

# Driver history for the R&S Vector Network Analyzers ZVB, ZVA and the Multiport Vector Network Analyzer ZVT

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<b>ZVB/ZVA/ZVT Driver History</b>		
Revision	Date	Note
2.90.0	01/2012	<p>Release for ZVB/ZVT/ZVA Firmware 2.90</p> <p>* New functions</p> <ul style="list-style-type: none"> <li>- rszvb_SelectNoiseFigure</li> <li>- rszvb_TraceDeleteAll</li> <li>- rszvb_TraceDeleteAllChannels</li> <li>- rszvb_TraceExportDataPortsIncomplete</li> <li>- rszvb_SetNumberOfStages</li> <li>- rszvb_GetNumberOfStages</li> <li>- rszvb_SetSignalSource</li> <li>- rszvb_GetSignalSource</li> <li>- rszvb_SetIFSignalPort</li> <li>- rszvb_GetIFSignalPort</li> <li>- rszvb_SetRFSignalPort</li> <li>- rszvb_GetRFSignalPort</li> <li>- rszvb_SetFixedPowerToSignal</li> <li>- rszvb_GetFixedPowerToSignal</li> <li>- rszvb_SetSignalPowerMode</li> <li>- rszvb_GetSignalPowerMode</li> <li>- rszvb_SetFixedFrequencySignalStage2</li> <li>- rszvb_GetFixedFrequencySignalStage2</li> <li>- rszvb_SetFixedFrequencyToSignal</li> <li>- rszvb_GetFixedFrequencyToSignal</li> <li>- rszvb_SetFrequencyConversionModeStage2</li> <li>- rszvb_GetFrequencyConversionModeStage2</li> <li>- rszvb_SetFrequencyLOConversionFactor</li> <li>- rszvb_GetFrequencyLOConversionFactor</li> <li>- rszvb_SetFrequencyRFConversionFactor</li> <li>- rszvb_GetFrequencyRFConversionFactor</li> <li>- rszvb_LOSourceCalibrationStage2</li> <li>- rszvb_CalibrationAutoAssignmentType</li> <li>- rszvb_CalibrationAutoAssignmentDefinition</li> <li>- rszvb_GetCalibrationAutoAssignmentDefinition</li> <li>- rszvb_InitiateCalibrationAutoAssignment</li> <li>- rszvb_CalibrationAutoAssignmentSave</li> <li>- rszvb_CalibrationAutoAssignmentDeleteAll</li> <li>- rszvb_SetPresetSettingsState</li> <li>- rszvb_GetPresetSettingsState</li> </ul> <p>* Changed functions:</p> <ul style="list-style-type: none"> <li>- rszvb_ConfigureFrequencySettings - LO1, LO2 added, LO substituted by LO1</li> <li>- rszvb_SetFundamentalFrequencySignal - LO1, LO2 added, LO substituted by LO1</li> <li>- rszvb_GetFundamentalFrequencySignal - LO1, LO2 added</li> <li>- rszvb_SetFixedFrequencySignal - LO1, LO2 added, LO substituted by LO1</li> <li>- rszvb_GetFixedFrequencySignal - LO1, LO2 added</li> <li>- Modified option checking for K30 option</li> </ul>
2.86.0	08/2011	<p>Release for ZVB/ZVT/ZVA Firmware 2.86</p> <p>Modifications:</p> <p>* New functions:</p> <ul style="list-style-type: none"> <li>- rszvb_SelectMoreRatiosGenerator</li> <li>- rszvb_SelectMoreRatiosGeneratorWithDetector</li> <li>- rszvb_TraceExportDataPorts</li> <li>- rszvb_TraceAddMode</li> <li>- rszvb_TraceComplexResponseData</li> <li>- rszvb_TraceComplexResponseCatalog</li> </ul>

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		<ul style="list-style-type: none"> <li>- rszvb_SetConverterCalPowerOffset</li> <li>- rszvb_GetConverterCalPowerOffset</li> <li>- rszvb_SetTDIFReceiverFrequency</li> <li>- rszvb_GetTDIFReceiverFrequency</li> <li>- rszvb_SetLNPreamplifier</li> <li>- rszvb_GetLNPreamplifier</li> <li>- rszvb_SetSameSweepSetup</li> <li>- rszvb_GetSameSweepSetup</li> <li>- rszvb_SetSPParameterDetector</li> <li>- rszvb_GetSPParameterDetector</li> <li>- rszvb_SetEnhancedWaveCorrection</li> <li>- rszvb_GetEnhancedWaveCorrection</li> <li>- rszvb_SetLoadMatchingCorrection</li> <li>- rszvb_GetLoadMatchingCorrection</li> <li>- rszvb_SetRFOffBehavior</li> <li>- rszvb_GetRFOffBehavior</li> <li>- rszvb_SetOutputPortBits</li> <li>- rszvb_GetOutputPortBits</li> <li>- rszvb_SetCalibrationCorrectionBaseFrequencyState - for fw 2.86</li> <li>- rszvb_SetCalibrationCorrectionBaseFrequencyState</li> <li>- rszvb_DisableIMODMeasurement</li> <li>- rszvb_SetRemoteDisplayTitle</li> <li>- rszvb_GetRemoteDisplayTitle</li> <li>* Modified function</li> <li>- rszvb_writeFromFile</li> <li>- rszvb_SetConnector - added new connectors PC 1, PC 1.85, PC 2.4</li> <li>- rszvb_GetConnector</li> <li>- rszvb_AcquireReceiverPowerCalibration - enabled port selection for frequency converter, removed support for ZVR (extra command parameters)</li> </ul>
2.79.1	05/2011	Modifications: <ul style="list-style-type: none"> <li>- Fixed ZNB/ZNC support</li> </ul>
2.79.0	05/2011	Release for ZVB/ZVT/ZVA Firmware 2.79 <ul style="list-style-type: none"> <li>* Added</li> <li>- Added ZNB/ZNC support. The support is limited to already existing functions and is based on SCPI command compatibility as defined by SYSTEM:LANGUage 'ZVABT'.</li> <li>- Converter configuration</li> <li>- Source Power Correction</li> <li>- rszvb_SetTraceUnit, rszvb_GetTraceUnit</li> <li>- rszvb_SetMixerDelayDivisionByTwoEnabled, rszvb_GetMixerDelayDivisionByTwoEnabled</li> <li>- rszvb_SetMixerConstantDelayEnabled, rszvb_GetMixerConstantDelayEnabled</li> <li>- rszvb_SetSourcePowerCalibrationConverterState, rszvb_GetSourcePowerCalibrationConverterState</li> <li>- rszvb_rszvb_ExpUserCharDataTouchstoneFile</li> <li>- rszvb_GetCalibrationLabel</li> <li>- rszvb_SetAutomaticPowerReductionState, rszvb_GetAutomaticPowerReductionState</li> <li>- rszvb_SetRestartBehavior, rszvb_GetRestartBehavior</li> <li>- rszvb_GenerateSystemReport</li> <li>- rszvb_SetCalculationOfBandfilterCenterFrequency, rszvb_GetCalculationOfBandfilterCenterFrequency</li> <li>* Modified</li> <li>- rszvb_PrintToFile - modified API to allow better configuration of printout</li> <li>- rszvb_StartCalibration - new calibrations added</li> </ul>

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		- all traces are now read in 64 bit floating point format
2.75.1	08/2010	New features: - x64 platform support
2.75.0	06/2010	Release for ZVB/ZVT/ZVA Firmware 2.75  * New features: Bandwidth Fine Adjust Partial Measurement Trigger Delay Adjust Port Pair Calibration Mixer Delay External Receiver Vector Mixer Measurement - AUX ALC PI Controller Power Port Limits  * New functions: rszvb_SetTraceEvaluationRangeShow rszvb_GetTraceEvaluationRangeShow rszvb_SetMarkerSearchRangeShow, rszvb_GetMarkerSearchRangeShow rszvb_GetCurrentSweep rszvb_LoadAndInterchangeBalancedPortCircuitModelData rszvb_LoadAndInterchangeSingleEndedPortCircuitModelData rszvb_SetALCPortClamp, rszvb_GetALCPortClamp rszvb_SetSameConnectorGenderAtAllPorts rszvb_GetSameConnectorGenderAtAllPorts rszvb_SetDummySourcePowerCalibrationSensitivityCorrectionRange rszvb_GetDummySourcePowerCalibrationSensitivityCorrectionRange rszvb_QueryFrequencyRange rszvb_SetNWAApplicationPriority, rszvb_GetNWAApplicationPriority rszvb_SystemShutdown  * Modified functions: rszvb_TraceResponseData - added pulse profile measurement rszvb_CalibrationManager - added new operations Merge, Apply to All and Resolve for All rszvb_InsertNewSegment, rszvb_SetSweepSegmentNumberOfPoints - fixed number of points range
2.70.1	02/2010	Modifications:  New functions: rszvb_SetIFGainReferenceChannel rszvb_GetIFGainReferenceChannel Modified functions: rszvb_SelectMoreWaveQuantitiesWithDetector rszvb_SelectMoreRatiosWithDetector rszvb_WriteReceiverPowerCorrectionData rszvb_ReadReceiverPowerCorrectionData
2.70.0	11/2009	Release for ZVB/ZVT/ZVA Firmware 2.70  New functions: rszvb_LinearityDeviationManual rszvb_LinearityDeviationAuto rszvb_SetLinearityDeviationState rszvb_GetLinearityDeviationState rszvb_SetLinearityDeviationSlope rszvb_GetLinearityDeviationSlope rszvb_SetLinearityDeviationConstant rszvb_GetLinearityDeviationConstant rszvb_SetLinearityDeviationElectricalLength

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_GetLinearityDeviationElectricalLength rszvb_SetFrequencyHighAccuracy rszvb_GetFrequencyHighAccuracy rszvb_SetNoiseFigureDetectorMeasurementTime rszvb_GetNoiseFigureDetectorMeasurementTime rszvb_SetNoiseFigureMeasurementMode rszvb_GetNoiseFigureMeasurementMode rszvb_SetNoiseFigureLOOscillator rszvb_GetNoiseFigureLOOscillator rszvb_SetNoiseFigureCalibrationState rszvb_GetNoiseFigureCalibrationState rszvb_DefineNoiseFigureCalibrationSettings rszvb_StartNoiseFigureCalibration rszvb_TerminateNoiseFigureCalibration rszvb_CompleteNoiseFigureCalibration rszvb_OverwriteNoiseFigureChannelSettings rszvb_SetVirtualTransformGroundLoopState rszvb_GetVirtualTransformGroundLoopState rszvb_SetVirtualTransformGroundLoop rszvb_GetVirtualTransformGroundLoop rszvb_SetVirtualTransformGroundLoopCircuitModel rszvb_GetVirtualTransformGroundLoopCircuitModel rszvb_LoadGroundLoopCircuitModelData rszvb_CalibrationConnectorCatalog rszvb_CalibrationKitCatalog rszvb_CalibrationStandardsCatalog Modified functions: rszvb_StartCalibration rszvb_ConfigureCalibrationStandard rszvb_LoadCalibrationKit rszvb_GetSourcePort rszvb_SetRGBColor rszvb_SetRGBColor
2.60.0	09/2009	Release for ZVB/ZVT/ZVA Firmware 2.60  Initial Release for Linux, support for: - Mandriva Linux 2008 and Mandriva Linux 2009 - openSUSE 10.3 and openSUSE 11.0  New functions: rszvb_SetTraceDisplayState rszvb_GetTraceDisplayState rszvb_TraceResponseDataAllData rszvb_SetHold rszvb_GetHold rszvb_SetReferenceDiscreteMarker rszvb_GetReferenceDiscreteMarker rszvb_SetReferenceFixedMarker rszvb_GetReferenceFixedMarker rszvb_QuerySumOfSweepSegmentsTime rszvb_ReadTimeSamplesData rszvb_SetConverterSourceFrequency rszvb_GetConverterSourceFrequency rszvb_SetConverterPowerOffset rszvb_GetConverterPowerOffset rszvb_SetPulseGeneratorState rszvb_GetPulseGeneratorState

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_DefinePulseGenerator rszvb_DefinePulseTrainSegments rszvb_ConfigureChoppedPulseProfile rszvb_SetPulseGeneratorType rszvb_GetPulseGeneratorType rszvb_SetPulseGeneratorWidth rszvb_GetPulseGeneratorWidth rszvb_SetPulseGeneratorSinglePeriod rszvb_GetPulseGeneratorSinglePeriod rszvb_SetPulseGeneratorTrainPeriod rszvb_GetPulseGeneratorTrainPeriod rszvb_SetPulseGeneratorPolarity rszvb_GetPulseGeneratorPolarity rszvb_SetPulseGeneratorMode rszvb_GetPulseGeneratorMode rszvb_GetPulseTrainSegments rszvb_SetPulseTrainSegmentState rszvb_GetPulseTrainSegmentState rszvb_SetPulseTrainSegmentStart rszvb_GetPulseTrainSegmentStart rszvb_SetPulseTrainSegmentStop rszvb_GetPulseTrainSegmentStop rszvb_GetPulseTrainSegmentCount rszvb_DeleteAllPulseTrainSegments rszvb_SavePulseTrainFile rszvb_LoadPulseTrainFile rszvb_SetPulseGeneratorDelay rszvb_GetPulseGeneratorDelay rszvb_SetChoppedPulseProfileMode rszvb_GetChoppedPulseProfileMode rszvb_SetChoppedPulseProfileDelayIncrement rszvb_GetChoppedPulseProfileDelayIncrement rszvb_ZVAXPathConfiguration rszvb_ConfigurePulseGenerators rszvb_SetInternalCombiner rszvb_GetInternalCombiner rszvb_SetHarmonicFilter rszvb_GetHarmonicFilter rszvb_SetPulseModulator rszvb_GetPulseModulator rszvb_SetExternalSignalGeneratorInput rszvb_GetExternalSignalGeneratorInput rszvb_SetPulseGeneratorAssignment rszvb_GetPulseGeneratorAssignment rszvb_SetExternalSignalGeneratorOutput rszvb_GetExternalSignalGeneratorOutput rszvb_StartMixerDelayCalibrationSweep rszvb_SetMixerDelayAperture rszvb_GetMixerDelayAperture rszvb_SetMixerDelayConstant rszvb_GetMixerDelayConstant rszvb_SetMixerDelayCombinerState rszvb_GetMixerDelayCombinerState rszvb_SetMixerDelayCorrection rszvb_GetMixerDelayCorrection rszvb_SetMixerDelayUpperToneSource rszvb_GetMixerDelayUpperToneSource

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		<p>rszvb_LoadMixerDelayValues  rszvb_LoadMixerDelayCalibrationData  rszvb_StoreMixerDelayCalibrationData  rszvb_SetVectorMixerMode  rszvb_GetVectorMixerMode  rszvb_SetIMODTwoToneOutput  rszvb_GetIMODTwoToneOutput  rszvb_SetIndividualALCPortState  rszvb_GetIndividualALCPortState  rszvb_SetALCPortState  rszvb_GetALCPortState  rszvb_SetSourcePowerCalibrationConvergenceFactor  rszvb_GetSourcePowerCalibrationConvergenceFactor  rszvb_QueryDirectFixtureCompensation  rszvb_AcquireFixtureCompensationSweep  rszvb_StartFixtureCompensationSweep  rszvb_SaveFixtureCompensationData  rszvb_SetFixtureCompensationAutoLengthAndLossCalculation  rszvb_GetFixtureCompensationAutoLengthAndLossCalculation  rszvb_SetFixtureCompensationDirectCompensation  rszvb_GetFixtureCompensationDirectCompensation  rszvb_QueryExternalGeneratorCount  rszvb_QueryExternalGeneratorNumbers  rszvb_QueryExternalPowerMeterCount  rszvb_QueryExternalPowerMeterNumbers  rszvb_SetFastMultiportCorrection  rszvb_GetFastMultiportCorrection  rszvb_SetPowerCoefficients  rszvb_GetPowerCoefficients  rszvb_SetPowerCoefficientsDefault  rszvb_GetPowerCoefficientsDefault  rszvb_QueryExtensionUnitDeviceID  rszvb_QueryExtensionUnitHardwareOptions</p> <p>* Modified functions:  rszvb_AcquireSourcePowerCalibration - Added CONVerter  rszvb_SetTriggerSource - Added PGENerator  rszvb_GetTriggerSource - Added PGENerator  rszvb_SelectCalibrationType - Added FTRans, RTRans  rszvb_GetCalibrationType - Added FTRans, RTRans  rszvb_GetCalibrationState</p>
2.51.1	03/2009	<p>Modifications:  New functions:  - rszvb_WriteMemoryTraceDataExt  Modified functions:  - rszvb_SelectCalibrationType - added TOSM With Unknown Through calibration  rszvb_WriteMemoryTraceData</p>
2.51.0	12/2008	<p>Release for ZVB/ZVT/ZVA Firmware 2.51</p> <p>New functions:  rszvb_SetApertureGroupDelaySteps  rszvb_GetApertureGroupDelaySteps  rszvb_TraceResponseDataAll  rszvb_TraceResponseSingleSweepDataCount  rszvb_TraceResponseSingleSweepDataForward  rszvb_WriteMemoryTraceData</p>

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_TraceExportDataWithOptionsExt rszvb_ChannelTraceExportDataWithOptionsExt rszvb_SetMarkerSearchMode rszvb_GetMarkerSearchMode rszvb_SetGeneratorAttenuatorMode rszvb_GetGeneratorAttenuatorMode rszvb_SetSweepSegmentBitsState rszvb_GetSweepSegmentBitsState rszvb_SetSweepSegmentBitValues rszvb_GetSweepSegmentBitValues rszvb_DefineGroupOfAllMeasuredPorts rszvb_GetGroupOfAllMeasuredPorts rszvb_GetPortGroupsCount rszvb_SetDefaultConfigurationState rszvb_GetDefaultConfigurationState rszvb_SetPortConfiguration rszvb_GetPortConfiguration rszvb_SetPortImpedancesRenormalization rszvb_GetPortImpedancesRenormalization rszvb_SetIMODLowerToneSource rszvb_GetIMODLowerToneSource rszvb_SetIMODUpperToneSource rszvb_GetIMODUpperToneSource rszvb_SetIMODToneDistance rszvb_GetIMODToneDistance rszvb_SetIMODReceiverPort rszvb_GetIMODReceiverPort rszvb_SetIMODMeasurementOrder rszvb_GetIMODMeasurementOrder rszvb_SetIMODInternalCombiner rszvb_GetIMODInternalCombiner rszvb_SetIMODSpectrumMeasurement rszvb_GetIMODSpectrumMeasurement rszvb_SetIMODMaxOrder rszvb_GetIMODMaxOrder rszvb_StartIMODLowerToneSourcePowerCalibration rszvb_StartIMODUpperToneSourcePowerCalibration rszvb_StartIMODReceiverPowerCalibration rszvb_SetCoherentSignalState rszvb_GetCoherentSignalState rszvb_SetCoherentSignalAmplitude rszvb_GetCoherentSignalAmplitude rszvb_SetCoherentSignalPhase rszvb_GetCoherentSignalPhase rszvb_SetCoherentSignalReferencePort rszvb_GetCoherentSignalReferencePort rszvb_StartCalibrationWithOptions rszvb_SetDummySourcePowerCalibrationState rszvb_GetDummySourcePowerCalibrationState rszvb_SetReferenceReceiverAfterFirstCalSweep rszvb_GetReferenceReceiverAfterFirstCalSweep rszvb_SetCalibrationKitLabel rszvb_GetCalibrationKitLabel rszvb_DeleteCalibrationKit rszvb_SetFontSize rszvb_GetFontSize rszvb_SetChannelInfo

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_GetChannellInfo rszvb_SetRemotelLanguage rszvb_GetRemotelLanguage rszvb_setCheckRange  Modifiead functions: rszvb_FileManager rszvb_defaultInstrSetup (added command FORM:BORD SWAP) rszvb_SetPower (no range checking) rszvb_StartCalibration rszvb_ConfigureCalibrationStandard
2.30.1	05/2008	- Release for ZVB/ZVT/ZVA Firmware 2.30  Modified functions (frequency/offset range checking removed): rszvb_SetStartFrequency rszvb_SetStopFrequency rszvb_SetCenterFrequency rszvb_SetFrequencySpan rszvb_SetCWFrequency rszvb_InsertNewSegment rszvb_RedefineSegment rszvb_SetSweepSegmentStartFrequency rszvb_SetSweepSegmentStopFrequency rszvb_SetFrequencyConversion rszvb_SetPowerMeterFrequencyConversion rszvb_SetGeneratorFrequencyConversion
2.30	12/2007	- Release for ZVB/ZVT/ZVA Firmware 2.20  New functions: rszvb_ChannelTraceExportData rszvb_ChannelTraceExportDataWithOptions rszvb_SetRippleCheckOn rszvb_GetRippleCheckOn rszvb_GetRippleLimitGlobalCheckResult rszvb_SetCheckRippleLimitRangeSegment rszvb_GetCheckRippleLimitRangeSegment rszvb_GetRippleLimitCheckSegmentResult rszvb_SetRippleLimitsDisplayState rszvb_GetRippleLimitsDisplayState rszvb_SetRippleFailBeepOn rszvb_GetRippleFailBeepOn rszvb_AddRippleLimitLineRangesSegment rszvb_EditRippleLimitLineSegment rszvb_DeleteAllRippleLimitRanges rszvb_SetRippleLimitPhysicalUnits rszvb_SetRippleLimitResponseDomainFormatUnits rszvb_GetNumberRippleLimitRanges rszvb_SetRippleLimitRange rszvb_GetRippleLimitRange rszvb_SaveRecallRippleLimit rszvb_SetSourceCombinerState rszvb_GetSourceCombinerState rszvb_DeleteAllCalibrationData rszvb_CalibrationAutoType rszvb_CalibrationAutoTypeSimplified

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_AdditionalDirectoryCalibrationKit rszvb_DiagramAreaName rszvb_DiagramAreaCatalog rszvb_TraceDiagramAreaCatalog rszvb_AutoZeroingExternalPowerMeter rszvb_SetAutoConfigNRPZxx rszvb_GetAutoConfigNRPZxx Modified functions (panel control corrected): rszvb_SetAlarmSoundsState rszvb_SetStatusSoundsState rszvb_SetErrorDisplayState rszvb_SetAverageFactor fixed
2.20	10/2007	- Release for ZVB/ZVT/ZVA Firmware 2.20  New functions: rszvb_TraceAssignWindowDiagramArea rszvb_TraceGetChannelName rszvb_TraceGetChannelNumber rszvb_SetTimeDomainTransformationResolutionEfactor rszvb_GetTimeDomainTransformationResolutionEfactor rszvb_SetTDIFSourcePowerMode rszvb_GetTDIFSourcePowerMode rszvb_SetTDIFCompensationState rszvb_GetTDIFCompensationState rszvb_GeneratorPowerCalibrationHarmonic rszvb_SetSourcePowerCalibrationState rszvb_GetSourcePowerCalibrationState rszvb_SetReferenceReceiverCalibrationState rszvb_GetReferenceReceiverCalibrationState rszvb_ReceiverPowerCalibrationHarmonic rszvb_SetFrequencyConversionType rszvb_GetFrequencyConversionType rszvb_SetFrequencyConversionSource rszvb_GetFrequencyConversionSource Modified functions: rszvb_GetDisplayUpdate rszvb_TraceStatisticalEvaluation
2.10.1	04/2007	- Release for ZVB/ZVT/ZVA Firmware 2.10  New functions: rszvb_SetUserDefinedPresetState rszvb_GetUserDefinedPresetState rszvb_SetUserDefinedPresetFile rszvb_GetUserDefinedPresetFile rszvb_setCheckOption Modified functions: rszvb_checkOption
2.10.0	03/2007	- Driver update for ZVB/ZVT/ZVA Firmware 2.10  New functions: rszvb_SelectPowerMeter rszvb_ChannelGetChannelName rszvb_ChannelGetChannelNumber rszvb_ChannelSetActive rszvb_ChannelGetActive

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_ChannelRename rszvb_TraceGetTraceNumber rszvb_TraceGetTraceName rszvb_TraceSetRGBColor rszvb_TraceGetRGBColor rszvb_SetAutomaticLevelControlState rszvb_GetAutomaticLevelControlState rszvb_QueryVerificationSweepResults rszvb_SetTDIFState rszvb_GetTDIFState rszvb_SetTDIFAmplitudeImbalanceLogicalPort rszvb_GetTDIFAmplitudeImbalanceLogicalPort rszvb_SetTDIFAmplitudeImbalanceStartPower rszvb_GetTDIFAmplitudeImbalanceStartPower rszvb_SetTDIFAmplitudeImbalanceStopPower rszvb_GetTDIFAmplitudeImbalanceStopPower rszvb_SetTDIFPhaseImbalanceLogicalPort rszvb_GetTDIFPhaseImbalanceLogicalPort rszvb_SetTDIFPhaseImbalanceStartPhase rszvb_GetTDIFPhaseImbalanceStartPhase rszvb_SetTDIFPhaseImbalanceStopPhase rszvb_GetTDIFPhaseImbalanceStopPhase rszvb_TraceListCatalog Modified functions: rszvb_ChannelAddTrace rszvb_TraceAssignDiagramArea rszvb_SetDisplayResultsState rszvb_GetDisplayResultsState rszvb_TraceStatisticalEvaluation rszvb_SetSweepType rszvb_GetSweepType
2.02.0	01/2007	- Driver update for ZVB/ZVT/ZVA Firmware 2.02 New functions: rszvb_SetTraceScaleDivisionsByName rszvb_SetTraceRefValueByName rszvb_SetTraceRefPositionByName rszvb_TraceRename rszvb_ChannelTraceRename rszvb_setTimeout rszvb_getTimeout Modified functions: rszvb_ChannelAdd Modified Front Panel help for functions: rszvb_RFSourceCalibration rszvb_IFReceiverCalibration rszvb_LOSourceCalibration rszvb_AcquireSourcePowerCalibration rszvb_InitiateSourcePowerCalibration rszvb_SetVerificationSweepState rszvb_GetVerificationSweepState rszvb_AcquireReceiverPowerCalibration rszvb_SetCalibrationDataCurrentState rszvb_GetCalibrationDataCurrentState rszvb_SetCalibrationDataDefaultState rszvb_GetCalibrationDataDefaultState rszvb_StartCalibration

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
2.00.2	01/2007	Readded to the header file rszvb_ConfigureSourcePowerCalibration rszvb_ConfigureReceiverPowerCalibration
2.00.1	01/2007	Front Panel Name fixed for function Auto Length And Loss Modified functions: rszvb_TraceResponseDataZVR rszvb_TraceStimulusDataZVR rszvb_TraceResponseDataSPParameterGroup Modified Front Panel help for functions: rszvb_SetCalibrationPowerGeneratorOffset rszvb_GetCalibrationPowerGeneratorOffset
2.00.00	12/2006	- Driver update for ZVB/ZVT/ZVA Firmware 2.00 New functions: rszvb_TraceAutoscaleByName rszvb_TraceAddSPParameterGroup rszvb_QueryTraceAddSPParameterGroup rszvb_SetTimeGateDisplayState rszvb_GetTimeGateDisplayState rszvb_SetDisplayResultsState rszvb_GetDisplayResultsState rszvb_SetTraceFormatZVR rszvb_GetTraceFormatZVR rszvb_TraceResponseDataZVR rszvb_TraceStimulusDataZVR rszvb_TraceResponseDataSPParameterGroup rszvb_TraceExportDataWithOptions rszvb_MarkerxBandwidthZVR rszvb_MarkerBandfilterResultsZVR rszvb_SetMarkerSearchResultState rszvb_GetMarkerSearchResultState rszvb_RecallLimitLineWithOptions rszvb_SetGeneratorStepAttenuators rszvb_GetGeneratorStepAttenuators rszvb_SetAutomaticGeneratorAttenuator rszvb_GetAutomaticGeneratorAttenuator rszvb_SetMeasBandwidthSelectivity rszvb_GetMeasBandwidthSelectivity rszvb_SetPulseTimeStart rszvb_GetPulseTimeStart rszvb_SetPulseTimeStop rszvb_GetPulseTimeStop rszvb_SetPulseTimeBandwidth rszvb_GetPulseTimeBandwidth rszvb_SetPulseCoupledSectionLimitLinesState rszvb_GetPulseCoupledSectionLimitLinesState rszvb_SetPulseEvaluationMode rszvb_GetPulseEvaluationMode rszvb_SetPulseEvaluationSectionStart rszvb_GetPulseEvaluationSectionStart rszvb_SetPulseEvaluationSectionStop rszvb_GetPulseEvaluationSectionStop rszvb_SetPulseSectionLimitLinesState rszvb_GetPulseSectionLimitLinesState rszvb_SetPulseShiftStimulus rszvb_GetPulseShiftStimulus rszvb_SetFrequencyStimulus rszvb_GetFrequencyStimulus

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_SetPowerStimulus rszvb_GetPowerStimulus rszvb_SetUserConnector rszvb_GetUserConnector rszvb_SetCalibrationPowerGeneratorOffset rszvb_GetCalibrationPowerGeneratorOffset rszvb_SetCalibrationKitUserConnectorType rszvb_GetCalibrationKitUserConnectorType rszvb_ConfigureLoss rszvb_SetLossAtDC rszvb_GetLossAtDC rszvb_SetLossAtFrequency rszvb_GetLossAtFrequency rszvb_SetLossReferenceFrequency rszvb_GetLossReferenceFrequency rszvb_AutoLengthAndLoss rszvb_SetDataTransfer rszvb_GetDataTransfer rszvb_SetErrorDisplayState rszvb_GetErrorDisplayState Modified functions: rszvb_TraceAutoscale rszvb_SetSweepType rszvb_GetSweepType rszvb_StartCalibration rszvb_setStatusRegister rszvb_getStatusRegister rszvb_GetCalibrationState rszvb_defaultInstrSetup
1.90.0	06/2006	- Driver update for ZVB/ZVT/ZVA Firmware 1.90  New functions: rszvb_checkModel rszvb_TraceResponseDataError rszvb_SetTimeGateShape rszvb_GetTimeGateShape rszvb_SetTimeGateSpan rszvb_GetTimeGateSpan rszvb_SetSAWSimulationType rszvb_GetSAWSimulationType rszvb_SetLimitResponseDomainComplexUnits rszvb_SetLimitResponseDomainFormatUnits rszvb_SetLimitResponseDomainSpacingUnits rszvb_SetLimitDomainUnits rszvb_GetReferenceMarkerResponse rszvb_SetTraceMathFunction rszvb_GetTraceMathFunction rszvb_SetTraceMathWaveQuantityState rszvb_GetTraceMathWaveQuantityState rszvb_SetTraceCompressionValue rszvb_GetTraceCompressionValue rszvb_GetTraceCompressionPoint rszvb_SetTraceTransformConversion rszvb_GetTraceTransformConversion rszvb_SetVirtualTransformBalancedPort rszvb_GetVirtualTransformBalancedPort rszvb_SetVirtualTransformBalancedState

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_GetVirtualTransformBalancedState rszvb_SetVirtualTransformBalancedCircuitModel rszvb_GetVirtualTransformBalancedCircuitModel rszvb_LoadBalancedPortCircuitModelData rszvb_SetVirtualTransformSingleEndedPort rszvb_GetVirtualTransformSingleEndedPort rszvb_SetVirtualTransformSingleEndedState rszvb_GetVirtualTransformSingleEndedState rszvb_SetVirtualTransformSingleEndedCircuitModel rszvb_GetVirtualTransformSingleEndedCircuitModel rszvb_LoadSingleEndedPortCircuitModelData rszvb_SetMarkerColorState rszvb_GetMarkerColorState rszvb_SetRGBColor rszvb_GetRGBColor rszvb_SetTraceColorState rszvb_GetTraceColorState rszvb_LoadColorScheme rszvb_SaveColorScheme rszvb_SetTraceBottom rszvb_GetTraceBottom rszvb_SetTraceTop rszvb_GetTraceTop rszvb_LoadCalibrationKit rszvb_ImportKit rszvb_ExportKit rszvb_SetSweepSegmentSelectivity rszvb_GetSweepSegmentSelectivity rszvb_LoadSegment rszvb_SaveSegment rszvb_QueryOverlappingSweepSegments rszvb_SaveAllMarkers rszvb_SetCalibrationConnector rszvb_GetCalibrationConnector rszvb_DeleteCalibrationConnector rszvb_SetCalibrationDataCurrentState rszvb_GetCalibrationDataCurrentState rszvb_SetCalibrationDataDefaultState rszvb_GetCalibrationDataDefaultState rszvb_CalibrationAutoSimplified rszvb_GetCalibrationConnection rszvb_GenerateDefaultCalibrationData rszvb_SetFactoryCalibrationState rszvb_GetFactoryCalibrationState rszvb_SetFrequencyConversion rszvb_GetFrequencyConversion rszvb_SetMeasureAWavesState rszvb_GetMeasureAWavesState rszvb_SetLocalOscillatorAState rszvb_GetLocalOscillatorAState rszvb_SetLocalOscillatorBState rszvb_GetLocalOscillatorBState rszvb_SetLogicalPortCommonRefImpedance rszvb_GetLogicalPortCommonRefImpedance rszvb_SetLogicalPortDifferentialRefImpedance rszvb_GetLogicalPortDifferentialRefImpedance rszvb_SetPhysicalPortRefImpedance

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_GetPhysicalPortRefImpedance rszvb_SetIFGain rszvb_GetIFGain rszvb_SetRFSignalSourceState rszvb_GetRFSignalSourceState rszvb_SetPermanentSignalSourceState rszvb_GetPermanentSignalSourceState rszvb_SetSlope rszvb_GetSlope rszvb_SetLowPhaseNoiseState rszvb_GetLowPhaseNoiseState rszvb_SetReferenceFrequency rszvb_GetReferenceFrequency rszvb_SetSourcePort rszvb_GetSourcePort rszvb_SetFrequencyStepSize rszvb_GetFrequencyStepSize rszvb_SetReceiverStepAttenuators rszvb_GetReceiverStepAttenuators rszvb_SetAlarmSoundsState rszvb_GetAlarmSoundsState rszvb_SetStatusSoundsState rszvb_GetStatusSoundsState rszvb_DeleteMemoryTrace rszvb_AcquireReceiverPowerCalibration Fixed functions: rszvb_ConfigureMechanicalLength rszvb_TraceResponseData rszvb_ResetOffsets rszvb_QueryResetOffsets rszvb_GetPortPowerOffset Removed from the Front Panel: rszvb_ConfigureReceiverPowerCalibration
1.4.2	04/2006	Modifications:  New functions: rszvb_AcquireSourcePowerCalibration Fixed functions: rszvb_ReadSourcePowerCorrectionData rszvb_SetFundamentalPowerSignal rszvb_GetFundamentalPowerSignal rszvb_SetFixedPower rszvb_GetFixedPower rszvb_SetTimeGateState rszvb_GetTimeGateState rszvb_QueryExternalGenerator rszvb_QueryExternalPowerMeter rszvb_SetCalibrationPowerOffset rszvb_GetCalibrationPowerOffset rszvb_ModifySourcePowerCalibrationSettings rszvb_ConfigureSourcePowerCalibration Removed from the Front Panel: rszvb_ConfigureSourcePowerCalibration
1.4.1	04/2006	Modifications: Fixed functions: rszvb_ModifySourcePowerCalibrationSettings

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		rszvb_GetCalibrationPowerOffset rszvb_SetAWaveReceiverPowerCalibrationState rszvb_GetAWaveReceiverPowerCalibrationState
1.4	04/2006	Modifications:  Mixer Mode Measurement added Power Calibration added  New functions: rszvb_SetCorrectionState rszvb_GetCorrectionState rszvb_SetSourcePowerCorrectionState rszvb_GetSourcePowerCorrectionState rszvb_SetReceiverPowerCorrectionState rszvb_GetReceiverPowerCorrectionState rszvb_ConfigureExternalGenerator rszvb_QueryExternalGenerator rszvb_DeleteExternalGenerator rszvb_ConfigureExternalPowerMeter rszvb_QueryExternalPowerMeter rszvb_DeleteExternalPowerMeter
1.3	03/2006	Modifications:  - ZVA support added  New functions: rszvb_GetCalibrationType rszvb_ExpCharDataTouchstoneFile rszvb_GetCalibrationDate rszvb_GetCalibrationState rszvb_GetCalibrationDataParameters rszvb_SaveCalibrationKit rszvb_SystemKeylock rszvb_SetSoftKeyLabel rszvb_GetPressedSoftKey rszvb_SetActiveCalibrationUnit rszvb_GetActiveCalibrationUnit rszvb_GetAllCalibrationUnits rszvb_ConfigureCalibrationUnitStandard Modified functions: rszvb_SetTimeDomainTransformationType
1.2	07/2005	Modifications:  Fixed functions: - rszvb_SelectCalibrationType - fixed string concatenation - rszvb_StartCalibration - fixed port2 range checking Added new function - rszvb_CalibrationAutoEx with user defined timeout Added new harmonic measurement functions: - rszvb_ConfigureHarmonicMeasurement - rszvb_SetHarmonicMeasurementState - rszvb_GetHarmonicMeasurementState - rszvb_SetHarmonicOrder - rszvb_GetHarmonicOrder - rszvb_SetHarmonicSourcePort - rszvb_GetHarmonicSourcePort - rszvb_SetHarmonicReceivePort

## ZVB/ZVA/ZVT Driver History

Revision	Date	Note
		<ul style="list-style-type: none"> <li>- rszvb_GetHarmonicReceivePort</li> <li>- rszvb_SetHarmonicRelativeState</li> </ul>
1.1	04/2005	<p>Modifications: Driver update for <b>Time Domain Measurement</b> and <b>ZVT support</b></p> <p>Port checking fixed in many functions. New Functions:</p> <ul style="list-style-type: none"> <li>- rszvb_SelectMoreRatiosWithDetector</li> <li>- rszvb_SelectMoreWaveQuantitiesWithDetector</li> <li>- rszvb_SetTraceTransformDomain</li> <li>- rszvb_GetTraceTransformDomain</li> <li>- rszvb_SetTimeDomainStartTime</li> <li>- rszvb_GetTimeDomainStartTime</li> <li>- rszvb_SetTimeDomainStopTime</li> <li>- rszvb_GetTimeDomainStopTime</li> <li>- rszvb_SetTimeDomainCenterTime</li> <li>- rszvb_GetTimeDomainCenterTime</li> <li>- rszvb_SetTimeDomainTimeSpan</li> <li>- rszvb_GetTimeDomainTimeSpan</li> <li>- rszvb_SetTimeDomainTimeAxisScaling</li> <li>- rszvb_GetTimeDomainTimeAxisScaling</li> <li>- rszvb_SetTimeDomainTransformationType</li> <li>- rszvb_GetTimeDomainTransformationType</li> <li>- rszvb_SetTimeDomainTransformationFilter</li> <li>- rszvb_GetTimeDomainTransformationFilter</li> <li>- rszvb_SetTimeDomainTransformationSidebandSuppression</li> <li>- rszvb_GetTimeDomainTransformationSidebandSuppression</li> <li>- rszvb_SetHarmonicGridAndKeep</li> <li>- rszvb_SetDCValue</li> <li>- rszvb_GetDCValue</li> <li>- rszvb_ExtrapolateDCValue</li> <li>- rszvb_SetContinuousExtrapolation</li> <li>- rszvb_GetContinuousExtrapolation</li> <li>- rszvb_CalculateHarmonicGrid</li> <li>- rszvb_SetTimeGateState</li> <li>- rszvb_GetTimeGateState</li> <li>- rszvb_SetTimeGateStartTime</li> <li>- rszvb_GetTimeGateStartTime</li> <li>- rszvb_SetTimeGateStopTime</li> <li>- rszvb_GetTimeGateStopTime</li> <li>- rszvb_SetTimeGateCenterTime</li> <li>- rszvb_GetTimeGateCenterTime</li> <li>- rszvb_SetTimeGateType</li> <li>- rszvb_GetTimeGateType</li> <li>- rszvb_SetTimeGateFilter</li> <li>- rszvb_GetTimeGateFilter</li> <li>- rszvb_SetTimeGateSidebandSuppression</li> <li>- rszvb_GetTimeGateSidebandSuppression</li> </ul>
1.0	10/2004	Created.

## Supported interfaces

The current revision of instrument driver supports interfaces:

- IEEE 488.2 (IEC-625, GPIB)
- RSIB
- VXI-11

## LabWindows/CVI

### CVI Version

Use National Instruments LabWindows/CVI 6 or later.

### 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.

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

### C#

A wrapper is necessary to enable a direct access to the driver DLL.  
The rszvb.cs wrapper for C# is automatically installed in the ~\VXIpnP\WinNt\include directory.

### Visual Basic .NET

A wrapper is necessary to enable a direct access to the driver DLL.  
The rszvb.vb wrapper for .NET is automatically installed in the ~\VXIpnP\WinNt\include directory.  
See the Visual Basic .NET examples.

### VEE Version

Use VEE 6 or later.

### 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\rszvb directory.

### Additional Information

For more information regarding the VXIPnP instrument drivers, please read the readme.txt file that comes with each driver.

## Linux and Mac OS X

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