

# **SENSORS & SYSTEMS**

A New Era of Light, Fast, and Powerful Solutions

National defense and security agencies increasingly rely on smart sensors for surveillance and electronic intelligence. These sensors must be able to operate independently while also functioning as part of an integrated, interlacing network to detect threats of all kinds and from all directions. They must be powerful enough to do their job but small enough not to compromise payload efficiency.

#### **DETECTING THREATS ON ALL SIDES**

The need for sensors that maximize size, weight, and power (SWaP) isn't new, nor is the term. But the importance to military operations has grown of late, as the Department of Defense (DoD) increasingly focuses on developing unmanned platforms. These systems are driving demands for smaller, yet more sophisticated, electronics that can perform in any environment.

In this new landscape, "smaller, faster, stronger" become more than just buzz words. The fusion of radar, communications, electronic warfare, and cyber effects in a low-cost, low-profile package becomes a force multiplier in the field.

#### **ENGINEERING FOR DEFENSE**

At Huntington Ingalls Industries (HII), we exist to support American warfighters through technology and engineering innovation. Our team of highly trained, highly technical engineers focuses on developing embedded hardware, firmware, and software for multi-mode defined systems. We are experts in sensors, platforms, processing, and C5ISR, with an 80-year track record of quality and the credentials to prove it.

Our low-SWaP sensor and sensing solutions are built on stateof-the-art architectures and employ our system-on-a-chip embedded processor. They can operate as a stand-alone system, be connected for multi-mode operation, or be integrated into an existing common operating picture.

We are working to upgrade American military capabilities by fusing new technology — like artificial intelligence (Ai) — into signal processing, for improved performance in the field. Together with our government clients, we are engineering a new era in U.S. national defense and security.

Technical Solutions tsd.huntingtoningalls.com

## HII'S SENSOR & SYSTEM 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 sensor and system solutions faster and at lower costs.



### RADAR SYSTEMS

We build multimode radars with capabilities in sense through the wall (STTW), foliage penetration (FOPEN), counter UAS (cUAS), and wide area surveillance with Ai-enabled target classification.



# COMMUNICATION SYSTEMS

HII supports U.S. mobile and tactical security with our high-speed communications hardware, including cyber-secure LPI/LPD waveforms and HW- or SW-based encryption.



# ELECTRONIC WARFARE SYSTEMS

Our engineers develop new low-SWaP, tactical, firmware-defined systems to support integrated EW, cognitive EW, and cyber EW— no matter where the mission takes you.



### SPECTRUM SYSTEMS

As a system of systems, our multimode spectrum systems support various mission sets, including dynamic spectrum allocation as well as deployed Counter-UAS operations.

### **FEATURED WORK**

#### DIGITALLY INTEROPERABLE (ADIO) RADIO

Our digitally interoperable (ADIO) radio platform provides a small form factor footprint with improved performance and capability. From standard comms to passive listening for spectral monitoring and waveform/frequency, ADIO delivers flexibility for SDR systems, so that disparate radio networks can interoperate.

In addition, we are providing RDT&E and experimentation to improve coexistence of systems such as high speed data link architectures to radar and electronic

warfare to signals intelligence — simultaneously. Our agile development model allows us to quickly deliver enhancements to key communications and RADAR-based systems. This work will provide significant improvements in wireless communication systems and also provide efficient and highly adaptive development processes that will generate cost benefits for our customers and result in significant improvements for communications and RADAR-based systems throughout the DoD.



As the nation moves into a new era of defense — with changing adversaries who exploit an array of fast-evolving technology — our intelligence, surveillance, and reconnaissance (ISR) capabilities must rise to meet new demands for speed, scale, and security. The future of ISR means keeping pace with the future of technology, so that America's defenses remain at the leading edge. To learn more about how we can help with our complete package of sensor and sensor system solutions, or to get connected with one of our experts, visit us online at tsd.huntingtoningalls.com.

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### About Huntington Ingalls Industries, Technical Solutions:

Building on a legacy of more than a century of naval shipbuilding, Huntington Ingalls Industries' Technical Solutions division provides mission-critical national security solutions to a wide variety of government and commercial customers worldwide. Comprising more than 7,000 professionals worldwide, our unique national security services portfolio includes unmanned systems, nuclear and environmental services, intelligence, surveillance and reconnaissance (ISR), cyber and electronic warfare, live, virtual and constructive (LVC) training solutions, and fleet sustainment and logistics. For more information, visit tsd.huntingtoningalls.com.

