



SCPI Sample Program Quick Reference Guide

BERTWave MP2100B

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1 Outline

This Quick Reference Guide explains the setup and connections when running a SCPI sample program written in C# using NI-VISA. The sample program includes in MP2100B installer.

2 BERTWave Setup and Connections

The sample program can be controlled from a PC controller either via Ethernet or GPIB.

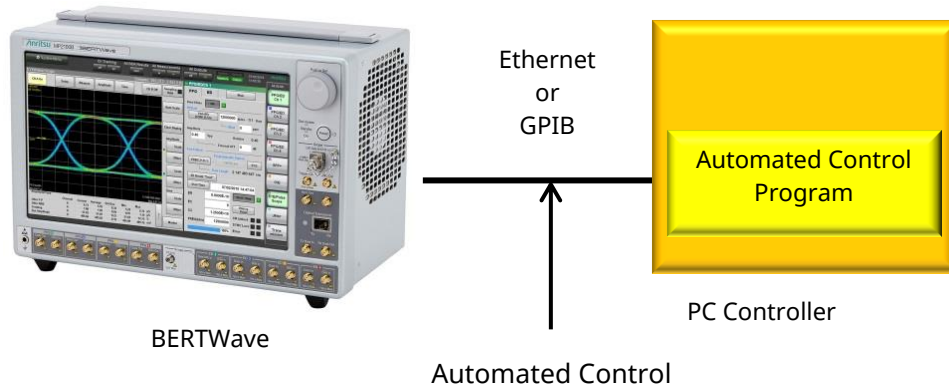


Fig. 1 Basic Equipment Setup

Connect and set-up the BERTWave as follows when using either GPIB or Ethernet.

- (1) Connect the BERTWave Ethernet connector and the PC controller Ethernet connector.
- (2) Use the BERTWave Setup Utility to set the IP address of the connected Ethernet connector.
- (3) Return to the Selector screen and start the Main application.

3 PC Controller Setup

The sample program has been confirmed to run under the following PC controller environment.

OS	Windows 7
National Instruments NI-VISA	Versions 14.0.0 or 14.0.1
National Instruments NI-488.2	Version 14.0
Development Program Tools	Microsoft Visual C# 2010
Microsoft .NET Framework	4.0

The following pages describe how to set-up this operating environment.

3.1. Installing Visual C# Express/.NET Framework

Download and install the Express edition (2010 version or later) of Visual C# from the Microsoft Corporation site (requires Microsoft account registration). .NET Framework 4.0 will also be installed at the same time. Installation requires administrator rights.

<http://www.visualstudio.com/downloads/download-visual-studio-vs>

3.2. Installing NI-VISA

Download NI-VISA from the following URL and install it in the PC controller. Use of NI-VISA requires a license, but usage is free of charge according to National Instruments conditions. For details, refer to the National Instruments' HP license (requires user registration). Installation in the PC requires administrator rights.

<http://sine.ni.com/psp/app/doc/p/id/psp-411>

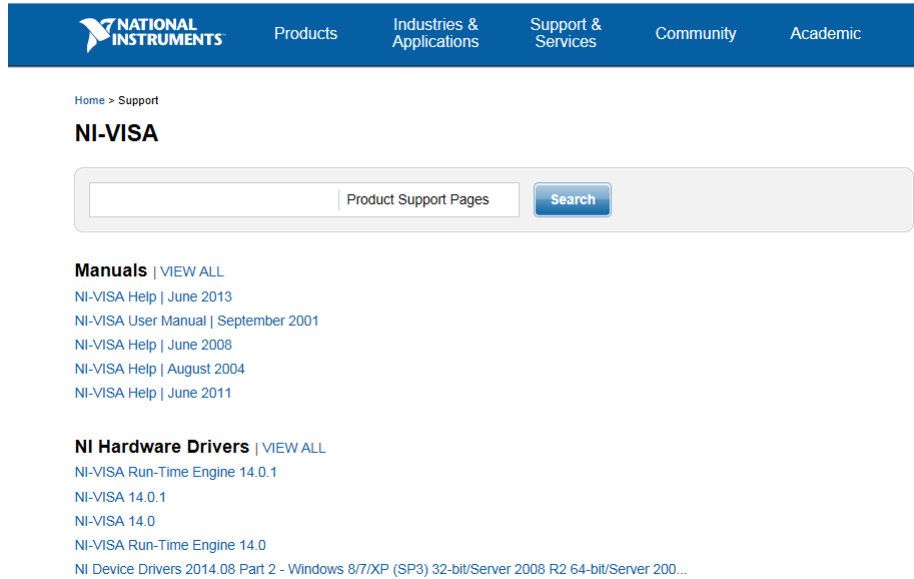


Fig. 2 NI-VISA Download

At installation, add [.NET Framework 4.0 language support] (to use Visual C#).

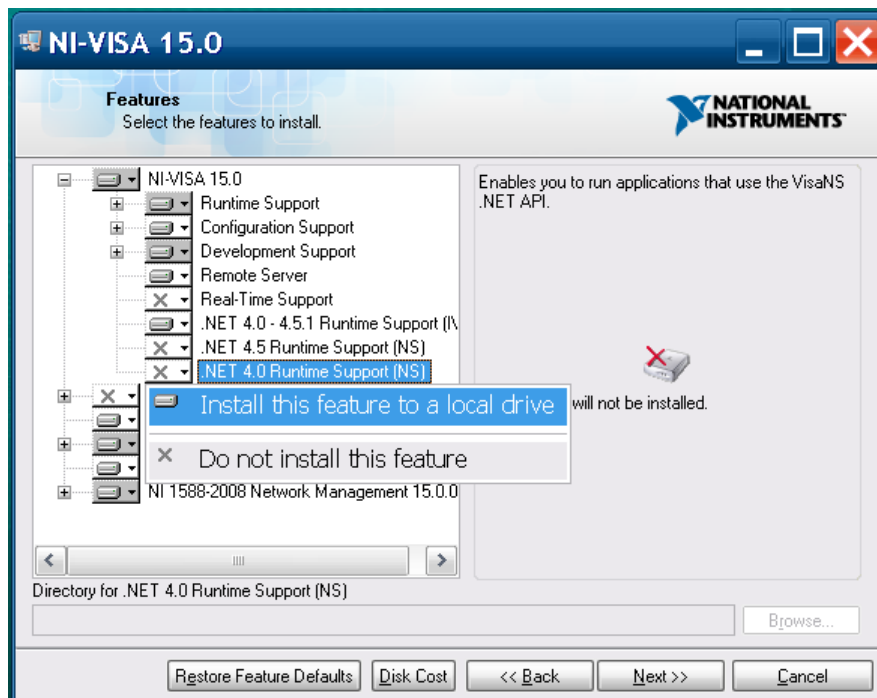


Fig. 3 Screen for Selecting Functions at NI-VISA Installation

3.3. Installing NI-488.2

Download NI-488.2 from the following URL and install it in the PC controller. Installation requires administrator rights.

<http://sine.ni.com/psp/app/doc/p/id/psp-356>

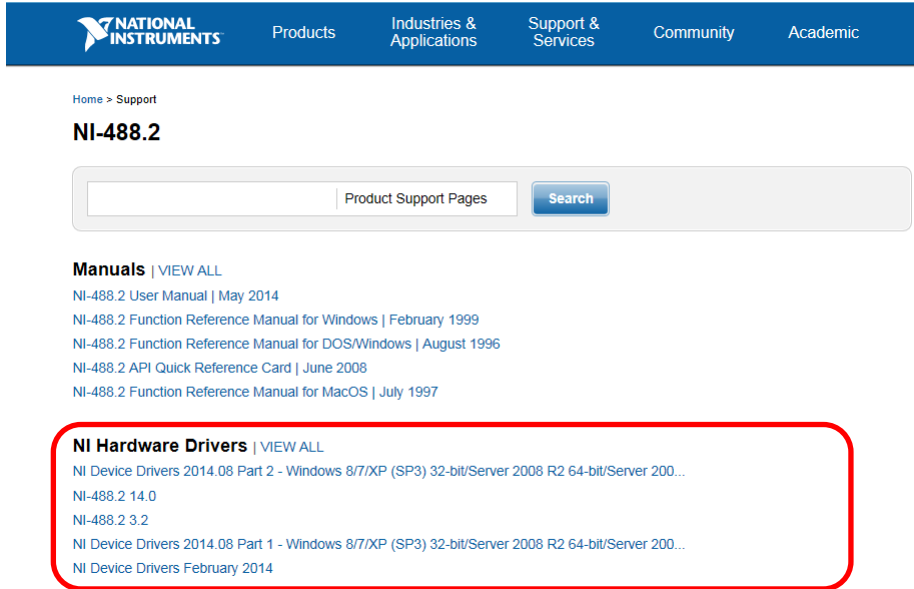


Fig. 4 NI-488.2 Download

At installation, add [.NET Framework 4.0 language support] (to use Visual C#).

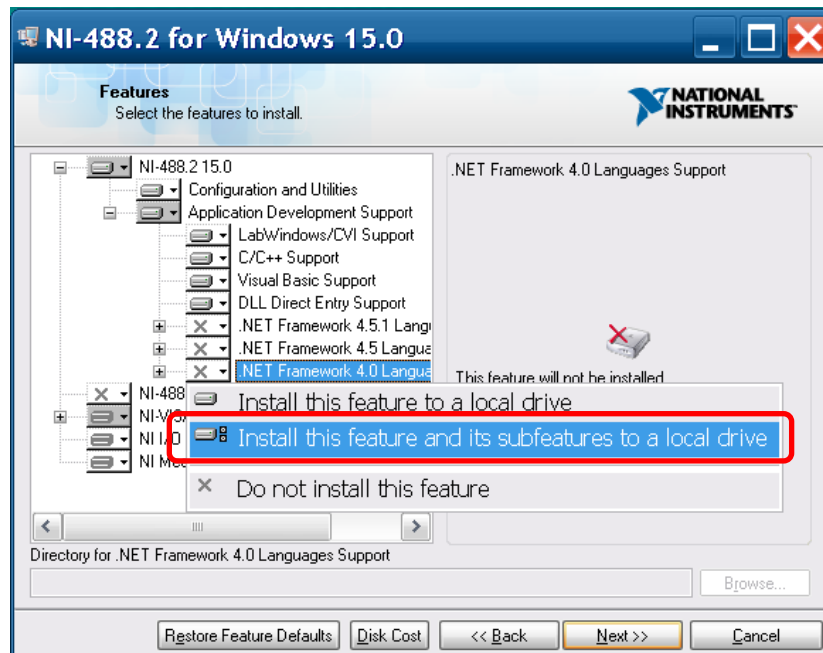


Fig. 5 Screen for Selecting Functions at NI-488.2 Installation

3.4. Setting NI Measurement & Automation Explore (when connecting via Ethernet)

At connection via Ethernet, as well as installing NI-VISA, it is also necessary to register the TCP/IP resources when installing NI Measurement & Automation Explore. The procedure is described below. It is not required for connection using GPIB.

- i. Click [NI MAX] from the Start menu of the PC controller.
- ii. At the Measurement & Automation Explore screen, right-click [Device and Interface], and click [Create New].

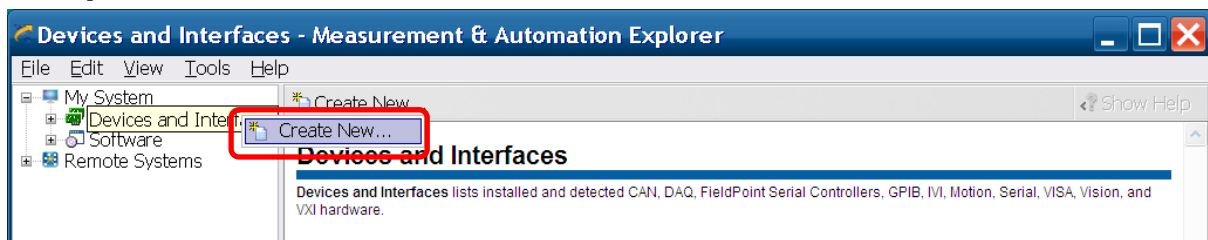


Fig. 6 Measurement & Automation Explore Screen

- iii. Select [VISA TCP/IP Resources] at the display screen and click [Next].
- iv. Next, select [Raw Socket Manual Input] and click [Next].
- v. Next, input the IP address for the BERTWave side at [Host Name or IP Address] and the port number (5001) and click [Finish].

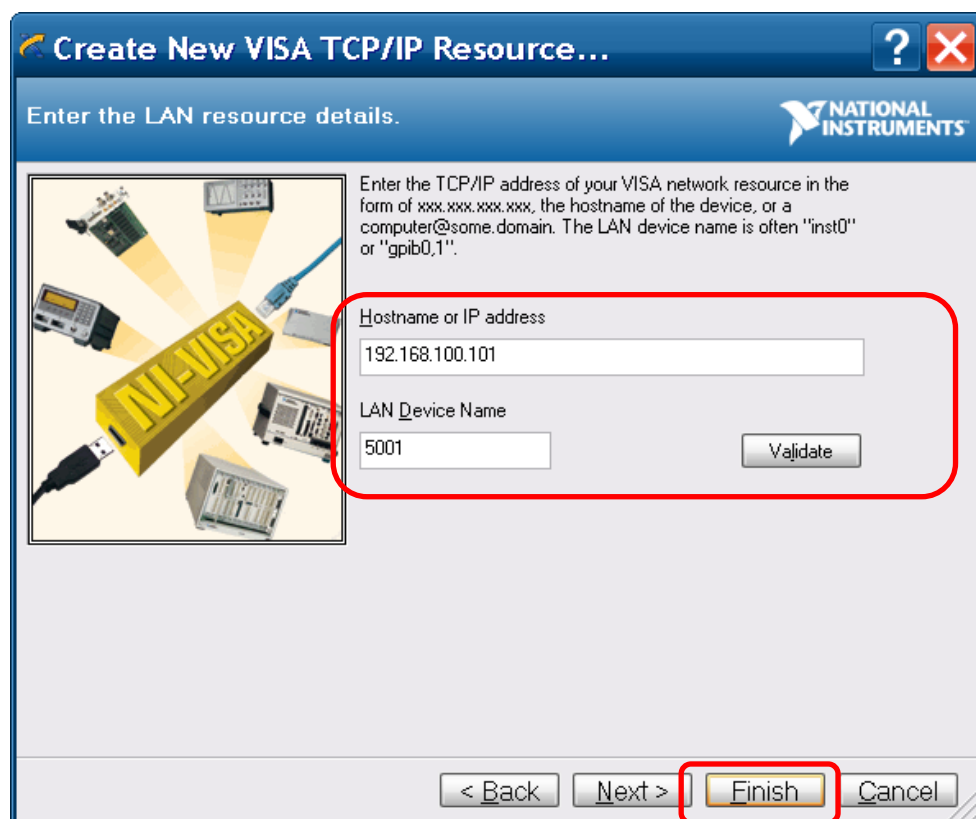


Fig. 7 New VISA TCP/IP Resources Registration Screen

4 Executing Sample Program

- a. Open the sample program solution file in Visual C#.
 - i. At the PC controller start menu, click [Microsoft Visual Studio 2010 Express]—[Microsoft Visual C# 2010 Express].
 - ii. At the running Visual C# screen, click [File]—[Open Project].
 - iii. At the open dialog box for the displayed project, move to the BW_SCPI_Sample folder.
 - iv. Select the solution file (*.sln) in the Combo box at the bottom of the dialog.
 - v. Select the BW_SCPI_Sample with the Microsoft Visual Studio Solution file details and click [Open].

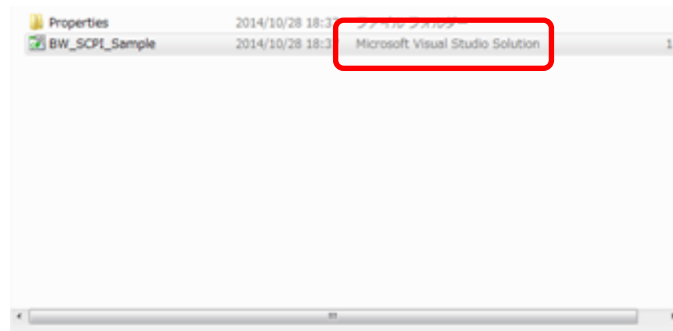


Fig. 8 Dialog Box when Opening Project

- b. Either click [Debug]—[Start Debug] at the Visual C# menu, or start debugging by clicking the Start button at the top of the screen.



Fig. 9 Debug Start Button

- c. The screen shown in Fig. 10 is displayed when debugging starts.
- Select the connection interface at [Resource name].
 - Select the BERTWave function to be executed at [Test Module].
 - Click the [Initialize] or [Test] button to execute the sample sequence for the function selected at [Test Module]. [Initialize] sets the default values, and [Test] performs measurement.

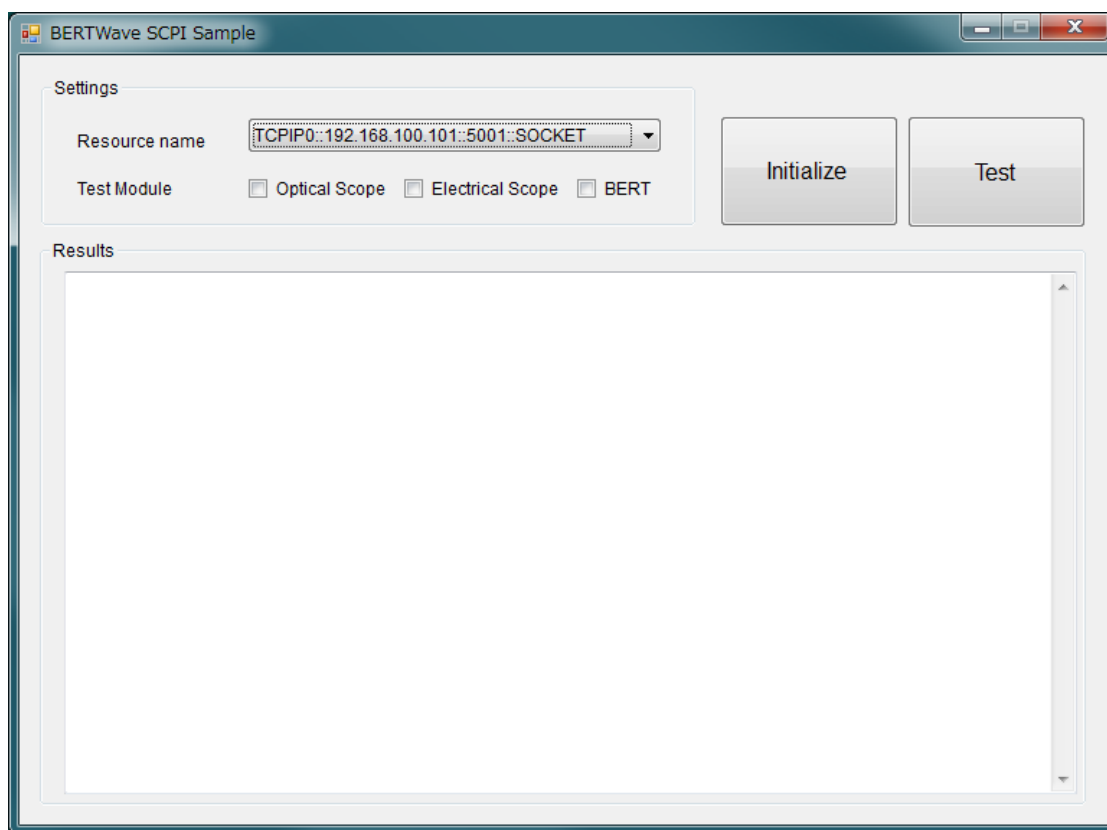


Fig. 10 Sample Program GUI

If an error message is displayed, refer to the message contents and reconfirm the connection methods and environment settings described in this Quick Reference Guide.

This sequence of Sample program is contents of Ideal Remote-Control Sequence (MP2100B-E-F-1-(1.00)).
<http://dl.cdn-anritsu.com/en-en/test-measurement/files/Application-Notes/Application-Note/mp2100b-ef1100.pdf>

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