LabWindows/CVI, VXIpnp driver history for the R&S® SMA100B RF and Microwave Analog Signal Generator

Products:

| R&S®SMA100B

| R&S®SMB100B

Driver history for LabWindows/CVI and VXIplug&play Instrument Driver for C/C++, VEE, etc.

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ROHDE&SCHWARZ

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1 Supported Instruments

In the following table, the supported R&S instruments and firmware versions are listed:

Which instruments are supported?		
Current revision of instrument driver supports these instruments and firmware versions:		
Instrument	**Supported Firmware**	**Remarks**
SMA100B	5.00	
SMB100B	4.90	

2 Getting Started

2.1 LabWindows/CVI driver

The Rohde & Schwarz **rssmx** Instrument driver can be used in LabWindows/CVI 6 and later. In order to be able to compile an application it is required to add following files to your LabWindows/CVI project:
- *rssmx.c + rssmx.h*
- *rssmx_attributes.c + rssmx_attributes.h*
- *rssmx_utility.c + rssmx_utility.h*
- *rsidr_core.c + rsidr_core.h*
- *rssmx_callbacks.c*
- *rssmx.fp + rssmx.sub*

2.2 VXIplug&play driver in C/C++, LabWindows/CVI

In this case, the compiled source code from LabWindows/CVI driver is used. The compiled ANSI-C libraries exist for Windows XP and newer, 32-bit / 64-bit.

Add the following files to your 32-bit target project:
- C:\Program Files (x86)\IVI Foundation\VISA\WinNT\include\rssmx.h
- C:\Program Files (x86)\IVI Foundation\VISA\WinNT\lib\msc\rssmx.lib (static)
- C:\Program Files (x86)\IVI Foundation\VISA\WinNT\Bin\rssmx_32.dll (dynamic)
- C:\Program Files (x86)\IVI Foundation\VISA\WinNT\rssmx\rssmx.fp (in CVI only)
- C:\Program Files (x86)\IVI Foundation\VISA\WinNT\rssmx\rssmx.sub (in CVI only)

Add the following files to your 64-bit target project:
- C:\Program Files\IVI Foundation\VISA\Win64\Include\rssmx.h
- C:\Program Files\IVI Foundation\VISA\Win64\Lib_x64\msc\rssmx64.lib (static)
- C:\Program Files\IVI Foundation\VISA\Win64\Bin\rssmx_64.dll (dynamic)
- C:\Program Files\IVI Foundation\VISA\Win64\rssmx\rssmx.fp (in CVI only)
- C:\Program Files\IVI Foundation\VISA\Win64\rssmx\rssmx.sub (in CVI only)

2.3 VXIplug&play driver in MATLAB

MATLAB instrument driver **rssmx.mdd** can be found in:

32-bit driver
C:\Program Files (x86)\IVI Foundation\VISA\WinNT\rssmx\rssmx.mdd

64-bit driver
C:\Program Files\IVI Foundation\VISA\Win64\rssmx\rssmx.mdd

For detailed description on how to use the driver in MATLAB please refer to the
Application Note 1MA171 - How to use R&S instrument in MATLAB

2.4 Linux and Mac OS X

To be able to use Rohde & Schwarz **rssmx** Instrument driver in Linux or Mac OSX, the
functioning VISA is required. Then, the process is the same as using LabWindows/CVI
driver.

2.5 Additional Help

LabWindows/CVI and VXIplug&play instrument driver contains in addition the
instrument driver documentation in compressed HTML format (Windows CHM help file
rssmx_vxi.chm) and stored together with the driver sources or in the following folder:

32-bit driver
C:\Program Files (x86)\IVI Foundation\VISA\WinNT\rssmx\rssmx_vxi.chm

64-bit driver
C:\Program Files\IVI Foundation\VISA\Win64\rssmx\rssmx_vxi.chm

3 LabWindows/CVI and VXIplug&play driver history

rssmx Instrument Driver		
Driver history for LabWindows/CVI and VXIplug&play Instrument Driver for C/C++, VEE, etc.		
Revision	Date	Note
5.0.0	11/2022	* Updated for firmware 5.00 * New core 4.3.0 * New: - rssmx_ConfigureRFFrequencyPhaseContinuity - rssmx_QueryRFFrequencyPhaseContinuityMaxMin - rssmx_ConfigureALCExternalDetector - rssmx_QueryRFFrequencySweepBlankPoints - rssmx_ConfigurePowerAnalysisMathAxis - rssmx_ConfigurePowerAnalysisSource * Fixed RsSmx_rngClockSynthesisPower range to -24..+30 * Modified: - rssmx_ConfigureClockSynthesisOutputSignal - range fixed at Level parameter
4.70.0	05/2021	* Version 4.70.0 * Update for firmware 4.70 * Aligned version of the driver with the version of the instrument firmware * New Core 4.0.0. The core is incompatible with the Cores 3.x. If you work with drivers that use both core 4.x and 3.x, please contact our customer support, we will update your Core 3.x drivers to the newest version. * New: - rssmx_QueryRFLevelUninterruptedRange - rssmx_QueryRFLevelRange - rssmx_QueryALCMode - rssmx_ConfigureChirpModulationEnabled - rssmx_ConfigureChirpModulationSettings - rssmx_QueryChirpModulationCompressionRatio - rssmx_ExecuteChirpModulationSingleTrigger - rssmx_ConfigureRFCombinedSweepState - rssmx_ConfigureRFCombinedSweepMode - rssmx_ConfigureRFCombinedSweepTriggerSource - rssmx_ConfigureRFCombinedSweepRetrace - rssmx_ExecuteRFCombinedSingleSweep - rssmx_ConfigureRFCombinedSweepShape - rssmx_ConfigureRFCombinedSweepDwellTime - rssmx_ConfigureRFCombinedSweepFrequencyStartStop - rssmx_ConfigureRFCombinedSweepLevelStartStop - rssmx_ConfigureRFCombinedSweepStepCount - rssmx_AddPowerSensorMappingUSBSensor - rssmx_AddPowerSensorMappingLANSensor - rssmx_RemovePowerSensorMappingLANSensors - rssmx_RemovePowerSensorMappingUSBSensors - rssmx_RemoveAllPowerSensorMappingSensors * Modified: - rssmx_ConfigureRFFrequencyMode - Parameter added - rssmx_ConfigureClockSynthesisOutputSignal - Frequency range removed

rssmx Instrument Driver		
Driver history for LabWindows/CVI and VXIplug&play Instrument Driver for C/C++, VEE, etc.		
Revision	Date	Note
		* Deleted: - rssmx_CheckAttributeViInt32 - rssmx_CheckAttributeViReal64 - rssmx_CheckAttributeViString - rssmx_CheckAttributeViBoolean - rssmx_CheckAttributeViSession - rssmx_SetAttributeViSession - rssmx_GetAttributeViSession - rssmx_ReadInstrData
1.2.0	06/2019	* Update for firmware 4.60 * New core 3.5.0 * Added support for Avionic Standards, Power Analysis subsystems. * New: - rssmx_ConfigureAMSettings - rssmx_ConfigureAMDeviationMode - rssmx_ConfigureAMDepthTotal - rssmx_ConfigureFMDeviationMode - rssmx_ConfigureFMDeviationTotal - rssmx_ConfigurePMDeviationMode - rssmx_ConfigurePMDeviationTotal - rssmx_TriggerPulseGenerator - rssmx_ConfigureSweepType - rssmx_ConfigureRFFrequencySweepTime - rssmx_TriggerLFFrequencySweepAuto - rssmx_QueryReferenceOscillatorNominalSynchronizationBandwidth - rssmx_QueryReferenceOscillatorMinimumLockingRange - rssmx_RecallImmediate - rssmx_SaveImmediate - rssmx_ConfigureAutoSystemErrQuery - rssmx_ConfigureMultiThreadLocking - rssmx_GetAttributeRepCapName * Modified: - rssmx_ConfigureRFLevel - New setting characteristics
1.1.0	05/2018	* Modified: - rssmx_ConfigureALCEnabled - "Off" value added (for backward compatibility) - rssmx_ConfigureRFLevel - Setting Characteristics - remove "User" value * New attribute: - RSSMX_ATTR_PGEN_MODE_DOUBLE (for backward compatibility)
1.0.0	11/2017	Initial release

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 more than 80 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
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- Continuous improvement in environmental sustainability
- ISO 14001-certified environmental management system

Certified Quality System
ISO 9001

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