

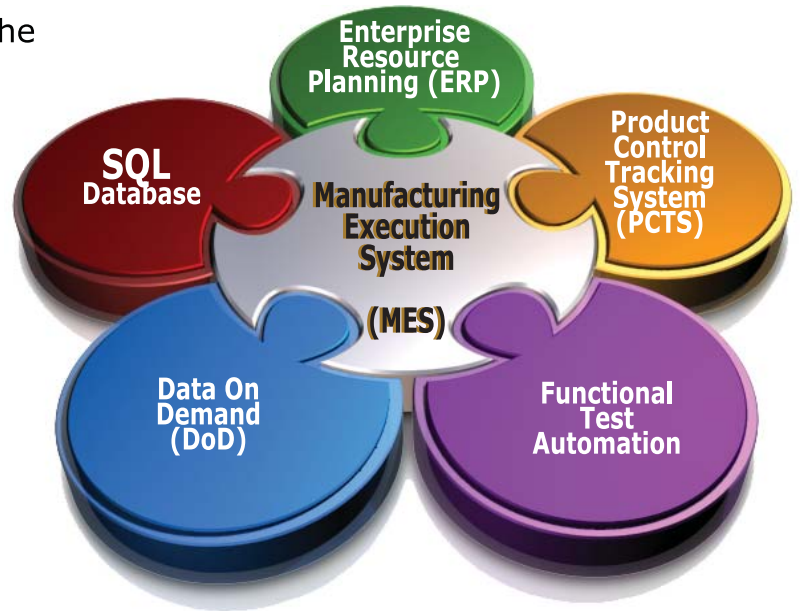
Automated Manufacturing Execution System

DTx is the authority on highly reliable embedded computing solutions. Utilizing our paperless automated Manufacturing Execution System (MES), we can offer you the absolute in traceability, quality, flexibility, and product life cycle control that no other ODM can. The interconnected MES modules document all components used and operations completed during production and provide real-time status and planning reports.

Product Control Tracking System (PCTS): PCTS utilizes online work instructions and handheld scanners to provide 100% traceability of all component part and serial numbers. PCTS also tracks employee data, order data, assembly operations, quality inspection steps, test data, intervals between scans and total build time. This data is stored in an SQL database and is included in a 2D barcode label attached to each unit. It also becomes part of the device history record which is maintained for the life of the product. Anytime a product is returned for repair or upgrade the record is updated.

Functional Test Automation: This testing software is a DTx specific interface and IP functional testing module which uses the product's serial number to assess the tests required for each product. The hardware requirements for each test station are minimal and include two switches, a UPS system, test PC, modem and cables. All inputs, outputs, components and key functional areas of the product are fully tested and verified for compliance. Debugging tools are available to assist the Technician or Engineer in troubleshooting and repair of new or returned products.

Data On Demand (DoD): DoD is used to communicate and analyze scanned data from the PCTS and Functional Test Automation modules both internally and externally. This information is refreshed every 60 seconds and made available on an interactive company intranet site, as well as on production floor display stations. The collected data maps work-in-progress and completion status for all work orders and reports functional test status and assembly time.



Benefits

- Improved On-Time Delivery
- Shorter Lead Times
- Increased Product Quality and Reliability
- Efficient Customer-Supplier Communication & Planning
- Better Supplier Responsiveness and Flexibility
- Expedited New Product Introduction (NPI)
- Lifelong Product Traceability
- Lower Return Rates

For more information on MES, please contact us at Embedded@DTx.com



Designs • Controls • Delivers

Automated MES Module Overview

Product Control Tracking System (PCTS)

- Enables Lean Manufacturing Process
- Interfaces with Company ERP System for Material Flow Management & Scheduling
- Maps Serial Numbers to Product Assembly Requirements, BOM, Part No., Operator, Assembly Instructions, Test Requirements, & Customer Order
- Utilizes Paperless Work Instructions Customized to Each Product's Specifications

Functional Automated Testing

- Fully Automates Software Imagery and Functional Test Process
- Integrates DTx Developed Software with Off-The-Shelf Product Test Software
- Links to Customer & Product Requirements
- Provides 100% Verification of Product Functionality, SW/FW Updates, & Subassembly Performance

Data On Demand (DoD)

- Utilizes Data from PCTS & Test Automation to Generate Reports
- Updates Product Monitoring Board
- Provides Real-Time Communication & Information to Program Management, Manufacturing, Engineering, Suppliers, and Customers