

LabVIEW driver history for the R&S® RTB2000 / RTM3000 / RTA4000 Digital Oscilloscopes Driver Documentation

Products:

| R&S® RTB2000 / RTM3000 / RTA4000



Driver history for LabVIEW

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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
RTB2000	2.202	
RTM2000	6.010	
RTM3000	1.600	
RTA4000	1.600	

2 Installation of the LabVIEW driver

Before you start the installer, please close your LabVIEW application.

2.1 Installation on a Windows machine

The driver is distributed as WinZip self-extracting executable file. Installer supported operation systems: WinXP, Win7, Win8, Win10.

Preconditions:

- LabVIEW 2010 or newer installed
- Any VISA installed – R&S VISA 5.5.4 or newer / NI VISA 10.0 or newer

When you start the driver WinZip installer, it performs the following steps:

1. Unpacking of the driver's **instr.lib** and **user.lib** directories content as well as the **Installer.vi** into a temporary folder: **C:\temp\rsrtx-lv-1.4.0**
The driver is compiled in LabVIEW 2010 32-bit. From there you can copy it to another location or run the **Installer.vi** manually later. The content of the temporary folder is not deleted after the installation is finished. Starting the same installation again will overwrite all the data in that temporary folder.
2. After unpacking, the **Installer.vi** automatically starts in the last opened version of LabVIEW. In case you have more than one version of LabVIEW installed on your machine, make sure that the last opened LabVIEW version is the one in which you want to install the driver. If that is not the case, cancel the installation, open and close your desired LabVIEW version and run the installer again. You can have the driver installed parallel for more LabVIEW versions by repeating the installation process for each desired version.
3. On the installer options page you can change the location of the **instr.lib** part of the driver. **user.lib** part must be placed in the default location, otherwise the Express VI configuration will not properly function.
Hitting **Next** button will first delete the old driver (if it existed), copy the new driver and mass-compile it.
4. If you have an older rsidr_toolbox, the installer updates it to the last version.
5. The LabVIEW is closed and after starting it again, the driver is ready for use.

2.2 Installation on a non-Windows machine

In case you would like to install the driver on a non-Windows machine, use a Windows machine to start the driver's WinZip self-extracting executable file. **This machine does not need to have LabVIEW installed.**

After the **Step 1** (see the chapter 2.1), copy the content of the temporary folder to your target machine and start the **Installer.vi** manually.

From that point onwards, the installation process is the same as described in Steps 2, 3, 4 and 5.

3 LabVIEW driver history

LabVIEW Instrument Driver		
Driver history		
Revision	Date	Note
1.4.0	04/2020	<p>Added support for RTM3000 / RTA4000 FW 1.600</p> <p>New Core 6.60.0</p> <p>New:</p> <ul style="list-style-type: none"> Probe Meter (Class) Configure Probe Attenuator RTZ A15 Enabled.vi Configure Probe Zero Adjust.vi Configure Probe Save Zero Adjust.vi Configure Probe Input Voltage Range.vi Configure Probe Bandwidth Limit.vi Configure Probe Audible Overrange.vi Configure Probe Meas Mode.vi Configure Probe AC Coupling.vi Configure Actions On Trigger State.vi Configure Actions On Trigger.vi Configure Amplitude Time Main Measurement.vi Configure Delay Measurement Marker Visible.vi Configure Delay Measurement Direction.vi Configure Automatic Measurement Timeout Auto.vi Configure Automatic Measurement Timeout.vi
1.3.0	01/2020	<p>Added support for RTB2000, FW 2.202, RTM3000, FW 1.550, RTA4000 FW 1.550</p> <p>New:</p> <ul style="list-style-type: none"> Zoom (Class) Gate (Class) SPI (Class) Mathematics Tracks (Class) Spectrum Data (Class) Bode Plot (Class) Burst (Class) PWM (Class) Configure Horizontal Record Length.vi Query Horizontal Record Length.vi Configure Memory Mode.vi Configure Roll Mode Automatic.vi Configure Roll Mode Minimum Time Base.vi Query Number of Averages Current.vi Configure Channel Zero Offset.vi Configure Channel Position.vi Configure Channel Waveform Color.vi

LabVIEW Instrument Driver		
Driver history		
Revision	Date	Note
		Configure Probe Degauss.vi Query Probe Gain.vi Configure Probe Gain Unit.vi Configure Probe Gain Manual.vi Enable Display Date And Time.vi Configure History Channel Player Control Enable.vi Configure History Channel Time Table Enable.vi Configure History Digital Player Control Enable.vi Configure History Digital Time Table Enable.vi Configure History Math Player Control Enable.vi Configure History Math Time Table Enable.vi Configure History Protocol Player Control Enable.vi Configure History Protocol Time Table Enable.vi Query History Spectrum Acquisition Absolute Time.vi Query History Spectrum Acquisition Relative Time.vi Query History Spectrum Acquisition Date.vi Query History Spectrum All Dates.vi Query History Spectrum All Time Differences.vi Query History Spectrum All Daytimes.vi Configure History Logic Player Control Enable.vi Configure History Logic Time Table Enable.vi Configure Cursor Second Source Settings.vi Configure Mask Segment Capture Mode.vi Configure Protocol UART Idle State Polarity.vi Query Protocol UART Frame Settings.vi Query Protocol UART Rx Frame Settings.vi Query Protocol UART Tx Frame Settings.vi Close Hardcopy Dialogs.vi Configure Math Waveform Label.vi Configure Math Waveform Color.vi Configure Reference Waveform Label.vi Configure Reference Waveform Color.vi Query Digital Waveform Samples Number.vi Query Spectrum Waveform Samples.vi Query Spectrum Average Waveform Samples.vi Query Spectrum Maximum Waveform Samples.vi Query Spectrum Minimum Waveform Samples.vi Configure Power Modulation Threshold Settings.vi Query Power Safe Operating Area Result Acquisition Violation.vi Query Power Safe Operating Area Result Total Violation.vi Configure Spectrum Frequency Full Span.vi

LabVIEW Instrument Driver		
Driver history		
Revision	Date	Note
		Query Spectrum Reference Marker Frequency.vi Query Spectrum Reference Marker Level.vi Query Spectrum Marker Frequency.vi Query Spectrum Marker Frequency Delta.vi Query Spectrum Marker Level.vi Query Spectrum Marker Level Delta.vi Configure Waveform Generator Arbitrary Range.vi Configure Waveform Generator Arbitrary Display Enable.vi Configure Pattern Generator External Trigger Slope.vi Query Logic Probe Connected.vi Configure Logic Point Selection.vi Query Logic Waveform Data Points.vi Configure Counter Source.vi Configure Ethernet HTTP Port.vi Save Instrument Settings To PC.vi Recall Instrument Settings From PC.vi Modified: Configure Waveform Acquisition Type.vi - Acquisition Type help updated Configure Probe Attenuation Manual.vi - Range limit updated Configure Video Trigger Source.vi - Parameter Field help updated Query Protocol UART Word Value.vi - Start and End changed to ViReal64, Source upd. Query ARINC 429 Status.vi - SCPI command updated, SDI and SSM helps updated Configure Hardcopy Settings.vi - Filename help updated Hardcopy Print.vi - SCPI command updated Configure Reference Waveform Source.vi - Range updated Configure Pattern Generator VI Type.vi - Range and help updated Configure Counter State.vi - Removed repeated capability from SCPI command Query Counter Frequency.vi - Removed repeated capability from SCPI command Query Counter Period.vi - Removed repeated capability from SCPI command Configure Ethernet IP Port.vi - Range limits added Configure Ethernet VXI11 Port.vi - Range limits added, SCPI command updated Set Status Register.vi - Added ADC State, range limit added Get Status Register.vi - Added ADC State
1.2.1	10/2019	- Fixed Measurement suffix range from 1..4 to 1..8 - New driver core 6.50.1
1.2.0	01/2018	- Added support for RTM3000 and RTA4000 instruments - Initialize.vi, Initialize with Options.vi, Close.vi and Utility VIs have new VI icons
1.1.0	10/2017	* First Official Release Version Exchanged Driver Core 6.8.0 New Subsystem:

LabVIEW Instrument Driver		
Driver history		
Revision	Date	Note
		Configuration >> Digital Channel History >> Logic Search >> Export Protocols >> UART Protocols >> MILSTD Simple Mathematics (RTB) Waveform Acquisition >> Simple Math (RTB) Waveform Acquisition >> Digital Data Waveform Acquisition >> Logic Waveform Export Generator Logic System New: Configure Record Length.vi Configure Acquire Mode.vi Configure Peak Detect.vi Configure High Resolution.vi Number of Averages Reset.vi Configure Waveform Rate Maximum.vi Configure Horizontal Reference.vi Configure Probe CM Offset.vi Configure Trigger Out Mode.vi Runt Trigger Range.vi Configure Runt Trigger Width.vi Configure Runt Trigger Delta.vi Configure Window Trigger Range.vi Configure Window Trigger Width.vi Configure Window Trigger Time Range.vi Configure Timeout Trigger Time.vi Configure Display Language.vi Configure Diagram Annotation State.vi Configure Diagram Annotation Track.vi Display Clear Screen.vi Configure Display Persistence Type.vi Configure Display Segmentation Record Maximum Segments.vi Query History Channel Table Mode.vi History Channel Export Save.vi Digital History Export Save.vi History Math Export Save.vi History Protocol Export Save.vi

LabVIEW Instrument Driver		
Driver history		
Revision	Date	Note
		Configure Cursor Measurement Type.vi Configure Cursor Source.vi Cursor Line Next Peak.vi Cursor Line Previous Peak.vi Configure Quick Measurement State.vi Configure Mask Test Action Screenshot Destination.vi Configure Mask Test Action Saves Waveform Destination.vi Configure Mask Test Action AUX Output State.vi Configure Mask Scaling.vi Configure Search Condition.vi Configure Search Source Configure Search Trigger Window Level.vi Configure Search Trigger Window Delta.vi Configure Search Trigger Window Polarity.vi Configure Search Trigger Window Range.vi Configure Search Trigger Window Time Range.vi Configure Search Trigger Window Width.vi Configure Protocol Display Vertical.vi Configure Protocol SPI CS Polarity.vi Configure SPI Trigger Source.vi Configure Hardcopy Output Format.vi Query Hardcopy Data.vi Configure Hardcopy Page Size.vi Query Hardcopy Page Size.vi Configure Reference Waveform Source.vi Initiate Acquisition And Wait.vi Configure Acquisition State.vi Power Analysis Autoset.vi Power Analysis Autoset Current.vi Power Analysis Autoset Voltage.vi Query Power Current Harmonics Measurement Duration.vi Query Power Current Harmonics Measurement Real Power Current.vi Read Power Safe Operating Area Acquisition Data.vi Fetch Power Safe Operating Area Acquisition Data.vi Fetch Power Safe Operating Area Acquisition Data Header.vi Fetch Power Safe Operating Area Acquisition Conversion Data.vi Configure Spectrum Analysis Mode.vi Configure Spectrum Analysis Frequency Center Span.vi Spectrum Marker Setup Center Screen.vi Spectrum Marker Setup Range To Peak.vi Query Spectrum Reference Marker Results.vi

LabVIEW Instrument Driver		
Driver history		
Revision	Date	Note
		Query Spectrum Marker Results.vi Query Spectrum Marker Delta Results.vi Query Spectrum Marker All Results.vi Query Spectrum Marker All Delta Results.vi Query Counter Frequency.vi Query Counter Period.vi Configure Channel Vertical Scale.vi Configure Waveform Acquisition Type.vi Query Channel Overload.vi Clear Channel Overload.vi Channel All Off.vi Channel All On.vi Modified: Configure Channel.vi - default for coupling changed Configure Trigger.vi - line trigger type added Configure Edge Trigger Filter.vi - HF Reject added, low removed Configure Measurement Source.vi - QMA source added Query Search Result.vi - more result types Query All Search Results.vi - more result types Query Power Consumption Measurement Results.vi - new results Power Safe Operating Area Lin Point Value.vi - Current added Power Safe Operating Area Log Point Value.vi - Current added Configure Spectrum Analysis Frequency.vi removed controls for center and span Configure Counter State.vi - counter range changed Read Main Waveform Measurement.vi - removed some measurement functions Fetch Main Waveform Measurement.vi - removed some measurement functions
1.0.0	04/2017	* First Beta Version created based on the rsrtm20xx driver

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