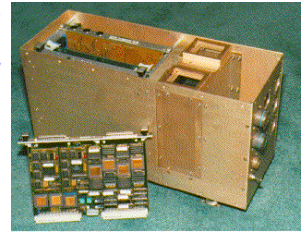




The Aircraft System Capabilities of *Spiral Technology, Inc.*

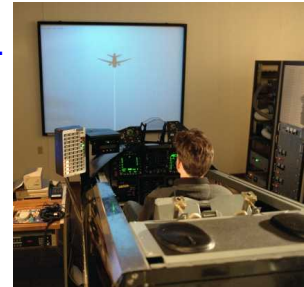


Spiral Technology, Inc. has an extensive background in practical Systems Engineering, Design, Development, Integration and Test, and Operation of the wide variety of systems required to support the flight research and test of aircraft systems. Utilizing the classical "Spiral" Systems Engineering methodology, our program managers, scientists, engineers, and technicians are experienced in virtually all aspects of flight research and test mission support requirements including:



Utilizing the classical "Spiral" Systems Engineering methodology, our program managers, scientists, engineers, and technicians are experienced in virtually all aspects of flight research and test mission support requirements including:

- Aircraft design including Aerostructures, Flight Control Systems, Propulsion Systems, Flight Dynamics, and Thermal Loads Systems
- Mission Planning
- Airborne Instrumentation and Downlink Data Stream Development
- Flight Termination Systems
- Receipt and Re-Transmission of RF Data to and from the Test Article
- RF Antennae Design
- Real-Time Flight Simulation
- Ground Based Cockpit Development for Remotely Piloted Research Vehicles (RPRVs)
- Uplink Command and Control and Cockpit Information Displays



- Radar and Telemetry Tracking Systems
- Ground Based and Mobile Telemetry Data Acquisition, Processing, and Display Systems
- Commercial-Off-The-Shelf (COTS), Standards Based Software for Setup, Monitor, and Control of Airborne and Ground Based Telemetry Systems

We have applied this extensive expertise over the years to a wide variety of flight research and test aircraft including:

Flight Experiment

- The Apex (Autonomous Unpiloted Air Vehicle - AUAV) High-Altitude Flight Experiment
- The Helios Environmental Research Aircraft and Sensor Technology (ERAST) Project (AUAV)
- The X-45A Unpiloted Combat Air Vehicle (UCAV)
- Highly Maneuverable Aircraft Technology (HiMAT) – A Subscale Supersonic Remotely Piloted Research Vehicle (RPRV)
- Spin Research Vehicle – 3/8 Scale Model of an Air Force F-15 Fighter Aircraft (RPRV)
- X-43A Unpiloted Hypersonic Research Vehicle (AUAV)
- X-37 Advanced Technology Demonstrator (Autonomous and RPRV)
- X-38 Experimental Crew Return Vehicle (AUAV)
- F-18 Hornet High Alpha Research Vehicle (HARV)
- US Air Force Advanced Range Instrumentation Aircraft (ARIA)



- Mission Support at the Air Force Flight Test Center of the Global Hawk
The Global Hawk is an extremely high altitude UAV that is designed to provide high-resolution reconnaissance imagery to the War Fighter. Utilizing the Avionics Test and Integration Complex at the AFFTC our engineers supported the US and German RQ-4A Global Hawk sensor integration to identify / eliminate Safety of Flight and Electromagnetic Interference / Compatibility issues using specialized equipment. Off-board emitters were simulated to ensure proper receiving sensor functions and other on-board emitters (i.e. S-band telemetry and C-band beacon).

Spiral's dedicated staff of engineers represents a unique cadre of aircraft system expertise who believe in and implement our corporate motto of **"Leadership, Performance, Results"** and are experienced in applying these skills to a wide variety of aircraft systems ranging from airborne systems to ground-based systems that receive and process data for presentation to the research and test engineer.

Spiral Technology

www.spiraltechinc.com