Diamond$_X$ PD3$_X$ eLearning

Test Solution for Ultra-High Definition Display Driver ICs
Course # 2701e


Automotive


Consumer


Flat Panel Display


IoT/IoV & Optoelectronics


Industrial & Medical


MCU


Mobility

Course Description

This eLearning material introduces the student to the 3rd generation Panel Display Driver (PD3x) instrument. The eLearning will provide the student with an overview of the instrument, the theory of operation, and real-world test examples.

On completion of the eLearning, the student will be able to describe the components of the PD3x, understand its theory of operation, add the instrument resources to a program, and be able to describe programming statements used in test examples. This is accomplished with a combination of multimedia presentations and interactive software demonstrations.

Course Outline

- Product Introduction
- Functionality and Theory of Operation
- Programming - Test Examples

Course Length

- Self-paced – 3-5 hours typical depending on skill level

Prerequisites

- Six months test program experience
- Successful completion of the Unison Applications Programming ILT course

Recommended

- C and C++ programming
- Familiarity with Linux Operating System
- English - written and spoken

- **320 Channels per Instrument**
- **16-bit 200Ksps Digitizer**
- **Dual IMA**
- **Max Current ± 2mA, Voltage Range ± 12.5V, 0 to 25V**

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Course Modules

1 - Product Introduction
This module is a foundation for the later modules, providing the student with an overview of the PD3$_X$. On completion of this module the student will be able to:

- State on which system the PD3$_X$ can be installed
- Identify target markets the PD3$_X$ is intended to meet
- Summarize the Operating Specifications of the PD3$_X$
- Recognize the instrument's major feature set

2 - Functionality and Theory of Operation
This module provides an in-depth description of the PD3$_X$ instrument functionality. Included in this module are functional block diagrams and illustrations meant to assist in understanding the operation of the instrument. On completion of this module the student will be able to:

- List the major features of the PD3$_X$ instrument
- Recognize where the PD3$_X$ instrument can be installed
- Describe the major functional elements of the instrument

3 - Programming – Test Examples
Designed to build on the student's existing knowledge of creating a Test Program in Unison, this section consists of multiple modules which introduce the student to general, as well as specific programming examples. The examples will be completed by the student using interactive software demonstrations to reinforce the programming concepts introduced. Throughout this section the student is encouraged to access the help system to develop familiarity with the programming statements. On completion of this module the student will be able to:

- Add PD3$_X$ resources to an AdapterBoard Object using the Unison PackageTool
- Recognize and use various Unison Digital, TMU, and VI APIs
- Recognize the features and benefits of the Unison GraphicalDebugTool (GDT)
- Recognize the uses and procedures in making triggered measurements
- Complete a PPMU-based Continuity Test
- Complete a Functional Continuity Test
- Complete a Slew Rate Test
- Complete a Grayscale Measurement Test

At the end of each module the student will be required to pass a test, achieving a score of 75% or more. The student is encouraged to take notes throughout the course, and repeat, or pause the presentation as needed.

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Who Should Attend
- Test program development engineers

Related Courses
- Unison Applications Programming
- Introduction to Unison eLearning

Course Viewing Requirements
To view the course, you must have:
- Browser supporting HTML5
- Audio-listening capabilities (such as a headset or speakers)
- Connection speed of at least 600 kbps

Course Cost
- Access is free of charge to all Cohu semiconductor tester customers

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