

# DAQ Adaptor for MATLAB®

## Interface Software for MATLAB

DAQ Adaptor for MATLAB®

Test & Measurement Software

### Key Features

- Interface software that allows MATLAB users direct access to DT-Open Layers® compliant Data Translation USB modules and PCI data acquisition boards
- Included with all supported PCI boards and USB modules
- A single environment for acquisition, analysis, and visualization
- Directly access measurement data from MATLAB and utilize its engineering analysis functions
- All hardware features supported

### Overview

The DAQ Adaptor is a software interface tool that allows MATLAB users direct access to analog and digital I/O data. Used together with MATLAB from The MathWorks® and their Data Acquisition Toolbox™, a single integrated environment is provided to support the entire data acquisition and analysis process. With these tools, a Data Translation module can be configured within MATLAB to access all the built-in features of the hardware device. All Data Translation's Open Layers compliant USB and PCI boards are supported to provide a full range of performance capabilities. Analysis and visualization features of MATLAB can be incorporated into the design to analyze data, save it for post-processing, and make changes based on analysis results.

### The Basics

The DAQ Adaptor for MATLAB provides users with a convenient way to combine the speed and precision of Data Translation's USB and PCI boards with the powerful analysis and data presentation features of MATLAB. Users create DT-Open Layers subsystems, an API for all Data Translation data acquisition boards, add channels to them, and perform single-value or streaming I/O operations. MATLAB then provides an array of analysis and display features to process input data and generate output data.

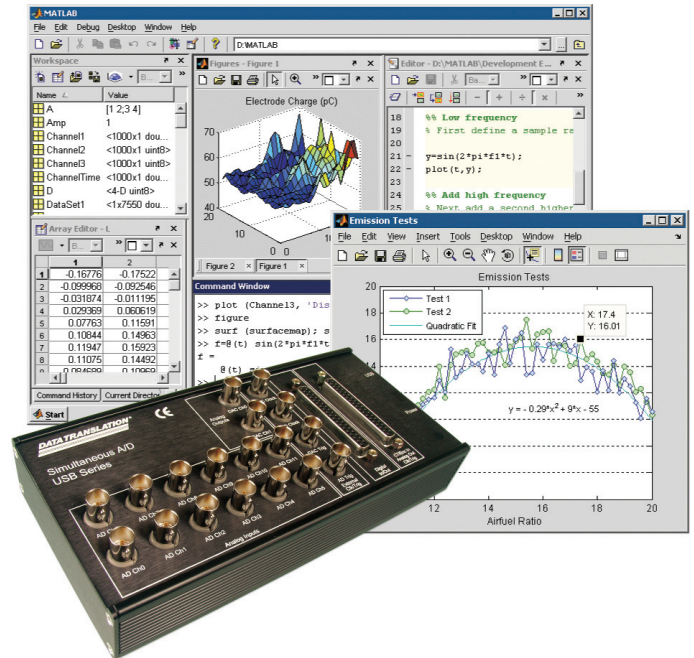


Figure 1. Measurement and analysis is accomplished easily using USB data acquisition and the DAQ Adaptor. MATLAB users now have a single, integrated, easy-to-use environment for acquiring signals into MATLAB.

### Controlling Your Acquisition

The Data Acquisition Toolbox from The MathWorks supports a wide range of functions for controlling your acquisition. Users can set event information, evaluate the acquisition status, define triggers and callbacks, preview data while the device is running, and perform analysis on the fly. The DAQ Adaptor for MATLAB interface tool supports all these functions as well by creating a clean interface to the MATLAB program.

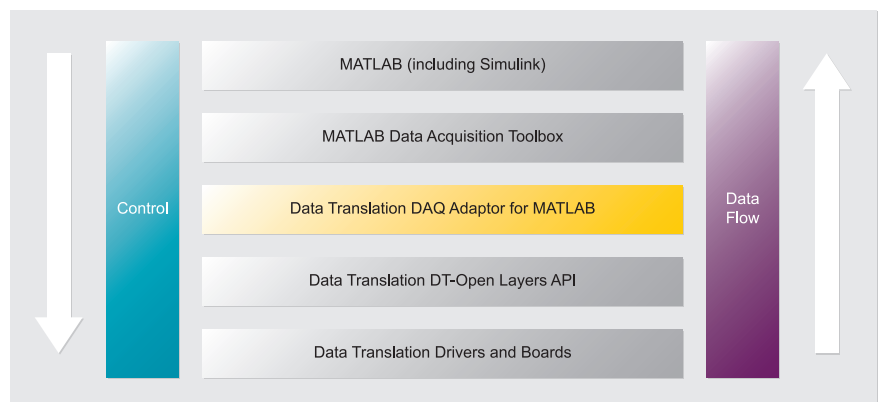


Figure 2. The above diagram depicts the hierarchy of control and data flow. DT-Open Layers provides all the board specific logic so that just one adaptor can be used for all Data Translation boards.

## System Requirements

- Data Translation hardware and device drivers \*
- DAQ Adaptor for MATLAB \*
- MATLAB®
- MATLAB® with Data Acquisition Toolbox™

*\*Included with the Data Acquisition Omni CD that ships with your hardware, or download from our web site ([www.datatranslation.com](http://www.datatranslation.com))*

## Supported Hardware

- Any DT-Open Layers compliant Data Translation USB module or PCI data acquisition board

## Ordering Summary

The **DAQ Adaptor for MATLAB** is included on the Omni CD provided with supported data acquisition hardware. The DAQ Adaptor is also available as a free download from [www.datatranslation.com](http://www.datatranslation.com).