visualATE Applications

Market Leading Low-Cost Mixed Signal and Analog Test Solutions


Automotive


Mobility


IoT/IoV & Optoelectronics


Computing & Network


Industrial & Medical


Consumer

Course Description

The purpose of this course is to introduce students to the software, system operating environments, and seven of the available instrument cards. This is accomplished by a combination of lectures and lab exercises and online learning materials. Upon completion of the course, the student will be able to: generate Test Functions, assemble Test Programs, debug test code, and understand the basic functions of the MUX, DVI, OVI, TMU, PV_3, ACS, and DDD instruments. Students must complete the online pre-course before attending the class. Login information for the online materials will be emailed upon confirmation of registration.

Course Outline

- Foundations and Program Development Steps with DVI and OVI
- Visual Studio Code Debugger and visualISE Hardware Debugger with OVI and TMU
- High Voltage/Current Generation with PV_3
- Waveform Generation with ACS
- Digital Pattern Generation with DDD

Course Structure

- Five days, including classroom and practical exercises

Prerequisites

- Six months test program experience
- Ohm's Law

Recommended Skills

- C or C++ programming
- Familiarity with Windows operating system
- English - written and spoken

Online Pre-Course Content

Completed prior to attending classroom session:

- Hardware and software overview
- Operator environment
- Engineering environment

Who Should Attend

- Test program development engineers
- Test program support engineers

- **Multisite capability resulting in higher throughput**
- **21 instrument slot configuration**
- **Air cooled architecture and instruments**
- **Compact low power technology**

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Course Modules

1 - Foundations and Program Development Steps with DVI & OVI

- Programming Syntax and Conventions
- MUX instrument hardware and software
- DVI instrument hardware and software
- System interconnects
- Program development steps
- Lab exercises covering resistance measurement, current measurement, LED voltage versus current measurement

2 - Visual Studio Code Debugger and visualISE Hardware Debugger with OVI and TMU

- Data log Functions
- OVI instrument hardware and software
- TMU instrument hardware and software
- Visual Studio code debugger
- visualISE
- Lab exercises covering DUT Continuity, Vol/Voh measurements, Vil/Vih measurements, OVI and DVI Rise/Fall time measurements, DUT Propagation Delay measurement, and DUT Rise/Fall Time measurements

3 - High Voltage/Current Generation with PV3

- PV3 hardware and software
- Lab exercises covering high current and voltage delivery and differential voltage measurement of Rdson type measurements

4 - Waveform Generation with ACS

- ACS hardware and software
- Lab exercises covering True RMS measurements, Frequency measurement, generating a Triangle Wave and loading waveform data from a file

5 - Digital Pattern Generation with DDD

- DDD hardware and software
- Lab exercises covering DUT Icc measurement, DUT Functional tests and ACS external clock
- visualATE Import/Export Functions

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