

Technical Support
Knowledge Center Open

Programming Example Layout: How Do I Choose a Programming Example?

Notices

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Contents

The links to the programming examples were arranged so that you could quickly find programming examples by language type, i.e. Visual Basic 6, Visual Basic 7, C/C++, etc.

Once you select a language, you will see examples specific to that language.

Examples that work on BOTH the 34972A and the 34970A are flagged by having key word “34970/72A” in the title of the example itself and the associated Read Me file. In many cases, these are the same examples as the older ones (below), but they have been updated to more modern versions of Visual Studio. You can also quickly identify these newer examples by looking at the date field on the far right – they will have a year of 2010.

The older examples have only the key word “34970A” in the Example title and Read Me file. These examples use older IO Libraries, and older versions of Visual Studio. Also, many of these examples query the ID of the instrument and error if it is not a 34970. The syntax in the examples will work on the 34972A, but users would need to modify the section that checks which instrument is connected for them to run on a 34972A.

Now another common question is: Should I choose the VISA example or the VISA COM example?

The following information tells you about each library. You will see that VISA has more abilities and spans more applications; however, VISA COM may be a better fit if your application is using COM data types and is a more object oriented design.

VISA (*Virtual Instrument Systems Architecture*) – The VISA library is the industry standard for instrument control and is now maintained by the IVI Foundation. A program written to work with the VISA library will work with implementations of VISA from other vendors. It can be used from any program that can call arbitrary Windows DLLs, such as:

- Keysight VEE
- C/C++
- MathWorks MATLAB®
- Microsoft® Visual Basic 6
- Microsoft Visual Studio® .NET (using Visual Basic, Managed C++ or C#)
- National Instruments LABVIEW
- National Instruments LabWindows/CVI

VISA provides complete access to GPIB, LAN, USB, RS-232, VXI message-based, and VXI register-based products.

VISA-COM – The VISA-COM library is a COM interface for I/O that was developed as a companion to the VISA specification and is now maintained by the IVI Foundation. A program that is designed to use the VISA COM Global Resource Manager will work with any vendors implementation of VISA COM. VISA COM works best in standard object-oriented ADE's that support COM directly, or through some interoperability mechanism. These environments include:

- Keysight VEE
- Microsoft Excel using VBA
- MathWorks MATLAB
- Microsoft Visual Basic 6

- Microsoft Visual Studio .NET (using Visual Basic, Managed C++ or C#)

Other environments may work with VISA COM, but there are I/O libraries that work more seamlessly (E.g. VISA). VISA-COM does not support VXI devices.

- Keysight VEE
- Microsoft Excel using VBA
- Microsoft Visual Basic 6
- Microsoft Visual Studio .Net (using Visual Basic, Managed C++ or C#)

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