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**Products:**

- | R&S®UPV
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How to use LabVIEW, LabWindows/CVI  
and VXIplug&play driver for C#, C/C++,  
Visual Basic .NET, VEE, etc.

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# 1 LabVIEW

## 1.1 Getting Started

The LabVIEW drivers and examples can be downloaded from the Rohde & Schwarz download area of the website:

<http://www.rohde-schwarz.com/drivers>.

In order to use the LabVIEW instrument driver after installing, please copy the folder `C:\VXIIPNP\GWinnt\rsupv` into your LabVIEW directory (`C:\Program Files\National Instruments\LabVIEW<Version>\instr.lib`). After restarting your LabVIEW development environment the driver will then be directly accessible from the Instrument Driver function palette menu.

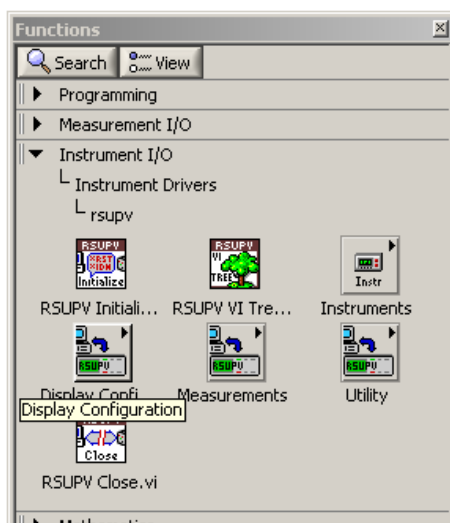


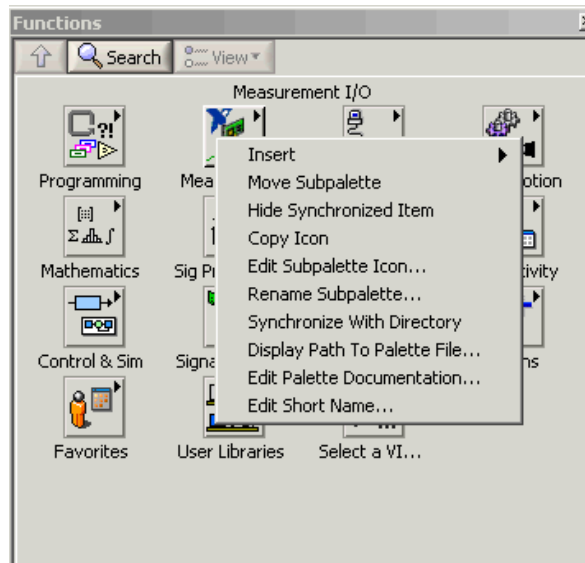
Figure 1: Path to LabVIEW instrument driver in the function palette of the Block Diagram

## 1.2 LabVIEW settings

For optimal usage 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 drivers palette files with its own.

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 and save the changes.



**Figure 2: Turn off “Synchronize with directory” feature in LabVIEW**

## 1.3 Additional Help

In addition the instrument driver documentation is included in compressed HTML format (Windows CHM help file) and stored together with the LabVIEW driver sources. Each VIs help is linked to the section in the help 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 of LabVIEW.

## 1.4 LabVIEW 2009 and higher

Please use the LabVIEW 2009 driver.

## 2 LabWindows/CVI

### 2.1 Getting Started

The LabWindows/CVI drivers and examples can be downloaded from the Rohde & Schwarz download area of the website:

<http://www.rohde-schwarz.com/drivers>.

In order to be able to compile an application it is required to add following files to your LabWindows/CVI project:

- rsupv.c
- rsupv.h
- rsupv.fp

### 2.2 LabWindows/CVI Version

Use National Instruments LabWindows/CVI 6 for compiling the instrument driver and the examples. Please note that examples' graphical interface (.uir file) can be created with a later versions of LabWindows/CVI.

### 2.3 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 driver for C#, C/C++, Visual Basic .NET, VEE, etc.

### 3.1 Getting Started

The VXIplug&play instrument driver and examples can be downloaded from the Rohde & Schwarz download area of the website:

<http://www.rohde-schwarz.com/drivers>

#### 3.1.1 Visual C#

A wrapper is necessary to enable a direct access to the driver DLL. The *rs<Driver>.cs* and *rs<Driver>64.cs* wrapper for C# is automatically installed in the corresponding *~VXIpnP\WinNT\include* or *~VXIpnP64\Win64\include* directory.

#### 3.1.2 Visual Basic .NET

A wrapper is necessary to enable a direct access to the driver DLL. The *rs<Driver>.vb* and *rs<Driver>64.vb* wrapper for VB.NET is automatically installed in the corresponding *~VXIpnP\WinNT\include* or *~VXIpnP64\Win64\include* directory.

#### 3.1.3 Agilent VEE Version

Please use Agilent VEE Version 6 or later. Please note that the using attributes is not possible in Agilent VEE.

How to instrument drivers is described here: [1MA35: Rohde & Schwarz Drivers under VEE - Installation and Troubleshooting](#).

### 3.2 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 *~VXIpnP\WinNT\rs<Driver>* directory.

For more information regarding the VXIplug&play instrument drivers, please read the *readme.txt* file which comes with the instrument driver.

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## 4 Linux and Mac OS X

Drivers for Linux and Mac OS X are available. Further information please consult [1MA153: Development Hints and Best Practices for Using Instrument Drivers](#).

## 5 Remote control via LAN

The Rohde & Schwarz instruments are preconfigured for networks using DHCP (dynamic host configuration protocol). In these networks, the IP address is assigned automatically and the instruments are identified via an unambiguous computer name in the network.

The RSCommander software helps you to easily discover your instrument IP address or instrument resource name. This tool is available on the [R&S website](#).

### Using the Instrument Name as Resource Name:

By default the instrument name is composed of *rs<Device><Serial number>* (on the rear panel of the instrument).

Example:

- Serial Number = 123456
- Instrument = RSUPV
- Resource Name = TCPIP::RSUPV12345::INSTR

### Using the IP Address as Resource Name:

Example:

- IP Address = 192.168.1.33
- Resource Name = TCPIP::192.168.1.33::INSTR

### **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.

### **Environmental commitment**

- Energy-efficient products
- Continuous improvement in environmental sustainability
- ISO 14001-certified environmental management system



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