AEHF Achieves Initial Operational Capability


The AEHF satellite communication system delivers the most critical strategic information to the National Command Authority and enables the communication of tactical information between and among the Air Force, Army, Navy, Marines and several allies. Achieving IOC means the AEHF System has demonstrated its ability to meet specific requirements that enable warfighters to accomplish their mission.

AEHF supplies critical information such as maps, voice, video, text and data to thousands of users simultaneously operating on ground, sea and air platforms. It also protects communications from enemy jamming, spoofing, detection and interception.

“AEHF gives our warfighters a true advantage in every type of conflict and at all levels,” said Tim Frei, vice president, Communication Systems, Northrop Grumman Aerospace Systems. “We built on our military communications expertise and pushed the state of the technology to design and deliver AEHF payloads. Northrop Grumman is proud to be part of the team that delivered this critical capability to the nation.”

Four payloads have been delivered and three are on-orbit. Production of a fifth and sixth payload is in progress.

This milestone follows a six-month rigorous and complex multiservice operational test and evaluation of the system by the Air Force that concluded in February. The goal of the test and evaluation period was to ensure the AEHF system, including space, mission ground control and terminal elements, was integrated and successfully performed its missions—providing survivable, global, secure, protected and jam-resistant communications for military ground, sea and air assets.

The Northrop Grumman-built payload consists of processing hardware and software, antennas, radio frequency subsystems and crosslinks. The payload delivers XDR (Extended Data Rate) communications services, providing data rates up to 8.192
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Mbps per user, Milstar LDR (Low Data Rate) services (75 - 2,400 bits per second), and Milstar MDR (Medium Data Rate) services (4.8 Kbps - 1.544 Mbps).

AEHF builds on heritage of the Milstar I and Milstar II payloads produced by Northrop Grumman, providing up to 10 times greater capacity and channel data rates six times higher. It delivers the flexible connectivity-on-demand needed to achieve 21st century objectives—swift, decisive outcomes based on information dominance. Payload-provided on-orbit processing provides the flexibility needed to rapidly establish and reconfigure networks to meet dynamic command and control requirements.

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