SNAP PAC .NET HART Developer Toolkit

Introduction

HART® SNAP I/O analog modules are designed to provide communication with other Highway Addressable Remote Transducer (HART) current loop devices.

HART SNAP I/O modules include the SNAP-AIMA-iH current input module and the SNAP-AOA-23-iH current output module. Both modules mount on a SNAP PAC rack with a SNAP PAC brain or rack-mounted controller for communication.

If you are controlling HART SNAP I/O modules through a SNAP PAC controller running a PAC Control strategy, you do not need this technical note nor the developer toolkit.

If you are *not* using PAC Control and are developing or adding to a .NET or Mono custom program to communicate with HART SNAP I/O modules, you will need this technical note and the SNAP PAC .NET HART developer toolkit.

For additional information on these modules, see the *HART SNAP I/O Modules Data Sheet* (form 2080).

About the Developer Toolkit

The SNAP PAC .NET HART developer toolkit communicates with SNAP-PAC-AOA-23-iH and SNAP-PAC-AIMA-iH I/O modules via the SNAP PAC brain or controller on the same mounting rack as the modules. The toolkit lets you easily find and communicate with HART devices connected to those modules.

The toolkit can be used under either .NET or Mono, making it even easier to add to your existing application. This library supports Visual Studio 2005, 2008, and 2010, as well as Mono 3.2.7 or newer.

System Requirements

- Visual Studio 2005 or newer, or Mono 3.2.7 or higher
- Windows 8.1 (32- or 64-bit), Windows 7 Professional SP1 (32- or 64-bit), Vista Business SP1 (32- or 64-bit), or Ubuntu 12.04 or higher
- Ethernet interface (or wireless LAN)

Obtaining the Toolkit

The toolkit is a free download from downloads.opto22.com. Save the file to your computer and unzip it. Place the Opto22.HART.dll where you need it, usually in your project folder.

Adding the Toolkit to your Project

The toolkit must be added as a resource to your Visual Studio or Mono project. It may be added to a C#, Mono, Visual Basic, or a CLR-enabled C++ project.

Adding to a Visual Studio Project

1. In your project, from the Project menu, choose Add Existing Reference.
2. Navigate to the folder with the Opto22.HART.dll.
3. Select the Opto22.HART.dll.
4. In your project files, do one of the following:
   - For Visual Basic, add an Imports (namespace) into your code file. For example:
     ```
     imports Opto22.HART
     ```
   - For Visual C#, add a Using (namespace) into your code file. For example:
     ```
     using Opto22.HART
     ```
   - For Visual C++, add a Using namespace (namespace) in the beginning of your code file. For example:
     ```
     using namespace Opto22.HART
     ```

Adding to a Mono project

1. In your project, right-click References and choose Edit References.
2. Click the .NET Assembly tab and navigate to the folder containing the Opto22.HART.dll.
3. Select the Opto22.HART.dll.
4. Add a Using (namespace) into your code file. For example: `using Opto22.HART`

Accessing Assembly Documentation

Assembly documentation is provided in html format. You will need a web browser to open it, but you don't need Internet access.

Open the documentation folder and open index.html.

Your web browser will show the assemblies within the toolkit.

Introduction to Assembly Namespace Opto22.HART

This assembly serves as the HART communication interface. Use this assembly to discover, configure, read, and write HART field devices connected to SNAP-PAC-AOA-23-iH and SNAP-PAC-AIMA-iH modules.

For Help

If you have questions about using the toolkit and cannot find the help you need in this technical note or in the assembly documentation, contact Opto 22 Product Support.

Phone: 800-TEK-OPTO (835-6786)
               951-695-3080
               Monday through Friday, 7 a.m. to 5 p.m. Pacific Time

Fax: 951-695-3017

E-mail: support@opto22.com

Website: www.opto22.com