



Ohio

The Aerospace State

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Ohio

The Aerospace State



Unsurpassed Heritage

- Wright Brothers, “Hap” Arnold, Eddie Rickenbacker, Jimmy Doolittle, Bennie Schriever, Hans Von Ohain, John Glenn, Neil Armstrong, Jim Lovell, Judith Resnick, Guy Bluford ...
- Birthplace of the powered airplane, high bypass turbofan engines, ion thrusters, hydrogen rockets, “g” suit, advanced composite structures...
- Huffman Prairie, Wright Field, Lewis Field, Cleveland Air Races...
- The nation’s second top astronaut producing state... 24 Ohio Astronauts
 - STS-70 had an “All Ohio” Crew
- Cleveland produces more astronauts than any other U.S. metropolitan area





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Home to

- Wright-Patterson Air Force Base
- Air Force Research Laboratory
- NASA Glenn Research Center
- National Aviation Hall of Fame
- National Museum of the United States Air Force
- International Women's Air & Space Museum
- National Aviation Heritage Area
- National Composites Center
- National Center for Advanced Modeling and Simulation
- National Center for Space Exploration Research

Education

- Ten leading universities with doctoral and research programs in aerospace
- Nation's 1st graduate program in Astronautical Engineering (AFIT)
- Nation's 2nd Aeronautical Engineering Department
 - University of Cincinnati





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NASA Glenn Research Center

- World-renowned expertise in aerospace power, propulsion, communications, microgravity
 - Pioneer in liquid hydrogen propulsion
 - Over 100 R & D 100 awards- best in NASA
- Significant responsibility for critical manned spaceflight programs
 - Crew Exploration Vehicle Service Module,
 - Crew Launch Vehicle Upper Stage Systems
 - Lunar station power, communications, thermal management
- Core capability in aeropropulsion, turbomachinery, fluids, combustion, electric propulsion, nuclear propulsion, icing research, aerospace power systems
- Unique collection of world class facilities-\$1.6B in R&D research infrastructure
- Plum Brook Station
 - 6,400 acre remote test site with a replacement value of \$651M
 - World's largest space environment chamber
 - Environmental testing of Orion Crew Exploration Vehicle, Lunar Lander
 - World unique upper stage test facility





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Wright-Patterson Air Force Base

- Ohio's largest single-site employer
 - 24,000 military, civilian, contractor employees
 - \$6.0B economic impact to Ohio
- Base Realignment and Closure
 - 1,200 new jobs, \$332M in construction
 - Center of Excellence for Human Performance and Sensors
- Manages \$56B annual budget (41% of Air Force budget)
 - Research, development, and maintenance of USAF systems
- Air Force Research Laboratory
 - Sensors, Propulsion, Materials, Air Vehicles, Human Effectiveness
 - \$4B annual budget, over 70% contracted out
 - Over \$1B in research infrastructure, including numerous world unique facilities
- Aeronautical Systems Center, Air Force Materiel Command, National Air and Space Intelligence Center, Air Force Institute of Technology



Ohio

The Aerospace State

- National leader in aerospace propulsion and power technology
- Over 1,200 companies with predominant aerospace ties, over 100,000 jobs in aerospace
- Strong aerospace industrial presence
 - **GE Aviation, Goodrich, Parker-Hannifin, Timken, Lockheed-Martin, Boeing, PCC Airfoils, Hartzell Propeller, Teledyne Turbines, many others**
 - **Home to over 450 aerospace propulsion and power suppliers and manufacturers**
 - **Tops in the Midwest in aerospace production and parts manufacturing**
 - **\$2.13B gross product in 2005**
- Ten leading universities with doctoral and research programs in aerospace fields





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Strong State Support and Public-Private Partnerships

- **\$1.6B Third Frontier Initiative to support Ohio's high tech economy**
 - Sensors, Photovoltaics, Fuel Cells, Advanced Materials, Nanotechnology
 - Ohio Center for Advanced Propulsion and Power
 - \$12M state investment
 - 7 universities, industry, AFRL, NASA Glenn
- **Advanced Virtual Engine Test Cell (AVETEC)**
- **Edison Technology Centers**
 - Welding, Machining, Materials, Manufacturing, Information Technology, Bio-life sciences, ...
- **Wright Brothers Institute**
- **Ohio Aerospace Institute**



The Ohio Aerospace Institute's Mission:

To build Ohio's aerospace economy through





History & Background

- **Private, not-for-profit 501 (c) (3) founded in 1989**
- **First NASA-associated collaborative Institute chartered to foster relationships between universities, aerospace industries, and government organizations**
- **Strong state support from:**
 - NASA Glenn Research Center
 - Wright Patterson Air Force Base - Air Force Research Laboratory
 - Ohio research universities
 - Governor's Aerospace Advisor
 - Aerospace industry
- **More than \$206M in secured funding**
- **More than 250 federal awards**
- **Revenue \$15.8M (FY '08)**
- **More than 75 employees in two locations**
 - Cleveland HQ (Adjacent to NASA Glenn)
 - Dayton – adjacent to Wright-Patterson AFB





Research & Technology

Education & Training

Networking & Information Exchange



Partners & Members

The OAI family includes:

- Air Force Research Laboratory
- NASA Glenn Research Center
- 19 market-leading aerospace companies
- 35 small or emerging businesses
- 10 Ohio universities, all of which offer PhD degrees in aerospace-related engineering and research





Governor Declares May 7th “Aerospace Day In Ohio”



STATE OF OHIO
Executive Department

OFFICE OF THE GOVERNOR

Columbus

AEROSPACE DAY IN OHIO

MAY 7, 2008

Ohioans have been pioneers in aerospace technologies starting with Wilbur and Orville Wright. Since the Wright brother's ground-breaking work in Dayton, Ohioans have continually blazed new paths towards greater heights in aerospace. and:

The aerospace industry is a cornerstone of Ohio's economy. Over 600 companies have ties to the aerospace industry and over 186,000 Ohioans are employed in aerospace related industries, and:

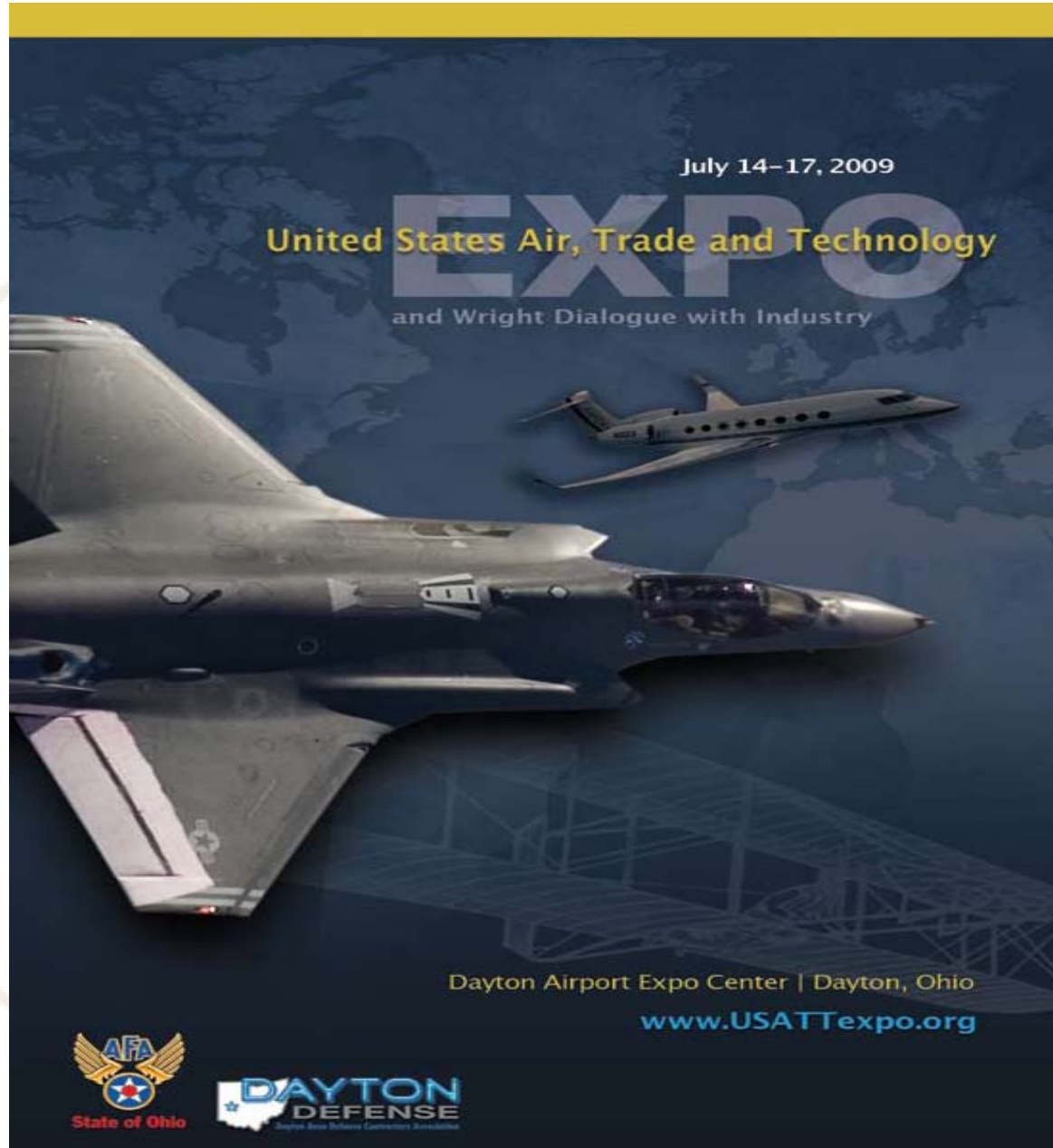
Ohio is distinct in the nature of our aerospace industry and aerospace assets. In Ohio, federal, private and non-profit entities cross the civil and military aerospace product development scale, and:

The contributions that Ohioans have provided have become a symbol of the pioneering nature our State and has become a source of pride for all of Ohio.

**NOW, THEREFORE, I, TED STRICKLAND, Governor of Ohio, and
LEE FISHER, Lieutenant Governor of Ohio, recognize May 7, 2008 as
Aerospace Day in Ohio.**

Ted Strickland
Ted Strickland
Governor

Lee Fisher
Lee Fisher
Lt. Governor



July 14-17, 2009

United States Air, Trade and Technology EXPO

and Wright Dialogue with Industry

Dayton Airport Expo Center | Dayton, Ohio

www.USATTexpo.org

