

SPACE SUPERIORITY SOLUTIONS

L3Harris provides the United States government with space domain awareness (SDA), space control and space command and control (C2) capabilities needed to gain, maintain and exploit space superiority.

ENABLING SPACE SUPERIORITY

Space, a warfighting domain, has never been more critical to the security of our nation. For more than 30 years, L3Harris has bolstered the nation's space superiority mission as the most trusted provider of sustainment engineering services and one-of-a-kind solutions for SDA and space control. Today we are driving the operational agility of our forces with enhanced solutions that also deliver space operator training, enterprise architectures, electronic warfare (EW) capabilities and warfighter decision support tools at the operational and tactical levels.

SPACE CONTROL

L3Harris serves as product support integrator for a diverse portfolio of space control systems, providing program management, systems and software engineering, and cyber security systems and services. We are improving the ground-based radio frequency EW capabilities needed by the warfighter to develop and employ tactics, techniques and procedures supporting space control operations. With the goal of helping our forces adapt to dynamically changing environments, we are advancing a counter communications architecture that is flexible, sustainable and able to support multiple missions relying on numerous waveforms.

L3Harris is the original equipment manufacturer for the Big Top live, virtual, constructive training environment for operational space EW training standardization and scoring. Big Top duplicates real-world settings within the safety net of a closed-loop environment using both recorded live and system-generated signals. Highly transportable, this solution is a practical, cost-effective way to bring the training environment to learners at the

squadron level – wherever they are – and enable full-scale wargaming exercises as part of the joint operational planning process.

L3Harris is the integrator for the only U.S. Space Test and Training Range (STTR), which is located at Schriever Air Force Base, Colorado. We sustain the range by supporting critical operator test and training missions that require the ability to simulate a real-world environment. Today we are working to modernize the capability of the STTR, which is extensible to a space-based environment. Coupling the STTR's "live" capability with the Big Top environment and L3Harris' extensive modeling and simulation capabilities provides the ultimate space warfare preparation environment.

SPACE DOMAIN AWARENESS

L3Harris is enabling the Space Force's move from traditional space situational awareness (SSA) to SDA with our modernization of existing Department of Defense sensors, innovative ground and space-based sensors, and algorithmic capabilities and tools that support rapid data acquisition, extraction and exploitation.

Our modernization efforts are bringing legacy Cold War sensors into today's tactical fight. We are applying up-to-date hardware and software technologies to deliver better performance and communications. We are also enabling the exploitation of more collected data and greatly improved search capabilities. Recent modernization examples include sweeping improvements to the resolution, resilience and accuracy of the Eglin AN/FPS-85 radar and the Ground-based Electro-Optical Deep Space Surveillance (GEODSS) System.



CAPABILITIES AND SERVICES

- > Agile software development
- > Architecture design and planning
- > Data analytics and knowledge generation
- > Data collection and management
- > Decision support tools
- > Hardware and system integration
- > Mission planning
- > Modeling, simulation and analysis
- > Radio frequency and mechanical engineering
- > Remote operations
- > Sensor development, integration and networking
- > Signal processing
- > Spaceflight software
- > World-class sustainment

L3Harris was the first contractor to operate its own optical sensor network for persistent space object monitoring and provide specific event tracking and monitoring services. This commercial sensor network can relieve U.S. Space Surveillance Network sensors from commercial coverage demands, allowing the exquisite sensors to support more difficult track-and-search operations in support of space events and defensive operations. Our value-added processing of optical data from our network and others includes orbit determination and catalog maintenance, space object characterization and normalcy modeling and change detection. Our machine-to-machine interfaces give customers near-real-time information and the ability to conduct dynamic tasking.

L3Harris' data processing enables orbit determination, catalog maintenance, space object characterization and change detection for predictive warning of space events and enemy action. We aggregate data from a consortium of partners and vendors to provide worldwide collection of optical, radar and passive radio frequency sensors for SSA research and space battle management C2 operations.

Our machine-to-machine interfaces give customers near-real-time information and the ability to conduct dynamic tasking in fast-moving tactical space events. Our catalog allows operators to return to a space event that happened in the past – even if there was no tasking related to it. Our initiatives on the SSA Data Library are bridging Title 10 and 50 data for space defense and event characterization to provide decision support and predictive assessment for the Joint Task Force-Space Defense commander.

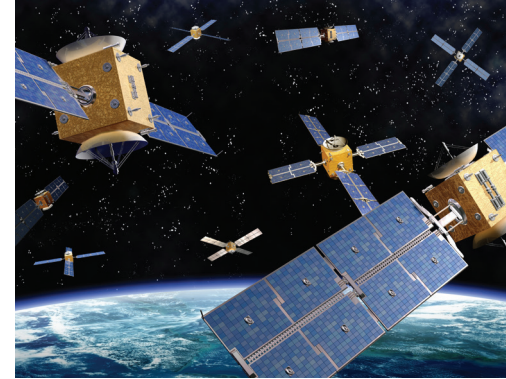
We also address the life cycle of space and ground-based systems – from mission design to operations – with our rich application library of tools, which were developed based on dozens of Department of Defense, Intelligence Community, civil and commercial missions. Additionally, our support to Department of Defense wideband satellite operations include operations and maintenance, life-cycle engineering, on-site technical assistance, equipment installation, depot-level repair, logistics, cybersecurity, training and sustainment.

OPERATIONAL SPACE C2

L3Harris is bringing together our company's full SDA and space control resources to provide critical orbital analysis support, training and tools to all space C2 nodes and to all levels of space C2 – tactical, operational and strategic. We are also looking to the future of operational-level space C2 with new thought leadership and corresponding capabilities that will enable dominance in the space warfighting domain.

To this end, we are creating infrastructure that is scalable and modular. We are developing capabilities for commanders and decision-makers that close the warfighting observe-orient-decide-act (OODA) loop for faster and better-informed courses of action. And we are developing a training and wargaming environment that enables controllers and decision-makers with both virtual and live space assets to hone their C2 skills in a networked, connected and distributed manner.

**For more information, contact
spacesuperiority@L3Harris.com**



L3HARRIS ACCOMPLISHMENTS

- > Served the nation's space superiority mission for 30 years on location
- > Supported the U.S. Air Force's space superiority mission with award-winning logistics and depot support
- > Provided unique, high-level systems view that enables rapid assessment of multiple alternatives on mission system performance and cost
- > Achieved 25% life-cycle cost reduction and improved performance for Air Force Space Command support
- > Reengineered and repurposed an at-risk project into today's state-of-the-art STTR
- > Enabled the \$1 billion S-Band Fence to successfully complete development and operational testing by rapidly deploying space C2 modifications using an Agile process

Space Superiority

© 2020 L3Harris Technologies, Inc. | 02/2020 | d1051 | 58280 | TRP

Nonexport-controlled Information

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



L3HARRIS™
FAST. FORWARD.

1025 W. NASA Boulevard
Melbourne, FL 32919