THE NEED FOR IMPACT AND VIABILITY

The United States’ long-standing military dominance and national security has been supported, in part, by some of the most advanced, capable platforms on the planet. Yet, these platforms take a long time and large budgets to create, especially as military technologies and adversaries become increasingly advanced.

Today, the U.S. must complement its investment in new assets with intelligent, nimble integration of embedded systems that support the long-term combat effectiveness and viability of its platforms. But the rapid integration of mission systems into existing and new architectures is a complex task. This platform integration must work seamlessly to reduce vulnerabilities while ensuring adaptability.

And it must make sense for the mission. After all, innovation is just a word, if it’s not backed by practical solutions to real-world problems. Doing it right requires clever engineering to apply new algorithmic, software, and electronics technology for hardware and software that work in cooperation to maximize effectiveness and minimize costs.

FAST, SECURE, DECISIVE MILITARY ACTION

At Alion, we exist to support American warfighters through technology and engineering innovation. Together with our DoD and national security clients, we are on the forefront of advancing and integrating leading-edge data fusion algorithms and unique advanced sensors onto special mission military platforms.

As experts in sensors, platforms, processing, and C5ISR, we understand America’s defense systems. Our engineers use rapid prototyping and agile development processes to deliver special-mission capabilities in mere months— solutions that would normally take years under more traditional practices. By pairing data insights and systems expertise with capabilities in artificial intelligence (AI), our platform integration solutions enable fast, secure, and decisive military action.

With 30% veterans and forward-deployed engineers, we bring deep operational experience — as well as enlisting and overseeing critical partner capabilities — to deliver best-of-breed solutions for our special mission customers in rapid time.
ALION’S PLATFORM INTEGRATION SOLUTIONS

We are deeply analytical professionals who never stop looking for a way to make things better. That’s why we apply our vendor-agnostic approach and agile engineering methodology to every project and problem. By putting your mission first, we partner with you to deliver market-leading platform integration solutions faster and at lower costs.

SENSOR FUSION
Alion is leading system software development on the most advanced sensor and data fusion package presently deployed in the airborne maritime domain.

Ai & MACHINE LEARNING
We are a leader in infusing Ai into defense and national security systems—building the foundations for seamless human-machine teams.

SOLUTION ENGINEERING
We build solutions for platform integration on your schedule and with critical capabilities, when time to deployment is the highest priority.

OPERATIONS & SUPPORT
Through our expert in-house resources and broad partner network, we provide operations and support for the mission—wherever it takes you.

HUMAN-MACHINE TEAMING
Our Human Systems Integration (HSI) team provides technical capabilities across the range of HSI domains, including manpower, personnel, training, human factors engineering, habitability, safety, occupational health, and force protection/survivability.

As part of this work, we provide user-centric interface design, test, and evaluation; cognitive engineering (e.g., decision-aiding design); human-automation/autonomy interactions; human-robot-interaction engineering; and human performance modeling and simulation.

AIRCRAFT INTEGRATION
Alion’s aircraft integration team has more 25 years of experience in prototyping and installation of avionics upgrades, airframe changes, and aircraft modifications to Naval aircraft.

We support research, design, development, and integration of components and systems as well as provide rapid prototyping and insertion of new technology. Personnel qualifications include IPC/WHMA-A-620 Requirements and Acceptance for Cable and Wire Harness Assemblies and conform to SAE-ASS0881E and NAVAIR 01-1A-505-1.

FEATURED WORK

Systems in the field must maintain continuous combat capability, regardless of budget pressures or age. At Alion, we work with our clients to make sure their systems are modernized and able to meet the challenges ahead—whatever the mission. Our engineers are ready to help you reimagine solutions to meet current demands and turn those ideas into reality. To learn more about how we can help with our complete package of platform integration solutions, or to get connected with one of our experts, visit us online at www.alionscience.com/platformintegration.

About Alion Science and Technology
At Alion, we combine large company resources with small business responsiveness to design and deliver mission-critical engineering solutions. With an 80-year technical heritage and an employee-base comprised of more than 30% veterans, our engineers, technologists, and program managers bring together an agile engineering methodology and the best tools on the market to deliver mission success faster and at lower costs. Based just outside of Washington, D.C., we help clients turn big ideas into real solutions. For more information, visit www.alionscience.com.

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