronic Warfare Projectil
- TANGOTRAK Mesh Utility 40mm Projectile - Including Relay, Decoy, Beacon & Motion Sensor
- 40mm Rapid Perimeter Deployment System

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.09)
- [+] High-Priority Tech (+0.80)

Financial Summary:

- 3 SBIR awards (\$3.1M)

Recent Activity:

- Latest SBIR: 2024-09-11
-

12. HawkEye 360, Inc.

Location: HERNDON, Virginia

Stage: Growth / Scale-up

Composite Score: 3.50 (+3.5 / 0.0)

Technology Relevance: 0.418

Technology Focus:

- SPACE ORDER OF BATTLE / SPACE DOMAIN AWARENESS VIA COMMERCIAL, LOW EARTH ORBIT (LEO) RF-INTELLI

Intelligence Signals:

- [+] SBIR + VC Raise (+1.60)
- [+] Funding Velocity (+1.20)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 1 SBIR awards (\$1.2M)
- 1 contracts (\$29.5M)
- Private capital: \$243.0M

Recent Activity:

- Latest SBIR: 2024-06-25
 - Latest contract: 2022-09-30
 - Latest Reg D filing: 2023-07-07
-

13. ALPHACORE INC

Location: TEMPE, Arizona

Stage: Seed / Early

Composite Score: 3.42 (+3.4 / 0.0)

Technology Relevance: 0.418

Technology Focus:

- Mobile Intelligent Radiometric Evaluation Lab (MIREL)
- High bandwidth, low latency wavefront sensing for airborne directed energy applications
- Multi-Spectral Infrared Focal Plane Arrays

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.17)
- [+] High-Priority Tech (+0.90)

Financial Summary:

- 7 SBIR awards (\$2.3M)

Recent Activity:

- Latest SBIR: 2024-09-30
-

14. K2 SPACE CORPORATION

Location: TORRANCE, California

Stage: Series A

Composite Score: 3.25 (+3.2 / 0.0)

Technology Relevance: 0.424

Technology Focus:

- Multi-Function Software Defined Phased Array Satellite Payload
- High Performance TacRS Constellation Satellite Platform
- High Powered Electric Propulsion System for Space Vehicles

Intelligence Signals:

- [+] SBIR + VC Raise (+1.50)
- [+] Funding Velocity (+1.05)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 3 SBIR awards (\$6.7M)
- Private capital: \$8.9M

Recent Activity:

- Latest SBIR: 2024-09-18
 - Latest Reg D filing: 2023-02-28
-

15. THRUST AI LLC

Location: ENID, Oklahoma

Stage: Seed / Early

Composite Score: 3.17 (+3.2 / 0.0)

Technology Relevance: 0.427

Technology Focus:

- Combat Controller (SOF) AI Sensor Fusion for Contested Airspace C2
- Combat Controller (SOF) Parasitic Radar & Optical Fusion for Contested Airspace C2
- Passive RADAR integration with AI-enabled Terminal Airspace Awareness Suite ("Bird Brain") for

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.12)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 4 SBIR awards (\$2.6M)

Recent Activity:

- Latest SBIR: 2024-08-28
-

16. GRAVITICS INC

Location: ERIE, Colorado

Stage: Series A

Composite Score: 3.55 (+3.5 / 0.0)

Technology Relevance: 0.372

Technology Focus:

- Orbital DroneSat Carrier for Space-Based Tactically Responsive Missions
- High Power-Density Lithium Titanate Battery Systems for Space Applications

Intelligence Signals:

- [+] SBIR + VC Raise (+1.40)
- [+] SBIR Phase II (+1.35)
- [+] High-Priority Tech (+0.80)

Financial Summary:

- 2 SBIR awards (\$1.8M)
- Private capital: \$6.7M

Recent Activity:

- Latest SBIR: 2024-05-23
 - Latest Reg D filing: 2022-11-23
-

17. ADVANCED SPACE LLC

Location: WESTMINSTER, Colorado

Stage: Seed / Early

Composite Score: 3.33 (+3.3 / 0.0)

Technology Relevance: 0.402

Technology Focus:

- Trusted Automated Satellite Operations for Mission Life
- Low Latency Space Object Maneuver Detection
- Multi-Object Behavior Modeling of Space Systems

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] Fast SBIR Graduation (+1.19)
- [+] High-Priority Tech (+0.80)

Financial Summary:

- 4 SBIR awards (\$2.2M)

Recent Activity:

- Latest SBIR: 2024-08-27
-

18. SOLSTAR SPACE COMPANY

Location: SANTA FE, New Mexico

Stage: Seed / Early

Composite Score: 2.05 (+2.0 / 0.0)

Technology Relevance: 0.574

Technology Focus:

- Wide Band Continuous Spacecraft System Communications Terminal
- Radiation Hardened WiFi Access Point for Spacecraft

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 2 SBIR awards (\$1.3M)

Recent Activity:

- Latest SBIR: 2024-05-14
-

19. Exos Aerospace Systems & Technologies, Inc.

Location: GREENVILLE, Texas

Stage: Series A

Composite Score: 3.60 (+3.6 / 0.0)

Technology Relevance: 0.361

Technology Focus:

- ?Evaluation and Design of EXOS-HVVR to Validate an RDRE to Meet DoD TRSA/ Hypersonic Testbed Ob

Intelligence Signals:

- [+] SBIR + VC Raise (+1.70)
- [+] Funding Velocity (+1.20)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 1 SBIR awards (\$189K)
- Private capital: \$7.8M

Recent Activity:

- Latest SBIR: 2024-04-16
 - Latest Reg D filing: 2025-02-06
-

20. INFORMATION SYSTEMS LABORATORIES INC

Location: POWAY, California

Stage: Seed / Early

Composite Score: 2.05 (+2.0 / 0.0)

Technology Relevance: 0.572

Technology Focus:

- Sat Wars Space Aggressor Spectrum Warfare Test & Training Tool
- Virtual RF Target (VRT)
- SATSAR Test and Training Tool

Intelligence Signals:

- [+] SBIR Phase II (+1.35)
- [+] High-Priority Tech (+0.70)

Financial Summary:

- 4 SBIR awards (\$4.4M)

Recent Activity:

- Latest SBIR: 2024-09-23
-

Methodology

This report was generated by the Defense Alpha Intelligence Engine using the following pipeline:

Semantic Search: SBIR award titles embedded with all-MiniLM-L6-v2 sentence-transformer (384-dimensional vectors). Cosine similarity measured against four technology-specific queries covering RF systems, SIGINT/EW, SATCOM, and software-defined radio.

Signal Scoring: Composite score computed from 13 signal types including SBIR progression, contract wins, VC fundraising, multi-agency interest, and risk indicators (customer concentration, SBIR stalling).

Ranking: 55% technology relevance + 45% composite signal score.

Filtering: Startups only, net-positive composite score, at least one positive signal, minimum 0.35 semantic similarity, excluding major defense primes.

Search Queries:

- "RF antenna radio tactical communications mesh networking spectrum"
- "SIGINT signals intelligence spectrum sensing electronic warfare EW"
- "satellite communications ground station SATCOM terminal"
- "software defined radio waveform tactical data link"

Data Sources:

- 5,147 DoD contracts from USASpending.gov (2020-2025)
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