



CAPABILITIES



TAG's Design and Manufacturing Facility Expands Dulles Campus

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Engineering

Technology Services Group®

TAG's Technology Services Group® offers world-class engineering expertise in the design and development of advanced IT solutions for defense, Federal Civilian, and industrial markets. For more than 20 years, we have dedicated our experience in mechanical, electrical, thermal, and systems engineering to meeting unique customer requirements. Our strength lies in our ability to quickly and efficiently develop resolutions to IT challenges with reliable and cost-effective hardware systems.

Each TAG solution is designed based on our proven engineering process. The process begins with intricate planning and consideration of the total project. These considerations include cost, timeline, component selection, environmental conditions, power budgets, software applications, and interface with current systems.

TAG also offers testing and reliability analysis for all systems and solutions. TAG's on-site testing capabilities include a HALT (Highly Accelerated Life Testing) Chamber, EMI (Electromagnetic Interference) test chamber, and reliability modeling. All systems are built to survive a variety of military and industry specified regulations.

The TAG Engineering Process

Concept

Deployable Architecture Development

The Concept Phase focuses on the creation and refinement of technical requirements and on the discovery and definition of the overall system architecture for applications in a rugged environment.

Forward-Looking Design Concepts

TAG's 20 years of experience delivering deployable systems into the world's harshest environments form the basis for all new designs. This experience provides the foresight to properly identify the problem areas that users might encounter in the field..

Customer Specification Development and Review

The actual engineering design is based on a full understanding of a customer's overall system objectives – environmental, performance, longevity, power consumption, or other specific requirements. This understanding guides the development of a system specification, which becomes the governing document for all subsequent phases of development.

Design

The TAG Engineering Process is a proven system of collaboration that incorporates our expertise in various elements of design. The customer's requirements are at the forefront of the entire process.

Systems Engineering

Systems Engineering initiates the design process by interfacing with the customer to fully understand the complete specification of the system including software, hardware, and environmental requirements as well as lifecycle and support needs to ensure full program-length system performance.

Thermal Engineering

Thermal simulation and finite element analysis, performed using Flowtherm thermal analysis software, ensure that systems and instruments are designed and built to survive the full range of harsh thermal environments encountered by land, air, or sea.

Mechanical Engineering

The mechanical engineering process develops technology and solutions for structures, sub-systems, and survivability. Using three-dimensional Computer-Aided Design (CAD), TAG Tactical Systems' research, design, develop, and fabricate custom-built structures using high-performance materials to house and protect a wide range of sensitive devices and controls.

Capabilities

Products

Applications

Electrical Engineering

The electrical engineering process actively engages in research and development of advanced Commercial Off-The-Shelf (COTS) computing technologies for military applications with particular focus on rugged COTS adaptation technologies, thermal monitoring, embedded systems, power supply designs, and electromagnetic compatibility (EMC). TAG Tactical Systems' extensive COTS experience includes component selection, analysis, and qualification for rugged environments.

Testing

Testing

HALT Testing (Highly Accelerated Life Testing)

By testing its machines at high stress conditions over a short period of time, TAG engineers are able to uncover design requirements and engineer machines that will withstand the same environmental challenges over a long period of time.

Reliability Analysis

TAG engineers perform reliability analysis testing and reports to satisfy customer requirements, and determine spares requirements.

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