



**OVERVIEW**

Alabama's aviation/aerospace industry has been integral to U.S. Space and Defense programs for more than 50 years.

Today, Alabama is home to hundreds of aerospace, aviation, and defense-related companies supporting both government and commercial markets and has attracted investment from companies around the globe.



**HIGHLIGHTS**

- **Alabama ranks 12th among US states** for total employment in Aerospace Products and Parts Manufacturing (NAICS 3364).
- Aerospace Products and Parts **exports were valued at over \$1.4 billion** in 2021.
- Alabama's aviation, aerospace and defense sectors are made up of equipment manufacturers (OEMs), maintenance, repair & overhaul (MRO), material and component manufacturers, engineering and technical service providers, research and development (R&D) companies, and other product and service providers – over 300 companies.
- Alabama is home to Airbus' first American jetliner production facility.
- Blue Origin opened their 350,000 square-foot facility in Huntsville that will allow the spaceflight company to accelerate production of its heavy-lift BE-4 rocket engine. Blue Origin will test its Alabama-made engines at Marshall Space Flight Center.

**Airbus Begins Production of First U.S. – Built A320 in Mobile (2015)**

This marks another important milestone for the Alabama manufacturing facility. Since it began production in July 2015, 27 A321 aircraft have been delivered from the facility.

Airbus Press Release (May 2017)

<http://www.airbus.com/newsroom/press-releases/en/2017/05/airbus-begins-production-of-first-u-s-built-a320-in-mobile.html>



**AIRBUS**

**Airbus launches A220 production on new Alabama assembly line (2020)**

Airbus launched production of A220 aircraft at its newly constructed Final Assembly Line hangar at its Alabama manufacturing facility in May 2020.

<https://www.madeinalabama.com/2020/05/airbus-launches-a220-production-on-new-alabama-assembly-line/>

**Airbus announces third Final Assembly Line (2022)**

Airbus announced plans to ramp up global production of A320 Family jets.

<https://www.madeinalabama.com/2022/05/airbus-alabama-expansion-project-adding-1000-jobs-in-mobile/>





## COMMERCIAL AIRCRAFT PRODUCTION

In 2012, Airbus announced that it would build the company's first American jetliner production facility in Mobile.

Final assembly and production on the Airbus A320 family of aircraft began in 2015. Airbus began delivering aircraft to customers in early 2016.



Airbus Assembly Line View

### FAST FACTS

<b>Location:</b>	<b>Mobile, Alabama</b>
<b>Announced:</b>	<b>July 2, 2012</b>
<b>Production Start:</b>	<b>2015</b>
<b>Products:</b>	<b>A319, A320, A321, &amp; A220 aircraft</b>
<b>Investment:</b>	<b>\$600 million</b>
<b>Job Creation:</b>	<b>1,000 direct jobs</b>

## ALABAMA : PART OF A GROWING SOUTHEAST INDUSTRY

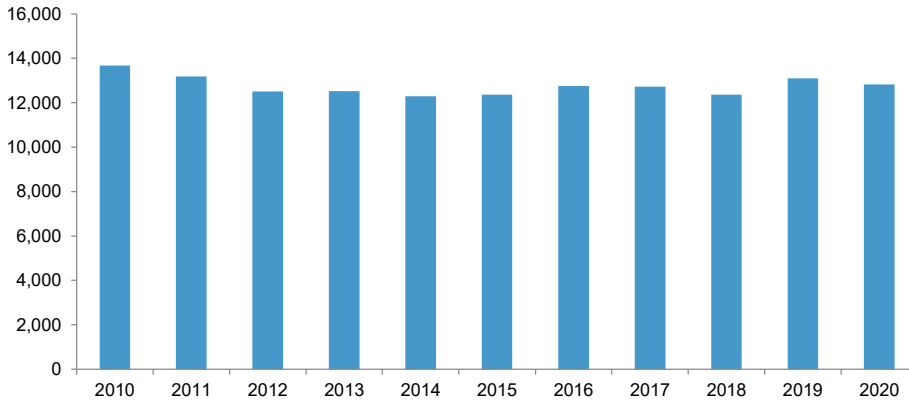


Airbus and Alabama are part of a well-established and growing Southeast industry in aircraft manufacturing.



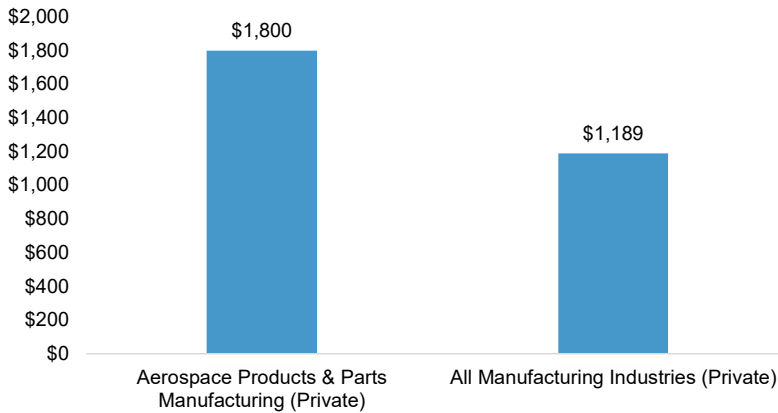
# HIGHLIGHTS, AEROSPACE PRODUCTS AND PARTS

## Average Employment: Aerospace Products and Parts Manufacturing



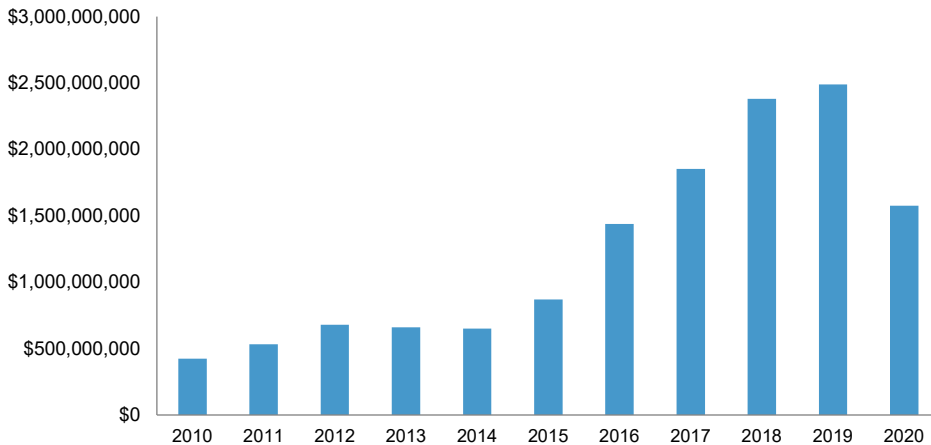
Source: U.S. Bureau of Labor Statistics [www.bls.gov](http://www.bls.gov). 2020 data

## Average Weekly Wage: Aerospace Products and Parts Manufacturing 2020



Source: U.S. Bureau of Labor Statistics [www.bls.gov](http://www.bls.gov). 2020 data

## Dollar Value of Alabama Exports: Aircraft, Spacecraft and Parts



Source: Alabama Department of Commerce, International Trade Division, 2020



United Launch Alliance



Airbus Engineering Center



GE Aviation jet engine components factory





## AVIATION, AEROSPACE AND DEFENSE AROUND THE STATE

### Huntsville and North Alabama

- Huntsville is one of the country's principal centers for space and defense technology.
- Huntsville is home to **Redstone Arsenal** and **NASA's Marshall Space Flight Center** where the Saturn V rocket was designed and the next-generation Space Launch System is being developed.
- **Cummings Research Park** (Huntsville) is one of the world's leading science and technology business parks.
- **Boeing** and **Lockheed Martin** have made major contributions to the space and defense industry advancement in Huntsville for over 50 years.
- In 2015, **GE Aviation** announced that it will invest more than \$200 million to produce advanced materials to support the aerospace industry.
- In 2015, **Hexcel** announced a \$150 million expansion at its facility in Decatur.
- Other notable companies in the Huntsville area include **Aegis Technologies**, **SAIC**, **SES**, **Raytheon**, **COLSA Corporation**, **Teledyne Brown Engineering** and **United Launch Alliance** (Decatur).

### Montgomery and Central Alabama

- **Maxwell-Gunter Air Force Base** (Montgomery) sits on the original site of the 1910 Wright Brother's flying school. Today, Maxwell is the home of Air University and is the U.S. Air Force's center for Joint Professional Military Education.
- In 2014, **GE Aviation** (Auburn) announced that it would spend \$50 million on a new 3-D printing initiative, a first-of-its-kind project that will mass produce fuel nozzles for jet engines.

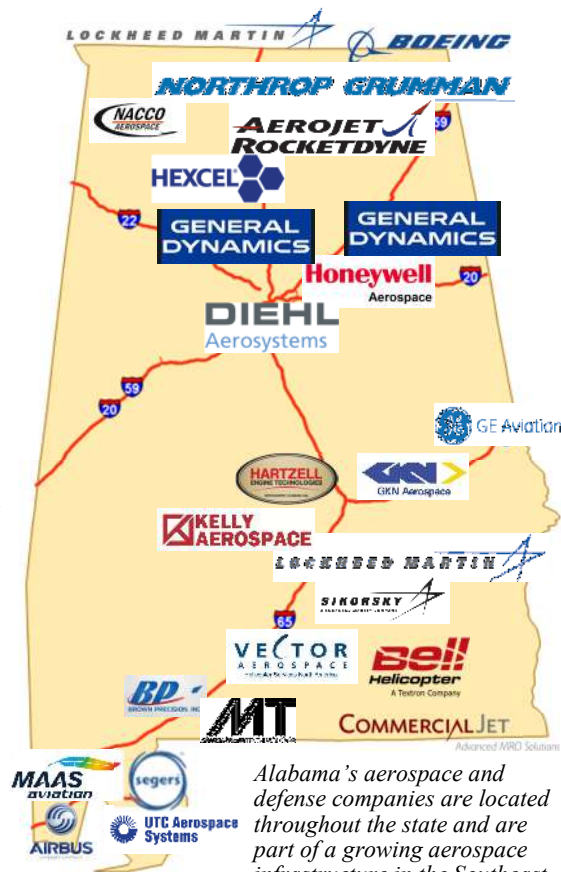
### Mobile and Southwest Alabama

- Mobile's **Brookley Aeroplex** is one of the largest industrial complexes on the Gulf Coast and is home to a number of aviation and aerospace companies including **Airbus Americas Engineering**, **Star Aviation**, **VTMAE**, **Continental Motors**, and **Safran**.
- Brookley Aeroplex was selected as the location for **Airbus'** first American jetliner production facility. Production on its A320 family of aircraft began in 2015 and the first Alabama-assembled jetliner, a A321, was delivered in 2016.
- In 2015, **Airbus Defense and Space** selected Mobile-based **Airbus DS Military Aircraft Inc.** as its new worldwide support center for the C212 aircraft series.
- In 2015, **MAAS Aviation** announced a \$39 million twin-bay paint facility and Paris-based **Hutchinson Corporation** announced a \$2 million aerospace manufacturing center of excellence in Mobile and 100 jobs.
- Other notable aerospace companies in the area include **UTC Aerospace Systems** (Foley), and **Segers Aero** (Fairhope).

### Dothan and Southeast Alabama

- **Enterprise Community College** (avionics and aviation mechanics training) and **Fort Rucker** - the Army Aviation Center of the United States - play a strong role in the development of aviation jobs in southeast Alabama.
- In 2014, **Lockheed Martin** (near Troy) broke ground for its Long Range Strike Systems cruise missile production. In 2015, the company announced the addition of 240 employees at the facility by 2020.

- In 2014, **Alabama Aircraft Support** (Enterprise) broke ground on a \$12 million aircraft maintenance hangar facility at Enterprise Municipal Airport.
- **Commercial Jet**, an MRO (maintenance, repair, and overhaul) services provider recently began operations at the Dothan Regional Airport in a 400,000 sq. ft. aircraft servicing and maintenance facility.
- Other notable companies in southeast Alabama include **Vector Aerospace** (Andalusia), **DRS Technologies** (Andalusia), and **Sikorsky Aircraft** (Troy).



*Alabama's aerospace and defense companies are located throughout the state and are part of a growing aerospace infrastructure in the Southeast.*



## RECENT EXPANSIONS AND NEW PROJECTS (PARTIAL LIST)

Company	County	Product	Jobs Created	Investment (Millions)
<b>2020</b>				
Airbus	Mobile	Aircraft Production Facility & Assembly Station	275	\$40 (Expansion)
<b>2019</b>				
Segers Aero Corporation	Baldwin	Aerospace MRO	5	\$4.3 (Expansion)
DynCorp Aviation	Covington	Helicopter MRO	60	\$152 (Expansion)
Lockheed Martin Space	Lawrence	Aerospace Product & Parts Manufacturing	72	\$45.2 (Expansion)
Globalstar Aero	Dale	Aircraft Maintenance and Repair	25	\$1 (Expansion)
<b>2018</b>				
Airbus	Mobile	A220 jets	430	\$300 (Expansion)
Doncasters Southern Tool	Calhoun	Metal Products	50	\$48 (Expansion)
DynCorp Aviation	Covington	Helicopter MRO	60	\$150 (Expansion)
EOS USA	Madison	Remotely Controlled Weapons Systems	100	\$2 (New)
Lockheed Martin	Pike	Missiles	60	\$130 (Expansion)
Resicum International LLC	Baldwin	Aviation Training and Maintenance	18	New
Southern Sky Aviation	Jefferson	Aviation MRO	50	New
Stewart Industries International	Jefferson	Aviation MRO	200	New
<b>2017</b>				
Aerojet Rocketdyne	Madison	Rocket Engine, Mfg	700	\$137 (Expansion)
Continental Motors	Mobile	Piston engine manufacturing	-	\$60 (Expansion)
Dynetics	Morgan	Mfg. parts for NASA & others	15	\$7.3 (Expansion)
Raytheon Company	Madison	Missiles & Space Vehicles, Mfg	200	N/A (Expansion)
United Launch Alliance	Morgan	Rocket boosters	-	\$115 (Expansion)
Blue Origin	Madison	Rocket Engine, Mfg	265	\$90 (New)
Dynetics, Inc.	Morgan	Aerospace testing facility	10	\$14.2 (New)
Global Aviation Services	Marshall	Helicopter repair and overhaul	25	N/A (New)
RUAG Space	Morgan	Enclosures to cover satellites	100	N/A (New)
Safran USA	Mobile	Aircraft engine nacelle systems	20	\$1.0 (New)
<b>2016</b>				
UTC Aerospace Systems	Baldwin	Nacelle Components	260	\$20.4 (Expansion)
Yulista Management Services, Inc.	Madison	Aircraft Parts	200	\$13.5 (Expansion)
The Boeing Company	Madison	Engineering, Advanced Manufacturing	400	N/A (Expansion)
Commercial Jet Services	Houston	Aviation MRO	100	N/A (Expansion)
<b>2015</b>				
Lockheed Martin Missiles/Space	Madison	Missiles & Space Vehicles	100	N/A (Expansion)
Hutchison Aerospace	Mobile	Acoustic Insulation	100	\$2.0 (New)
DIEHL Aerospace Inc.	Shelby	Aircraft Product Support & Maintenance	4	\$3.5 (Expansion)
GE Aviation	Madison	Aerospace Composites	300	\$200.0 (New)
MAAS Aviation Aircraft Services	Mobile	MRO Paint Facility	80	\$39.0 (New)
Continental Motors	Mobile	MRO for Aerospace Engines	25	\$1.0 (Expansion)



## WORKFORCE TRAINING AND EDUCATION

- **Alabama Industrial Development Training (AIDT)** was established to help new and expanding Alabama companies recruit and train an outstanding workforce. AIDT is consistently recognized for its excellence.
- **Institutions of higher education** across the state work closely with aerospace and defense companies to align programs with industry needs. 28 four-year colleges and universities and 24 two-year community and technical colleges - strategically located throughout the state- provide Alabamians with educational opportunities to meet the emerging needs of industry.
- Four universities-Auburn University, University of Alabama, Tuskegee University, and University of Alabama in Huntsville, offer **degrees in Aerospace Engineering**.
- Alabama's Auburn University receives the nation's first FAA authorization to operate an **Unmanned Aircraft Systems Flight School**.
- **Aerospace Education Research and Innovation Center (AERIC)** at Tuskegee University supports two-year research projects in the areas of fatigue damage tolerance, experimental aerodynamics, and the performance of materials and components under extreme environmental conditions. AERIC also helps expand Alabama's aerospace workforce talent pipeline.



Top 5 -  
U.S. Training Agency

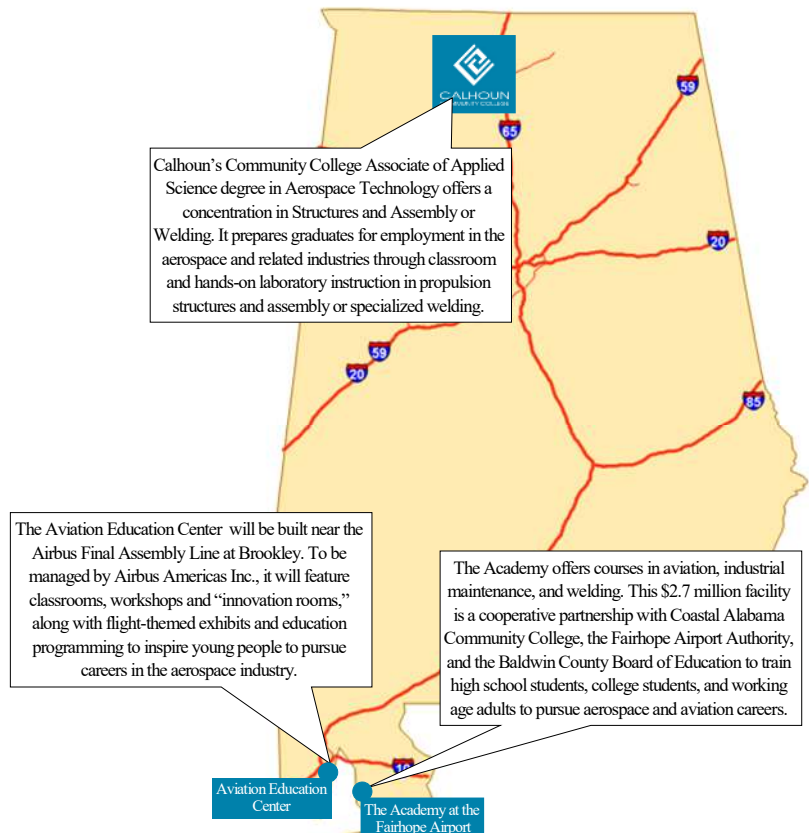


The Alabama Aviation Training Center, operated by AIDT, is preparing workers for the Airbus A320 Family Assembly Line (FAL).

### Alabama Aviation Centers



### Other Aviation Education Locations







## 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

- Werner Von Braun came to Huntsville.



Werner Von Braun

### 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

- Boeing Delta IV rockets were consolidated to Alabama for production. The facility is now part of the United Launch Alliance joint venture between Boeing and Lockheed-Martin.

### 2006

- NASA Marshall Space Flight Center in Huntsville was named as a key Center for the development of Ares I and Ares V Rockets.

### 2007

- Airbus North America Engineering opened a premier engineering center in Mobile's Brookley Aeroplex.

### 2009

- Headquarters U.S. Army Space and Missile Defense Command moved to Redstone Arsenal, Huntsville.

### 2012

- Alabama was chosen as home of Airbus' U.S. A320 family final assembly line - the company's first-ever production of jetliners on American soil.

### 2015

- The Airbus U.S. Manufacturing Facility commenced aircraft assembly in Mobile.



### 2016

- Airbus celebrated delivery of its first Alabama – assembled commercial jetliner, an A321, to U.S. customer JetBlue.

### 2017

- Airbus begins assembly of the first A320.

### 2020

- Airbus has added A220 production with its new final assembly line.

#### *Sources:*

*Alabama Department of Commerce, Business Development and International Trade  
 US Bureau of Labor Statistics  
 Alabama Aerospace Industry Association  
 USA spending.gov  
 Alabama Commission on Higher Education  
 NASA  
 Redstone Arsenal  
 Marshall Space Flight Center  
 Miscellaneous news articles/ announcements*

January 2020