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EMPOWERING MOBILE MISSION CRITICAL SATCOM

KYMETA™

NEWS ON-THE-MOVE

LATEST NEWS

Multi-Orbit Satcom On-The-Move—It's a Thing!

Kymeta's newest Osprey™ u8 hybrid-GEO-LEO ready to ship in 2024

Kymeta has completed engineering verification of the **Osprey™ u8 hybrid-GEO-LEO (HGL)** terminal. Production units are on track to be shipped as early as Q1 of 2024. The Osprey u8 HGL operates on-the-move with no emplacement or displacement times to ensure forces are survivable. It offers resilience through multi-orbit path diversity and operates in GNSS-denied environments.

The Osprey u8 HGL meets MIL-STD-810 environmental and dynamics requirements with a very robust mean time between failure to ensure reliability in the harshest operating environments. The simplicity of Kymeta's design ensures small nodes of non-technical operators can stay connected with very little training required. The terminal's low size, weight, power requirement, and cost ensure a feasible solution for even the smallest vehicles and vessels. When needed most, the Osprey u8 HGL enables maneuver forces, across all Services, access to data necessary for mission success.

Kymeta will have a model on display with representatives available to discuss capabilities at Booth 3120 during AFCEA West in San Diego, from 13-15 February. Schedule a meeting at **marketing@kymetacorp.com** for a chance to meet with the team and see the model in person.

WATCH THE VIDEO:

CONTINUED »

IN THIS ISSUE

KEY EVENTS

» **World Defense Show**
FEBRUARY 4-8, 2024,
RIYADH, SAUDI ARABIA

» **AFCEA West**
FEBRUARY 13-15, 2024,
SAN DIEGO, CA

MORE EVENTS »

LATEST NEWS (continued)

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OSPREY™ u8

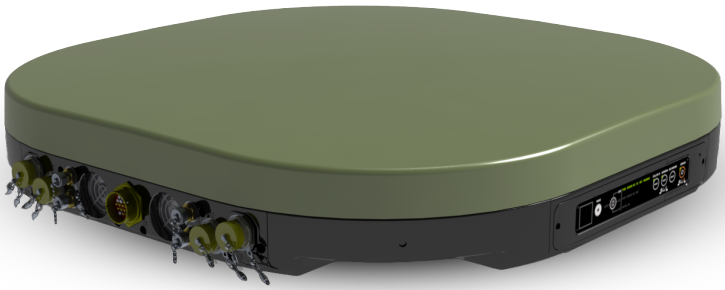

FIGURE 1
Osprey u8 HGL

KEY CAPABILITIES

MULTI-ORBIT: The new terminal is designed from the ground up to operate on-the-move and across multiple orbits. The Osprey u8 HGL uses Kymeta's software-defined metasurface antenna to electronically switch between linear and circular polarization to dynamically maneuver between LEO and GEO constellations. The aperture is paired with Kymeta's uniquely designed software-controlled Multi-Constellation RF Chain Module (MC-RCM) which includes a block upconverter (BUC) capable of scaling from 6-40 Watts to comply with wildly different network requirements and limits for operating on both LEO and GEO constellations.

GNSS-DENIED OPERATIONS: Users can operate using the embedded GNSS receiver or an external M-Code or SAASM GPS. In truly contested environments, users can manually enter their location for operation on GEO networks. An assured position, navigation, and timing (A-PNT) capability is also available to enable GNSS-denied operation on LEO networks.

LOW TOTAL COST OF OWNERSHIP: The Osprey u8 has a high mean time between failure due to the lack of moving parts and low power consumption, plus the ability to manage bandwidth usage between Cellular, GEO, and LEO networks to ensure least-cost routing when conditions permit, means that Kymeta's solution is more affordable across the life of a program.

BEAM-FORMING AGILITY: Kymeta's unique design maximizes link availability in on-the-move applications. The electronically steered aperture reforms the beam hundreds of times per second resulting in world-class beam-forming agility. When coupled with Kymeta's secret sauce – pointing and tracking algorithms – the Osprey u8 HGL enjoys rapid and precise beam steering to support fast-switching necessary to hand-off from setting to rising LEO satellites while simultaneously negotiating very rough terrain or aggressive sea states without packet loss.

EASY TO USE, MULTI-NETWORK: Kymeta's Osprey u8 HGL is a self-contained, multi-network terminal that extends resilient and robust access to data to areas of the battlefield that have previously not been able to subscribe to beyond-line-of-site data. The terminal employs an embedded iDirect 950mp GEO modem, an embedded LEO modem, and an embedded global LTE sim in a single terminal. The terminal also allows the use of external modems that comply with the Open Antenna-Modem Interface Protocol (OpenAMIP) and an additional slot for a local SIM for increased network redundancy. With this configuration, the Osprey u8 HGL provides users up to four data paths from a low size, weight, and power terminal. The auto acquisition and tracking capabilities allow incidental operators to use the terminal with very little training. Simply apply power, and it works! Warfighters are now free to focus on operations instead of maintaining access to critical data.

FIGURE 2
Field-removable Modular Modem Cartridge

Kymeta is bringing a SATCOM terminal to market that meets the demands of the operating forces. The Osprey u8 HGL operates on-the-move with no emplacement or displacement times to ensure forces are survivable. It offers resilience through multi-orbit path diversity and operates in GNSS-denied environments. The Osprey u8 HGL meets MIL-STD-810 environmental and dynamics requirements with a very robust mean time between failure to ensure reliability in the harshest operating environments. The simplicity of Kymeta's design ensures small nodes of non-technical operators can stay connected with very little training required. The Osprey's low size, weight, power requirement, and cost ensure a feasible solution for even the smallest vehicles and vessels. When needed most, the Osprey u8 HGL enables maneuver forces, across all Services, access to data necessary for mission success.

USE CASE

The Kymeta Osprey u8: Advancing On-The-Move Satcom Capabilities in Stryker Vehicles

In February 2023, soldiers from the U.S. Army's IIIAC CG's Executive Communications Team took on the task of transforming the Stryker Combat Vehicle to a fully functional mobile command post on-the-move communications capability. As part of the test, the III Corps used the Osprey u8 to resolve line-of-sight limitations and improve connectivity.

READ THE COMPLETE STUDY »

FIGURE 3
Osprey u8 on top of Stryker vehicle

NOTES FROM THE FIELD

A Chat with Steve Sliwa

After more than 30 years of service in the United States Army, Col (Ret.) Steve Sliwa joined Kymeta in April 2022, as Strategic Solutions Director, bringing a unique perspective for having experienced the need for reliable and effective communications during deployment.

> "Why did I join Kymeta? It was the product, plain and simple."

It's not uncommon for Steve to answer why he switched gears after successful and honorable years in service; as he explains, it's all about the product. In his own words, "I feel confident that I can see a piece of game-changing technology that will have a positive impact on joint military operations and improve the effectiveness of Soldiers." Differently than switching gears, Steve joined Kymeta to continue and complement the mission.

Commissioned in 1986 after graduating from West Point in the Field Artillery, Steve served in Europe, the Pacific, and Middle East, having fought in Desert Storm and as the commander of a Maneuver Battalion Task Force in combat in Iraq in 2004. He also had tours in Haiti and Afghanistan, having his last tactical assignment commanding a Field Artillery Brigade in South Korea, with the responsibility of protecting Seoul from North Korean Artillery Fires.

FIGURE 4
Steve Sliwa speaking as a guest at NDIA

In addition to tactical assignments, Steve had the opportunity to serve in meeting the rapid and emerging requirements from Soldiers and Units for select materiel on the battlefield. As the Director of the U.S. Army Rapid Equipping Force, he had the authority to procure commercial off the shelf (COTS) technology, have it tested and issued to deployed Army forces forward in the areas of combat operations. According to him, most COTS employed did not have the full development for military use – from being built to a military specification, including training packages and spare parts. Some of the items equipped were winners—some were not.

NOTES FROM THE FIELD (continued)

A Chat with Steve Sliwa

Thinking Back

During demonstrations for the Kymeta Osprey™ u8, Steve frequently reflects on what it would have meant to be able to deploy this technology in several key locations when in service: within the Tactical Operations Center, with each firing unit, the support battalion, and with each critical node. Steve sees the Osprey u8 as a COTS he wishes he could have had in his own formations or equipped to capacitate other formations.

"I knew immediately that the Kymeta u8 was a winner, something ready for a Milestone C decision, so simple and effective that it's ready to go into combat and other operations."

FIGURE 5
Steve Sliwa with Kymeta's latest release, the Osprey u8 hybrid-GEO-LEO

FIGURE 6
Steve Sliwa out in the field for demonstrations

Thinking Ahead

Weighting in on the push for modernization in the U.S. Forces, to include the Army of 2030 and beyond, Steve believes the Osprey u8 could make all kinds of units better from command and control and closing the fires chain to the capability to do telemedicine and maintenance on the battlefield. In one simple action, soldiers can pass high resolution imagery to frontline units and back up those same units up the chain of command in reports.

Steve concludes, affirming, "I can say with all honesty, the u8 would make every unit more capable and every battlefield sensor better with the ability to report at distance and make the best use of the internet at the tactical edge of the battlefield."

"I knew immediately that the Kymeta u8 was a winner, something ready for a Milestone C decision, so simple and effective that it's ready to go into combat and other operations."

— Steve Sliwa
Strategic Solutions Director, Kymeta

Please contact us at www.kymetacorp.com/contact and a member of our staff will get back to you as soon as possible. For more frequent news and updates, please follow us on social media.

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