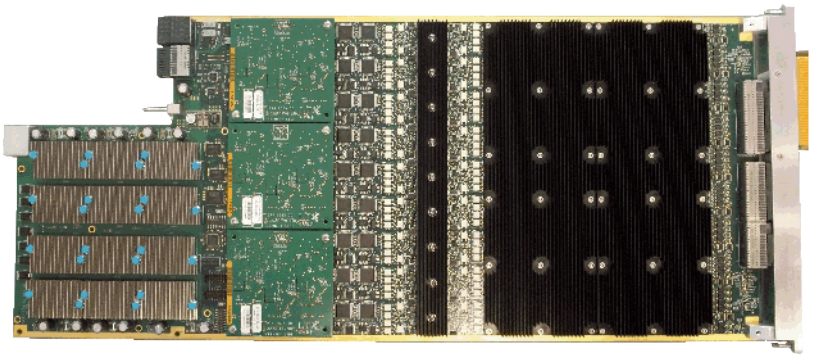
PMVI$_X$ Instrument Introduction

Diamondx eLearning Overview
Course # 2003e



Course Description

This eLearning material introduces the student to the Power Management V/I (PMVIx) instrument. The training will provide the student with an overview of the instrument, the major functional areas, the DPS and PCL ganging features, the power consumption spreadsheet and some programming best practices. On completion of the course, the student will be able to describe the components of the PMVIx, understand its theory of operation including ganging and power dissipation, add instrument resources to a program including ganging, and complete an LDO ganging test program. This is accomplished by a combination of multimedia presentations and interactive software demonstrations.

Course Outline

- Product Overview
- Functional Blocks and Theory of Operation
- Ganging Features
- Power Consumption Parameters
- Programming Test Examples

Course Length

- Self-paced – 3-4 hours typical depending on skill level

Prerequisites

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

Recommended

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

Automotive

Consumer

Flat Panel Display

IoT/IoV & Optoelectronics

Industrial & Medical

MCU

Mobility

- **72 Channels Per Board**
- **4-Quadrant Operation**
- **Max Voltage - 2.5 to +20 V**
- **Voltage measure accuracy to ±(0.02% MV +100 µV)**
- **Up to ±1A/Channel, gang to 16A**
- **Precision ADC**

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Course Modules

1 - Product Overview

On completion of this module the student will be able to:

- State on which systems the PMVIx can be installed
- Identify target markets the PMVIx is intended to meet
- Recognizes the difference between DPS and PCL Modes
- Summarize the key Operating Specifications of the PMVIx

2 - Functional Blocks and Theory of Operation

On completion of this module the student will be able to:

- List and locate the major functional areas of the PMVIx instrument
- Describe the major functional areas of the instrument (DPS, PCL, PMV, TMU, CBIT and AUX bypass)
- Recognize how to calibrate the PVM for best measurement accuracy
- Identify unique PMVIx functional features and proper usage

3 - Ganging Features

On completion of this module the student will be able to:

- Describe the DPS and PCL ganging capabilities
- Identify the programming methods to enable Fixed and Dynamic ganging

4 - Power Consumption Parameters

On completion of this module the student will be able to:

- Describe the DPS and PCL power consumption parameters
- Recognize the steps to reduce PMVIx power consumption
- Demonstrate the ability to use the power consumption spreadsheet in an LDO programming test example

5 - Programming - Test Examples

On completion of this module the student will be able to:

- Add PMVIx resources to an AdapterBoard Object using the Unison PackageTool
- Recognize the programming implications of PMVIx operating power regions
- Recognize the features and benefits of the Unison Graphical Debug Tool (GDT)
- Complete LDO Output Voltage Accuracy and Load Regulation tests using an interactive programming demonstration

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

- Free of charge for all Cohu Semiconductor Tester Customers

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