

visualATE Applications

Market Leading Low-Cost Mixed Signal and Analog Test Solutions



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, PV3, 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 PV3
- 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



Automotive



Mobility



IoT/IoV & Optoelectronics



Computing & Network



Industrial & Medical



Consumer

- 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