Advanced EHF
Assured, Protected, Survivable
Advanced Extremely High Frequency

Advanced EHF is the nation’s newest protected military satellite (MILSATCOM) system, providing a secure communications backbone for US warfighters and leaders. AEHF delivers significant enhancements over legacy systems for a broad set of mission areas, including: land, air, naval, special operations, strategic, missile defense, space and intelligence operations. The system offers assured, protected and survivable MILSATCOM to the US Government and international partners (Canada, the Netherlands, and the United Kingdom).

AEHF satellites are integrated with a robust, survivable, and resilient mission control segment, a mission planning element, and user terminals that work across the AEHF and Milstar constellations. With the first satellites operating in-orbit, AEHF will soon provide near-global, 24-hour coverage for a wide array of warfighter applications including data networking, broadcasting, voice conferencing, and strategic reportback.

By exploiting features not available on other SATCOM systems, only AEHF will provide connectivity to warfighters in all threat conditions in a contested wartime environment.

Ensuring Future Capability

AEHF provides significant margin (>3000lb mass and 4kW power) for enhancements to support future warfighter missions as part of a low-risk technology insertion program. Options include: additional capacity - up to 3x -5x; Comm-on-the-Move user support; Improved anti-jam and crypto enhancements and others that enhance system flexibility and resilience.

AEHF Features

Capability

10x improvement over Milstar with robust protection against jamming and detection threats with frequency hopping, low power signals, frequency selection, covert waveform, on-board signal processing and anti-jam nulling antennas.

Resilience

Secure control network; Nuclear hardening; Satellite autonomy; Distributed, survivable mission control architecture; On-board switching for rapid network flexibility; Satellite crosslinks to avoid vulnerable ground relays.

Affordability

Reducing cost through supply chain efficiencies, block buys, efficient production, innovative test plans, streamlined program plan & workforce management, reduced oversight, and fixed-price acquisition.