

Next Generation Space Defense

# MILSATMAGAZINE

May 2025



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# YOUR STRONGEST ALLY IN THE ELECTRONIC WARFARE BATTLESPACE

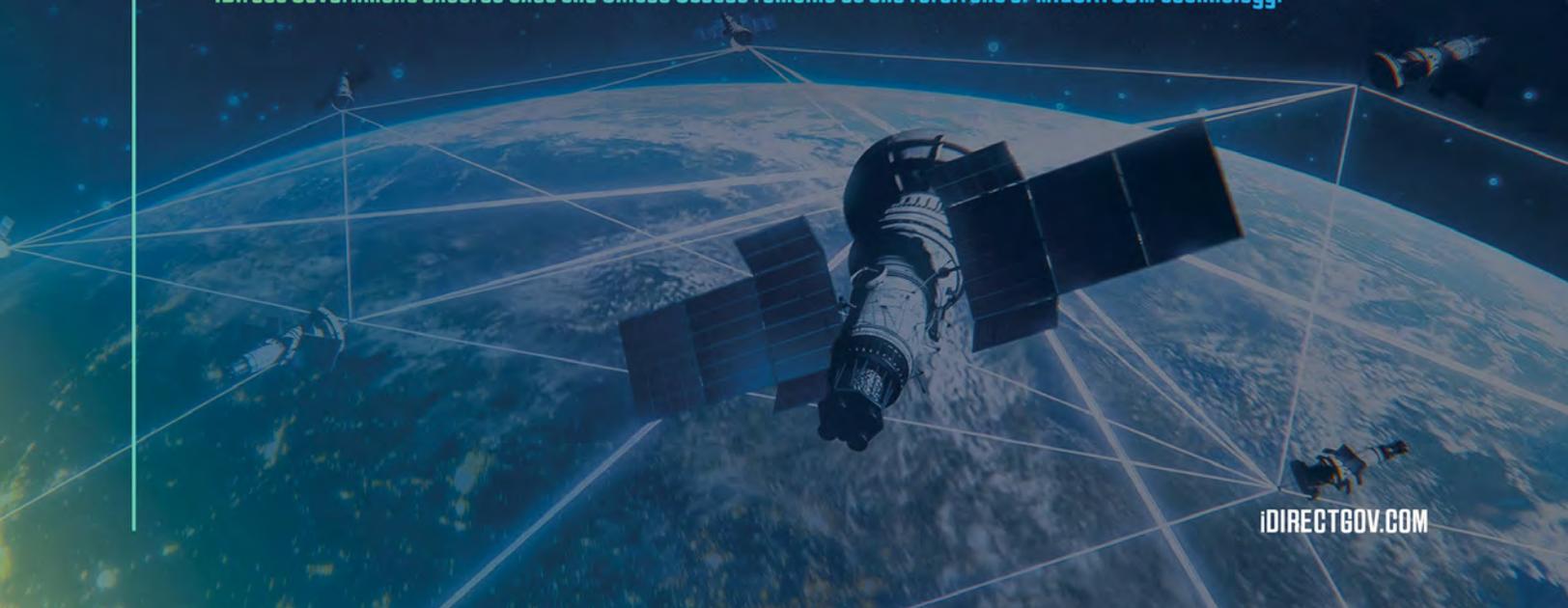
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# DISPATCHES

## ROCKET LAB PARTNERS WITH U.S.A.F. | AFRL FOR NEUTRON LAUNCH FOR ROCKET CARGO MISSIONS



**Rocket Lab USA, Inc. (Nasdaq: RKLB) will launch their medium-lift, reusable rocket—Neutron—for the U.S. Air Force Research Laboratory (AFRL) for a Rocket Cargo mission that supports point-to-point cargo transportation and this mission is scheduled for a return-to-Earth launch no earlier than 2026.**



The launch contract will see Neutron execute a Rocket Cargo survivability experiment under the AFRL Rocket Experimentation for *Global Agile Logistics (REGAL)* solicitation, an effort by the Department of Defense to create a rocket-based point-to-point transportation system to quickly and rapidly deliver cargo around the world with commercial launch providers. AFRL's experiment will be launched by Neutron and re-enter Earth's atmosphere in a demonstration of re-entry capability for future REGAL missions.

Rocket Lab's Neutron medium-lift reusable launch vehicle will provide both government and commercial customers with an alternative and reliable launch service capable of deploying 13,000 kg to LEO. Neutron is tailored to deploy constellations and national security missions as well as science and exploration payloads. Neutron's debut remains on track for first launch in the second half of 2025.

## USSF DEFINES PATH TO SPACE SUPERIORITY IN 1ST WARFIGHTING FRAMEWORK



***The United States Space Force (USSF) has released the [Space Warfighting framework](#) that outlines the service's vision for achieving and maintaining space superiority, while ensuring the long-term safety and sustainability of the space domain.***

This landmark document underscores the critical importance of space superiority as a joint force priority, recognizing it as an essential element for the success of military operations across all domains.

The framework establishes a common lexicon for counterspace operations, detailing a range of responsible offensive and defensive actions Guardians may employ to maintain control of space and ensure the success of the Joint Force.

Counterspace operations will be executed across three primary mission areas: orbital warfare, electromagnetic warfare and cyberspace warfare. At the direction of combatant commanders, Guardians may conduct counterspace operations including terrestrial strike, orbital strike, space link interdiction and active and passive space defense,

Space Warfighting marks a significant step forward in solidifying the Space Force as a warfighting service and integral part of the Joint and Combined Force, highlighting the essential role of space superiority for national security.

*"It is the formative purpose of the Space Force to achieve space superiority—to ensure freedom of movement in space for our forces while denying the same to our adversaries,"* said Chief of Space Operations **Gen. Chance Saltzman**. *"We must be prepared to employ capabilities for offensive and defensive purposes to deter and, if necessary, defeat aggressors that threaten our vital national interests.*

*"This document builds on the Military Space Operations terms of reference and Space Force Doctrine Document 1 to increase U.S. lethality and deter would-be aggressors in space,"* said **Lt. Gen. Shawn Bratton**, deputy chief of Space Operations for Strategy, Plans, Programs and Requirements. *"We developed Space Warfighting to expand on the tenets of Competitive Endurance and the Space Force Truths. With Space Warfighting, we establish the counterspace framework necessary for Guardians to achieve space superiority, a precondition for Joint Force success."*

# DISPATCHES

## GILAT RECEIVES A \$6 MILLION DEFENSE CONTRACT FOR MILITARY COMMS IN APAC



***Gilat Satellite Networks Ltd. (NASDAQ: GILT, TASE: GILT) has announced the company's Defense Division secured an order valued at \$6 million to provide the [SkyEdge II-c](#) platform to a military organization in the Asia-Pacific region.***

The advanced satellite communications solution will support both fixed and mobility sites, ensuring secure and reliable connectivity for critical defense operations with enhanced air interface cyber security. Delivery is expected over the next 3 months.

Gilat's SkyEdge II-c platform is designed to meet the demanding requirements of military communications, providing high resilience, efficiency, and robust security for mission-critical applications.

This contract underscores the confidence in Gilat's field-proven technology and the company's long-standing expertise in delivering advanced satellite solutions for defense organizations worldwide.

*We continue expanding our operations in the defense market both in and out of the U.S. and are proud to support the growing needs of military forces in the Asia-Pacific region with our state-of-the-art satellite communications technology," said **Gilad Landsberg**, President of Gilat Defense. "This contract reaffirms our position as a trusted provider of secure and resilient SATCOM solutions, enabling seamless operations across diverse and challenging environments."*

## L3HARRIS RECEIVES \$214 MILLION IN ORDERS TO SUPPORT THE GERMAN ARMED FORCES



***L3Harris Technologies (NYSE: LHX) has received multiple orders that are expected to total \$214 million under Germany's Digitalization – Land Based Operations (D-LBO) program.***

These orders include delivery of interoperable communication systems to enhance the operational capabilities of the *German Armed Forces*.

L3Harris' resilient communications solutions leverage battle-tested hardware and robust waveform technology, which support the D-LBO program's objective for German armed forces to be more operationally efficient and coalition interoperable.

These orders follow other recent awards the company has received for Falcon® radios, including for the Netherlands' *FOXTROT* and the U.S. Army's *HMS* programs.

*Resilient and immediate communication among allies is crucial for countering threats posed by aggressive adversaries," said **Sam Mehta**, President, Communication Systems, L3Harris. "We are proud to support our NATO ally with our trusted communications technology, which has demonstrated its value in the field by protecting soldiers and networks at the tactical edge."*

# DISPATCHES

## SES SPACE & DEFENSE TO PROVIDE HYBRID SPACE-BASED ARCHITECTURE TO THE DOD



**SES Space & Defense joins the [Defense Innovation Unit's \(DIU\) Hybrid Space Architecture Network initiative.](#)**

SES's *Hybrid Space Architecture II* project will showcase an automatically orchestrated secure integrated multi-orbit network that interconnects commercial and government networks to deliver assured and affordable, low-latency, multi-path communications across a scalable and resilient multi-domain network.

SES Space & Defense will deliver an engineered multi-orbit network leveraging *Secure Integrated Multi-Orbit Networking (SIMON™)*. This will enable always-on connectivity as an affordable, resilient alternative to traditional *Primary, Alternate, Contingency, and Emergency (PACE)* and auto-*PACE* operations currently used by warfighters across the *Department of Defense (DoD)* worldwide.

By blending **LEO, MEO, and GEO** capabilities in a purposeful manner, *SIMON™* ensures that the warfighters' data can affordably traverse multiple orbital regimes simultaneously, adapting and adjusting in real time to changing mission requirements.

"With *SIMON™*, warfighters will have the ability to 'set and forget' their user terminals and affordably realize assured connectivity across multiple orbits," said **David Fields**, President and CEO of SES Space & Defense. "This transformational approach solves a decades-long dichotomy of affordability versus resilience, providing *SATCOM* agility, flexibility, and reliability for the forward deployed personnel."

## EUTELSAT ONEWEB + KYMETA DEBUT MULTI-ORBIT SATCOM TERMINAL



**[Eutelsat OneWeb](#) and [Kymeta](#) have announced the general availability of the new [Kymeta™ Goshawk u8 flat-panel terminal](#) on the [Eutelsat OneWeb LEO network](#), a new multi-orbit terminal for government and military customers.**

The terminal meets key defense needs by enabling the benefits of both GEO and LEO networks on one terminal, providing resilient, flexible multi-orbit connectivity across all operational domains. As nations boost defense spending and invest in sovereign *SATCOM*, the Goshawk u8 is purpose-built to deliver.

With robust and trusted communications being a top security priority, the Goshawk u8 delivers seamless connectivity from both LEO and GEO satellite networks in a single user terminal. The terminal's rugged, low-profile design and reliable, high-bandwidth performance make it ideally suited for the evolving demands of allied nations' defense and security sectors.

The Kymeta Goshawk u8 provides a 'plug-and-play' terminal, designed for use across a range of platforms, including land vehicles, maritime vessels, and fixed installations. Combining LEO, GEO, and cellular connectivity it allows for improved responsiveness to enable maneuver warfare tactics, such as rapid, focused, and unexpected actions that can shatter an enemy's cohesion.

The Goshawk u8 delivers a critical solution with its flexible, open network architecture designed to support defense operations on the move.

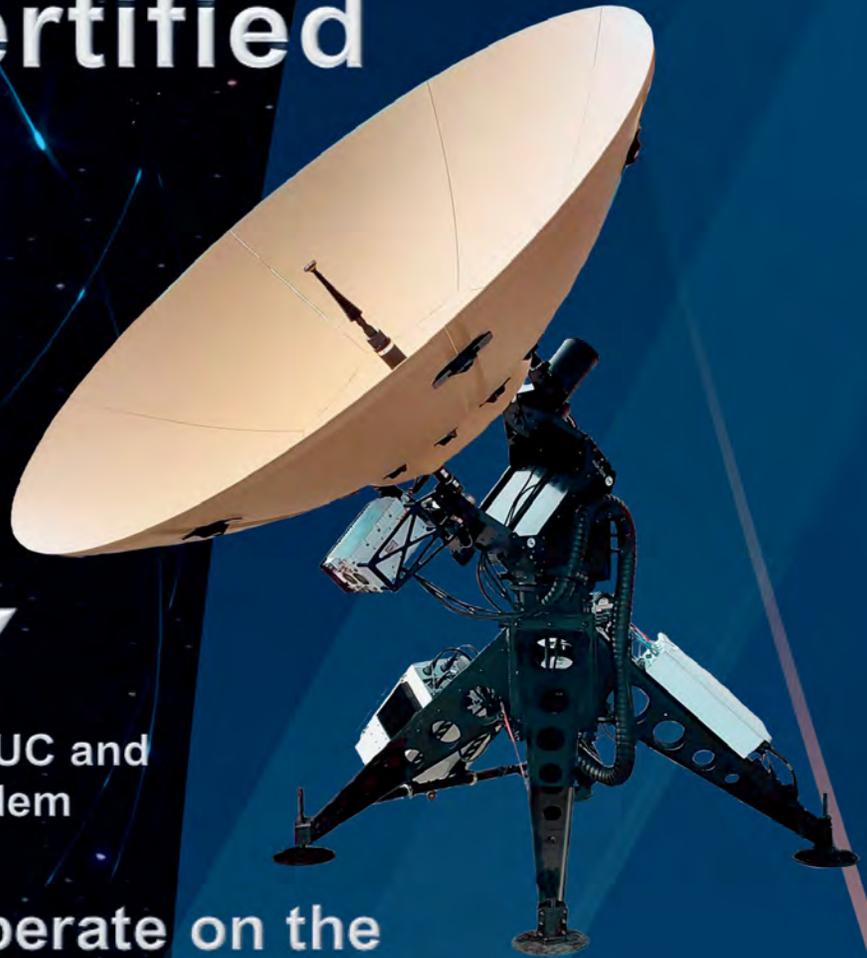
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# DISPATCHES

## INDO-PACOM COMMANDER HIGHLIGHTS U.S. ARMY'S REGIONAL CONTRIBUTION



**During the 2025 Land Forces Pacific Symposium and Exposition in Honolulu, the U.S. military's senior leader in the Indo-Pacific area of responsibility discussed ways the Army contributes to the joint force's overall mission throughout the region.**

Navy Admiral **Samuel J. Paparo**, commander of **U.S. Indo-Pacific Command**, said “fires” or weapons systems that strike targets are the capability he most needs.

“The ability to deliver fast, accurate and lethal fires across domains is fundamental,” he said.

Paparo referenced China’s potential invasion of Taiwan as an example, noting that U.S. maritime and air superiority aren’t necessarily needed to prevent an invasion. Rather, the joint force needs the capability to deny China’s use of the Taiwan Strait.

“And the Army’s fires capability, integrated with the ... joint force, is essential to deny that zone by imposing devastating costs,” he added.

Paparo also said that, over the past nine years, the Army has risen to meet a challenge issued by a previous Indo-Pacom commander to forge a capability to “Sink ships, neutralize satellites, shoot down missiles and deny the enemy’s command and control. The Army responded decisively with the creation of multidomain task forces.”

He added that there are currently **Multi-Domain Task Forces (MDTFs)** in the field bringing land-based capability to oppose the enemy’s command, control, communications, computers and information systems’ surveillance, reconnaissance and targeting capabilities.

“This fundamentally alters the strategic calculus in the contested environment,” Paparo said, adding that the MDTF capability allows the joint force to place fires and effects “precisely at the time and the place of our choosing.”

Paparo also praised the Army’s short-range, ballistic Precision Strike Missile capability, calling it “a game-changer that fundamentally alters China’s risk calculus; this is a matter of record.” He noted that the missile system is capable of potentially neutralizing numerous enemy targets before any kinetic conflict begins.

“These capabilities—along with space, cyber and electronic warfare—operate from key terrain in the first island chain and near strategic maritime choke points, creating... persistent and lethal effects,” Paparo said, adding that he considers the Army’s fires capability to be the most valuable and lethal asset in the region.

Paparo also spoke about the command’s air and missile defense components. He said the missile threat posed by China and North Korea is growing in “both quality and sophistication,” and that the command’s AMD needs to be resilient, adaptive and responsive to evolving challenges. He also said interoperability with allies is key. “By connecting these defense systems, sharing intelligence and coordinating responses, we create a common operating picture and then, accordingly,



**Adminral Paparo**

a combined defense shield,” Paparo said.

He also discussed the Army’s role in sustainment throughout the region, stating that effective sustainability is “existential.”



Paparo said

integrating artificial intelligence into the process is “revolutionizing sustainment” as it allows his command to anticipate requirements in all classes of supply — fuel, ammunition and missiles/

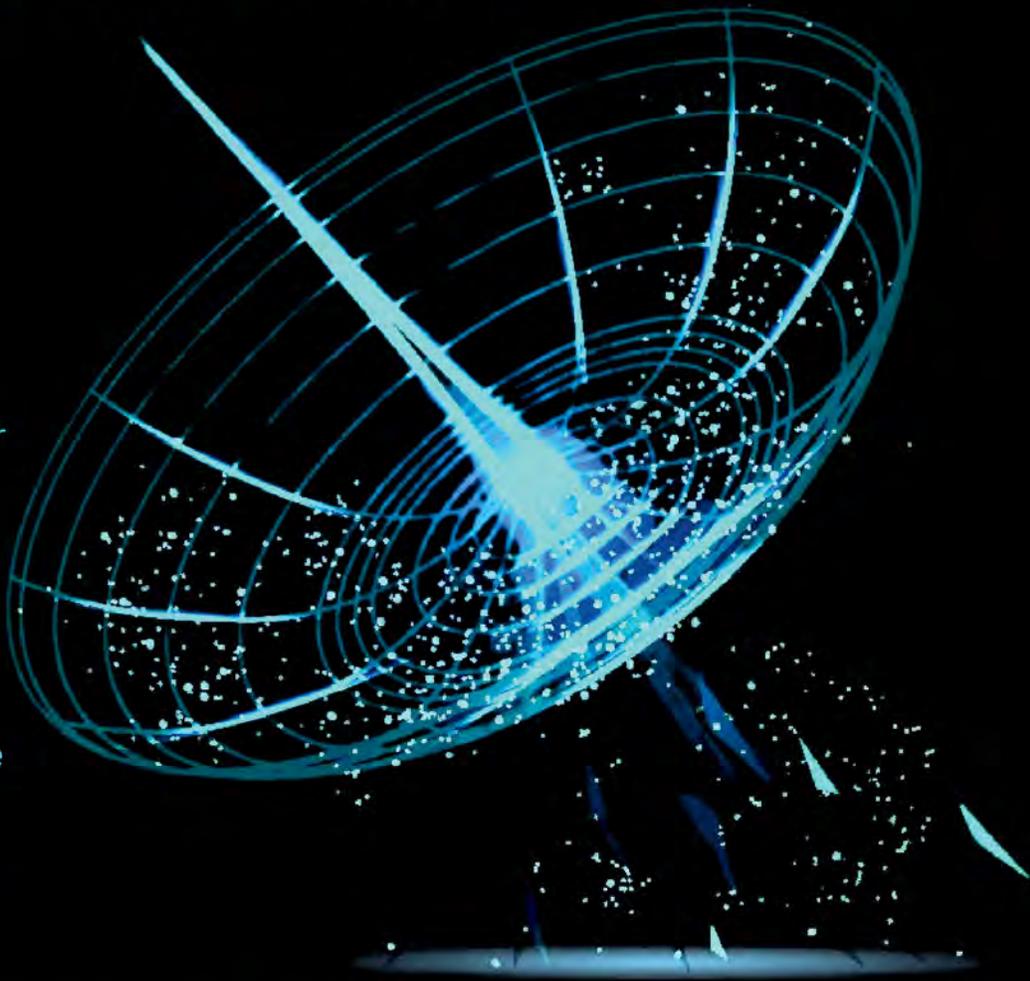
The admiral said the Army provides the “backbone” of the joint force’s ability to sustain combat power throughout the region, and its role in theater-wide sustainment cannot be overstated.

He said the challenges in the Indo-Pacific region are “formidable but not insurmountable. The Army’s contributions to joint conflicts are transformative and inspiring, but we all must do more—and we need to do it now.”

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# DISPATCHES

## UAVIONIX DEBUTS TRAKR



*FlightLine software in operation, photo courtesy of the company*

**uAvionix** this month announced the launch of **Trakr**, a new suite of hardware and services that extends the company's FlightLine airspace surveillance platform to include real-time monitoring of customer-owned drone operations alongside ADS-B data from aircraft.

By integrating Trakr's UAS-specific position feeds with FlightLine's ADS-B aircraft surveillance, uAvionix now delivers a complete picture of low-altitude airspace for operators conducting critical missions such as Drone as First Responder (DFR), infrastructure inspection, wildfire response, range managers, and beyond.

As low-altitude airspace becomes increasingly populated with UAS, operators and airspace managers face significant challenges in maintaining situational awareness. FlightLine has long provided FAA-trusted ADS-B surveillance. However, the absence of assured, real-time drone tracking has left critical blind spots for UAS operators—particularly in BVLOS and multi-drone environments. Remote ID technologies offer limited range and are often not suitable for enterprise operations.

With the introduction of Trakr, uAvionix provides operators with a private UAS tracking ecosystem integrated with the FlightLine platform for the display and monitoring of UAS operations. The Trakr device, a compact, low-SWaP transmitter affixed to each drone, broadcasts real-time GPS position over the 915 MHz ISM band. The signal is received by either a permanently installed TrakrStation or the portable, battery-powered TrakrStationLTE, and transmitted to the cloud-based FlightLine portal.

**[Read more at this direct link...](#)**

## SAAB SIGNS MOU WITH ICEYE



**Saab** and **ICEYE**, recently signed a Memorandum of Understanding (MoU) to cooperate on the development and integration of advanced space-based radar data in Saab's command and control (C2) systems.

This strategic cooperation aims to integrate ICEYE's cutting-edge SAR technology solutions into Saab's command and control systems, enhancing tactical decision-making and situational awareness in defence.

Space-based sensor capabilities are becoming crucial for modern militaries, providing access to critical information in challenging environments. This cooperation intends to deliver tangible value to customers by integrating ICEYE's enhanced situational awareness, long-range targeting, and improved tactical decision-making capabilities with Saab's command and control systems.

The MoU lays the foundations with the initial focus on investigating and demonstrating integration for multi-domain operations. The benefits would enable advanced space situational awareness (SSA) and critical infrastructure protection capabilities, providing valuable insights for both civilian and military authorities in times of peace, the grey zone or conflict.

"Saab's integration with ICEYE data will provide real-time, high-resolution imagery through clouds and darkness, enabling comprehensive surveillance and reconnaissance for faster, even more informed decisions, in complex operational environments," said **Carl-Johan Bergholm**, Senior Vice President and Head of Saab's business area Surveillance.

# DISPATCHES

## UK-MADE SPACE SYSTEM TO HELP PROTECT MILITARY SATELLITES



**UK-made tech will help the military monitor space allowing a new £65 million deal. The Borealis command, control and data processing system will help the UK military and the UK Space Agency to better monitor and protect satellites, through new software which compiles**

**and processes data from multiple sources, more quickly, to monitor space.**

The £65 million deal with CGI UK, will support around 100 skilled jobs in Leatherhead, Reading and Bristol, boosting the UK's space capabilities and delivering on the Government's Plan for Change.

The new technology will provide UK military with a better understanding of the Space Domain, improving military commanders decision-making process and supporting operations, both at home and overseas.

Under the five-year contract, Borealis will provide software for the National Space Operations Centre, which develops and operates the UK's space surveillance and protection capabilities. It will be a unique, UK-made system which support military operations around the world.

Borealis will enhance the UK's ability to monitor and protect crucial space assets, which underpin the UK's security and prosperity, enabling us to navigate the oceans, keep our military personnel safe, monitor the climate, and forecast the weather.

**[Read more at this direct link...](#)**

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# DISPATCHES

## DIU SOLICITATION: CUAS LOW COST SENSING CHALLENGE



*The Defense Innovation Unit (DIU), in collaboration with the U.S. Northern Command (USNORTHCOM), seeks to identify solutions for scalable, cost-effective, unmanned aircraft system (UAS) detection, identification, and tracking.*

This challenge aims to enhance the DoD's counter-UAS (CUAS) capabilities while addressing cost and scalability limitations associated with traditional radars, optical sensors, and radio frequency detection systems.

DIU Director, **Doug Beck**, said, “*This work will significantly enhance our ability to detect and track threats, and will help our NORTHCOM teammates secure the homeland.*”

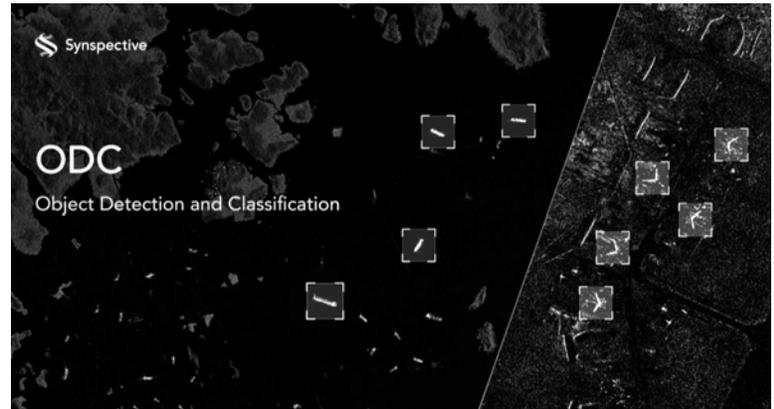
DIU Lead for Counter UAS, **Matthew Way**, said, “DoD needs more options for low cost cUAS sensors that can augment our more exquisite capabilities to provide earlier warnings and indicators,” said Way. “We understand there may be trade-offs in detection range and accuracy to drive down costs versus positively enabling a distributed sensing concept.”

*Establishing a layered domain awareness network from seabed to space to detect and track threats approaching North America is critical to immediate and future mission requirements, because you can't defeat what you can't see,”* said **General Guillot** at the Senate Hearing on the Posture of NORTHCOM and SOUTHCOM for FY 2026

A team of subject matter experts will evaluate applicants and select up to 10 finalists. This group of finalists will receive a portion of the overall funding to help cover their participation in NORTHCOM's Falcon Peak exercise in September of 2025. The top performing vendors at Falcon Peak will compete for the remaining prize funding.

[Learn more at this direct infolink...](#)

## SYNSPECTIVE + SATIM LAUNCH OBJECT DETECTION AND CLASSIFICATION (ODC) SOLUTION



**Synspective Inc.** has launched the firm's **Object Detection and Classification (ODC)** solution that is designed to enhance the accuracy and reliability of monitoring vessels and aircraft—this solution overcomes the limitations faced by traditional monitoring systems, offering scalable and cost-effective wide-area security.

Monitoring maritime and land domains faces significant challenges due to the vast areas and dynamic nature. Optical satellites have difficulty with cloud cover and darkness, while ground-based systems and patrols face limitations in coverage and high operational costs. Recognizing these hurdles, Synspective's ODC solution delivers a persistent surveillance capability, ensuring security and operational efficiency around the clock, regardless of weather conditions or time of day.

Synspective's ODC leverages advanced SAR data and analytics to provide timely and precise insights into the presence, location, and type of vessels and aircraft. This is supported by our plan to deploy a constellation of more than 30 **StriX SAR satellites** by 2030, which will significantly enhance monitoring frequency and coverage capabilities.

The company's collaboration with **SATIM**, a leader in AI-based Automatic Target Recognition (ATR) on SAR imagery, integrates proven algorithms into Synspective's analytical platform, ensuring reliable detection and classification of target objects. This platform is designed for flexibility and future advancements, with plans to extend detection capabilities to a broader range of objects.

[Learn more at this direct infolink...](#)



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# SSPI's Better Satellite World: Satellites and the Art of War

Author: SSPI Editorial Team



## **The South China Sea is a triangle of ocean bordered by Vietnam, the Philippines, Taiwan, Indonesia—and China.**

In 1988, strange things started happening there. China's Navy fired on three Vietnamese vessels, sinking them and killing 74 sailors. The dispute was over China's claim to a group of mostly uninhabited islands far beyond that nation's territorial waters.

However, in China's view, the entire South China Sea was its exclusive property. China made that clear in another battle with a Philippine Navy gunboat.

Then... everything went quiet—until years later. China began building forts and airfields on island reefs scattered across the Sea.

### **STRANGE BEHAVIOR?**

Not to one of the most famous generals in Chinese history. **Sun Tzu**, born 2,500 years ago, is famous for writing a short book called *The Art of War*. His writings teach that wars can be won without fighting battles. They can be won, for example, by taking possession of small islands and showing you are willing to fight for them—without doing much fighting at all.

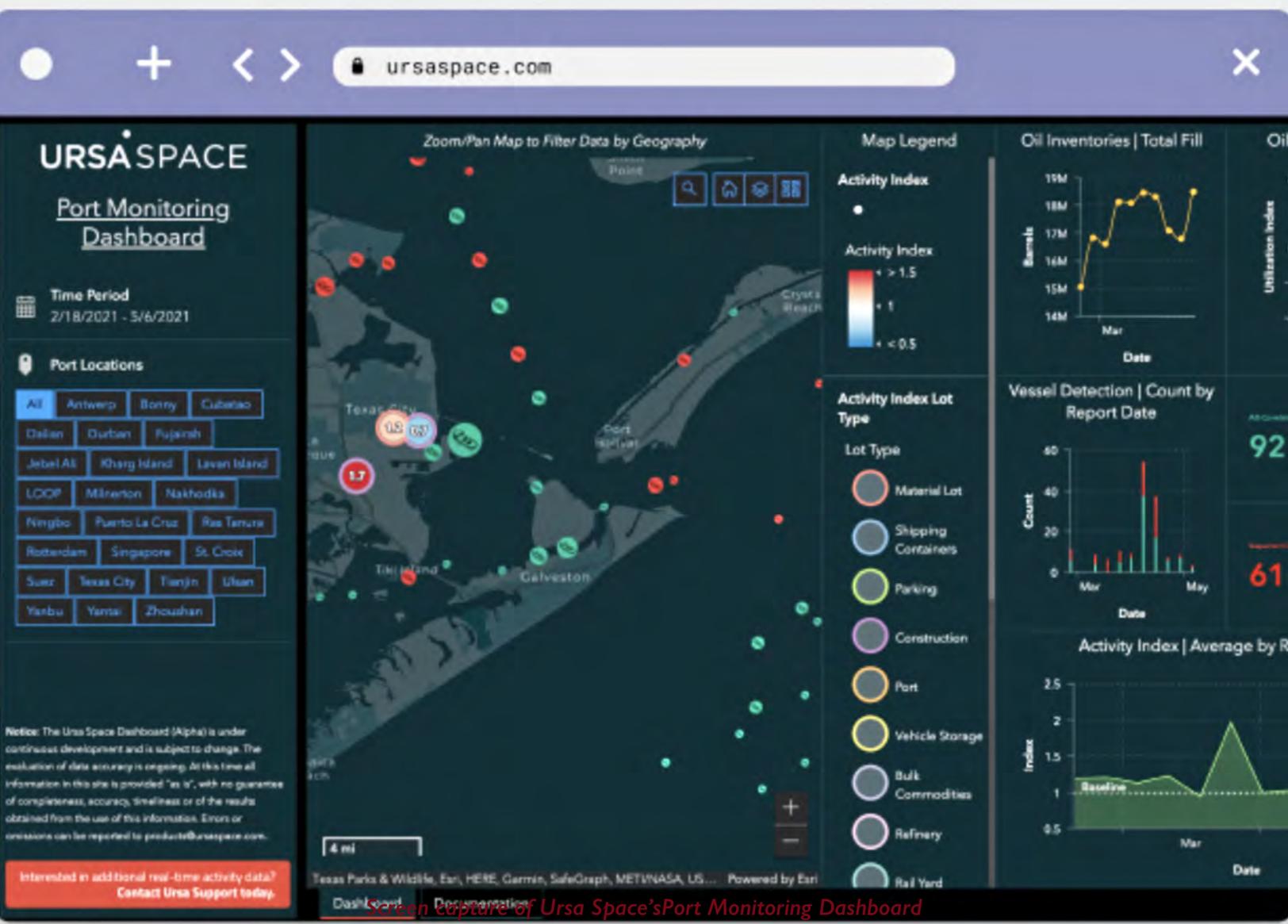
Take China's *Maritime Militia*. It's made up of hundreds of fishing boats that have surged out of harbors to surround disputed islands and menace U.S. Navy warships. They claim to be patriotic captains defending their nation's rightful claims to the entire South China Sea.

### **But are they?**

A company called **Ursa Space** wanted to find out. Ursa builds data systems that automatically analyze radar images that are captured by satellite. By automating the process, Ursa can analyze thousands of images taken over months and years.

That particular specialty was a perfect match for the problem. The South China Sea is hidden by clouds for half of the year.





Screen capture of Ursa Space's Port Monitoring Dashboard

Radar ignores both clouds and darkness, and easily detects the steel hulls of fishing boats.

The Ursa Space analysis revealed an invisible navy in ports across China's southwest coast.

More than 150 fishing boats would form up into armadas in port and set sail together.

Ursa tracked their voyages to the Sea's disputed zones—even when the ships turned off their legally-required radio trackers. In fact, ships without tracking signals were easier to identify as members of the Maritime Militia.



A report from the [Center for Strategic & International Studies](#)

revealed that the Chinese government was paying the Militia to cover their operating costs.

Rather than being humble fishermen fired by zeal for their country, the captains seemed to be on the government payroll.

China is hardly the first nation to claim territory beyond its borders. Its Asian neighbors have claims of their own.

And there's a reason why the western Pacific between Hawaii and the Philippines was known as "America's Lake."

But satellite technology and companies such as Ursa Space ensure that countries trying to win wars without fighting can no longer do it out of view of the world.

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[www.bettersatelliteworld.com](http://www.bettersatelliteworld.com)



# — SPACE SYSTEMS COMMAND BRIEFING —

COMSO Celebrates Two Years of Accelerating Commercial Partnerships with USSF

Author: Lisa Sodders, Space Systems Command Public Affairs

Over the past two years, Space Systems Command's Commercial Space Office (COMSO) has been reinventing space acquisitions—partnering with commercial as well as governmental partners, shaping the “demand signal” to industry through a variety of vectors, and integrating new and emerging technology throughout the U.S. Space Force.

## Commercial Space Office

Streamlined access to:

- Warfighter Needs
- Faster Acquisition
- Lower Cost
- Innovation



COMSO—which was rebranded from the Commercial Services Office to the Commercial Space Office two years ago—is responsible for accelerating commercial partnerships to deliver “fight tonight” capabilities aligned with warfighter needs at a faster pace and with lower cost compared to traditional military acquisition methods. It was instrumental in creating the U.S. Space Force's Commercial Space Strategy and is the executive agent of that strategy.

“Our commercial partners are extremely important to us,” said **Col. Rich Kniseley**, senior materiel leader of COMSO, who is currently transitioning to a new role in the Pentagon. We can't outpace our adversaries on our own. Building new capabilities takes longer than buying what's already available on—or can be adapted from—the commercial market. The U.S. Space Force also doesn't have the monopoly on innovation, and by teaming up with the commercial space industry, we're able to tap into game-changing new technology – and also help foster the development of the kinds of tech that can keep us ahead of the threat,” Kniseley said.



**Colonel Rich Kniseley**

With Colonel Kniseley's transition, Lieutenant Colonel **Timothy Trimailo** became the new head of COMSO.

“The COMSO team has established an amazing framework for commercial capability integration and I'm incredibly excited to lead this organization into the future,” Trimailo said. “Commercial innovation has been an obsession for me throughout my career and it's an honor to lead this team. We will be laser-focused on building upon the solid foundation set by Col. Kniseley, delivering commercial capabilities to the warfighter and continuing to develop the framework to exploit what we have, buy what we can, and build only what we must.”



**Lieutenant Colonel Timothy Trimailo**

**Space Systems Command's Commercial Space Office is structured to take full advantage of innovations in the commercial space industry to deliver warfighting capabilities faster and at lower cost.**



COMSO originally started with a budget of zero. With the support of the Senate Appropriations Committee, COMSO was funded in FY24 and FY25. Those funds directly supported the success of **Tactical Surveillance, Reconnaissance, and Tracking (TacSRT)** and started the **Commercial Augmentation Space Reserve (CASR)**.

SSC's Front Door is a first-step portal for early-stage startups, non-traditional partners, and other commercial vendors to engage with USSF and serves as a central point of connection and useful information exchange for industry and government stakeholders.

COMSO also negotiated with the *Office of the Secretary of Defense* and the *Secretary of the Air Force Financial Management and Comptroller* to stand up a Space Force working capital fund expected to come on line in October of 2025. This will come from the greater Air Force working capital fund to ensure the successful transition of the Commercial SATCOM mission from the **Defense Information Systems Agency (DISA)** to the Space Force.



Under the COMSO umbrella is a network of programs, offices, and initiatives designed to help COMSO take full advantage of the commercial space industry. These include **Front Door**, **SpaceWERX**, the **Global Data Marketplace**, the **Commercial Satellite Communications Office (CSCO)**, the **Commercial Space Marketplace for Innovation and Collaboration center (COSMIC)** and the **CASR**.

Over the last two years, Front Door has expanded, streamlined its processes, automated its entry portal, added a **Customer Relationship Management (CRM)** system, and increased the number of **Reverse Industry Days** it hosts.

*“If all of the different programs and funding vehicles sound complex, that’s because they are – that’s why we have COMSO, and why SSC is the acquisition arm of the U.S. Space Force,” Kniseley said. “We leave no stone unturned when it comes to delivering the capabilities our warfighters need to defend our nation.”*

*“We brought in additional resources for Front Door that have helped streamline our processes, reduce our response times, and process more companies, especially to the direct-to-phase-two routes,” Kniseley said.*

More than 900 vendors have been processed through Front Door to date, helping to build an “enhanced space catalog” to help match vendors with the right government organization and/or allied partner, said *Vic Vigliotti*, Front Door’s director.

At the recent *Space Symposium 2025*, Front Door also announced a new initiative, **Orbital Watch**, which will provide commercial space industry companies with critical, unclassified threat information on a regular basis.

*“With Orbital Watch, our commercial space industry partners will be receiving unclassified threat information that will not only enable them to work with us to provide needed capabilities, but also to protect themselves against the kinds of threats our adversaries are presenting.” Kniseley said.*



SpaceWERX is a division of the U.S. Air Force’s **AFWERX** program dedicated to innovation

in military space. Its mission is to accelerate agile and affordable capability transitions by teaming leaders in innovative technology with Guardian talent.



SpaceWerx allocates approximately \$460 million per year across the Space Force through a number of programs, including the *Small Business Innovation Research (SBIR)* program and the *Small Business Technology Transfer Programs (STTR)* program).

Since 2023, SpaceWERX has awarded 918 SBIR/STTR contracts , valued at \$1.03 billion to 511 different companies.

Because military spending is ultimately funded by the taxpayer, it is governed by a plethora of rules and regulations to make sure those funds are being spent wisely, which can often make it difficult for emerging tech firms and smaller companies that have never done business with the U.S. military to navigate the process.

The *Strategic Funding Increase (STRATFI)* and *Tactical Funding Increase (TACFI)* programs are designed to bridge the capability gap between SBIR/STTR (*Phase II efforts and Phase III scaling efforts*), facilitating the delivery of strategic capabilities for the USSF.

TACFI is focused on transitioning smaller-scale, tactical capabilities at the operational level. STRATFI is focused on large-scale, strategic capabilities at the *Department of the Air Force (DAF)* level.

With both options available to SBIR/STTR Phase II companies, Air and Space Forces are able to scale innovation support across technology sectors and mission needs.

Since 2023, SpaceWERX supported 65 awards through the Strategic Funding Increase and Tactical Funding Increase programs—24 through STRATFI and 41 through TACFI—leveraging a combined total of more than \$1.43 billion, including approximately \$371 million in SBIR/STTR funds, \$497 million in government matching, and \$564 million in private investment.

The **Commercial Satellite Communications Office (CSCO)** is a central marketplace for purchasing commercial *satellite communications (SATCOM)* for combatant commands. Buying commercial services to augment military satellites is not new, but the abundance of commercial providers operating in *proliferated Low Earth Orbit (pLEO)* is.

In 2023, CSCO facilitated a ground-breaking, \$900 million, pLEO *Indefinite Delivery, Indefinite Quantity (IDIQ)* contract for commercial SATCOM procurement. Congress recently raised the ceiling for this contract to \$13 billion and is transitioning management from DISA to CSCO.

*“When the pLEO IDIQ transitions from DISA, the contract will have more manpower assigned to it, more onboarding resources for vendors, and will be able to respond faster,” Kniseley said. “We’ll be streamlining the process; reviewing and matching customer to vendor faster. The pLEO effort groups multiple requirements together so we have better buying power. At the same time, we can help vendors align with the best kind of contract and funding – it doesn’t have to be pLEO. Because we have so many contracts with CSCO, a vendor may think pLEO is the right way, but we may have better deals for them.”*

New to the COMSO portfolio is the **Commercial Augmentation Space Reserve (CASR)**, an SSC strategic initiative designed to ensure access to commercial capabilities throughout the spectrum of conflict while maintaining security, reliability, and availability. COMSO recently awarded its first four pilot contracts with each of the four companies signing three-month contracts to provide “*peacetime capability*” for *Space Domain Awareness (SDA)*. The contracts also include pre-priced arrangement for surge conditions.

*“If all of the different programs and funding vehicles sound complex, that’s because they are. That’s why we have COMSO, and why SSC is the acquisition arm of the U.S. Space Force. We leave no stone unturned when it comes to delivering the capabilities our warfighters need to defend our nation.”—Col Rich Kniseley*

*“We started with the pilot program because we are still working through some issues related to the broader framework, but we didn’t want to wait for the 100 percent solution,” Kniseley said. “We’ll learn from this pilot phase in parallel with finishing out the broader framework.”*

CASR also hosted its first wargame in March with representatives from the *commercial satellite communications (COMSATCOM)* community, USSF, and stakeholder agencies.

COMSO’s Global Data Marketplace removes entry barriers to integrate existing and emerging commercial capabilities and exploit commercial data sources for the Space Force, inter-agencies and allies at speed.



The online platform enables companies to sell space domain awareness data—including tactical surveillance, reconnaissance and tracking data—and enables the Space Force to better exploit traditional and non-traditional data sources.

In addition to hosting Industry Days and Reverse Industry Days with commercial space industry professionals, COMSO has held several forums with venture capital and investment communities...

*“having very frank conversations with the investment community and telling them this is what we need,” Kniseley said. “Explaining, here are the mission areas that we care about, so they are informed and understand ‘Ok, this is where the government wants to go.’ That enables them to start looking for companies to do some early investment and it’s up to us (industry) to show how they can scale that for production.”*

COMSO also launched its **Commercial Space Marketplace for Innovation and Collaboration** (COSMIC) in 2023. A collaboration between SSC and **Virginia Tech Applied Research Corporation (VT-ARC)**, the Chantilly, Virginia, center is designed to facilitate SSC collaboration with the commercial industry, drive synergies with government agency partners, and deliver capabilities to the warfighter with greater speed and cost efficiency.



*“Our adversaries aren’t going to stop challenging our Nation for space dominance,” Kniseley said. “If we want to stay ahead of the threat, it’s going to take everyone – Space Force, other government partners, commercial space industry partners – working together to improve the resiliency of our space architecture, deliver new and more lethal capabilities to our warfighters, and innovate at the speed of the fight.”*



[www.ssc.spaceforce.mil](http://www.ssc.spaceforce.mil)

## MANAGED CONNECTIVITY ADDRESSING CHALLENGES IN THE AID SECTOR

Author: Mark Hawkins, IEC Telecom



**When disaster strikes— be it natural disaster, conflict or infrastructure disruption—reestablishing communications is a core priority for relief teams.**

The rapid evolution of satellite connectivity, particularly LEO constellations, is transforming the way aid teams establish and use their communication structures in the field.

The increasing prevalence of climate-related disasters underscores the urgent need for robust communication solutions. According to the [United Nations Office for Disaster Risk Reduction \(UNDRR\)](#), the frequency of natural disasters has surged by 83% over the past two decades.



From floods to fires, hurricanes to landslides, these events require immediate and coordinated action. The

[International Telecommunications Union \(ITU\)](#) reports that more than 75% of first responders identify dependable connectivity as the single most critical factor for operational efficiency. Reflecting this demand, the market for mobile satellite services in disaster management is projected to grow at a *compound annual growth rate (CAGR)* of 8.5% through 2030.



*“First responders typically operate in areas where reliable cellular connectivity is unavailable. These include remote communities—often the first victims of disasters due to weak infrastructure—where GSM coverage is limited or non-existent. This is also true for urban environments, where*

telecom infrastructure may be severely damaged, cutting off communication channels. Satellite telecommunications remain the critical link between humanitarian missions and coordination centers,” said **Mark Hawkins**, Senior Humanitarian Technology Consultant with **IEC Telecom Group**.



Mark Hawkins

With the advent of reliable, high-speed, low-latency, and cost-effective connectivity enabled by LEO technology, communication in the field has evolved far beyond basic coordination and emergency calls. Aid agencies now have access to the full spectrum of digitalisation, including telemedicine, advanced tracking with multi-layered mapping, specialised applications, and more—right where it’s needed most.

When such a level of connectivity is deployed at the scale of a humanitarian mission, monitoring of active lines, credit limits, and consumption patterns is essential to ensure proper provisioning. This is particularly important in light of recent cuts in NGO funding, forcing humanitarian agencies to tighten budgets on all fronts.

Mark Hawkins added, “Enabling connectivity is just a part of the picture. In the areas of humanitarian action, access to the internet is a very scarce and seductive resource, to ensure purposeful consumption, particularly in current days where every line of the operational budget is severely monitored, network management solutions gain paramount importance.”

IEC Telecom, with more than 30 years of experience supporting the humanitarian sector, is uniquely positioned to address these challenges. As an authorized reseller of **Starlink**, IEC Telecom integrates advanced satellite technology with proprietary network management tools, delivering tailored solutions that empower emergency response teams to operate effectively in high-stakes scenarios.

The firm’s latest solution, **RDK 2.0**, a next-generation **Rapid Deployment Kit**, has been designed to meet the specific requirements of aid and rescue missions.



This portable, carry-on-sized case features the **Starlink Mini**, which can seamlessly support up to 128 devices over Wi-Fi 5 technology. Two power banks enable off-grid operation, a crucial feature in the critical first hours of any operation. Importantly, when connected to **OptiView**, IEC Telecom’s network management ecosystem, each kit can be managed remotely.

As such, each RDK 2.0 can be activated or deactivated as the situation demands. In addition, IEC Telecom offers the possibility of reallocating credits between kits to maximise airtime usage within the subscription period, ensuring no megabyte goes to waste.

“One of the key trends in the humanitarian sector today is so-called ‘localisation’, whereby international aid agencies shorten their operational presence in third countries while handing over execution to local NGOs. In such a scenario, transparency and reportability are key,” Mark said. “With network management tools, HQ preserves direct control of all active links and can assess consumption partners, reallocate credits and adjust provisioning on reliable source data accessible anytime via a user-friendly online portal.

“Digitalization is not only about the empowerment which results from new opportunities unlocked with high-speed data access, nor only remote control. It’s also about the enablement of new cooperation models, which, due to the ongoing transformations, the humanitarian sector is desperate to attain.”

The world today is restless and unpredictable and humanitarian agencies have never been more in demand nor as vulnerable. The ability to establish fast, reliable communication remains a critical necessity for those operating in hostile or insecure environments.

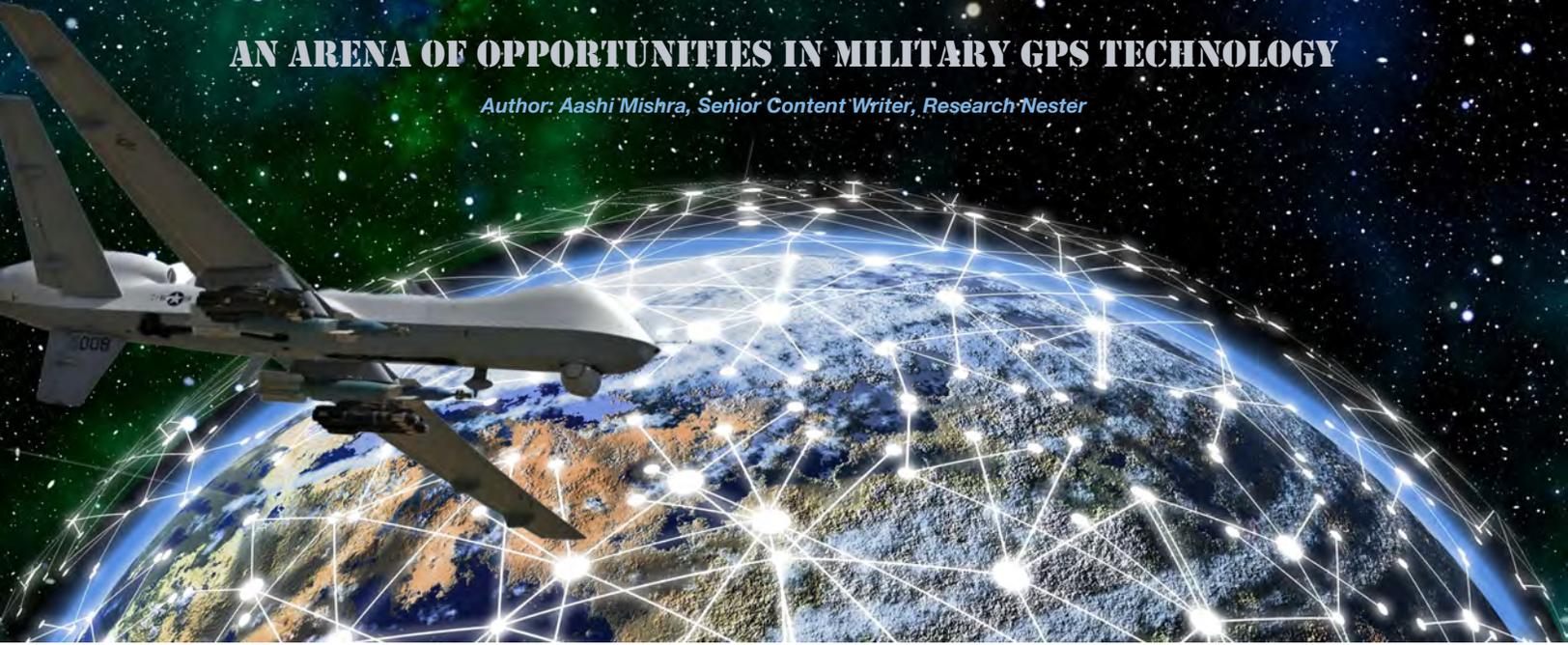
To ensure safety, operational efficiency and agility of humanitarian missions, NGOs have no alternative but to embrace technological advancements which means that the role of managed data-driven solutions will only continue to grow.

The future of humanitarian aid is digital, and the time to prepare is now.



## AN ARENA OF OPPORTUNITIES IN MILITARY GPS TECHNOLOGY

Author: Aashi Mishra, Senior Content Writer, Research Nester



**The rising tensions between global powers is leading to an unprecedented surge in military spending—the International Institute for Strategic Studies stated that defense spending across the globe reached \$2.46 trillion in 2024.**

Countries are integrating the latest technological advancements within their military operations. One such technological boon is GPS... no less than the crucial backbone for modern defense.

Global positioning systems (GPS) have become a vital military tool in today's hostile arenas as it can offer three-dimensional **positioning, navigation, and timing (PNT)** data. Beyond the everyday applications of GPS for navigation, these systems enable tracking military assets, in real-time, from any location in the world.

Military GPS receivers are specialist navigational aids made for use in military settings. Their powers and features include better security, anti-jamming capability, **selective availability anti-spoofing modules (SAASM)**, high precision, anti-spoofing and anti-jamming antennas.

Due to numerous, pervasive, hostile scenarios around the world, the use of military GPS receivers is rapidly increasing to enable precise positioning and navigation for a variety of operational tasks. Moreover, these receivers continue to increase in number in response to the global rise in various border disputes as well as terrorist threats. With advancements in satellite technology and cybersecurity, military GPS receivers are evolving to meet the demands of contemporary warfare.

Leading companies that are engaged in the MILSATCOM environs are garnering enviable profits and rendering excellent services to their client bases. A few of the GPS applications include...

### **I. Navigation and Guidance**

GPS offers versatile, effective, and incredibly dependable navigation and guidance options to military personnel worldwide. In times of war and peace, GPS serves as the main navigation system for soldiers, vehicles, ships, and aircraft.

For instance, more than three billion global navigation satellite system across the globe depend on the GPS signals that supplied by the **U.S. Space Force's** satellites. This has increased the demand for advanced GPS receivers with high accuracy and reliability. These receivers are now essential to military forces because they make precise digital mapping options available, and enable communication in critical missions.

Likewise, unmanned systems, such as UAS, UAV, and UGV, are used in a variety of military and defense applications where GPS/GNSS is necessary to always know the exact location of the device... and those being tracked. The United States has the largest military drone fleet in the world, with more than 12,000 UAVs.

Jamming and GPS spoofing are two of the most prevalent cyberattacks on UAVs that cause them to become ineffective. As accurate and unobstructed position data is essential for the safe operation of GPS-dependent UAVs, developing and manufacturing high-end GNSS and GPS receivers is indispensable to organizations. Receivers built to deny cyberattacks use spoofing detection and mitigation techniques to create highly effective defense strategies.

## 2. Surveillance and Reconnaissance

Reconnaissance and surveillance information includes data on the terrain, weather as well as threats that are vital information for all military operations. The importance of intelligence, surveillance, and reconnaissance (ISR) capabilities to the military is no longer a 'nice to have' but 'have to have' in order for GPS-guided UAVs to provide command centers and warfighters with battlefield situational awareness (BSA).

In January of 2025, Ukraine's Ministry of Defense announced the adoption and deployment of the **Poseidon H10 MkIII**, a domestically developed UAV system, that represents a significant advancement in the Ukrainian Armed Forces' capacity for surveillance and reconnaissance.

A vital role that unmanned systems play in contemporary warfare and surveillance operations throughout the seemingly continuous war cannot be understated. GPS receivers are essential for ISR to track enemy movements, and enhance BSA.

## 3. Target Acquisition and Tracking

Tracking and detecting targets is a crucial mission of military operations for the recognition of signs and indications that reveal the presence of target(s) in certain locations. GPS is used by military weapon systems to track air and ground targets that encompass enemy vehicles, aircraft, or individuals.

In July of 2024, the **Air Force Research Laboratory (AFRL)** in U.S. announced the introduction of new target-tracking capabilities that use Artificial Intelligence (AI) and other cutting-edge technologies that are being developed for the offensive and defensive architectures of the future.

The AFRL is also seeking tools to assist with the ingestion and processing of telematic-based data that is provided by GPS, non-GPS, inertial navigation systems, or radio frequency (RF) identification trackers.

GPS receivers are essential for target acquisition and tracking systems. These systems aid in precisely locating adversary assets and positions.

By the close of 2037, the military GPS receiver market is expected to have grown from a 2024 valuation of \$1.9 billion to \$3.2 billion. Growing geopolitical tensions and conflicts are major factors driving the military GPS receiver market.

Geopolitical threats do affect the world's economy, leading to an increased focus on minimizing collateral damage and enhancing mission effectiveness. Moreover, the growing use of autonomous systems, such as drones, unmanned land vehicles, and **unmanned underwater vehicles (UUV)**, has increased the adoption of GPS receivers for precise positioning and navigation.



Major companies in the military GPS receiver market are continuously inventing and creating more precise, dependable and user-friendly products. They are also investing in R&D to boost the accuracy and reliability of their navigation skills. Leading corporations that include **BAE Systems, Raytheon Technologies Corporation, Mayflower Communications, and General Dynamics Corporation**, have gained a major share of this market segment.

In May of 2022, **Mayflower Communications Company Inc.** obtained approval from the **U.S. Federal Aviation Administration (FAA)** for both models of that company's **MAGNA GPS** anti-jam product that provides simultaneous L1/L2 protection and are capable of safeguarding both military and commercial GPS receivers.

Today, the military GPS receiver market is dominated by the U.S., and this trend is expected to continue. The growth of the market in this region can be attributed to increased defense spending and the growing need for cutting-edge military technologies.

Featuring extra ordinary capabilities, today's GPS is a foundation of contemporary military operations. As many military missions and operations significantly depend on the transmission of real-time data, the use of military GPS receivers is increasing, and will continue to grow, to offer precise target tracking and route guidance.

To obtain a competitive advantage, major companies in the military GPS receiver market are continuously concentrating on creating more precise, dependable, and user-friendly products. Toward that end, GPS receivers are now an essential part of military forces and their usage is likely to accelerate in recent years.

[www.researchnester.com/reports/military-gps-receiver-market/7134](http://www.researchnester.com/reports/military-gps-receiver-market/7134)

