EmAnt Pte Ltd

Low Cost USB DAQ Training Kit

Our DAQ Training Kit allows everyone to learn Data Acquisition in an affordable manner. For programming, they can use the industry specific LabVIEW or the popular .NET languages of Visual Basic, C++ and C#.

Our customers include

- Educational Institutions that would
 - like their students to learn DAQ & LabVIEW but cannot allocate the time to create instructional materials and the budget for industrial grade DAQ hardware.
 - like to make their existing .NET language curriculum more interesting and relevant without incurring a high cost in terms of instructional materials creation or hardware.
- Students who need to use DAQ with LabVIEW or a .NET language as part of their coursework or during their work attachments.
- Industrial users who do not have to use DAQ with LabVIEW or a .NET language on a regular basis. Or the DAQ hardware is deployed in production and unavailable for training
- Hobbyists who are interested to explore the convergence of computers, control and communication.



Users of our training kit can learn DAQ and programming in a guided workshop or on their own in a self paced manner.

The learner builds a Light Intensity Logger using our step by step Instruction Guide in less than a day.



While Building the Light Intensity Logger, the user will learn

Sensor, Actuators - Light Sensor, LEDs, Switch

Data Acquisition - Analog Input, Analog Output, Digital Input, Digital Output

If they are using LabVIEW, they will learn

- · Build VI
- Sub VI
- While Loop
- Charts
- Clusters
- Boolean comparison
- Arrays
- Use Statistical VIs
- Save data to File
- Shift Registers

If they are using the .NET languages, they will learn

- · Basic Program Structure
- · Variables & Statements
- · Console Input/Output
- · Branching Statement if else
- Loop for
- · do Loop
- Array
- File IO
- Windows Form

The Low Cost DAQ Training Kit comprises

• EMANT300 Low Cost USB DAQ module

- · 22 bit Analog Input @ 10Hz sampling
 - PGA up to 128
 - · up to 6 Single ended / Differential
 - inputs
- one 8 bit Current DAC
- one 16 bit PWM or one 16 bit Counter
- 8 Digital IO lines

Light Application Adaptor for EMANT300

- Light Sensor
- · LEDs
- · Switch
- · Screw Terminals for quick prototyping
- USB Cable



- Instruction guide Build Light Intensity Logger.
 Separate guides for LabVIEW, C#, VB and C++
- LabVIEW driver and example programs
- .NET control for the EMANT300. Example programs in C#, C++ and VB

• basic .NET instrument type controls (open source)



To use LabVIEW, the user must have the LabVIEW Development System ver 7.0 or later for Microsoft Windows.

To use the .NET languages, they need at least the . NET Framework 1.1 or later. For the Windows Form exercises, they need either

- · Visual Studio 2003 or later
- SharpDevelop IDE (Open Source)
- · C# Builder from Borland

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