

LabWindows/CVI, VXIplug driver history for the R&S® Vector Network Analyzers Driver Documentation

Products:

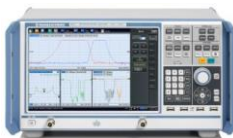
| R&S®ZNA



| R&S®ZNB



| R&S®ZNC



| R&S®ZND



| R&S®ZNB-T



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

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1 Supported Instruments

In the following table, the supported Rohde & Schwarz 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
ZNA	1.71	1 st Release, Compatibility support
ZNB	2.56	
ZNC	2.54	
ZND	2.54	
ZNBT	2.56	

2 LabWindows/CVI and VXIplug&play history

rsvna Instrument Driver		
Driver history for LabWindows/CVI and VXIplug&play		
Revision	Date	Note
2.50.0	01/2019	<ul style="list-style-type: none"> - New core 3.x.x - Added compatibility support for R&S ZNA Network Analyzer * New - rsvna_ConfigureAutoSystemErrQuery - rsvna_ConfigureMultiThreadLocking - rsvna_GetAttributeRepCapName - rsvna_GetOPCTimeout - rsvna_SetOPCTimeout * Modified - rsvna_ConfigureErrorChecking - changed API: added last parameter statusChecking
2.42.0	01/2018	<ul style="list-style-type: none"> * Breaking Changes: - Changed "Block Data" array parameter to content of a "Touchstone File": <li style="padding-left: 20px;">rsvna_ConfigureVirtualNetworkSingleEndedData <li style="padding-left: 20px;">rsvna_ConfigureVirtualNetworkBalancedData <li style="padding-left: 20px;">rsvna_ConfigureVirtualNetworkDifferentialMatchData
2.41.0	12/2017	<ul style="list-style-type: none"> * Modified: - rsvna_WriteFromFileToInstrument - fixed - added rsvna_queryDataUnknownLengthString_ReadCallback: <li style="padding-left: 20px;">RSVNA_ATTR_FILE_RECALL_SET_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_TRACE_CHANNEL_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_TRACE_CHANNEL_CATALOG_BALANCED_PORTS <li style="padding-left: 20px;">RSVNA_ATTR_TRACE_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_TRACE_NAME_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_TRACE_RESPONSE_S_DATA_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_CALIBRATION_CONNECTOR_TYPE_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_CHANNEL_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_DISPLAY_DIAGRAM_AREA_CATALOG <li style="padding-left: 20px;">RSVNA_ATTR_DISPLAY_TRACE_DIAGRAM_AREA_CATALOG
2.40.0	04/2017	<ul style="list-style-type: none"> * Analyzer port number extended from 8 to 24 * New: - rsvna_TraceExportDataPortsVariable * Breaking changes: - rsvna_ConfigureCalibrationStandard - deleted, replacement is rsvna_ConfigureCalibrationStandardExt

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2.30.0	11/2016	<p>* Added more rigorous check for Repeated Capabilities</p> <p>* New:</p> <ul style="list-style-type: none"> - rsvna_ClearStatus - rsvna_IDQueryResponse - rsvna_ProcessAllPreviousCommands - rsvna_QueryOPC - rsvna_SetFastSweepMode - rsvna_SetVISATimeout - rsvna_GetVISATimeout <p>* Breaking Changes:</p> <ul style="list-style-type: none"> - rsvna_AddCalibrationKitAuto - added Timeout to API - rsvna_CalibrationAutoSimplified - added Timeout to API - rsvna_CalibrationAutoTypeSimplified - added Timeout to API - rsvna_CalibrationAutoType - added Timeout to API - rsvna_CalibrationAuto - added Timeout to API - rsvna_ConfigureCalibrationKitAuto - added Timeout to API <p>* Modified:</p> <ul style="list-style-type: none"> - rsvna_SelectRatios - SCPI command parameters corrected for Ratios 2 (b2/a2 Src Port 2) and 3 (b1/a2 Src Port 2) - rsvna_RecallSetManager - when loading Recall Set, dynamic repeated capabilities are synchronized with instrument's
2.21.0	10/2015	<p>* New:</p> <ul style="list-style-type: none"> - rsvna_SelectPowerSensorMeasurement - rsvna_ConfigureFrequencyMinMax - rsvna_ConfigureDisplayUpdate - rsvna_DisplayUpdateOnce - rsvna_ConfigureMarkerState <p>* Modified:</p> <ul style="list-style-type: none"> - rsvna_SelectRatios - SCPI command parameter array corrected - Line 3 (MM) Standard SCPI command parameter (value 9) corrected in these functions: <ul style="list-style-type: none"> - rsvna_QueryCalibrationUnitCharacterizationData - rsvna_ConfigureCalibrationStandard - rsvna_ConfigureCalibrationStandardExt - rsvna_LoadCalibrationKit - rsvna_ConfigureCalibrationStandardWithLabel - rsvna_LoadCalibrationKitWithLabel - rsvna_ReadCalibrationKitWithLabelSParameterData
2.20.2	01/2015	<p>* Modified:</p> <ul style="list-style-type: none"> - rsvna_ActivatePowerCalibrations - added Channel parameter - RSVNA_ATTR_CALIBRATION_CONNECTOR_TYPE_CATALOG - repeated capability 'Channel' removed

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		* Deleted: - RSVNA_ATTR_SWEEP_SEGMENT_NUMBER duplicated, use RSVNA_ATTR_QUERY_SWEEP_SEGMENT_COUNT instead
2.20.1	12/2014	* Added support for ZND instrument
2.20.0	07/2014	* Support for firmware version 2.20 * New: - rsvna_ConfigureLogicalPortReferenceImpedanceDefault - rsvna_DeleteMemoryTraceAll - rsvna_DeleteMemoryTraceAllChannel - rsvna_ConfigureCalibrationStandardExt - rsvna_ConfigureCalibrationDelayMode - rsvna_LoadCalibrationKitWithLabel - rsvna_ReadCalibrationKitWithLabelSParameterData - rsvna_ConfigureRFFESettings - rsvna_ConfigureRFFECCommand - rsvna_ConfigureGPIO - rsvna_QuerySweepSequencerCount - rsvna_DeleteAllSweepSequencerItems - rsvna_ConfigureSweepSequencerRFFECCommand - rsvna_ConfigureSweepSequencerGPIOVoltage - rsvna_ConfigureSweepSequencerDelayTime - rsvna_DefineParallelMeasurementPortGroup - rsvna_ConfigureParallelMeasurementPortGroupName - rsvna_ConfigureParallelMeasurementNumberOfPorts - rsvna_ConfigureParallelMeasurementDUTPort - rsvna_ConfigureOffsetCompensation - rsvna_DefineVirtualNetworkPortSet - rsvna_ImportFixtureCompensation - rsvna_ExportFixtureCompensation - rsvna_ConfigureRemoteEncoding - rsvna_QueryProgramReturnValue * Modified: - Removed range checking of attribute RSVNA_ATTR_STIMULUS_INTERNAL_SOURCE_POWER - rsvna_TraceExportDataPorts - changed API - rsvna_ConfigureCalibrationStandardWithLabel - rsvna_ConfigureVirtualNetworkSingleEndedPort - rsvna_ConfigureVirtualNetworkSingleEndedCircuitModel - rsvna_ConfigureVirtualNetworkBalancedPort - rsvna_ConfigureVirtualNetworkBalancedCircuitModel - rsvna_ConfigureVirtualNetworkPortPair - rsvna_ConfigureVirtualNetworkPortPairCircuitModel

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		<ul style="list-style-type: none"> - rsvna_ConfigureVirtualNetworkGroundLoop - rsvna_ConfigureVirtualNetworkGroundLoopCircuitModel <p>2013-10-18, Martin Krcmar</p> <ul style="list-style-type: none"> * Version 1.93.0 * Support for firmware version 1.93 * New: <ul style="list-style-type: none"> - rsvna_TraceImportDataAutoDistribute - rsvna_QueryCalibrationDataParametersSpecific - rsvna_QueryCalibrationDataParametersPortSpecific - rsvna_QuerySourcePowerCalibrationDataParametersSwitchingMatrix - rsvna_DefineVirtualNetworkPortPair - rsvna_DeleteVirtualNetworkPortPair - rsvna_ConfigureVirtualNetworkPortPairState - rsvna_ConfigureVirtualNetworkPortPair - rsvna_ConfigureVirtualNetworkPortPairCircuitModel - rsvna_LoadPortPairCircuitModelData - rsvna_ConfigureVirtualNetworkGroundLoopState - rsvna_ConfigureVirtualNetworkGroundLoop - rsvna_ConfigureVirtualNetworkGroundLoopCircuitModel - rsvna_LoadGroundLoopCircuitModelData - rsvna_ConfigureVirtualNetworkDifferentialMatchState - rsvna_ConfigureVirtualNetworkDifferentialMatch - rsvna_ConfigureVirtualNetworkDifferentialMatchData - rsvna_ConfigureVirtualNetworkDifferentialMatchCircuitModel - rsvna_LoadDifferentialMatchCircuitModelData * Modified: <ul style="list-style-type: none"> - rsvna_QuerySourcePowerCalibrationDataParameters
1.93.0	10/2013	<ul style="list-style-type: none"> * Support for firmware version 1.93 * New: <ul style="list-style-type: none"> - rsvna_TraceImportDataAutoDistribute - rsvna_QueryCalibrationDataParametersSpecific - rsvna_QueryCalibrationDataParametersPortSpecific - rsvna_QuerySourcePowerCalibrationDataParametersSwitchingMatrix - rsvna_DefineVirtualNetworkPortPair - rsvna_DeleteVirtualNetworkPortPair - rsvna_ConfigureVirtualNetworkPortPairState - rsvna_ConfigureVirtualNetworkPortPair - rsvna_ConfigureVirtualNetworkPortPairCircuitModel

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		<ul style="list-style-type: none"> - rsvna_LoadPortPairCircuitModelData - rsvna_ConfigureVirtualNetworkGroundLoopState - rsvna_ConfigureVirtualNetworkGroundLoop - rsvna_ConfigureVirtualNetworkGroundLoopCircuitModel - rsvna_LoadGroundLoopCircuitModelData - rsvna_ConfigureVirtualNetworkDifferentialMatchState - rsvna_ConfigureVirtualNetworkDifferentialMatch - rsvna_ConfigureVirtualNetworkDifferentialMatchData - rsvna_ConfigureVirtualNetworkDifferentialMatchCircuitModel - rsvna_LoadDifferentialMatchCircuitModelData - rsvna_ConfigureRemotePreset * Modified: - rsvna_QuerySourcePowerCalibrationDataParameters
1.90.0	08/2013	<ul style="list-style-type: none"> * Support for firmware version 1.90 * New: - rsvna_SelectBalancedPortsSParameters - rsvna_TraceListBalancedPorts - rsvna_SelectCalibrationTypeExtended - rsvna_LoadCalibrationKitByGenderFromFile - rsvna_LoadCalibrationKitByGenderFromPool - rsvna_QueryCalibrationKitData - rsvna_QueryCalibrationKitInfo - rsvna_ConfigureVirtualNetworkSingleEndedData - rsvna_ConfigureVirtualNetworkBalancedData - rsvna_QuerySwitchMatrixRelayCount - rsvna_Configure User Defined Physical Port - rsvna_DeleteUserDefinedPhysicalPorts - RSVNA_ATTR_INIT_WAIT_STATE - RSVNA_ATTR_LOGICAL_PORT_ALIGNMENT * Modified: - rsvna_SelectCalibrationType - rsvna_ConfigureVirtualNetworkSingleEndedPort - rsvna_ConfigureSweepNumberOfPoints - range fixed
1.80.0	03/2013	<ul style="list-style-type: none"> * Support for firmware version 1.80 * New: - rsvna_ConfigureMarkerTargetFormat - rsvna_GenerateDefaultCalibrationAutoAssignmentWithDetection - rsvna_QueryAllCalibrationAutoAssignmentCount - rsvna_AddCalibrationKitAuto - rsvna_StartAGCLearningSweep - rsvna_SaveAGCLearningResults

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		<ul style="list-style-type: none"> - rsvna_ConfigureUserDefinedPresetCalibration - rsvna_ConfigureCalibrationAutoAveraging * Modified: <ul style="list-style-type: none"> - rsvna_GenerateDefaultCalibrationAutoAssignment - rsvna_ConfigureVirtualNetworkSingleEndedPort - rsvna_ConfigureVirtualNetworkSingleEndedCircuitModel - RSVNA_ATTR_CALIBRATION_CONNECTOR – bug fixed (affected function rsvna_ConfigureConnector)
1.70.0	12/2012	<p>Support for firmware version 1.70</p> <p>* New:</p> <ul style="list-style-type: none"> - Switch Matrix Support - Calibration Auto Assignment support - Logical Ports - Port Groups - rsvna_CreateTraceSParametersGroup - rsvna_ConfigureTimeGateOffsetActivation - rsvna_ClearLimitCheckResults - rsvna_ClearRippleLimitGlobalCheckResult - rsvna_ClearCircleLimitCheckResult - rsvna_QuerySweepSegmentNumber - rsvna_QueryCalibrationPortsState - rsvna_ConfigurePortConnectorTypes - rsvna_QueryCalibrationDataParametersCount - rsvna_ConfigureExternalPowerSParameterCorrection - rsvna_ConfigureCalibrationKitAuto - rsvna_QuerySourcePowerCalibrationDataParameters - rsvna_QuerySourcePowerCalibrationDataParametersCount - rsvna_ConfigureReceiverPowerAttenuation - rsvna_ConfigureReceiverFrequencyConversion - rsvna_ConfigureMixerInputSignal - rsvna_ConfigureCalibrationManagerState - rsvna_ConfigureUIDataFlowDirection - rsvna_ConfigureUIOutputPortsState - rsvna_ConfigureUIDigitalSignal <p>* Modified:</p> <ul style="list-style-type: none"> - rsvna_DefineBalancedPort - calls into new function rsvna_DefineLogicalPort - rsvna_DeleteBalancedPort - calls into new function rsvna_DeleteLogicalPort - rsvna_DeleteAllBalancedPorts - calls into new function rsvna_DeleteAllLogicalPorts - rsvna_SelectCalibrationType - added new calibration types - rsvna_ConfigureMixerPower

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1.61.0	05/2012	<p>Support for ZNB, ZNC firmware version 1.61</p> <p>* New functions</p> <ul style="list-style-type: none"> - rsvna_ShowCircleLimits - rsvna_ConfigureCircleLimitCheck - rsvna_ConfigureCircleLimitLine - rsvna_QueryCircleLimitCheckResult - rsvna_ConfigureZoomOverview - rsvna_ConfigureLayoutSimplified - rsvna_ConfigureLayout - rsvna_JoinLayouts - rsvna_ConfigureCalibrationStandardWithLabels - rsvna_ConfigureCalibrationKitWithLabel - rsvna_ConfigureCalibrationKitUserConnectorTypeWithLabel - rsvna_CalibrationKitCatalogWithLabel - rsvna_CalibrationStandardsCatalogWithLabel - rsvna_ConfigureCalibrationKitLabelWithLabel - rsvna_DeleteCalibrationKitWithLabel - rsvna_ExportKitWithLabel - rsvna_QueryAvailableCalibrationDataCatalog - rsvna_QueryAvailableCalibrationDataCatalogPort - rsvna_ConfigureSweepMeasDelayInsertionPoint - rsvna_ConfigureIntermodulationCalSourcePort - rsvna_TemporaryDisableOption <p>* New Attribute only:</p> <ul style="list-style-type: none"> - RSVNA_ATTR_CIRCLE_FAIL_BEEP - RSVNA_ATTR_DISPLAY_TRACE_INFO_STATE - RSVNA_ATTR_ADJUST_TIME_GATE <p>* Modified functions:</p> <ul style="list-style-type: none"> - rsvna_ConfigureAGC - rsvna_ConfigureAGCSegment
1.50.0	04/2012	<p>Support for ZNB, ZNC firmware version 1.50</p> <p>Modifications:</p> <p>* New subsystems:</p> <ul style="list-style-type: none"> - Mixer (option K4) - Intermodulation Measurements (option K14) - Fixture Compensation - ENA support (AUX Trigger and Universal Interface) - Automatic Gain Control <p>* Modified functions:</p>

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		<ul style="list-style-type: none"> - rsvna_StartCalibration - added Power Meter - rsvna_ConfigureMarkerBandfilterSearchMode - added None search mode * New functions - rsvna_QueryFrequencyRange - rsvna_ConfigureAverageMode - rsvna_ActivatePowerCalibrations - rsvna_SystemVersion - rsvna_setCheckStatus - rsvna_ConfigureSplitType - rsvna_ConfigureSplitGrid *Fixed: - rsvna_TraceListCatalog - fixed wrong attribute access that caused sending command with double question mark (RCDRV00001881) - rsvna_ConfigureSourcePowerCalibrationGeneratorOffset - incorrect attribute used
1.40.0	01/2012	<p>Support for ZNB, ZNC firmware version 1.40</p> <p>Modifications:</p> <ul style="list-style-type: none"> * New subsystems: - Power Added Efficiency - Source Power Calibration - Reciever Power Calibration - Power Meter Transmission Coefficients - Port Config - External Devices <ul style="list-style-type: none"> * Modified functions: - rsvna_ConfigureDCRange - parameters changed - rsvna_ConfigureAcquisition - attribute RSVNA_ATTR_SWEEP_MODE_CONTINUOUS_ALL_CHANNEL added - rsvna_SelectCalibrationType - bug fixed - rsvna_CalibrationAutoType - Parameters - Full N-port for SMARTerCal added - rsvna_CalibrationAutoTypeSimplified - Parameters - Full N-port for SMARTerCal added - rsvna_QueryCalibrationConnection - Channel ignored - rsvna_ConfigureConnector - BNC added <ul style="list-style-type: none"> * New functions: - rsvna_TraceDeleteAll - rsvna_TraceDeleteAllChannels - rsvna_TraceResponseDataAllSData - rsvna_TraceResponseSDataCatalog - rsvna_TraceResponseSingleSweepDataFirstLast

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		<ul style="list-style-type: none"> - rsvna_ConfigurePowerStartStop - rsvna_ConfigureSweepStimulusAxis - rsvna_ConfigureSweepSegmentXAxis - rsvna_CalibrationAutoPower - rsvna_ConfigureCalibrationExternalPowerMeter - rsvna_QueryCalibrationUnitCharacterizationsStandards - rsvna_ReadCalibrationDataPort - rsvna_WriteCalibrationDataPort - rsvna_QueryCalibrationStimulusFrequenciesPort - rsvna_QueryCalibrationDataParametersPort - rsvna_ConfigureCalibrationKitPassword - rsvna_SaveCalibrationKit - rsvna_ConfigureTouchscreenLock - rsvna_ConfigureUserKeyFunction <p>* New Attribute only:</p> <ul style="list-style-type: none"> - RSVNA_ATTR_LOAD_MATCH_CORRECTION_STATE - RSVNA_ATTR_CALIBRATION_ALL_CHANNELS_STATE - RSVNA_ATTR_DISPLAY_TRACE_COLOR_FOR_LIMIT_LINES - RSVNA_ATTR_DISPLAY_COLORIZE_FAILED_SEGMENTS - RSVNA_ATTR_DISPLAY_SHOW_FAILED_SYMBOLS - RSVNA_ATTR_CALIBRATION_AUTOMATIC_POWER_REDUCTION - RSVNA_ATTR_STATISTICAL_COMPRESSION_POINT_RESULT_STATE - RSVNA_ATTR_DISPLAY_FREQUENCY_INFO_STATE - RSVNA_ATTR_DISPLAY_CHANNEL_INFO_STATE - RSVNA_ATTR_DISPLAY_ALL_MARKERS_SAME_COLOR - RSVNA_ATTR_DISPLAY_TRACE_COLORS_PER_DIAGRAM - RSVNA_ATTR_DISPLAY_FONT_SIZE - RSVNA_ATTR_NUMBER_OF_TEST_PORTS - RSVNA_ATTR_SOURCE_POWER_CALIBRATION_OTHER_SOURCES - RSVNA_ATTR_CALIBRATION_AUTOMATIC_MEMORY_STATE - RSVNA_ATTR_DISPLAY_HARDKEY_PANEL_STATE - RSVNA_ATTR_DISPLAY_MENU_BAR_STATE - RSVNA_ATTR_DISPLAY_STATUS_BAR_STATE - RSVNA_ATTR_DISPLAY_SOFTTOOL_PANEL_STATE - RSVNA_ATTR_DISPLAY_TITLE_BAR_STATE - RSVNA_ATTR_DISPLAY_TOOLBAR_STATE - RSVNA_ATTR_REPEAT_PREVIOUS_CALIBRATION_CURRENT
1.20.0	07/2011	Support for ZNB, ZNC firmware version 1.20
1.0.0	06/2011	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

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



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