

iTest Professional

iTest.PRO - Data Acquisition and Control System

Real-time data acquisition and control for transient and simulation testing applications

The typical lab must be able to run a wide variety of tests in one facility, which usually means a range of equipment from a variety of vendors. Labs must test everything from conventional engines and transmissions, to full hybrid powertrains and battery systems. In addition, the tests vary from R&D and benchmark tests, to durability and regulatory testing. The complexity is further compounded with a variety of data acquisition and control systems, making automation impractical, or even unfeasible, as they all have varying interfaces, protocols and formats.

The iTest.Pro data acquisition and control system is designed for engine and powertrain testbeds with the most challenging needs. Typical applications include certification and R&D tests running transient test schedules, and tests involving simulation.

The high performance, modular system includes a powerful scripting engine and API for complete customization. iTest.Pro is compatible with third-party systems, using either A&D's large library of device drivers, or through development of a customized driver.

iTest.Pro is comprised of three primary components: the development interface, Test Manager, and two user interfaces, AutomationPanel and FlexEdit. Test Manager is a fully functional development environment for creating and editing test schedules and test configurations, defining PID loops and other parameters. The AutomationPanel operator GUI contains interactive displays and manual controls that enable runtime editing of screens and running automated test schedules. FlexEdit is a simplified, preconfigured task-based work flow interface.



Highlights:

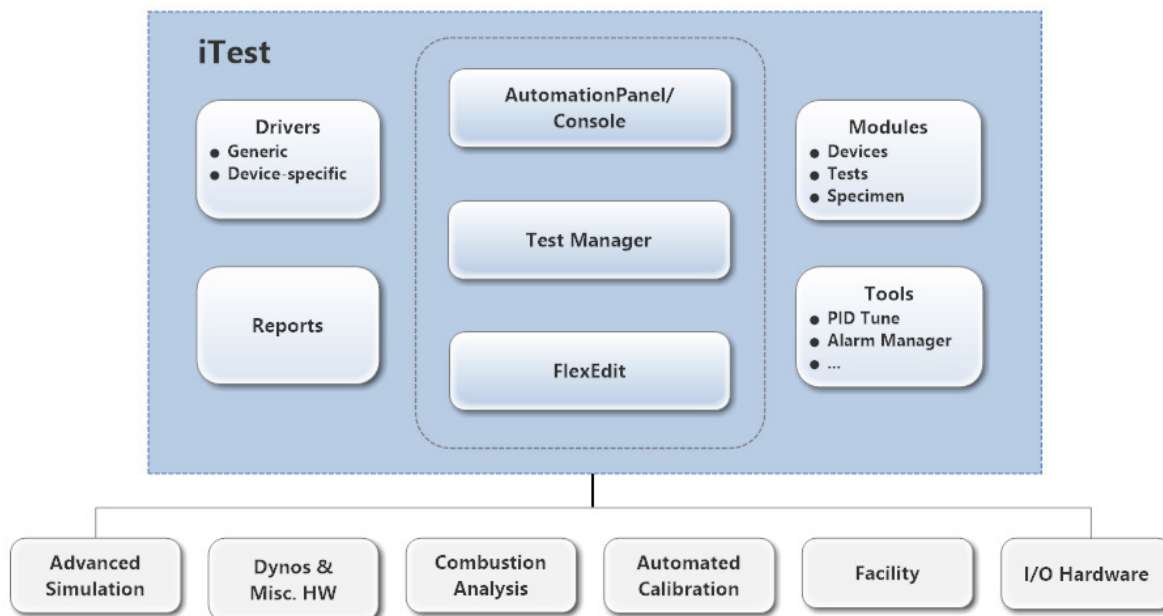
- A single, customizable user interface runs all equipment
- Test schedules shared across platforms
- Built-in standard test schedules for common applications
- Runtime validation ensures data integrity
- Consistent data output formats
- Automated reporting minimizes errors and improves data quality

Features:

- Extensive library of interfaces to third-party measurement instruments
- Python scripting integration
- ASAM MDF4.1 support
- Modular design enables selection of test-specific instrumentation
- Windows 10 compatible GUI
- High-speed time-aligned data logging
- Customizable GUIs



Architecture



iTest Family

iTest.Pro

A full-featured, expandable test automation and control system for engine and powertrain test beds with the most challenging needs, such as those running transient test schedules, and tests involving simulation.

Offline Development Suite

The configuration portion of iTest, intended for scripting, schedule creation, etc.

iTest.LA

A runtime-only package for standard engine applications and includes the AutomationPanel operating interface and FlexEdit workflow tool. This application allows some configurability, but customization is limited.

iTest.Micro

The iTest.Micro platform supports pre-configured “out-of-the-box” solutions that are targeted for test systems running simple, repetitive sequences (e.g. on/off), usually found in component or end-of-line quality testing.

iViewBox

A hardware-only solution for integrating non-PC based systems or those with embedded controllers into the LabWorX lab management system.

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