

LOCKHEED MARTIN 
We never forget who we're working for®

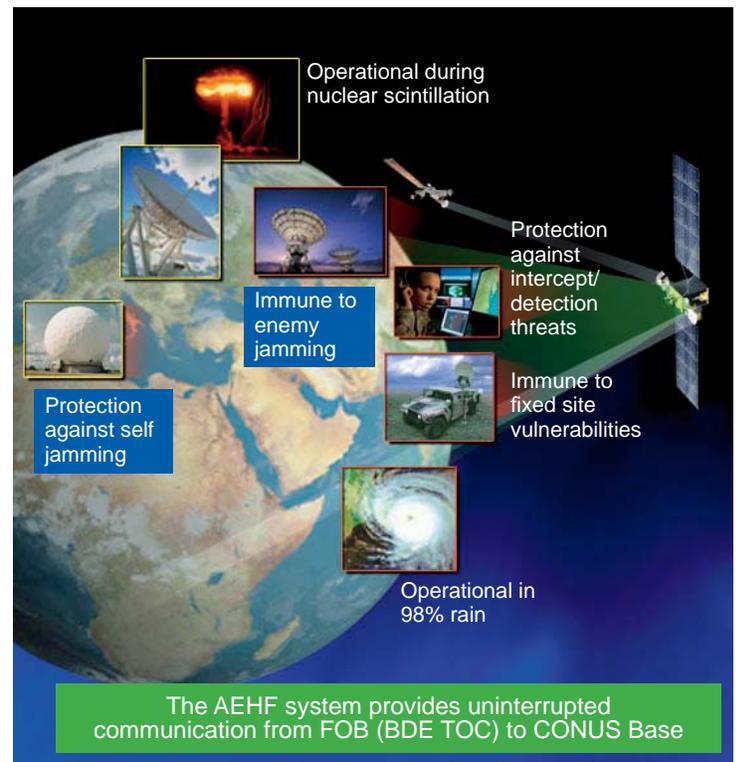
Advanced EHF

Assured, Protected, Survivable



Advanced Extremely High Frequency

Advanced EHF is a protected MILSATCOM system designed to provide significant performance enhancements over legacy systems in a broad set of mission areas, including land, air, naval, special operations, strategic nuclear, strategic defense, theater missile defense, space, and intelligence operations. AEHF provides assured, protected, and survivable SATCOM to the US Government and international partners, including the United Kingdom, the Netherlands, and Canada. As the backbone of US MILSATCOM, AEHF satellites are being combined with complementary efforts and programs including a mission control segment, a mission planning element, and a capability insertion program. These improvements will provide the greatest operational flexibility. The mission planning element is combined for MILSTAR and AEHF and provides efficient network and resource allocation across both constellations. Starting with the first space vehicle launch in 2010, AEHF will provide near-global 24-hour coverage for a wide array of warfighter applications, including broadcasting, data networking, voice conferencing, and strategic reportback. It accomplishes this by exploiting features not found on other SATCOM systems – providing the following operational advantages:



AEHF Features

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|------------------------------|---|
| Secure Communications | With robust protection against jamming or detection, AEHF provides uninterrupted communications through frequency hopping, low average power signal, EHF, and In-Theater Anti-Jam. |
| High Performance | 430 Mbps protected capacity, 10X throughput improvement over Milstar. |
| Maximum Flexibility | On-orbit processing provides the flexibility needed to rapidly establish and reconfigure networks to meet dynamic command and control requirements. Distributed Communication Planning capability supports assured access and borrowing and loaning of resources. |
| Survivability | AEHF is hardened for nuclear event survival; and features satellite autonomy, cross-links, and distributed mission planning to support operations in the event of ground system failure. |

Future of AEHF, Capability Insertion (CIP)

- AEHF maintains significant margin for enhancement (3K lbs in mass and 4KW in available power).
- CIP is a funded program to study the evolution of advanced missions for AEHF, including Communications On-The-Move (COTM).
- CIP is an effort of the Air Force Space and Missile Center Advanced Concept Group.

Lockheed Martin Space Systems Company

Sunnyvale, CA

AEHF Program

Program Management: Mike Davis 408.756.9953

Media Contact: Lauren Wonder 408.756.4225

