Lockheed Martin Matures Next Secure Communications Satellite Solution For U.S. Space Force With Major Design Milestone

DENVER, Feb. 7, 2025 – Lockheed Martin [NYSE: LMT] has now proven the readiness of its satellite design in support of the U.S. Space Force (USSF) Space Systems Command's upcoming Mobile User Objective System (MUOS) Service Life Extension (SLE) program through successful execution of an Early Design Review (EDR). Future MUOS satellites planned as part of the program will be critical in continuing to provide crystal-clear, secure communications to military forces on the move.

Lockheed Martin is one of two companies selected to develop future MUOS satellite concepts under Phase 1 of the program, centered on early design activities and risk reduction.

"In less than the initial one-year base period of performance, our team went above and beyond to deliver not only a successful early design review – but one so robust that it passed the rigorous standards of a more advanced design assessment," said Maria Hartin-Swart, program management director for Lockheed Martin's MUOS SLE development efforts.

The company's expertise derived from building and sustaining the existing MUOS constellation uniquely enables it to reduce risk by engineering for established complexities of the mission. Lockheed Martin's commitment to leveraging digital technology and innovation also helps ensure MUOS can operate smoothly for years to come.

Future-Proof Technology that Can be Reconfigured in Space

For its proposed MUOS satellites under the extension program, Lockheed Martin has called upon SEAKR Engineering, an industry leader in advanced electronics for space applications. Together the company and Lockheed Martin have designed a new MUOS payload processor – a centrally important electronics box on the spacecraft.

This new component uses state-of-the-art space technology to achieve an optimal balance of processing performance, resilience and resource utilization aboard the satellite.

Lockheed Martin's next-generation MUOS payload processor also introduces a modern feature: it can be re-programmed once in space. The ability to reconfigure aspects of this critical payload will enable future MUOS satellites to evolve and meet emerging mission needs throughout their lives on orbit. Here on Earth, this processor recently completed a successful customer demonstration and achieved a Technology Readiness Level-6 designation – signifying it is ready to advance to production.

Integration of this proven electronics technology ensures future MUOS satellites can remain secure and act with agility in the face of an ever-changing threat environment.

MUOS Makes a Difference in Secure Military Communications

MUOS is a network of orbiting satellites and relay ground stations that revolutionize secure communications for mobile military forces.

The unique Wideband Code Division Multiple Access waveform introduced by the current MUOS constellation enables it to act more like a conventional cellphone network, spreading multiple users out over a spectrum. Currently, MUOS satellites provide more than 67,000 terminal and radio users with:

- Secure, beyond-line-of-sight Ultra-High Frequency (UHF) communications
- Simultaneous, crystal-clear voice, video and mission data
- Reliable communications where needed most, even in the far corners of the globe

After Phase 1 concludes, the USSF has said it will select a provider for Phase 2, encompassing production, testing and delivery of two new MUOS satellites for launch by 2030.

About Lockheed Martin

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