

Course Number E2824A+24D Scheduled

Agilent 83000 F330 System Training–Part 2

Overview

Develop complete production programs for complex devices

Course Overview

The Agilent Technologies 83000 Advanced User Training gives the student already familiar with the F330 test system, training on how to develop complete production test programs for complex devices.

What You Will Learn

- Create Tests for Complex Devices Using Equation Based Timing and Level Set-ups
- Timing and Vector Translation from Simulation Data to 83000 Set-ups
- "Top Down" Design of a Testflow
- Developing a Test Program for Use in the Production
- Testing Devices in Parallel

Specifications

Course Type

User/Application training

Audience

83000 F330 test engineers, or anyone involved in developing test programs

Prerequisites

Agilent 83000 F330 System Training Part 1 (E2823A+24D) and a strong background in UNIX and "C" programming. A weakness here will severely impact the student's ability to comprehend the course material.

Course Length

5 days

Course Format

Course content is 50% lecture and 50% lab instruction with exercises, to show how to use the features covered in the lectures. The course is on the software use of the test system and assumes a working knowledge of the test system.

Delivery Method

Scheduled (at Agilent training locations)

Detailed Course Agenda Getting Started

- Training Overview
 - Training Objectives
 - Training Outline
 - Study Material
- Refreshing System Training Part 1
 - 83000 F330 Test Programs
 - Data Sets and Test Flows
 - Test Questions

Using the Timing System Most Effectively

- Refreshing Timing and Vector Internals
 - Inside the Timing System
 - Device Cycles
 - Logical and Physical Waveforms
 - Example Using Firmware Commands for Timing Setup
 - Vector Memory
 - External Clock
 - Using Tools to Modify Timing and Vectors
 - Related Topics
 - Lab Exercises
 - Summary and Discussion



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Innovating the HP Way

- Combining Device Cycles in Multi Mode
 - Introducing Multi Mode
 - Defining Device Cycles for Multi Mode
 - Defining Display Formats for Multi Mode
 - Defining Vectors for Multi Mode
 - Related Topics
 - Lab Exercises
 - Summary and Discussion
- Pin Margin Testing
 - Introducing Pin Margin Testing
 - Running Pin Margin Tests
 - Using the Control File
 - Lab Exercises
 - Summary and Discussion

Setting up Equation Based Tests

- Introducing the Equation System
 - When to Use Equations
 - EBT versus Non-EBT
 - Timing Equations
 - Level Equations
 - Using Specifications and Equations
 - Typical Steps
 - Further Applications
 - Related Topics
 - Test Questions
 - Summary and Discussion
- Implementing Timing Specifications
 - Lab Exercise
 - Device Specifications
 - Creating the Wavetable
 - Creating Equation Sets
 - Creating Specification Sets
 - Setting Up Vectors
 - Measuring Specifications
 - Related Topics
 - Summary and Discussion
- Implementing Output-Dependent Timings
 - Equations in Device Specifications
 - Setting up the Equation-Based Timing
 - Using the Spec Search Test Function
 - Defining the Testflow
 - Considering Throughput
 - Approaches for Optimization
 - Test Questions
 - Summary and Discussion

- Implementing Level Specifications
 - Lab Exercise
 - Device Specifications
 - Creating Equation Sets
 - Creating Specification Sets
 - Running a Sweep Test
 - Summary and Discussion
- Repetition: Equation-Based Testing
 - Application
 - Integration
 - Implementation and Optimization
 - Test Questions
 - Translating Test Programs
- Translating Simulation Data
 - Overview
 - Using the ASCII Translator
 - Translating Device Cycle Based Data
 - Translating Print on Change Data
 - Related Topics
 - Lab Exercises
 - Summary and Discussion
- Using Advanced ASCII Translator Options
 - State Mapping
 - IO-Control
 - Timing Map
 - Using Sequence Instructions
 - Translating Multiple ASCII Files
 - Lab Exercises
 - Related Topics
 - Summary and Discussion
- Translating Timing Files
 - Overview
 - Creating the Device Cycle Definition File
 - Translating the Device Cycle Definition File
 - Merging Timings
 - Lab Exercises
 - Summary and Discussion

Advanced Testflow Programming

- Programming Interfaces
 - Overview
 - Command Sets
 - Programming Interfaces and Templates
 - Available TPI Calls
 - Sample C Testflow
 - Lab Exercises
 - Summary and Discussion
- Creating User Procedures
 - Overview
 - Using the Templates
 - Creating Functions
 - Compiling, Executing and Debugging
 - Related Topics
 - Lab Exercises
 - Summary and Discussion
- Example: Measuring Parameters at a Certain Vector
 - The Task
 - Parameter Parsing
 - Specifying the Stop Vector
 - Executing the Test Pattern
 - Building the Testflow
 - Lab Exercises
 - Summary and Discussion
- Report Formatting and Data Logging
 - Contents of the Report Window
 - Data Sources and Processing
 - Implementing Report Formatters
 - Using a Report Formatter
 - Test Questions
 - Summary and Discussion
- Repetition: Advanced Testflow Programming
 - Programming Interfaces
 - Command Sets
 - Creating Command Sets
 - Report Formatters
 - Related Topics
 - Test Questions
 - Multi-Site Testing

- Increasing Throughput by Using Multiple Sites
 Basic Considerations
 - Setting Up a Multi-Site Test
 - Parallel Execution and Prerequisites
 - Related Topics
 - Test Questions
 - Summary and Discussion
- Switching from Single-Site to Multi-Site
 - Overview
 - Changing the Pin Configuration
 - Using the Site Control
 - Running Tests
 - Related Topics
 - Lab Exercises
 - Summary and Discussion
- Setting up the Testflow
 - Arranging Test Suites in the Flow
 - Setting Flags for Parallel Execution
 - Including Special Testflow Elements
 - Using Match Loops in a Multi-Site Test
 - Executing a Multi-Site Testflow
 - Related Topics
 - Lab Exercises
 - Summary and Discussion
- Embedding User Procedures
 - Outline
 - CPI Procedures for Multi-Site Testing
 - TPI Procedures for Multi-Site Testing
 - Firmware Commands for Multi-Site Testing
 - Writing User Procedures for Parallel Execution
 - Lab Exercises
 - Summary and Discussion
- Repetition: Multi-Site Testing
 - Benefits of Multi-Site Testing
 - Prerequisites
 - Implementation
 - Test Questions

For the latest information on class schedules and locations, visit our website: www.agilent.com/find/tmeducation

By internet, phone, or fax, get assistance with all your test and measurement needs.

Online Assistance

www.agilent.com/find/assist

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