Automation Tooling Systems

ATS Test Executive Software

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ATE 4000

Description

The ATS Test Executive is a proven fourth generation test and information software executive dedicated to performing test and failure analysis for high-volume production test systems. It manages the execution of all hardware control, data acquisition & analysis, data archiving, and management reporting operations of the test system. It exceeds simple pass / fail testing to offer quantitative and qualitative data which enables our customers to continually optimize their manufacturing process.

The Test Executive was developed using a database driven architecture, allowing for standard features of the system to be set up and configured using database parameters. This provides our customers the flexibility to continually modify the system as their process dictates. The result is a test system implementation with optimum efficiency, reliability and test measurement integrity, as well as being operator friendly.

Typical Test Applications

- Performance Curve Tracing
- Load-point Test
- High Sample Rate Signature Analysis (envelope, peak, RMS, duty cycle, etc.)
- Frequency Analysis
- Noise, Vibration & Harshness Analysis
- Servo / Stepper Motion Control
- Real-time Control & Hardware Triggering
- Leak (Fine & Gross), Flow, Pressure Drop
- Product Diagnostic Communications
- Vision Inspection
- Waveform Signal Generation
- Resistance, Inductance, Capacitance
- Hi-Pot, Surge, etc.

Specifications

Product Name:	ATS Test Executive
Model:	ATE 4000
Compiler / Operating System:	Microsoft Visual C++ Version 6.0, Windows NT/2000
Design Implementation Method:	Object Oriented Programming Model
System Architecture Hierarchy Layers:	1. Operator Interface (system setup, operation, and test system monitoring) 2. Application Specific Test Logic 3. Hardware Devices Interfacing
Modes of Operation:	1. Automatic 2. Manual 3. Shill (System Calibration Verification) 4. Capability (Gauge R&R Study)
Industry Device & Bus Protocols Supported:	GPIB Profibus Multi-point RS-Serial Ethernet, TCP/IP PCI, ISA VXI, PXI, VME J1850, CAN, K-Line, SCP, GM-LAN, etc.

Features

- **Fast Cycle Time optimized for maximum equipment utility**
- **Simple Color-coded Main Interface for immediate operator feedback of test results, graphical displays, and test system status**
- **Verbose Test System Error and Product Failure Messages to assist in root cause failure analysis**
- **Multilingual Language Support**
- **Automatic Test Result Data Archiving to standard databases, capable of local or remote LAN echo**
- **Automatic Process Event Logging: black box style, capable of local or remote LAN echo**
- **Automatic Management Report generation by hour, shift / batch, day, and week with test totals, yields, and fault pareto analysis**
- **User-definable System Configuration for programming of system wide parameters**
- **User-definable Part and Test Configuration for programming of part type and test parameters**
- **User-definable shift times, lunch hours, coffee breaks, etc.**
- **Multi-level system access controlled by configurable passwords**
- **Enhanced System Hardware Diagnostics Capabilities to assist in engineering analysis and product debug**
- **Full Host Automation PLC Interface includes automatic part type changeover, failure mode, rework mode and test-system-ready status**
- **Support for independent testing of multiple test fixtures**
- **Test Software Interface to test routines written in Labview, Visual Basic, etc.**
- **Test System Interface to server-based Quality Statistics Reporting Systems**
- **Pallet-based RF Tags Interface**
- **Support of Gauge Repeatability and Reproducibility (G R&R) Studies**
- **Test System Manual available online from main screen**
- **Support for the addition of test scripting**

Contact ATS directly for custom or product-specific applications beyond the scope of this document.

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