

Vital Link Test Cells

Engine and Aircraft

Test Capability



For over 20 years Vital Link has been a proven supplier of commercial and military Thrust Engine Test Cells for both the U.S. domestic and international markets.

Vital Link Thrust Engine Test Cells and associated systems allow for the evolution of engine types to be accommodated over the facility lifecycle.

Facilities can be constructed as permanent structures or as modular systems consisting of structural steel and factory fabricated acoustic assemblies and components. Modular systems offer reduced site assembly time, and can be discussed and relocated in a cost effective manner as the customer's needs change.

In addition to providing new Test Cells, Vital Link undertakes upgrade, modernization and modification of existing Test Cells. These refurbishments are often extensive in scope and provide the customer with an effective alternative to a new Test Cell at a fraction of the cost.

Typical project features include:

- Civil Engineering Design
- Aero-thermodynamic, Structural and Environmental Analysis and Design
- Acoustical Components – Enclosure Intake and Exhaust Silencing Systems
- Acoustical Control Room, Equipment, and Systems Rooms
- Test Stand and Engine Adapters
- Fuel Storage, Metering and Distribution Systems
- Engine Start Systems
- FADAST™** Data Acquisition and Control System
- FADAST™** Electronic Throttle Systems
- Fire Detection and Suppression Systems
- OEM Cross Calibration and Certification Services

Typical facilities supplies and supported include:

- The U.S. Air Force Type A/F32T-9 Noise Suppressor (Test Cell) and derivatives with capability to test engines including F-100, F-110, F-108, TF-33, J-57, J-79, V-2500 and CFM-56 incorporating an overhead thrust stand
- Test Cells specifically for the military afterburning and non-afterburning engines to 40,000 lb thrust engines incorporating 48" rail type floor mounted type test stands.

www.vitalinkinc.com
www.vitalinkltd.co.uk

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Vital Link Test Cells provide flexibility to support a range of engines within a single facility. Engine adapters for a range of engines can be provided for the common interface Engine Test Stand. Dress Kits for engine types are provided to the engine OEM requirements. Vital Link designs reduce installation and commissioning time and simplify future upgrade and modification.

The Vital Link designed and manufactured **FADAS™** package or Fully Automatic Data Acquisition System is a high speed, highly accurate engine data capture and control system developed using Commercial Off the Shelf (COTS) equipment for ease of future maintenance and upgrade. With the benefit of an optional fully automated test capability, it can also provide complete facility control and self diagnosis. With virtually 100% redundancy built in **FADAS™** provides unprecedented reliability for all engine & facility systems.



Vital Link's **FADAS™** system incorporates features that provide:

- Touch Screen Control
- Automated Engine Running
- Raw Data Reduction and Calculation to OEM Requirements
- Data Bus Interfaces including RS232, RS485, ARINC, MIL-STD-1553B
- Annunciator Panel
- Full Recording Capability
- Blackbox Recorder
- Event Log
- Audio and Visual Alarm Prompts
- Data Backup
- Technical Publication Suite
- Integrated System Fault Diagnostics and Troubleshooting
- Network Monitoring
- CCTV Integration
- Weather Station
- Cost Effective Upgrade and Modification Capability for Future Requirements

Also available for integration with Vital Link's **FADAS™** system is our high accuracy electronic throttle system providing precise control from the desk mounted quadrant to the engine via the test stand mounted throttle actuator. The throttle system offers various options including automated control of engines in accordance with the OEM test schedule.



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Vital Link, Inc.

914 Bartlett Road Sealy TX 77474
Tel (979) 885-4181 Fax (979) 885-3274
Email info@vitallinkinc.com

Vital Link Europe Ltd.

9 Stanhope Gate, Stanhope Road
Camberley, Surrey GU15 3DW UK
Tel +44 (0) 1276 401570
Email info@vitallinkltd.co.uk