Alabama Aerospace Industry

Major Clusters in Alabama’s Diverse Aerospace Industry

Space & Defense
The space/defense cluster of Alabama’s aerospace industry is centered around Huntsville in north Alabama. Major companies include Aegis Technologies, Boeing, COLSA Corporation, Lockheed Martin, PPG Aerospace and Teledyne Brown Engineering. In addition to its Huntsville facilities, Boeing Company also manufactures common core boosters for the Delta IV rocket and performs final assembly of Delta II rockets in Decatur. In southeast Alabama, Pike County’s Lockheed Martin plant assembles missiles. In 2006, EADS, the second largest aerospace/defense company in the world, opened an Airbus engineering center in Mobile. Northrop Grumman and EADS have selected Mobile, AL as the planned production site to build its next-generation fleet of aerial refueling tankers, dependent upon securing the Department of Defense contract. The estimated $40 billion contract is the largest single Air Force procurement in history. The two companies plan to assemble and modify their tankers in a pair of new plants at the Brookley Field Industrial Complex, creating 1,500 jobs.

Aviation
Aviation companies targeted for both the commercial and defense sectors are located throughout the state, with concentrations in central and southeast Alabama. Area companies include GKN Aerospace, with facilities in Montgomery and Tallassee, and Kelly Aerospace in Montgomery. In the south Alabama cities of Abbeville and Mobile, Teledyne Continental Motors employs more than 450 workers in the manufacture of engines, components and ignition systems for general aviation.

Maintenance, Repair & Overhaul (MRO)
The MRO industry is spread across the state. Pemco World Air Services facility in Dothan provides maintenance services for numerous rotary wing aircraft as well as heavy maintenance and major modifications on wide-body and narrow-body aircraft. Alabama Aircraft Industries in Birmingham provides a full range of aviation maintenance and modification services for both U.S. and foreign military, with a specialization in cargo planes. In Mobile, ST Mobile Aerospace Engineering focuses on providing scheduled maintenance and major modifications to wide-body and narrow-body aircraft. In Pike County, Sikorsky Support Services has helicopter service operations. In addition, U.S. Helicopter operates a large helicopter service facility in Dale County to serve Fort Rucker. AcroHelipro operates a helicopter repair and overhaul facility in Andalusia. In 2006, Aerospace Integration Corporation announced that the company would open a new modification facility in Albertville, Alabama integrating enhanced technology into military helicopters.

Employment
- 73,032 employees in 2002 (civilian/federal)
- 139,601 aerospace jobs (direct/indirect)
- 36% Engineering and R&D services
- 19% Aircraft maintenance, repair and overhaul (MRO)
- 16% Information technology services
- 14% Guided missile and space vehicle manufacturing
- 6% Guided missile and space vehicle parts manufacturing
- 6% Aircraft parts manufacturing and MRO
- 3% General manufacturing

Fast Facts
- Alabama received almost $9.5 Billion in Department of Defense Prime Contracts – FY 2008.
- Marshall Space Flight Center generated more than $1 billion in economic impact for Alabama in FY 2008.
- Alabama is home to over 330 aerospace companies.
- Aerospace equipment and parts exports were valued at over $531 million in 2009.

Sources: Alabama Aerospace Industry Association, 2003; American Electronics Association; International Trade Division, Alabama Development Office; EDPA Aerospace Database
Alabama Aerospace Industry Profile

Alabama Average Weekly Wage: Annual 2008


Southern States—Department of Defense Dollars by Place of Performance ($Billions), FY 2008

Source: Federal Procurement Data System—Next Generation 2010

Aerospace Companies in Alabama

200+ companies

330+ Companies Statewide

Data as of 2009

Economic Development Partnership of Alabama
www.edpa.org
Redstone Arsenal
Established in 1941, Redstone Arsenal has been at the forefront of U.S. Army and NASA aerospace developments. The arsenal is home to Marshall Space Flight Center, the U.S. Army Aviation and Missile Command, and the U.S. Army Space and Missile Defense Command. The Arsenal's advanced research and development of weapons used on land and in space is unmatched. Over 14,000 military and civilian personnel work at Redstone.

As a result of the 2005 BRAC (Base Realignment and Closure Commission) 4,800 jobs will be relocating to Redstone Arsenal. Seven different entities will move to Redstone as part of BRAC 2005: U.S. Army Material Command; U.S. Army Security Assistance Command; U.S. Army Space and Missile Defense Command; Missile Defense Agency; U.S. Army’s Aviation Technical Test Center; Rotary Wing Air Platform Research, Development, Acquisition, Test and Evaluation; and the U.S. Army 2nd Recruiting Brigade. At the conclusion of BRAC, Redstone will be home to 17 commands at the conclusion of the BRAC process.

Marshall Space Flight Center
Headquartered within Redstone Arsenal, MSFC employs over 8,600 workers (2,600 civil service employees and 6,000 employees of contractors). The center houses the following programs: Advanced Space Transportation Program, Center for Excellence for Space Propulsion, Center for Microgravity, Center for Space Transportation Systems, Chandra X-Ray Observatory, Earth and Science Research and International Space Station. MSFC is also home to the U.S. Space and Rocket Center, which hosts over 300,000 visitors annually.

Fort Rucker
Located near Ozark, Fort Rucker is the home of U.S. Army Aviation. Fort Rucker trains helicopter pilots for the Army and other international organizations. Fort Rucker employs over 8,000 military and civilian workers.

Maxwell Air Force Base
Located in Montgomery, Maxwell Air Force base employs over 4,000 military and civilian personnel. Maxwell is home to the Air University for professional military education. The academic training of Air Force officers at Maxwell and the computer support at its Gunter annex is used worldwide.

National Space Science and Technology Center
The Huntsville based NSSTC is a partnership between NASA’s Marshall Space Flight Center, Alabama universities, federal agencies, and industry. The laboratory is for cutting-edge research in selected scientific and engineering disciplines. The NSSTC houses the following centers: Space Science Research, Global Hydrology and Climate, Information Technology Research, Advanced Optics and Energy Technology, Propulsion Research, Biotechnology Research and Materials Science Research.

Major Facilities Statistics

Total Sq Ft in Alabama: 39 million
Total Personnel (Civilian and Military): 66,872

Economic Development Partnership of Alabama

Alabama Aerospace Industry Profile

Redstone Arsenal

U.S. Army Materiel Command
AMC is an Army Major Command responsible for materiel readiness including technology, acquisition support, materiel development, logistics power projection and sustainment. The Command’s missions range from development of weapon systems and research to maintenance and distribution of parts and supplies.

U.S. Army Aviation & Missile Command
AMCOM provides support to joint warfighters and allies to ensure aviation and missile system readiness for combat operations. The Command is responsible for the development, acquisition and fielding of aviation and missile systems and the integration of aviation and missile technology.

U.S. Army Security Assistance Command
USASAC supports the National Security Strategy through the management of Army security assistance programs including annual foreign military sales of more than $5 billion to approximately 140 allied countries, friendly nations and multinational organizations.

U.S. Army Aviation and Missile Research Development and Engineering Center
AMRDEC is the Army’s focal point for providing research, development, and engineering technology and services for aviation and missile platforms. AMRDEC manages and conducts research, exploratory and advanced development, and provides one-stop lifecycle engineering and scientific support for aviation and missile systems and UAV/UGV platforms.

Program Executive Office — Missiles and Space
The PEO Missiles and Space provides centralized management for all Army tactical and air defense missile programs and selected Army space programs. The PEO was established in January 2005 with the merger of PEO Air, Space and Missile Defense and the PEO Tactical Missiles.

Program Executive Office — Aviation
The PEO Aviation is the Army manager responsible for providing overall direction and guidance for the development, acquisition, testing, product improvement and fielding of Army Aviation systems including the Apache Helicopter, Cargo Helicopter, Utility Helicopter, Unmanned Aircraft System and Armed Scout Helicopter.

Redstone Technical Test Center
RTTC is a U.S. Army Test and Evaluation Command and is one of the eight test centers that comprise the Development Test Command headquartered at the Aberdeen Proving Ground in Maryland. RTTC’s primary service is to provide advanced testing of weapon systems for the Department of Defense, its contractors and friendly governments.

U.S. Army Aviation Technical Test Center
ATTC is the Army’s premier aviation development flight test organization and is an internationally recognized center of excellence for test and evaluation. ATTC plans, conducts, analyzes and reports on the development and airworthiness qualification of rotary and fixed wing aircraft, aviation systems and associated support equipment.

Missile Defense Agency
MDA is a Department of Defense agency that facilitates the development and integration of multi-service capabilities into seamless theater missile defense systems. MDA is also responsible for guiding the development of a missile defense system capable of defending the U.S. from a foreign missile attack.

U.S. Army Space & Missile Defense Command
SMDC is responsible for developing the Army’s missile defense systems including support of space and ground-based midcourse defense and assuring the Army’s access to and utilization of space assets in the execution of their mission.

Defense Intelligence Agency — Missile & Space Intelligence Center
MSIC is an intelligence organization charged with producing scientific and technological intelligence on adversary surface-to-air missiles and ballistic missile systems. This intelligence includes characteristics, capabilities and limitations of foreign military systems.

Redstone General Officers

Commanding General (AMC) ★★★★★
Deputy Commander (AMC) ★★★
Commanding General (SMDC) ★★★★★
Chief of Staff (AMC) ★★★
DCS Operations (AMC) ★★★
Commanding General (AMCOM) ★★★
Deputy PEO (PEO Aviation) ★★★
Program Executive Office (PEO Missile and Space) ★★★
Commanding General (USASAC) ★★★
Deputy for Test Integration and Fielding (MDA) ★★★
Program Director GMD (MDA) ★

Coming with BRAC ★ Currently at Redstone
## Alabama Aerospace Industry Profile

### Select Recent Expansions & New Projects

<table>
<thead>
<tr>
<th>Company</th>
<th>County</th>
<th>Product</th>
<th>Jobs Created</th>
<th>Investment (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axsys Technologies</td>
<td>Cullman</td>
<td>Precision machined components</td>
<td>20</td>
<td>$2.5 (Expansion)</td>
</tr>
<tr>
<td>Smith Machine</td>
<td>Tuscaloosa</td>
<td>Components for gun mounts</td>
<td>50</td>
<td>$5.5 (New)</td>
</tr>
<tr>
<td>Manroy USA</td>
<td>Jackson</td>
<td>Precision machined parts</td>
<td>25</td>
<td>$1.5 (New)</td>
</tr>
<tr>
<td><strong>2008</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAE Systems</td>
<td>Calhoun</td>
<td>Armor panels for military vehicles</td>
<td>25</td>
<td>N/A (Expansion)</td>
</tr>
<tr>
<td>GKN</td>
<td>Elmore</td>
<td>Aircraft parts</td>
<td>20</td>
<td>N/A (Expansion)</td>
</tr>
<tr>
<td><strong>2007</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST Mobile Aerospace</td>
<td>Mobile</td>
<td>Conversion of passenger jets into cargo freighters</td>
<td>200</td>
<td>N/A (Expansion)</td>
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<tr>
<td>General Dynamics Land Systems</td>
<td>Calhoun</td>
<td>Production of MRAP</td>
<td>270</td>
<td>$2.6 (Expansion)</td>
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<tr>
<td>Acrohelipro</td>
<td>Covington</td>
<td>Helicopter maintenance</td>
<td>50</td>
<td>$4.5 (New)</td>
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<td>Lockheed Martin Space Systems</td>
<td>Lawrence</td>
<td>Ordnance assembly</td>
<td>N/A</td>
<td>$27 (Expansion)</td>
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<tr>
<td>BAE Systems</td>
<td>Walker</td>
<td>Ammunition magazine and missile launchers for naval vessels</td>
<td>40</td>
<td>$19.1 (New)</td>
</tr>
<tr>
<td><strong>2006</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Raytheon Company</td>
<td>Madison</td>
<td>Engineering, management, customer support and business development</td>
<td>350</td>
<td>$23.7 (New)</td>
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<tr>
<td>EADS Casa N. America/Raytheon Cargo</td>
<td>Mobile</td>
<td>Military joint cargo aircraft delivery center</td>
<td>150</td>
<td>N/A (New)</td>
</tr>
<tr>
<td>BAE Systems</td>
<td>Marshall</td>
<td>Systems modifications and tech insertion for rotary wing aircraft</td>
<td>40</td>
<td>N/A (New)</td>
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<tr>
<td><strong>2005</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>EADS, North America</td>
<td>Mobile</td>
<td>Aircraft engineering, KC330 refueling tanker assembly</td>
<td>1,150</td>
<td>$600 (New)</td>
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<td>EJM Aerospace Services</td>
<td>Covington</td>
<td>Military/commercial aircraft maintenance, repair and overhaul</td>
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<td>$75 (New)</td>
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<tr>
<td>GKN Aerospace Services AL</td>
<td>Elmore</td>
<td>High performance composites</td>
<td>250</td>
<td>$21.8 (Expansion)</td>
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<td>Northrop Grumman</td>
<td>Mobile</td>
<td>KC -30 Production center</td>
<td>N/A</td>
<td>N/A (New)</td>
</tr>
<tr>
<td>Westar Aerospace &amp; Defense Group, Inc.</td>
<td>Madison</td>
<td>Specialized technology services for government and aerospace industry</td>
<td>200</td>
<td>$10.9 (Expansion)</td>
</tr>
</tbody>
</table>

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*Images of Boeing Rocket Assembly, KC-45 Tanker, and ST Mobile Aerospace.*
Aerospace and Defense Community Hubs

**Huntsville** *(For more information: www.huntsvillealabamausa.com)*
- Home to the 2nd largest research park in the U.S. – Cummings Research Park
- Huntsville/Redstone agencies manage all U.S. Army Aviation, missile and missile defense programs.
- Total federal budgets managed in Huntsville exceed $29 Billion annually.
- Marshall Space Flight Center NASA’s lead center for the development of launch vehicles and propulsion systems has key responsibilities in developing the Ares I-Crew Launch and Ares V-Heavy lift exploration vehicles.
- Between 2000-2008 professional/technical employment in the Huntsville Metro grew 41.7%.
- Over 44,000 workers are directly involved in local aerospace and defense industries.
- Huntsville is home to over 200 aerospace companies including Boeing, Lockheed Martin, SAIC, Northrop Grumman, Raytheon, CSC and Teledyne Brown Engineering.

**Mobile** *(For more information: www.mobilechamber.com)*
- Potential production site for the Northrop Grumman/EADS U.S. Air Force Refueling tanker at Brookley Field.
- Notable Aerospace Companies
  - SE Mobile Aerospace
  - Teledyne Continental Motors
  - EADS Casa North America
  - Goodrich Aerospace
  - Star Aviation

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**Source:** AL Dept of Industrial Relations, Total Nonagricultural Employment Annual Averages

**Source:** Alabama Development Office, International Trade Division
Major Milestones

1930s: Maxwell Air Force Base became the designated home of the U.S. Army Air Force Tactical School for professional military education.

1940s: Redstone Arsenal was established in Huntsville.

1950s: Wernher Von Braun came to Huntsville.

1960s: Marshall Space Flight Center (MSFC) opened at Redstone Arsenal, making Huntsville a major center for the future development of rockets and space exploration.

Apollo 4 launched using the Saturn V rocket developed at MSFC.

1970s: The Alabama Space and Rocket Center opened in Huntsville, becoming the future site of the U.S. Space Camp and Space Academy.

The Lunar Roving Vehicle, built in Huntsville, was driven on the moon.

1980s: The first Space Shuttle mission was powered into orbit by the main engine and solid rocket boosters developed by the Marshall Space Flight Center.

Lockheed Martin moved its smart missile operations from Orlando, Florida to Troy, Alabama.

1990s: The Army’s Aviation and Missile Command moved to Huntsville.

1998: Boeing announced that the Delta IV rocket would be built in Decatur.

2003: All Boeing Delta IV rockets are consolidated to Alabama for production.

2005: EADS, North America announced it will build an aircraft engineering center and future production facility for KC-30 aerial refueling tankers.


2007: Honda Aircraft Company selects GKN Aerospace – Alabama to supply the fuselage structural sub-assembly.