

AVION



**Engineering | Logistics
Programmatics**



100% EMPLOYEE OWNED

CONTRACTS

Avion's government-wide contracts offer our current and prospective customers straightforward access to our extensive experience and expertise. We are proud holders of contracts under the GSA Multiple Award Schedule, GSA OASIS, and GSA ASTRO. Additionally, we have two Army-wide multiple-award BPAs through the EXPRESS program.

POINTS OF CONTACT

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ISO Certification: 9001:2015



INNOVATION THAT MATTERS EXPERIENCE YOU CAN TRUST

Avion Solutions is known for its commitment to excellence, consistently providing versatile and innovative solutions across multiple domains. We excel in engineering, airworthiness, integrated product support, model-based systems engineering, modeling and simulation, and programmatic support.

Expertise and Professionalism

Our team of highly qualified experts possess industry-specific knowledge and elite technical proficiency, allowing us to collaborate on challenging tasks and improve performance and safety.

Collaborative Relationships

We value strong relationships built on trust and integrity, collaborating effectively with customers and industry-partners to deliver the best solutions.

Small Business Advantages

As a small business, we offer flexibility, mobility, and competitive pricing, providing cost-effective solutions with low overhead.

Commitment to the Warfighter

Our dedication to the Warfighter and our customers' objectives drives our efforts to deliver superior results, on time and on budget.

Avion Solutions is a multiple-time Best Places to Work® award winner, National Finalist for 2023 Employee Owned (ESOP) Company of the Year for the Southeast Chapter, and won 2022 Small Business of the Year in the Government Contracting Services Category.



TECHNOLOGY DEVELOPMENT & DESIGN

Avion provides advanced aviation and missile technology system design through a wide range of expertise. Our propulsion expertise includes turbine-engine and drive system design and performance optimization, while also addressing fatigue life prediction, engine performance, and integration and operability. We deliver cutting-edge aeromechanics solutions in aircraft dynamics and aerodynamics and evaluate flight performance and handling qualities with advanced simulations.

Our capabilities extend to high-fidelity sensor models and EO/IR phenomenology analysis. We have expertise in high temperature material property analysis and testing addressing extreme temperature conditions in hypersonic flight.

We support mission systems with a focus on communication, navigation, and surveillance, alongside addressing electromagnetic interference, man-machine interface, and environmental effects during system integration. We are experienced in innovative missile target system design and development to provide for superior performance and reliability.

AIRWORTHINESS CERTIFICATION

Avion provides comprehensive airworthiness expertise encompassing design, continuing, and production airworthiness support for DoD military aircraft, including civil derivative aircraft systems.

Design Airworthiness

We assess airworthiness artifacts from test, analysis, and demonstrations and develop airworthiness qualification plans. We develop military airworthiness criteria, including means of compliance, and issue findings through airworthiness releases, airworthiness qualification status reports, and statements of airworthiness qualification.

Continuing Airworthiness Support

We assess vendor qualifications to maintain sources of supply and evaluate field-revealed deficiencies through quality deficiency reports, as well as evaluating maintenance and overhaul processes of critical safety items.

Production Airworthiness

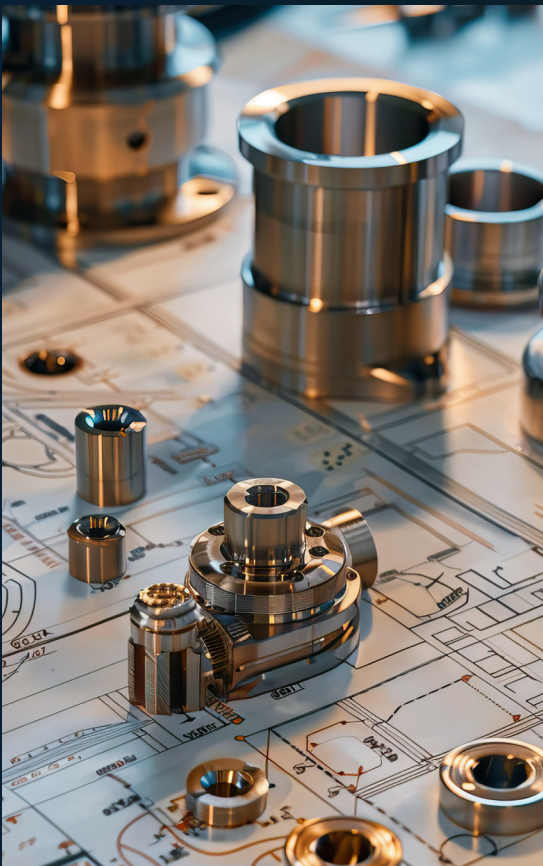
We assess and approve vendor/source approvals of production parts, assess non-conformance issues through material review boards, and evaluate deviations and waivers during manufacture.



PROGRAM SUPPORT

Avion's comprehensive programmatic expertise supports successful project outcomes within cost, schedule, and performance parameters. From program management and budgeting to risk management and stakeholder communications, we oversee every aspect of program and project management to align strategic goals with regulatory requirements, leading to efficient project completion.

We offer comprehensive budgeting and financial management services, including cost estimation and resource allocation. Our performance monitoring tracks and evaluates key program metrics to support continuous improvement. Additionally, we prepare and maintain detailed documentation and reports to provide clear insights into program status, progress, and outcomes.



LIFE-CYCLE ENGINEERING

Avion provides engineering support throughout all phases of the DoD life-cycle. We evaluate depot and field level maintenance for continuing airworthiness assurance of US military rotary wing and uncrewed aircraft systems through comprehensive maintenance assessments.

Our expertise includes managing critical safety items and handling deviation and waiver approvals to maintain operational efficiency and safety. We prioritize environmental compliance to minimize toxic materials in maintenance operations and conduct first article testing to verify production part specifications.

We perform production audits and conduct quality and regulatory production verification testing for systems and components. Our source approval requests confirm supplier compliance, while supporting the entire system life-cycle from Material Solution Analysis to Operations and Support.

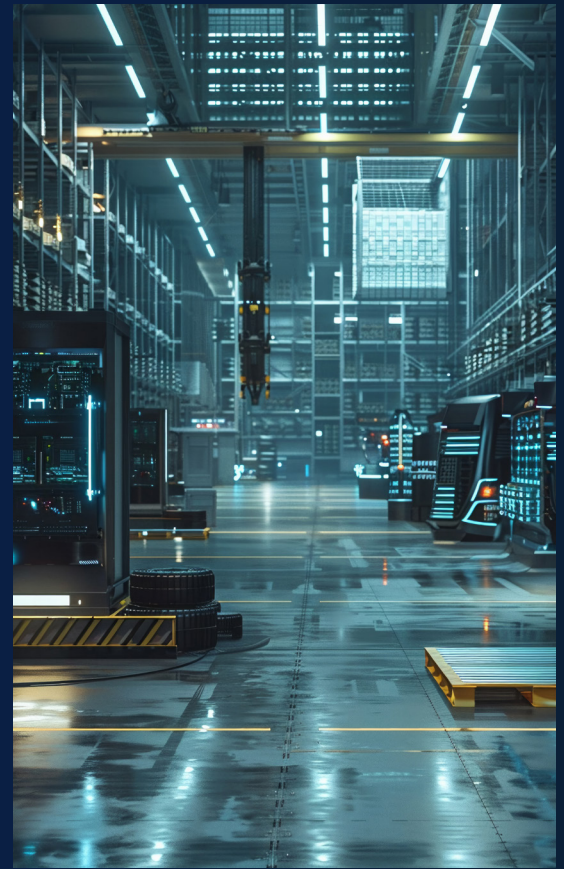
INTEGRATED PRODUCT SUPPORT

Avion delivers expert Integrated Product Support to enhance the performance and longevity of operational assets throughout their life-cycle. We provide configuration management by documenting system changes and maintaining consistent configurations.

Our depot operations focus on high-quality repair and overhaul. We provide support planning to cover all phases of the systems life-cycle, while logistics engineering optimizes processes for enhanced reliability and supportability.

We create tailored maintenance planning strategies to maximize system availability. We conduct comprehensive New Equipment Training across multiple platforms to support operational excellence.

Our services extend to asset tracking through property management, spare parts provisioning, and supply chain management to optimize material flow. We also manage technical data to maintain accurate and easily accessible documentation.



SYSTEMS ENGINEERING

Avion provides advanced systems engineering support through Model-Based Systems Engineering (MBSE) and Digital Engineering for DoD aviation and missile systems. We develop logical, functional, and physical architectures during system design and development and manage configuration and digital data artifacts, maintaining precise control and documentation throughout the system life-cycle. Our requirements management utilizes MBSE tools for thorough traceability and definition.

We conduct risk and safety management to identify and mitigate technical risks and hazards throughout the design, development, fielding and operational processes.

Our system design integration, validation, and verification services ensure that system performance meets end-user standards through rigorous testing and analysis. We offer support in life-cycle engineering, supporting continuous improvement and alignment with evolving requirements.



TESTING AND ANALYSIS

Avion conducts planning and analysis of ground and flight tests for aviation and missile systems, supporting robust performance through rapid capability prototyping and rigorous testing. We manage missile and hypersonic systems testing, including flight and ground test planning, feasibility analysis, truth data analysis, trajectory analysis, signature analysis and sensor assessments.

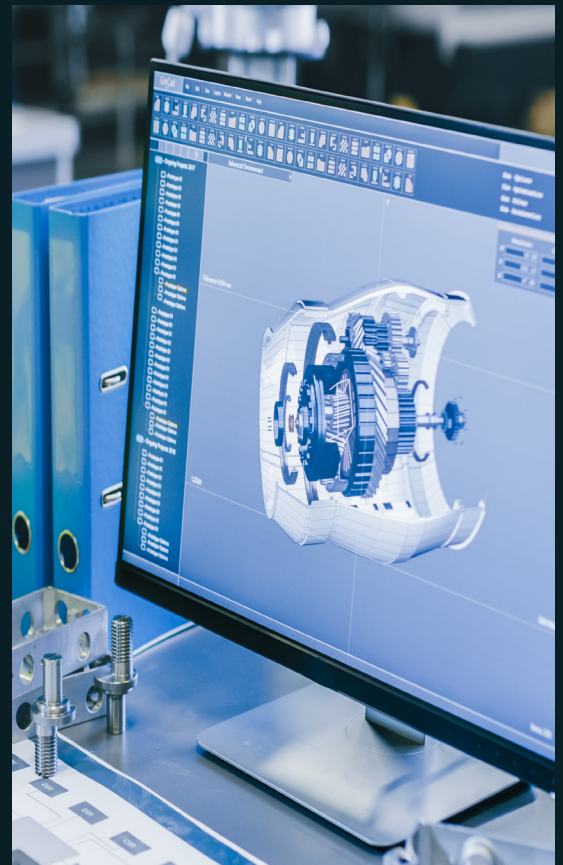
We provide on-site test support with quick-look data and trajectory predictions and provide test range support with keep-out zones and worst-case trajectory predictions. Our expertise extends to developing phenomenology data for post flight truth summits and working groups.

We specialize in airworthiness qualification tests for aviation systems, developing comprehensive test and evaluation master plans and performance verification requirements. Our approach confirms that systems meet all necessary standards for airworthiness and operational readiness.

MODELING AND SIMULATION

Avion provides high-fidelity modeling and simulation services, utilizing advanced techniques to meet diverse customer needs with accuracy and reliability. We perform computational fluid dynamics for analyzing aerodynamics and structural dynamics, and electro-optical/infrared phenomenology for signature analysis and validation. Our engine performance and flight performance modeling support comprehensive analysis and optimization.

We focus on multi-sensor correlation to integrate and analyze data from various sensors, enhancing overall system performance. Our plume signature and attenuation modeling and radar prediction capabilities provide critical insights for missile systems. Additionally, we perform trajectory simulation to predict missile flight paths using advanced physics-based models and Monte Carlo analysis, supporting accurate and reliable test planning.





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