

How to use R&S® ZVL Vector Network Analyzer drivers Driver Documentation

Products:

- | R&S® ZVL3 Vector Network Analyzer
- | R&S® ZVL6 Vector Network Analyzer

How to use LabVIEW, LabWindows/CVI
and VXPlug&Play drivers for VEE, C++,
C#, Visual Basic, Visual Basic.NET etc.

Table of Contents

1	LabVIEW	4
1.1	Getting Started	4
1.2	LabVIEW settings.....	4
1.2.1	LabVIEW 8 and later	4
1.2.2	LabVIEW 7	5
1.3	Additional Help.....	5
1.4	LabVIEW 7.1 driver	5
1.5	LabVIEW 8.2, LabVIEW 8.5 and LabVIEW 8.6 driver	5
1.6	Application Builder	6
2	LabWindows/CVI	9
2.1	CVI Version	9
2.2	Additional Help.....	9
3	VXIplug&play Instrument Driver for VEE, C++, C#, Visual Basic, Visual Basic .NET etc.	10
3.1	C#	10
3.2	Visual Basic .NET	10
3.3	Microsoft Visual Basic 6.0 (or higher)	10
3.4	VEE Version.....	10
3.5	Additional Help.....	11
3.6	Additional Information	11
4	Linux	12
5	Remote control via LAN	13
5.1	Instrument Name and IP Address	13
5.2	VXI-11 Support	13
5.3	RSIB Interface	13
5.4	ZVL Network Address	14
5.4.1	Computer Name	14
5.4.2	IP Address	14
5.4.3	Subnet Mask.....	14
5.4.4	DHCP On/Off.....	14
	

1 LabVIEW

1.1 Getting Started

In order to use this driver as a standard LabVIEW driver, please copy the contents of ~\VXI\np\GWinNt\rszvl directory into your LabVIEW directory (~\LabVIEW\instr.lib\rszvl\).

The driver will then be directly accessible from the LabVIEW Instrument Driver function palette menu..

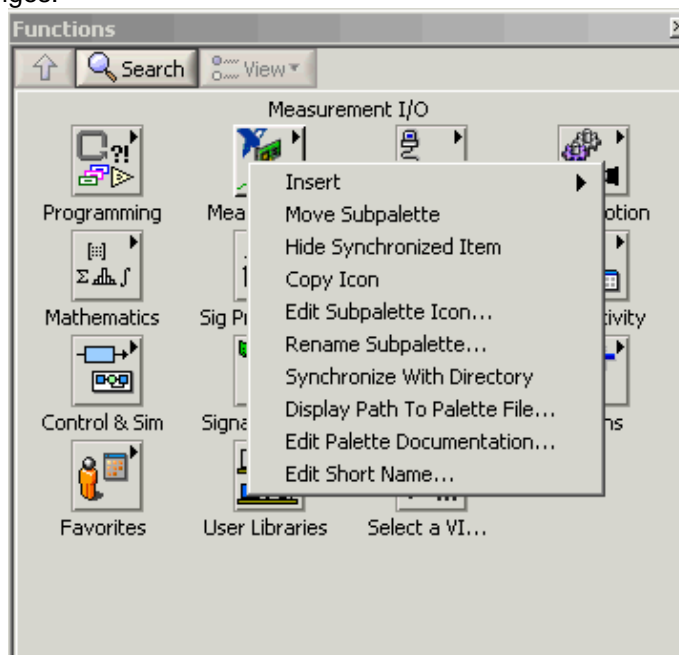
1.2 LabVIEW settings

For best results please turn off 'Synchronize with directory' feature on Instrument Drivers palette before installing any Rohde & Schwarz LabVIEW driver. If this feature is turned on, it overwrites driver's palette files with its own.

1.2.1 LabVIEW 8 and later

Turn off "Synchronize with directory" feature :

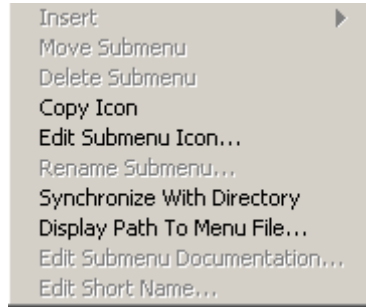
Tools => Advanced => Edit palette set. Then find "Instrument I/O" palette, right click on it and clear checkbox besides Synchronize with directory in context menu. Save the changes.



1.2.2 LabVIEW 7

Turn off "Synchronize with directory" feature :

Tools->Advanced->Edit palette views. Then find "Instrument I/O" palette => Instr Drivers right click on it and clear checkbox besides Synchronize with directory in context menu. Save the changes.



1.3 Additional Help

In addition, the instrument driver documentation is included in compressed HTML format (Windows CHM help file) stored together with the LabVIEW driver sources. Each VI's help is linked to the section in the "CHM" file that describes all the features of the VI.

An additional help topic can be accessed directly by pressing "Click here for more help" in the Context Help

1.4 LabVIEW 7.1 driver

Please use the LabVIEW 7 driver.

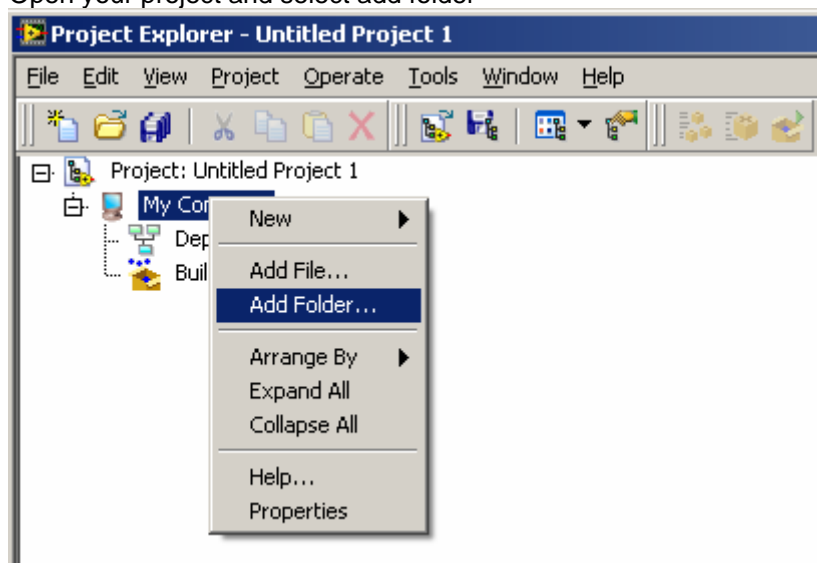
1.5 LabVIEW 8.2, LabVIEW 8.5 and LabVIEW 8.6 driver

Please use the LabVIEW 8 driver.

1.6 Application Builder

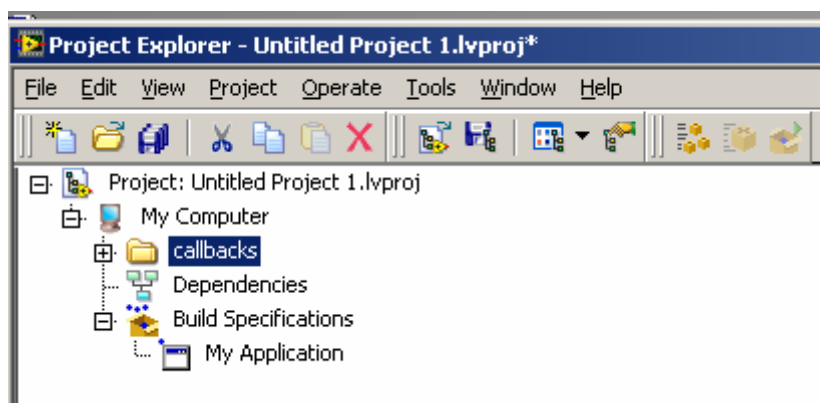
It is necessary to add all callbacks from the folder <instr.lib>/_utility/prefix_core/callback to your EXE file.

Open your project and select add folder

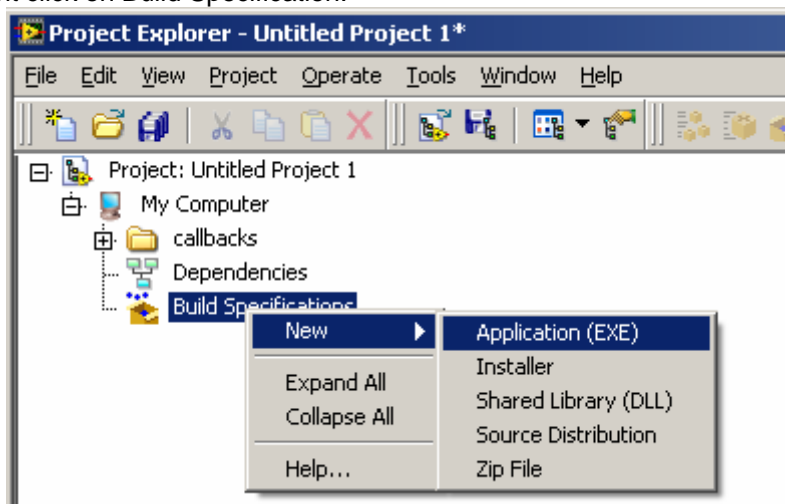


Select

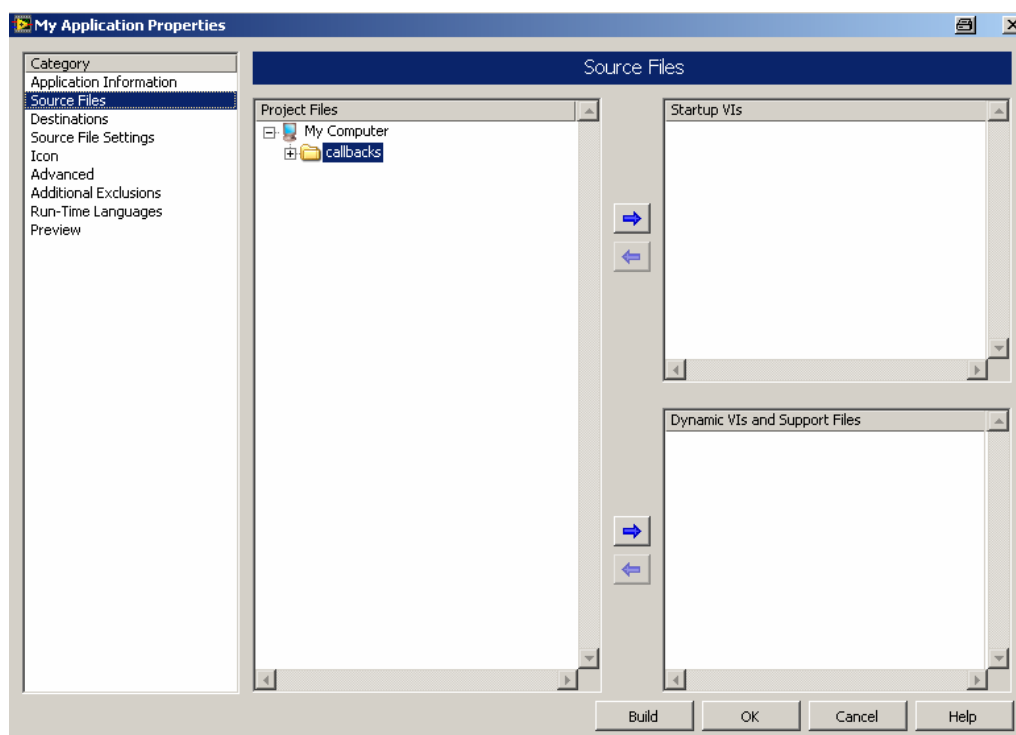
Instr.lib => rszvl => _utility => rs_core => callbacks



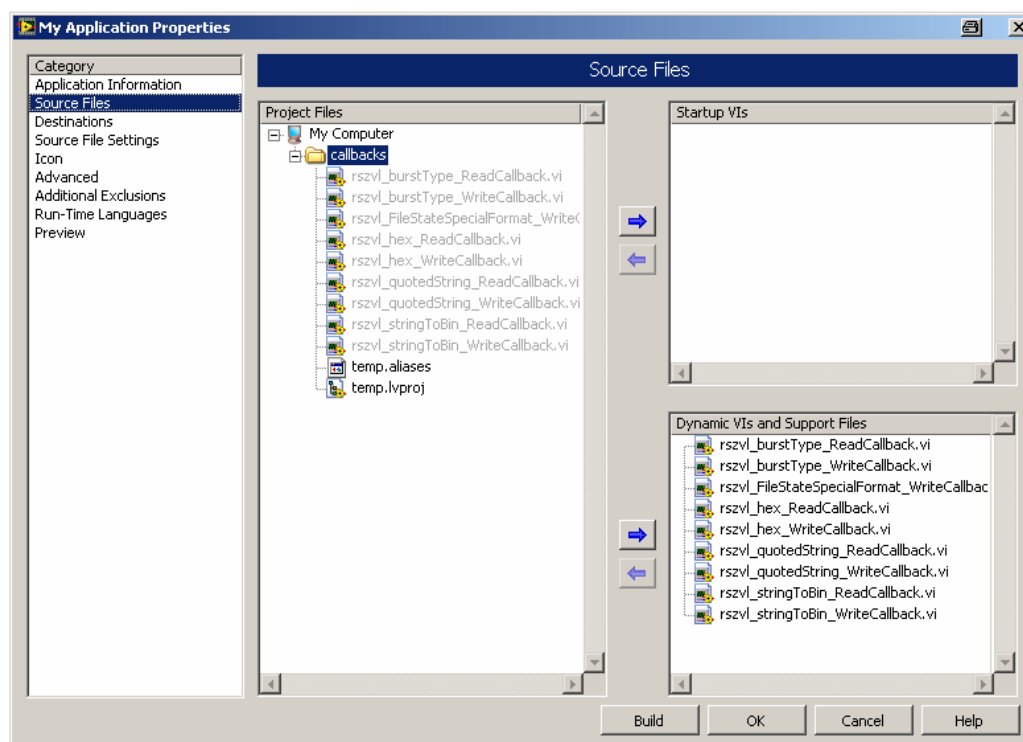
Right click on Build Specification:



Select Source files



Select callbacks
Add all Vi's to Dynamic VI's and Support Files



2 LabWindows/CVI

2.1 CVI Version

Use National Instruments LabWindows/CVI 5.5 or later.

2.2 Additional Help

The LabWindows/CVI instrument driver consists of a ZIP archive containing the driver sources. In addition, the instrument driver documentation is also included in compressed HTML format (Windows CHM help file) and stored together with the driver sources.

3 VXIplug&play Instrument Driver for VEE, C++, C#, Visual Basic, Visual Basic .NET etc.

3.1 C#

A wrapper is necessary to enable a direct access to the driver DLL.
The rszvl.cs wrapper for C# is automatically installed in the ~VXIpnP\WinNt\include directory.

3.2 Visual Basic .NET

A wrapper is necessary to enable a direct access to the driver DLL.
The rszvl.vb wrapper for .NET is automatically installed in the ~VXIpnP\WinNt\include directory.
See the Visual Basic .NET examples.

3.3 Microsoft Visual Basic 6.0 (or higher)

Refer to the Microsoft Visual BASIC manual for information on calling DLLs.
The BASIC include files are rszvl.bas and rszvl_1.bas , which are contained in the directory ~vxipnp\winnt\include. The ~ refers to the directory in the VXIPNP variable.
By default this is set to C:\. You may also need to include the visa.bas file that comes with your VISA DLL.

3.4 VEE Version

Use VEE 6 or later.

3.5 Additional Help

In addition, the instrument driver documentation is also included in compressed HTML format (Windows CHM help file) and stored together with the driver sources in the ~\VXI\np\WinNT\rszvl directory.

3.6 Additional Information

For more information regarding the VXIPnP instrument drivers, please read the readme.txt file that comes with each driver.

4 Linux

Drivers for Linux are available - Please contact Rohde & Schwarz Customer Support Center

5 Remote control via LAN

5.1 Instrument Name and IP Address

In order to connect the instrument using VXI-11 or RSIB use the instrument name or the IP address.

VXI-11 Support This driver supports remote control via RSIB. For more information see application note [1EF47](#)

5.2 VXI-11 Support

Use the instrument name or the IP address as **resourceName** in the `rszvl_init` function.

Example `RSIB::ZVL6-100062::INSTR` or
`RSIB::192.168.1.33::INSTR`

5.3 RSIB Interface

This driver supports remote control via RSIB. For more information see application note [1EF47](#)

Use the instrument name or the IP address as **resourceName** in the `rszvl_init` function.

Example `RSIB::ZVL6-100062::INSTR` or
`RSIB::192.168.1.33::INSTR`

5.4 ZVL Network Address

Opens a submenu of Setup => General Setup to configure the internet protocol properties and the computer name.

Menu (Key)	Submenu	Submenu	Command
SETUP ?	General Setup ?	Network Address ?	Computer Name
			IP Address
			Subnet Mask
f			DHCP On/Off

5.4.1 Computer Name

Opens an edit dialog box to enter the computer name via the keypad. The naming conventions of Windows apply. If too many characters and/or numbers are entered, in the status line, an according message is displayed.

5.4.2 IP Address

Opens an edit dialog box to enter the IP address via the keypad. The TCP/IP protocol is preinstalled with the IP address 10.0.0.10. If the DHCP server is available (*DHCP On*), the dialog box entry is read-only.

The IP address consists of four number blocks separated by dots. Each block contains 3 numbers in maximum (e.g. 100.100.100.100), but also one or two numbers are allowed in a block (as an example see the preinstalled address).

5.4.3 Subnet Mask

Opens an edit dialog box to enter the subnet mask via the keypad. The TCP/IP protocol is preinstalled with the subnet mask 255.255.255.0. If the DHCP server is available (*DHCP On*), the dialog box entry is read-only.

The subnet mask consists of four number blocks separated by dots. Each block contains 3 numbers in maximum (e.g. 100.100.100.100), but also one or two numbers are allowed in a block (as an example see the preinstalled address).

5.4.4 DHCP On/Off

Switches between DHCP server available (On) or not available (Off). If a DHCP server is available in the network, the IP address and subnet mask of the instrument are obtained automatically from the DHCP server.

About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

Regional contact

Europe, Africa, Middle East

+49 1805 12 42 42* or +49 89 4129 137 74

customersupport@rohde-schwarz.com

North America

1-888-TEST-RSA (1-888-837-8772)

customer.support@rsa.rohde-schwarz.com

Latin America

+1-410-910-7988

customersupport.la@rohde-schwarz.com

Asia/Pacific

+65 65 13 04 88

customersupport.asia@rohde-schwarz.com

Certified Quality System
ISO 9001
DQS REG. NO 1954 QM

Certified Environmental System
ISO 14001
DQS REG. NO 1954 UM

Rohde & Schwarz GmbH & Co. KG

Mühlendorfstraße 15 | D - 81671 München

Phone + 49 89 4129 - 0 | Fax + 49 89 4129 - 13777

www.rohde-schwarz.com