

CAPABILITY STATEMENT

Company Information

AetherVision, LLC
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Glastonbury, CT 06033
Website: <https://aethervision-rd.com>
SDVOSB Status: Verified



Contact Information

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Core Business

Research, Development, and Application of Disruptive Technologies for National Security. Specializing in next-generation ISR, Artificial Intelligence, and mission-critical systems for the DoD & Intelligence Community.

Security Information

Personnel: Active DoD SECRET, TS/SCI/SAP Eligible
Facility: Prepared to obtain clearances as required.

COMPANY OVERVIEW: MISSION COMMAND & INTENT

AetherVision, LLC is a formally verified **Service-Disabled Veteran-Owned Small Business (SDVOSB)** architected to solve the nation's most critical, emerging national security challenges. Our mission is to deliver an unfair technological advantage to the warfighter and intelligence analyst by pioneering and operationalizing disruptive technologies. We specialize in creating “first-ever” solutions for recognized capability gaps, particularly those involving unconventional threats and physics-defying phenomena. Founded and led by a service-disabled veteran with over two decades of executive experience commanding high-risk, high-reward R&D at DARPA, Raytheon, and NASA, we combine deep technical mastery with an agile, mission-focused execution culture.

TECHNOLOGY PORTFOLIO: DELIVERING DECISIVE OVERMATCH

AetherCore: Quantum-Neuromorphic ISR Paradigm

- **Mission Directive:** To detect, track, and resolve Unidentified Anomalous Phenomena (UAP) and other strategic threats exhibiting performance characteristics that render conventional ISR systems obsolete.
- **AetherVision's Solution:** A transformative ISR architecture that fuses quantum-limit sensors with event-driven neuromorphic AI, achieving unprecedented sensitivity to anomalous signatures while processing data with hyper-efficiency at the tactical edge.
- **Quantified Impact:** Achieves a projected **1,000x increase in sensitivity** over legacy systems and a **1,000,000:1 data reduction ratio**, enabling persistent, autonomous missions of unprecedented duration and stealth.

QuantumLight Shield: Proactive DEW Defense

- **Mission Directive:** To shift platform survivability from a passive to a proactive footing by neutralizing multi-spectrum Directed Energy Weapon (DEW) attacks before platform damage occurs.
- **AetherVision's Solution:** An integrated system combining a transparent metamaterial coating with an embedded, AI-driven sensor network that detects and deconstructs threats in microseconds.
- **Quantified Impact:** Projected to increase platform survivability against DEW attacks by **over 90%** while maintaining industry-leading optical clarity (**>98% VLT**), rendering adversary energy weapons ineffective.

Phantom Sentinel: Covert Distributed Sensing

- **Mission Directive:** To provide persistent, unattributable situational awareness in highly contested environments where traditional ISR assets are denied access.
- **AetherVision's Solution:** A “leave-behind” network of event-driven sensors operating at unprecedented low power (<100nW), making the network virtually undetectable.
- **Quantified Impact:** Delivers a **12x improvement in sensitivity** to low-signature targets and achieves **99.8% threat classification accuracy** on-node, providing a decisive advantage in covert operations.

PulseWeaver: Resilient Optical Communications

- **Mission Directive:** To guarantee resilient, high-bandwidth Command and Control (C2) in environments saturated with nation-state level Electronic Warfare (EW) and SIGINT threats.
- **AetherVision's Solution:** A Free-Space Optical (FSO) system that is physically immune to jamming by encoding data spatially, making it statistically indistinguishable from background noise to adversaries.
- **Quantified Impact:** Achieves a reliable **>10 Gbps data rate** and provides a projected **>10 dB of effective link margin improvement**, ensuring the viability of the JADC2 framework in active conflict.

DIFFERENTIATORS

- **Verified SDVOSB:** Providing streamlined acquisition pathways, including eligibility for set-aside and sole-source contracts (FAR 19.14).
- **Founder's Unique Authority:** A rare combination of decorated military service (USAF/Army), senior NASA research leadership, major defense contractor executive experience (Raytheon), and international academic direction.
- **Proven DARPA & High-Consequence Execution:** A track record of successfully conceptualizing, winning, and leading high-risk, high-reward programs, including the delivery of a TRL-6 neuromorphic camera prototype ahead of schedule and under budget for DARPA.
- **Focus on Asymmetric Advantage:** We do not build incremental improvements. We are dedicated to creating paradigm-shifting technologies that provide a decisive, non-linear advantage against peer and near-peer adversaries.
- **Unwavering Commitment to Veterans:** Actively recruiting and developing fellow veterans, leveraging their unparalleled discipline, mission focus, and integrity.

PAST PERFORMANCE & FOUNDATIONAL EXPERIENCE

- **DARPA FENCE Program:** As program lead, successfully developed and delivered a TRL-6 neuromorphic camera prototype, exceeding all program requirements for speed, dynamic range, and power efficiency, and demonstrating TRL maturation capability.
- **Leadership in Secure AI/ML Platforms (DoD):** Directed the architecture and deployment of secure AI/ML platforms for autonomous systems and ISR data analysis, managing multi-million dollar portfolios and achieving significant cost savings and mission effectiveness improvements.
- **Safety-Critical AI Development (NASA):** Led teams creating AI/ML models for mission-critical flight safety applications (F/A-18) and astronaut health, achieving a 100% success rate in preventing flutter incidents in tests and establishing gold-standard secure data governance frameworks.
- **Classified Program Performance:** AetherVision's leadership has a significant history of delivering impactful results on numerous classified programs for the Intelligence Community and DoD. Specifics will be discussed within appropriate secure channels upon verification of clearance and need-to-know.

NAICS CODES

- **541715:** R&D in the Physical, Engineering, and Life Sciences
- **541511:** Custom Computer Programming Services
- **541512:** Computer Systems Design Services
- **541519:** Other Computer Related Services
- **541690:** Other Scientific & Technical Consulting
- **334511:** Search, Detection, Navigation, Guidance, Aeronautical, & Nautical System Manufacturing
- **336413:** Other Aircraft Parts & Auxiliary Equipment Manufacturing
- **334290:** Other Communications Equipment Manufacturing
- **927110:** Space Research & Technology
- **518210:** Data Processing, Hosting, & Related Services