MetraBus Software

Programming options for the MetraBus

Fully Configured Application Packages

The MetraBus is supported by an extremely wide assortment of application software. These include:

- SoftWIRE, our new graphical programming add-in for Visual Basic

- DAS Wizard, our popular Excel add-in that allows you to monitor and control your MetraBus system from within Excel.

- HP VEE and HP VEE Lab, Agilent Technologies® popular graphical programming environments

- LabVIEW™, through the use of our Universal Library for LabVIEW driver.

SoftWIRE™ Graphical Programming for Visual Basic

The power and flexibility of syntactical programming

The speed and simplicity of graphical programming

Introducing SoftWIRE™

Graphical Programming in Visual Basic®

Syntactical programming has been around since the early days of computers. More recently, graphical programming languages have been introduced and are now a popular alternative to writing hard core, text-based syntax. What's been lacking is an easy way to combine the speed and ease of use of graphical programming with the flexibility and efficiency of writing code in an industry standard language. Until now—Introducing SoftWIRE.

Language Based Programming Utilizing the Universal Library

ComputerBoards' Universal Library is a powerful and easy-to-use software library. Using the library greatly simplifies the process of writing programs for MetraBus applications.

Universal Library is easy to use. It is written from the programmer's perspective. Simple data acquisition operations, such as making an analog reading, or a series of them, are treated as a single operation.

Universal Library is easy to maintain. The syntax is constant from board to board, and to a great extent from language to language. It is easy to use the same code with different boards and different platforms.

Universal Library is easy to expand. The personal computer is evolving constantly. Today the exciting news is PCI, CompactPCI, Windows 2000, and many other new developments. Here is some good news. The Universal Library lines of code you write today will run on the newest platforms and support our newest boards in the future, without modification! Universal Library was designed to protect your investment in software.

Universal means Easy to Learn & Use

Universal means **board** to board the **syntax** for functions, such as an analog input, are the same. From MAI-16 to PCI-DAS1602/16 the programming syntax is the same. In addition, the Universal Library is intelligent. It knows about individual boards and their capabilities. Ask for something the board can't do, and a warning message supplies the information you need to correct the program.

Universal means **language** to language the **syntax** structure remains constant. The functions and features remain constant. The intelligent capability parser remains constant. Want to change programming languages? The Universal Library requires no relearning. Moving from Windows 95 to Windows NT? The Universal Library code moves with you. Universal Library is compatible with virtually all popular operating systems and programming languages.

Direct Register Programming

Most users will take advantage of ComputerBoards' power Universal Library (UL) software to handle the bulk of the programming task. However, it is also very straightforward to program at the register level. Though the MetraBus is very easy to program, we recommend register level programming to experienced programmers only.

Register programming is accomplished with simple I/O writes and reads to the MetraBus driver board. MetraBus register level programming is quite simple, since the MDB-64 driver board provides all required low-level timing and control signals.

The MetraBus is composed of 64, read/write addresses. Each address points to a unique 8-bit data location on a MetraBus I/O board. The MDB-64 series utilizes 3 PC I/O registers in your computer's I/O register space. These are referred to as the *Base Address, Base Address +1*, and *Base Address +2*.

To read or write to a MetraBus I/O board, simply write the desired MetraBus address to the MDB-64 *Base Address*, and then read or write the MetraBus data to the MDB-64 *Base Address +1*. The MetraBus manual provides a detailed description of this process and will be easily followed by a reasonably experienced programmer.