

# F-35 LIGHTNING II JOINT STRIKE FIGHTER

## MISSION

Provide all-weather, precision, stealthy, air-to-ground strike capability, including direct attack on the most lethal surface missiles (SAMs) and air defenses; meet the requirements of the three US Services, the UK, and other allies.



## DESCRIPTION

The F-35 program will develop and deploy an affordable, next-generation, stealthy, multi-role strike fighter aircraft which can meet the requirements of the United States Air Force, the United States Navy, the United States Marine Corps, the United Kingdom (UK), and other allies. The Conventional Takeoff and Landing (CTOL) F-35 will be used to support the USAF core competencies of Air and Space Superiority, Global Attack, Precision Engagement, and Agile Combat Support.

F-35 will complement a force structure that includes fighter, bomber, and support assets operating in an environment with the F-22 and within the projected Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance architecture. The design is optimized for all weather, precision air-to-ground employment to include direct attack on the most lethal SAMs and air defenses. The F-35 capitalizes on system commonality and modularity, maximizing affordability and logistical support for 21st century AEF employment. Service versions include:

- USAF: F-35A CTOL, stealthy, multi-role aircraft (primary air-to-ground) to replace the F-16 and A-10 and complement the F/A-22
- USMC: F-35B (Short Take-Off and Vertical Landing (STOVL)), stealthy, multi-role strike fighter to replace the AV-8B and F/A-18
- USN: F-35C (Carrier Version (CV)), stealthy, multi-role strike fighter to complement the F/A-18E/F
- UK: F-35B STOVL aircraft to replace the Sea Harrier and GR-7

## ACQUISITION STATUS

<b>Program Status</b>	<b>System Development and Demonstration (SDD); Production begins in 2007 with deliveries in 2010 – 2028; Projected inventories – 1763 CTOL variants for USAF; 680 STOVL/CV variants for the Department of the Navy.</b>
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<b>Unit Assignment</b>	<b>TBD</b>
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<b>Current Inventory</b>	<b>0</b>
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# KC-X

## MISSION

The KC-X is currently in source selection and is the Air Force's #1 acquisition priority. The KC-X program will competitively develop and procure 179 commercial derivative tanker aircraft to begin the replacement of the aging KC-135. It is the first phase of a three-phase tanker recapitalization effort.



KC-135 depicted for display only

## DESCRIPTION

KC-X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities

## KEY PERFORMANCE PARAMETERS

**Conduct same sortie boom & drogue air refueling**

**Fuel offload & range at least as great as KC-135**

**Worldwide compliant Communication Navigation Surveillance / Air Traffic Management systems**

**Airlift & passenger capable**

**In-air re-fuelable (receptacle)**

**Operate in chem/bio environment**

**Network into battlespace information environment**

**Survivability measures (infrared & radio frequency guided surface-to-air missile defensive systems, electro-magnetic pulse hardening, situational awareness, night vision operation, laser eye protection, etc.)**

**Provisioning for a multi-point refueling drogue system:**

## ACQUISITION STATUS

**Program Status**      **In source selection, begin development in 2008**

**Unit Assignment**      **TBD**

**Current Inventory**      **0, projected inventory 179**

# COMBAT SEARCH AND RESCUE REPLACEMENT VEHICLE

## MISSION

The primary mission of CSAR-X is performing Combat Search and Rescue (CSAR) operations to recover downed aircrew and isolated personnel from hostile or denied territory. Rescue forces may also conduct other missions inherent in their capabilities to conduct Personnel Recovery (PR), such as non-conventional assisted recovery, non-combatant evacuation operations, civil search and rescue, international aid, emergency medical evacuation, disaster/humanitarian relief, and insertion/extraction of combat forces.

## DESCRIPTION

CSAR-X will provide USAF Combat Rescue forces with a vertical take-off and landing aircraft that is deployable and capable of main base and austere location operations for worldwide CSAR and Joint PR missions. On-board weapons and defensive capabilities will permit the CSAR-X to operate in a threat environment. In-flight refueling provides an airborne alert capability and extends combat mission range. The CSAR-X will be capable of operating in all environmental regions of the globe, day or night, during adverse weather conditions, to include passing through Nuclear, Biological, and Chemical (NBC) environments.

## KEY PERFORMANCE PARAMETERS

Combat Radius	Threshold: 275 nm (with 5 min loiter) Objective: 325 nm (with 5 min loiter)
Speed	135 kts
Hover Performance	Threshold: 4000', 95° F Objective: 6000', 95° F
Payload	3x Para-rescue Team Members Threshold: 4x Non-ambulatory Patients (Litters) Objective: 6x Non-ambulatory Patients (Litters)
Defensive Systems and Armament	Integrated Radio Frequency/Infrared/Electro-Optical Defensive Systems Crew Served Weapons

## ACQUISITION STATUS

Program Status	In source selection, begin development in 2008
Unit Assignment	TBD
Current Inventory	0, projected inventory 141

# NEXT GENERATION BOMBER

## MISSION

The Next Generation Bomber is the outcome of the Next Generation Long Range Strike Analysis of Alternatives, the most effective weapon system alternative capable of penetrating, surviving, and persisting in anti-access environments in 2018 to achieve desired effects deep in the battle space in support of joint operations.



## DESCRIPTION OF DESIRED CAPABILITIES

Long range, survivable, and persistent capabilities in anti-access environments

Rapid, flexible application of lethal and non-lethal effects in day, night, and adverse weather conditions

Timely and continuous delivery of desired effects against fixed, mobile, and time sensitive targets

Improved Find, Fix, Track, Target, Engage, Assess (F2T2EA) capability

Real-time, robust beyond line of sight connectivity

## ACQUISITION STATUS

Program Status      Concept Refinement

Unit Assignment      TBD

Current Inventory      0

# AIR FORCE ACQUISITION EXECUTIVE “BAKER’S DOZEN”

## MISSION

Deliver enduring world-class capabilities to assure Air, Space, and Cyberspace dominance for the nation and our allies.

## ACQUISITION THEMES

The Air Force’s requirements and acquisition operations ensure that the United States and its allies have the right equipment at the right time to carry out global operations that protect the nation’s security and provide humanitarian assistance when needed.

The Air Force’s aging aircraft and weapon systems, coupled with the time needed to recapitalize the fleet, put the nation’s security at risk. The Air Force is committed to seeking innovative solutions for its modernization and recapitalization endeavors, ensuring our continuous dominance of Air, Space, and Cyberspace at the best value for the taxpayer.

The Air Force is responsibly engaging with industry, Congress, and the media to ensure complete understanding of Air Force acquisition processes and how acquisition decisions are made.

To deliver the best value for the taxpayer, Air Force Acquisition is reducing waste and improving how it does business to deliver war-winning capabilities on time, on cost, meeting urgent operational needs.

The Air Force Requirements and acquisition workforce is comprised of uniquely qualified, talented, and dedicated professionals who uphold the highest standards and integrity.

## SAF/AQ’s ACTION PLAN: “THE BAKER’S DOZEN” INITIATIVES

### GAME CHANGERS

**Directed Energy—Non Lethal and Precision  
Advanced Composite Aircraft  
Energy Alternatives and Conservation  
Open Architectures and Standards**



### WORKFORCE

**Human Capital Strategic Planning**



### CREDIBILITY

**Cost Realism  
Service Contract Initiatives  
Risk-Based Programming/Risk-Based Oversight  
Time Certain Acquisition  
Award and Incentive Fee Realism  
Streamlined Quality Source Selection  
Strategic Sourcing  
Proactive External Engagement**



# WIDEBAND GLOBAL SATCOM (WGS) SYSTEM

## MISSION

Provide beyond-line-of-sight and long-haul communication relay from geosynchronous orbit 22,000 miles above the earth's surface.



## DESCRIPTION

The Wideband Global SATCOM (WGS) system will provide unprotected wideband communications for deployed forces and warfighter communications using existing terminals. It is a follow-on to Defense Satellite Communications System (DSCS) satellites and takes on the Global Broadcast Service (GBS) mission. The system consists of five satellites using existing and new wideband terminals.

## ACQUISITION STATUS

WGS is in the Build and Operations Phase. WGS satellite vehicle 1 (SV1) is awaiting launch. SV2 & SV3 are progressing through assembly, integration, and test. WGS Block 2 (SV4, SV5) contract was awarded 1QFY07 for launches in 2011 and 2012 respectively.

<b>Program Status</b>	<b>Concept Design Review (CDR) - 4QFY02; WGS SV4, SV5, and option for SV6 Contract Award - 1QFY07; First launch planned for 1QFY08</b>
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<b>Unit Assignment</b>	<b>The MILSATCOM Systems Wing (SMC/MCSW) is responsible for development, acquisition and sustainment of the WGS Program. USSTRATCOM is the Operating Command. Platform control will be performed by the Air Force 3rd Space Operations Squadron (3 SOPS). Payload control will be performed by the Army Space and Missile Defense Command (SMDC).</b>
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<b>Current Inventory</b>	<b>None.</b>
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# ADVANCED EXTREMELY HIGH FREQUENCY (AEHF) SYSTEM

## MISSION

Provide secure, survivable communications to U.S. warfighting forces during all levels of conflict.



## DESCRIPTION

The Advanced Extremely High Frequency (AEHF) communications system provides secure, survivable, anti-jam and anti-scintillation communications for strategic and tactical users with interoperability across services and agencies. It offers assured mission-critical strategic networks and low probability of detection and interception. The system consists of three satellites and a mission control segment using existing and new EHF terminals. The first AEHF satellite completes the Milstar satellite constellation.

## ACQUISITION STATUS

AEHF is in the Build and Operations Phase. The AEHF satellite vehicles are progressing through assembly, integration, and test. First launch is planned for 2008.

<b>Program Status</b>	<b>Critical Design Review - 3QFY04; Follow-on buy approval for AEHF 3 - 3QFY04; AEHF 3 contract award - 2QFY06; Planned first launch - 2008.</b>
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<b>Unit Assignment</b>	<b>The MILSATCOM Systems Wing (SMC/MCSW) is responsible for development, acquisition and sustainment of the AEHF Program. USSTRATCOM is the Operating Command. Platform control and payload operations will be performed by the Air Force 4th Space Operations Squadron (4 SOPS).</b>
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<b>Current Inventory</b>	<b>None.</b>
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# TRANSFORMATIONAL SATELLITE COMMUNICATIONS SYSTEM (TSAT)

## MISSION

Provide wideband tactical, protected tactical, mobile tactical, strategic, and relay type satellite-based communications to DoD, government, and allied forces/international partners.



## DESCRIPTION

The Transformational Satellite Communications System (TSAT) is a next-generation communication satellite system that will provide strategic and tactical protected communications. TSAT incorporates laser communications and packet routing/switching protocols to provide a high bandwidth environment. It extends the DoD ground based Global Information Grid network to deployed and mobile users and provides assured command and control to strategic forces. It delivers medium and high-data rate wideband communications exfiltration from Intelligence, Surveillance, and Reconnaissance (ISR) assets. TSAT increases throughput to tactical users, allowing communications-on-the-move and persistent worldwide connectivity of ISR assets. TSAT interfaces across the satellite communications (SATCOM) systems of other agencies. It consists of a five-satellite space segment with associated command and control, ground gateways, and the TSAT Mission Operations System (TMOS).

## ACQUISITION STATUS

TSAT is in the Concept Definition Phase. First launch is planned for 1QFY16.

<b>Program Status</b>	<b>System Requirements Review - 1QFY04; TMOS contract award - 2QFY06; System Design Review - 3QFY07; Space Segment contract award - 1QFY08; First launch planned for 1QFY16</b>
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<b>Unit Assignment</b>	<b>The MILSATCOM Systems Wing (SMC/MCSW) is responsible for development, acquisition and sustainment of the TSAT Program. USSTRATCOM will be the Operating Command.</b>
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<b>Current Inventory</b>	<b>None.</b>
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# SPACE BASED INFRARED SYSTEM (SBIRS)

## MISSION

SBIRS consolidates the national and DoD's infrared detection systems into a single overarching architecture that fulfills the nation's security needs in the areas of missile warning, missile defense, technical intelligence, and battlespace awareness.



## DESCRIPTION

SBIRS High constellation will consist of up to 4 Geosynchronous Earth Orbit (GEO) Satellites and 2 Sensors in Highly Elliptical Orbit (HEO); plus ground elements. SBIRS enables global, simultaneous surveillance, tracking and targeting of multiple targets in multiple areas of responsibility (AORs) and surveillance of infrared sources of operational, intelligence, or national significance.

## ACQUISITION STATUS

SBIRS High is in System Development and Demonstration (SDD). SBIRS first increment consolidated and modernized the DSP ground system. Initial operational capability declared on 18 Dec 01. SBIRS second increment fields advanced capabilities incrementally through 2015. On 17 Nov 06, the Air Force acknowledged that SBIRS HEO-1 was on-orbit and exceeding all performance expectations in its sensor calibration. HEO 1 continues its extensive on-orbit testing and calibration, after which it will do formal operational testing and then certification for its missile warning mission. SBIRS GEO-1 payload was mated to the spacecraft 28 August. Baseline Integrated System Testing will begin in October 2007.

<b>Program Status</b>	<b>System Development and Demonstration (SDD); Production begins in 2008 with deliveries in 2009 – 2013; Projected inventories – GEO-1 delivery FY09; GEO-2 delivery FY10. HEO-3 delivery 2012; HEO-4 delivery 2013</b>
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<b>Unit Assignment</b>	<b>USSTRATCOM is the Operating Command. The SBIRS Mission Control Station is located at Buckley AFB, CO.</b>
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<b>Current Inventory</b>	<b>1 HEO payload is on-orbit on a classified host.</b>
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