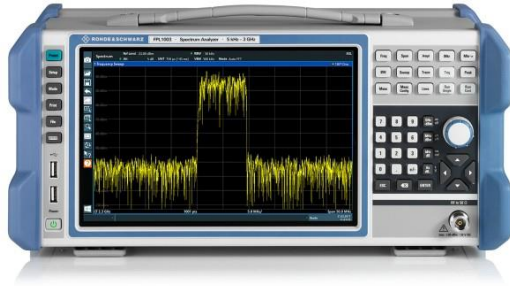


LabVIEW driver history for the R&S® FPL1000 Spectrum Analyzer

Products:

| R&S® FPL1000



| R&S® ZNL (Option B1)



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:

Instrument	Firmware	Remarks
FPL1000	1.70	
ZNL (Option B1)	1.35	

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 2015 or newer installed
- Any VISA installed – R&S VISA 5.12.3 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\rsfpl-iv-1.70.0**
The driver is compiled in LabVIEW 2015 64-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

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
1.70.0		<ul style="list-style-type: none"> * Support for FPL FW 1.70 * Core updated to 6.72.0 * New: <ul style="list-style-type: none"> - Added Phase Noise subsystem - Configure Power Sensor Sensor Level Offset.vi - Configure Internal Generator State.vi - Configure Internal Generator Usage.vi - Configure Internal Generator Independent CW Source.vi - Configure Internal Generator Tracking Generator.vi - Configure Internal Generator Power Sweep.vi - Configure Internal Generator Frequency Offset.vi - Internal Generator Calibrate Transmission.vi - Internal Generator Calibrate Reflection.vi - Internal Generator Recall Calibration Settings.vi - Internal Generator Save Calibration Settings.vi - Internal Generator Query Calibration Save File Path.vi - Internal Generator Save As Transducer Factor.vi - Output Loudspeaker Mute.vi - Configure Subwindow Y Axis Reference Value.vi - Configure Marker Zoom Factor.vi - Apply Window Preset Traces.vi - Apply Subwindow Preset Traces.vi - Window Set Focus.vi - Subwindow Set Focus.vi - Configure Power Display Line.vi - Configure Data X Value Distribution.vi - Hcopy Mode.vi - Configure Test Report Template General Settings.vi - Configure Test Report Template Raw Data Storage.vi - Configure Test Report Template Header Line.vi - Configure Test Report Template Logo.vi - Configure Test Report Template Selected Items.vi - Configure Test Report Template Selected Items String.vi - Query Test Report Template Catalogue.vi - Save Test Report Template.vi - Load Test Report Template.vi - Delete Test Report Template.vi

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		<ul style="list-style-type: none"> - Test Report Restore Defaults.vi - Test Report New.vi - Test Report Append.vi - Test Report Remove Set.vi - Test Report Remove All Sets.vi - Configure Test Report Title Page.vi - Configure Test Report Include User-Defined Information.vi - Query Test Report Item List.vi - Test Report Save.vi - Configure System Date Time.vi - Query System Date Time.vi - Calibrate All.vi - Recall Calibration.vi - Save Calibration.vi - Query Calibration Save File Path.vi - Configure Compression Point Measurement Enabled.vi - Configure Compression Point Measurement Reference.vi - Configure Compression Point Measurement Select Compression Points.vi - Query Compression Point Measurement 1 dB Result.vi - Query Compression Point Measurement 3 dB Result.vi - Query Compression Point Measurement N dB Result.vi - Configure Sweep List Symmetrical Setup Enabled.vi - Query Third Order Intercept Result Maximum.vi - Query Third Order Intercept Result Minimum.vi - Configure And Initiate List Evaluation Measurement Electronic.vi - Configure And Initiate List Evaluation Measurement Electronic Synchronized.vi - Select IQ Data File.vi - Query Noise Frequency Table Data.vi - Configure Noise Figure Uncertainty Source.vi - Configure Noise Figure Uncertainty Resistor Temp Uncertainty.vi - Configure Noise Figure Uncertainty Calibration Source.vi - Configure Noise Figure Uncertainty Calibration Resistor Temp Uncertainty.vi - Configure Noise Figure Uncertainty DUT Input Match.vi - Configure Noise Figure Uncertainty DUT Output Match.vi - Configure Noise Figure Uncertainty DUT Characteristics.vi - Configure Noise Figure Uncertainty Preamp Characteristics.vi - Query Noise Figure Uncertainty Analyzer Characteristics.vi - Query Noise Figure Uncertainty Result.vi - Configure VSA Frame APSK N State.vi - Configure VSA Frame ASK N State.vi - Query VSA Measurement Dirty.vi

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		<ul style="list-style-type: none"> - Query VSA Bit Error Rate Results.vi - VSA DSP Marker To Start Of Selected Result Range.vi - VSA DSP Delta Marker To Start Of Selected Result Range.vi - Query VSA DSP Capture Number Of Bursts.vi - Query VSA DSP Capture Number Of Patterns.vi - Query VSA DSP Current Range Burst Length.vi - Query VSA DSP Current Range Burst Present.vi - Query VSA DSP Current Range Burst Start.vi - Query VSA DSP Current Range Pattern Confidence.vi - Query VSA DSP Current Range Pattern Correct.vi - Query VSA DSP Current Range Pattern Present.vi - Query VSA DSP Current Range Pattern Start.vi <p>* Updated:</p> <ul style="list-style-type: none"> - Configure Power Sensor Absolute Power Unit.vi - Units updated - Configure Adjust Length Of Measurement.vi - Help updated - Configure Trigger Repetition Interval.vi - Range updated - Configure Marker Peak List.vi - No of peaks range updated - Configure And Initiate List Evaluation Measurement.vi - No longer synchronized - Configure And Initiate Pulse Power Measurement.vi - Trigger sources updated - Configure And Initiate Pulse Power Measurement Synchronized.vi - Trigger sources updated - Configure And Read Pulse Power Measurement.vi - Trigger sources updated - Configure IQ Analyzer Settings.vi - Triggers updated - Configure Noise Calibration Noise Source.vi - Smart noise source added - Configure Noise Measurement Noise Source.vi - Smart noise source added - Configure Noise Frequency Table Data.vi - Help updated - Configure ADEM Demodulator.vi - Trigger sources updated - Configure EMI LISN V-Network.vi - Network types updated - Configure VSA Standard Preset.vi - Help updated - Configure VSA Modulation FSK.vi - FP and VI fixed - Configure VSA Signal Structure Burst.vi - Helps and ranges updated - Configure VSA Symbol Number At Reference.vi - Range updated <p>* Deleted:</p> <ul style="list-style-type: none"> - Get VSA Pattern Found.vi - Query VSA Results BER Format.vi
1.30.0	08/2019	<p>* Updated:</p> <ul style="list-style-type: none"> - Configure Channel Power Adjacent Channel.vi - Updated range for Spacing parameter - Configure Channel Power Alternate Channel.vi - Updated range for Spacing parameter - Hcopy File Format.vi - WMF, EWMF, DPF, SG, DOC and RTF added - Configure RBW Filter Type.vi - 5-pole, RRC, CISPR, and MIL Std filters added

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		<ul style="list-style-type: none"> - Configure Trigger Source.vi - Baseband Power added - Configure And Initiate List Evaluation Measurement.vi - Range table added to Filter Type parameter - Set Status Register.vi - Added 'CORRection' commands - Get Status Register.vi - Added 'CORRection' commands - Configure Marker Auto Peak Search.vi - Bug preventing min search setting fixed - Configure And Initiate List Evaluation Measurement.vi, - Configure And Initiate List Evaluation Measurement Synchronized.vi, - Query List Evaluation Results.vi - Improved error elaboration for some invalid parameters. - Read List Evaluation Measurement.vi - Bug preventing successful execution fixed. <p>* New:</p> <ul style="list-style-type: none"> - Added VSA subsystem - Select Measurement Channel By Type.vi - RSFPL_ATTR_RF_INPUT_SELECT - Configure Subwindow Horizontal Scale.vi RSFPL_ATTR_SUBWINDOW_HORIZONTAL_SCALE - Configure RF Input SAW Filter.vi RSFPL_ATTR_RF_INPUT_SAW_FILTER - Configure Subwindow Y Axis Scaling.vi RSFPL_ATTR_SUBWINDOW_Y_AXIS_SCALING RSFPL_ATTR_SUBWINDOW_Y_AXIS_SCALING_MODE - Configure Window Sweep Points.vi RSFPL_ATTR_WINDOW_SWEEP_POINTS - Configure External Trigger Level.vi RSFPL_ATTR_EXTERNAL_TRIGGER_LEVEL - Configure Marker Linking.vi RSFPL_ATTR_MARKER_LINKING - Query Marker Amplitude.vi RSFPL_ATTR_MARKER_AMPLITUDE - Configure Marker Probability.vi RSFPL_ATTR_MARKER_PROBABILITY - Noise Measurement Marker All Off.vi RSFPL_ATTR_NOISE_MEASUREMENT_MARKER_ALL_OFF - Band Power Marker All Off.vi RSFPL_ATTR_BAND_POWER_MARKER_ALL_OFF - Configure Spurious Emissions Break Measurement Enabled.vi RSFPL_ATTR_SPURIOUS_EMISSIONS_BREAK_MEASUREMENT_ENABLED - Adjust Spurious Emissions X-Axis.vi RSFPL_ATTR_SPURIOUS_EMISSIONS_ADJUST_X_AXIS - Configure Statistical Measurement.vi

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		RSFPL_ATTR_SIGNAL_STATISTIC_APD_ENABLED RSFPL_ATTR_SIGNAL_STATISTIC_CCDF_ENABLED RSFPL_ATTR_SIGNAL_STATISTIC_NUMBER_OF_SAMPLES - Configure Signal Statistic Scaling.vi RSFPL_ATTR_SIGNAL_STATISTIC_SCALING_X_REF_LEVEL RSFPL_ATTR_SIGNAL_STATISTIC_SCALING_X_RANGE RSFPL_ATTR_SIGNAL_STATISTIC_SCALING_Y_UNIT RSFPL_ATTR_SIGNAL_STATISTIC_SCALING_Y_MINIMUM RSFPL_ATTR_SIGNAL_STATISTIC_SCALING_Y_MAXIMUM - Set Signal Statistic Scaling Settings.vi RSFPL_ATTR_SIGNAL_STATISTIC_DEFAULT_SETTING RSFPL_ATTR_SIGNAL_STATISTIC_ADJUST_SETTINGS - Query Statistical Measurement Results.vi - Query Statistical Measurement CCDF Level.vi - Configure Signal Statistic Gate Period.vi RSFPL_ATTR_SIGNAL_STATISTIC_GATE_PERIOD - Configure Signal Statistic Gate Comment.vi RSFPL_ATTR_SIGNAL_STATISTIC_GATE_COMMENT - Configure Signal Statistic Gate Range.vi RSFPL_ATTR_SIGNAL_STATISTIC_GATE_RANGE_ENABLED RSFPL_ATTR_SIGNAL_STATISTIC_GATE_RANGE_START RSFPL_ATTR_SIGNAL_STATISTIC_GATE_RANGE_STOP - Configure Display Format.vi RSFPL_ATTR_DISPLAY_FORMAT - Configure Subwindow Display Single Zoom Enabled.vi RSFPL_ATTR_SUBWINDOW_DISPLAY_SINGLE_ZOOM_ENABLED - Configure Subwindow Single Zoom.vi - Configure Subwindow Multiple Zoom Enabled.vi RSFPL_ATTR_SUBWINDOW_MULTIPLE_ZOOM_ENABLED - Subwindow Multiple Zoom.vi - Configure Noise Input Loss Temperature.vi RSFPL_ATTR_NOISE_INPUT_LOSS_TEMPERATURE - Query Noise Input Loss Table List.vi RSFPL_ATTR_NOISE_INPUT_LOSS_TABLE_LIST - Configure Noise Output Loss Temperature.vi RSFPL_ATTR_NOISE_OUTPUT_LOSS_TEMPERATURE - Query Noise Output Loss Table List.vi RSFPL_ATTR_NOISE_OUTPUT_LOSS_TABLE_LIST - Configure Noise Calibration Loss Mode.vi RSFPL_ATTR_NOISE_CALIBRATION_LOSS_MODE - Configure Noise Calibration Loss Constant.vi

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		RSFPL_ATTR_NOISE_CALIBRATION_LOSS_CONSTANT - Configure Noise Calibration Loss Temperature.vi RSFPL_ATTR_NOISE_CALIBRATION_LOSS_TEMPERATURE - rsfpl_SelectNoiseCalibrationTable RSFPL_ATTR_NOISE_CALIBRATION_LOSS_SELECTED_TABLE - Define Noise Calibration Loss Table.vi RSFPL_FUNC_DEFINE_NOISE_CALIBRATION_LOSS_TABLE - Delete Noise Calibration Loss Table.vi RSFPL_ATTR_NOISE_CALIBRATION_LOSS_DELETE_TABLE - Query Noise Calibration Loss Table List.vi RSFPL_ATTR_NOISE_CALIBRATION_LOSS_TABLE_LIST - Configure Noise DUT LO Type.vi RSFPL_ATTR_NOISE_DUT_LO_TYPE - Configure Noise DUT Fixed IF Frequency.vi RSFPL_ATTR_NOISE_DUT_FIXED_IF_FREQUENCY - Configure Noise Measurement Points.vi RSFPL_ATTR_NOISE_MEASUREMENT_POINTS - Query Noise Marker Results.vi - Query Noise Delta Marker Results.vi - Query ADEM Trace Result Modulation Frequency.vi RSFPL_ATTR_ADEM_TRACE_RESULT_MODULATION_FREQUENCY - Query ADEM Trace Result Carrier Power.vi RSFPL_ATTR_ADEM_TRACE_RESULT_CARRIER_POWER - Configure EMI Measurement.vi RSFPL_ATTR_EMI_MEASUREMENT_ENABLED RSFPL_ATTR_EMI_MEASUREMENT_DWELL_TIME - Configure EMI LISN V-Network.vi RSFPL_ATTR_EMI_LISN_V_NETWORK_TYPE RSFPL_ATTR_EMI_LISN_V_NETWORK_PHASE RSFPL_ATTR_EMI_LISN_V_NETWORK_HIGH_PASS_FILTER - EMI Measurement Marker Peak Search.vi RSFPL_ATTR_EMI_MEASUREMENT_MARKER_PEAK_SEARCH - Configure EMI Measurement Marker Detector.vi RSFPL_ATTR_EMI_MEASUREMENT_MARKER_DETECTOR - Query EMI Measurement Marker Result.vi RSFPL_ATTR_EMI_MEASUREMENT_MARKER_RESULT - Query EMI Measurement Marker Limit Condition.vi RSFPL_ATTR_EMI_MEASUREMENT_MARKER_LIMIT_CONDITION - Query EMI Measurement Marker Limit Vertical Distance.vi RSFPL_ATTR_EMI_MEASUREMENT_MARKER_LIMIT_VERTICAL_DISTANCE - EMI Measurement Delta Marker Peak Search.vi

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		<ul style="list-style-type: none"> RSFPL_ATTR_EMI_MEASUREMENT_DELTA_MARKER_PEAK_SEARCH - Configure EMI Measurement Delta Marker Detector.vi RSFPL_ATTR_EMI_MEASUREMENT_DELTA_MARKER_DETECTOR - Query EMI Measurement Delta Marker Result.vi RSFPL_ATTR_EMI_MEASUREMENT_DELTA_MARKER_RESULT - Query EMI Measurement Delta Marker Limit Condition.vi RSFPL_ATTR_EMI_MEASUREMENT_DELTA_MARKER_LIMIT_CONDITION - Query EMI Measurement Delta Marker Limit Vertical Distance.vi RSFPL_ATTR_EMI_MEASUREMENT_DELTA_MARKER_LIMIT_VERTICAL_DISTANCE - Configure Data Instrument Settings Recall Mode.vi RSFPL_ATTR_DATA_INSTRUMENT_SETTINGS_RECALL_MODE - Data Results Import Trace.vi - Query Factory Default IDN.vi RSFPL_ATTR_GENERAL_GET_IDN_STRING_FACTORY - Configure Calibration Signal Frequency 43 MHz Plus.vi RSFPL_ATTR_CALIBRATION_SIGNAL_FREQUENCY_43_MHZ_PLUS - Configure Calibration Signal Frequency 7 GHz Plus.vi RSFPL_ATTR_CALIBRATION_SIGNAL_FREQUENCY_7_GHZ_PLUS - Configure Calibration Signal Wideband Frequency.vi RSFPL_ATTR_CALIBRATION_SIGNAL_WIDEBAND_FREQUENCY - Configure Calibration Signal Peak Distance.vi RSFPL_ATTR_CALIBRATION_SIGNAL_PEAK_DISTANCE - Error List.vi RSFPL_ATTR_SYSTEM_ERROR_LIST - Error List Specific Type.vi - Clear Instrument Errors.vi RSFPL_ATTR_SYSTEM_CLEAR_ERRORS - Clear Remote Errors.vi RSFPL_ATTR_SYSTEM_CLEAR_REMOTE_ERRORS_TABLE - Query Remote Errors.vi - Query System Battery Level.vi RSFPL_ATTR_SYSTEM_BATTERY_LEVEL * Removed: - Configure IQ Data Format.vi
1.20.0	07/2018	<ul style="list-style-type: none"> * New: Configure Y Axis Grid Spacing.vi Configure Y Axis Reference Value.vi - Noise Figure functionality - Analog Demodulation functionality

rsfpl Instrument Driver		
Driver history for LabVIEW		
Revision	Date	Note
		* Update: Configure Preamplifier.vi Configure Trigger Source.vi
1.1.0	07/2018	* New: Configure Display Temporary Size.vi I/Q Analyzer functionality Logging functionality
1.0.0	06/2018	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.

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



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