



Course Number E6195C+24C or 24A Scheduled, Dedicated

TS-5400 Series II Advanced User Training Overview

Course Overview

Attendees will learn advanced topics for developing TS-5400 automated functional tests systems. They will understand and use the test executive software development platform, TestExec SL to create and modify system configurations and switching topology layers. Attendees will also learn how to add new instruments to a TS-5400 system by configuring them, using built-in support for message-based instruments, writing C-language measurement actions, calling VXI Plug&Play handlers, and developing low-level instrument or switch handlers. Hands-on labs will reinforce each of these topics and provide realistic enhancements that students can return home with. The course will finish with development of a Visual Basic Operator User Interface, and explore methods of integrating a system with factory automation systems using digital I/O and barcode readers.

Specifications

Prerequisites

Familiarity using IBM-compatible PCs and Microsoft Windows. Experience using instrumentation and test systems based on VXI and GPIB. Experience with C Language and Visual Basic programming.

Audience

Electronic Control Unit(ECU) Test Engineers and Integrators

Course Length

5 days

Course Format

Lecture and hands on lab

Delivery Method

Scheduled (at Agilent training locations) or

Dedicated (at customer site)

To save you time and travel, many Agilent courses can be delivered at your site. Agilent can provide required equipment, or save money by furnishing your own.

Detailed Course Agenda

I. TS-5400 Switching Topologies

Overview of switching topology layers, system configurations, and the switch manager.

LAB1 – Modifying the System Topology Layer: Adding Modules

LAB2 – Modifying the System Topology Layer; Adding or editing Wires and Aliases

LAB3 – Using Wires and Aliases effectively in your test plans.

II. C-Language Action Development

Use of the Action Wizard to construct software actions, calls to TS-5400 instrument handlers.

LAB4 – Construct an instrument action using a TS-5400 handler.

LAB5 – Construct an action to analyze a waveform.



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III. Adding a VXI Plug&Play handler and C-language actions.

Discussion of what VXI Plug&Play drivers are, how TestExec SL uses them, how to call them from instrument actions.

LAB6 – Install a VXI Plug&Play Driver

LAB7 – Call VXI Plug&Play Driver functions

IV. Adding Message Based Instruments

Use of TS-5400 software handlers and actions to control any VXI or GPIB message-based instrument. Creating new instrument actions from existing TS-5400 actions.

LAB8 – Install a message-based instrument handler, Create new actions to control the instrument

V. TS-5400 Instrument Handlers

Detailed discussion of the low-level TS5400 C-language instrument handlers. Learn how to create a new instrument or switching handler from scratch.

LAB9 – Create a C-language Handler to control switching and instrumentation.

VI. Creating custom Operator User Interfaces using Visual Basic

Detailed discussion of the ActiveX Server and Client for TestExec SL. Review of example TS5400 VB OPUI's.

LAB8 – Use VB to create simple and typical OPUIs.

VII. Communicating with Factory Automation Systems

Overview of communication between TestExec SL handlers and the Visual Basic Operator Interface for purposes of controlling digital I/O. Handling inputs, outputs, and events in the operator interface prior to test plan execution. Support for Barcode Readers.

LAB9 – Set up an automation handler in TestExec SL for digital I/O and invoke reads and writes from VB OPUI.

LAB10 – Set up and use a barcode reader with the VB operator interface.

For the latest information on class schedules and locations, visit our website:

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(tel) 1 800 629 485

(fax) (61 3) 9272 0749

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(fax) 64 4 495 8950

Asia Pacific:

(tel) (852) 3197 7777

(fax) (852) 2506 9284

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