

# LabWindows/CVI, VxiPnp driver history for the R&S® CMA180 Radio Tester

## Products:

| [R&S CMA180](#)



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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?		
Instrument	Supported Firmware	Remarks
CMA180	4.0.100	

## 2 Revision History

### 2.1 Version 4.0.100 / 09 – 2023

\* Support for CMA version 4.0.10

\* New Core 4.5.0

\* New:

- rscma\_ConfigurePOCSAGRepetition
- rscma\_ConfigureGeneratorFreeDialingEqualorIndividual
- rscma\_ConfigureGeneratorFreeDialingIndividualDigitPause
- rscma\_ConfigureGeneratorDialingSELCALIndividualDigitTime
- rscma\_ConfigureGeneratorDialingSELCALStandard
- rscma\_ConfigureVoIPATMFrequencyEnable
- rscma\_ConfigureGeneratorLSLocalizerAFFlyInvertDirection
- rscma\_ConfigureGeneratorLSGlideSlopeAFFlyInvertDirection
- rscma\_ConfigureAnalyzerAFDecayTime
- rscma\_ConfigureAnalyzerDemodulationFilterDistortionWidthFactor
- rscma\_ConfigureAnalyzerAFFilterDistortionWidthFactor
- rscma\_ConfigureAnalyzerSPDIFInputFilterDistortionWidthFactor
- rscma\_ConfigureAnalyzerVoIPFilterDistortionWidthFactor
- rscma\_ConfigureAnalyzerDeltaResultsRFPowerPEPMode
- rscma\_AnalyzerDeltaResultsRFPowerPEPUpdate
- rscma\_ConfigureAnalyzerDeltaResultsRFPowerPEPUserValue
- rscma\_ConfigureAnalyzerSelCallMinimalLength
- rscma\_ConfigureAnalyzerFreeDialingTonesMinimalLength
- rscma\_ConfigureAnalyzerFreeDialingTonesFrequencyRange
- rscma\_ConfigureAnalyzerSELCALStandard
- rscma\_ConfigureAnalyzerRFPEPLimits
- rscma\_FetchAnalyzerToneDCSCCodeWord
- rscma\_ReadAnalyzerToneDCSCCodeWord
- rscma\_ReadRFDeltaPowerPEPResult
- rscma\_FetchRFDeltaPowerPEPResult
- rscma\_QueryAnalyzerDeltaResultsRFPowerPEPMeasuredValue
- rscma\_ReadAnalyzerResultsAFSignal
- rscma\_FetchAnalyzerResultsAFSignal
- rscma\_ConfigureSearchRoutineTimeout
- rscma\_ConfigureRXRFLevel
- rscma\_ConfigureDigitalPayloadType
- rscma\_QueryDigitalP25PayloadType
- rscma\_ConfigureDigitalP25BERLimit
- rscma\_ReadDigitalP25BERResults
- rscma\_FetchDigitalP25BERResults

- rscma\_QueryDigitalP25BERLimitCheckResults
- rscma\_ReadDigitalP25PowerResults
- rscma\_FetchDigitalP25PowerResults
- rscma\_ReadDigitalP25SignalInfo
- rscma\_FetchDigitalP25SignalInfo
- rscma\_ConfigureACPDigitalStandard
- rscma\_ConfigureACPDataRate
- rscma\_OPCTSyncWriteEnable
- rscma\_OPCTSyncQueryEnable

\* Updated:

- rscma\_ConfigureAnalyzerDemodulationFilterDistortionWidth - Range table value updated
- rscma\_ConfigureAnalyzerAFInputFiltersDistortionWidth - Range table value updated
- rscma\_ConfigureAnalyzerSPDIFInputFiltersDistortionWidth - Range table value updated
- rscma\_ConfigureAnalyzerVoIPDistortionWidth - Range table value updated
- rscma\_ConfigureAudioSource - Range table value updated

\* Deleted:

- rscma\_FetchAudioDelayResult
- rscma\_FetchSPDIFDelayResult
- rscma\_FetchVoIPDelayResult
- rscma\_ConfigureRXSensitivitySearchTargetParameter

## 2.2 Version 1.7.200 / 06 – 2022

\* Support for CMA version 1.7.20

\* New Core 4.3.0

\* New:

- AF Analyzer > Results > Delay (Class)
- Digital (Class)
- rscma\_ConfigureUserDefinedModulationMode
- rscma\_ConfigureUserDefinedModulationInvertedEnabled
- rscma\_ConfigureUserDefinedDataEnabled
- rscma\_QueryXRTGeneratorPEP
- rscma\_ConfigureAudioDisplay
- rscma\_ConfigureAnalyzerAFOutputSource
- rscma\_FetchAudioDelayResult
- rscma\_FetchSPDIFDelayResult
- rscma\_FetchVoIPDelayResult
- rscma\_ConfigureSearchRoutineDisplay
- rscma\_ConfigureTXSensitivityTargetParameter
- rscma\_ConfigureRXBandwidthSearchMaxLevel
- rscma\_ConfigureVSEDisplay
- rscma\_ReadDigitalMeasSpectrumResults
- rscma\_FetchDigitalMeasSpectrumResults
- rscma\_FetchDigitalMeasSpectrumStartFrequency
- rscma\_FetchDigitalMeasSpectrumStopFrequency

\* Updated:

- rscma\_QueryUserDefinedModulationMode - Changed access to R/W, added 2FSK
- rscma\_ConfigureGeneratorAFVoIP - Added AF2 IN to Source parameter
- rscma\_ConfigureAnalyzerVoIPTrigger - Help
- rscma\_ConfigureDigitalMeasStandard - Added Spectrum
- rscma\_ConfigureDigitalIQMeasurementControl - Added Spectrum to Standard parameter
- rscma\_ConfigureDigitalMeasIQRecorderSampleRate - Added Spectrum to Standard parameter

- rscma\_ConfigureSpectrumAnalyzerZeroSpanRBW - Added Bandpass RBW

## 2.3 Version 1.7.100 / 06 – 2021

\* Support for CMA version 1.7.10

\* New Core 4.2.0. 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 classes:

- Generator >> Digital Settings >> DPMR
- XRT Generator
- Search Routines >> TX Common
- Search Routines >> TX Sensitivity
- Digital Standard Measurement >> Configuration >> DPMR Settings
- Digital Standard Measurement >> Configuration >> P25 Settings
- Digital Standard Measurement >> Configuration >> RF Settings
- Digital Standard Measurement >> Configuration >> TETRA Settings
- Base System >> Units

\* New:

- rscma\_QuerySIPReasonProtocol
- rscma\_QuerySIPReasonCause
- rscma\_QuerySIPReasonText
- rscma\_ConfigureGeneratorAFMultitoneTotalLevel
- rscma\_ConfigureAnalyzerAFOutputUpperLimitLevel
- rscma\_ConfigureAnalyzerVoIPURICMA
- rscma\_ConfigureAnalyzerVoIPUpperLimitLevel
- rscma\_QueryAnalyzerVoIPHeadFields
- rscma\_QueryAnalyzerVoIPSquelchState
- rscma\_DisableAnalyzerAllFilters
- rscma\_ConfigureAnalyzerFilterNotchPath
- rscma\_ConfigureAnalyzerDemodulationFilterNotch
- rscma\_ConfigureAnalyzerAFInputFilterNotch
- rscma\_ConfigureAnalyzerSPDIFFilterNotch
- rscma\_ConfigureAnalyzerVoIPFilterNotch
- rscma\_ConfigureAnalyzerDeltaResultsDemodulationFrequencyDeviationMode
- rscma\_AnalyzerDeltaResultsDemodulationFrequencyDeviationUpdate
- rscma\_ConfigureAnalyzerDeltaResultsDemodulationFrequencyDeviationUserValue
- rscma\_QueryAnalyzerDeltaResultsDemodulationFrequencyDeviationMeasuredValue
- rscma\_ConfigureAnalyzerDeltaResultsDemodulationRMSFrequencyDeviationMode
- rscma\_AnalyzerDeltaResultsDemodulationRMSFrequencyDeviationUpdate
- rscma\_ConfigureAnalyzerDeltaResultsDemodulationRMSFreqDeviationUserValue
- rscma\_QueryAnalyzerDeltaResultsDemodulationRMSFreqDeviationMeasuredValue
- rscma\_ConfigureAnalyzerDeltaResultsSPDIFRMSLevelMode
- rscma\_AnalyzerDeltaResultsSPDIFRMSLevelUpdate
- rscma\_ConfigureAnalyzerDeltaResultsSPDIFRMSLevelUserValue
- rscma\_QueryAnalyzerDeltaResultsSPDIFRMSLevelMeasuredValue
- rscma\_ConfigureAnalyzerDeltaResultsVoIPRMSLevelMode
- rscma\_AnalyzerDeltaResultsVoIPRMSLevelUpdate
- rscma\_ConfigureAnalyzerDeltaResultsVoIPRMSLevelUserValue
- rscma\_QueryAnalyzerDeltaResultsVoIPRMSLevelMeasuredValue
- rscma\_QueryAnalyzerRSSICode
- rscma\_ConfigureSearchRoutineOverviewType

- rscma\_ReadRXSensitivitySearchSignalQualityResults
- rscma\_ReadRXSensitivitySearchRFLevelResults
- rscma\_ReadRXSensitivitySearchSignalQualitySingleResults
- rscma\_ReadRXSensitivitySearchSensitivityResult
- rscma\_ReadRXBandwidthSearchSignalQualityResults
- rscma\_ReadRXBandwidthSearchFrequencyResults
- rscma\_ReadRXBandwidthSearchNoiseLevelTraceResults
- rscma\_ReadRXBandwidthSearchNoiseLevelResults
- rscma\_ReadRXBandwidthSearchSingleFrequencyResults
- rscma\_ReadRXBandwidthSearchSingleNoiseLevelResults
- rscma\_ReadRXBandwidthSearchSingleBandwidthResult
- rscma\_ReadRXBandwidthSearchSingleCenterOffsetResult
- rscma\_ConfigureRXSquelchSearchExtent
- rscma\_ReadRXSquelchSearchSignalQualityResults
- rscma\_ReadRXSquelchSearchRFLevelResults
- rscma\_ReadRXSquelchSearchSingleOffLevelResult
- rscma\_ReadRXSquelchSearchSingleOffLevelQualityResult
- rscma\_ReadRXSquelchSearchSingleOnLevelResult
- rscma\_ReadRXSquelchSearchSingleOnLevelQualityResult
- rscma\_ReadRXSquelchSearchSingleTightLevelResult
- rscma\_ReadRXSquelchSearchSingleHysteresisResult
- rscma\_ReadSwitchedSNRSearchSingleResult
- rscma\_SaveDigitalMeasConfiguration
- rscma\_LoadDigitalMeasConfiguration
- rscma\_ConfigureDigitalMeasIQRRecorderSampleRate
- rscma\_ConfigureDigitalMeasIQRRecorderLTEChannelBandwidth
- rscma\_ConfigureDigitalMeasDPMRFSKDeviationErrorLimit
- rscma\_ConfigureDigitalMeasDPMRFSKFrequencyErrorLimit
- rscma\_ConfigureDigitalMeasDPMRMagnitudeErrorLimit
- rscma\_ConfigureDigitalMeasP25FSKDeviationErrorLimit
- rscma\_ConfigureDigitalMeasP25FSKFrequencyErrorLimit
- rscma\_ConfigureDigitalMeasP25ModulationFidelityErrorLimit
- rscma\_ReadDigitalMeasDPMRSymbols
- rscma\_FetchDigitalMeasDPMRSymbols
- rscma\_QueryDigitalMeasRFResults
- rscma\_ReadDigitalMeasFSKDeviationErrorResults
- rscma\_FetchDigitalMeasFSKDeviationErrorResults
- rscma\_QueryDigitalMeasFSKDeviationErrorResults
- rscma\_QueryDigitalMeasFSKFreqErrorResults
- rscma\_QueryDigitalMeasMagnitudeErrorResults
- rscma\_ReadDigitalMeasPhaseErrorResults
- rscma\_FetchDigitalMeasPhaseErrorResults
- rscma\_QueryDigitalMeasPhaseErrorResults
- rscma\_ReadDigitalMeasEVMResults
- rscma\_FetchDigitalMeasEVMResults
- rscma\_QueryDigitalMeasEVMResults
- rscma\_ReadDigitalMeasP25ModulationFidelityResults
- rscma\_FetchDigitalMeasP25ModulationFidelityResults
- rscma\_QueryDigitalMeasP25ModulationFidelityResults
- rscma\_ReadDigitalMeasLTEEVMResultsCurrent
- rscma\_FetchDigitalMeasLTEEVMResultsCurrent
- rscma\_ReadDigitalMeasLTEModulationResultsCurrent
- rscma\_FetchDigitalMeasLTEModulationResultsCurrent
- rscma\_ReadDigitalMeasLTEPowerResultsCurrent
- rscma\_FetchDigitalMeasLTEPowerResultsCurrent
- rscma\_FetchDigitalMeasSymbolDistributionXResults
- rscma\_ConfigureSpectrumAnalyzerTrackingGeneratorVSWRMode
- rscma\_ConfigureFFTSpectrumAllMarkersEnabled
- rscma\_ConfigureGlobalDisplayLanguage

- rscma\_GetAttributeRepCapName

\* Updated:

- All attributes with RS\_VAL\_RAWSTRING data type renamed to RSCMA\_ATTR\_HIDDEN\_...
- rscma\_QueryDMRPulseShape - Parameter Impulse Length no longer used
- rscma\_QueryNXDNPulseShape - Parameter Impulse Length no longer used
- rscma\_ConfigureAnalyzerAFDemodulator - Parameters State Left, State Right are no longer used
- rscma\_ConfigureAnalyzerDemodulationTrigger - Parameters State, Repetition are no longer used
- rscma\_ConfigureAnalyzerAFTrigger - Parameter State is no longer used
- rscma\_ConfigureAnalyzerSPDIFTrigger - Parameter State is no longer used
- rscma\_ConfigureAnalyzerVoIPTrigger - Parameter State is no longer used
- rscma\_ConfigureAnalyzerDeltaResultsSPDIFLevelMode - SCPI command updated
- rscma\_AnalyzerDeltaResultsSPDIFLevelUpdate - SCPI command updated
- rscma\_ConfigureAnalyzerDeltaResultsSPDIFLevelUserValue - SCPI command updated
- rscma\_QueryAnalyzerDeltaResultsSPDIFLevelMeasuredValue - SCPI command updated
- rscma\_ConfigureAnalyzerDeltaResultsVoIPLevelMode - SCPI command updated
- rscma\_AnalyzerDeltaResultsVoIPLevelUpdate - SCPI command updated
- rscma\_ConfigureAnalyzerDeltaResultsVoIPLevelUserValue - SCPI command updated
- rscma\_QueryAnalyzerDeltaResultsVoIPLevelMeasuredValue - SCPI command updated
- rscma\_ReadAnalyzerDemodulationResults - Values Frequency Deviation Peak, Frequency Deviation RMS added to Measurement Type
- rscma\_FetchAnalyzerDemodulationResults - Values Frequency Deviation Peak, Frequency Deviation RMS added to Measurement Type
- rscma\_ConfigureSearchRoutineMode - SCPI command updated
- rscma\_ConfigureSearchRoutineRXSettlingTime - SCPI command updated
- rscma\_ConfigureSearchRoutineRXAdditionalPoints - SCPI command updated
- rscma\_ConfigureDigitalMeasurementStatistics - Parameter Stop Condition is no longer used
- rscma\_ConfigureDigitalMeasStandard - Value DPMR added to Standard
- rscma\_QueryDigitalMeasDMRPulseShape - Parameters Impulse Length, Roll-Off Factor are no longer used
- rscma\_ConfigureCMASound - Parameter CMA Source is no longer used
- rscma\_SystemVersion - SCPI command updated

\* Deleted:

- rscma\_ApplyVoIPFrequency
- rscma\_IPCInit
- rscma\_QueryIPCStatus
- rscma\_QueryIPCResult
- rscma\_ApplyAnalyzerVoIPFrequency
- rscma\_ConfigureAnalyzerDemodulationFilterDistortionFrequency
- rscma\_ConfigureAnalyzerAFInputLimits
- rscma\_ReadAnalyzerAFInputResults
- rscma\_FetchAnalyzerAFInputResults
- rscma\_ReadAnalyzerMultitoneResults
- rscma\_FetchAnalyzerMultitoneResults
- rscma\_ConfigureSearchRoutineAudioPath
- rscma\_ReadDigitalMeasDMRSymbolsHexadecimal
- rscma\_FetchDigitalMeasDMRSymbolsHexadecimal
- rscma\_ReadDigitalMeasNXDNSymbolsHexadecimal
- rscma\_FetchDigitalMeasNXDNSymbolsHexadecimal
- rscma\_ReadDigitalMeasTETRASymbolsHexadecimal
- rscma\_FetchDigitalMeasTETRASymbolsHexadecimal
- rscma\_CheckAttributeXXX
- rscma\_SetAttributeViSession
- rscma\_GetAttributeViSession
- rscma\_ReadInstrData
- rscma\_SetAttributeRawString - use rscma\_SetAttributeViString
- rscma\_GetAttributeRawString - use rscma\_GetAttributeViString

## 2.4 Version 1.5.610 / 10 – 2020

\* New core 3.11.0

\* New (33 items):

- rscma\_ConfigureGeneratorAFInternalGeneratorDualTone
- rscma\_ConfigureGeneratorDialingDTMFResetToStandard
- rscma\_ConfigureGeneratorDialingSelCallResetToStandard
- rscma\_ConfigureGeneratorDialingSELCALResetToStandard
- rscma\_ConfigureVoIPURIPort
- rscma\_ConfigureGeneratorILSGlideSlopeAFFrequencyEnabled
- rscma\_ConfigureAnalyzerDisplay
- rscma\_ConfigureAnalyzerFindRFSignalBurstSignalEnabled
- rscma\_ConfigureAnalyzerAFFirstInputMaximumLevel
- rscma\_ConfigureAnalyzerAFSecondInputMaximumLevel
- rscma\_ConfigureAnalyzerAFFirstOutputLevel
- rscma\_ConfigureAnalyzerAFSecondOutputLevel
- rscma\_ConfigureAnalyzerVoIPURIPort
- rscma\_ConfigureAnalyzerDeltaResultsDemodulationModulationDepthMode
- rscma\_AnalyzerDeltaResultsDemodulationModulationDepthUpdate
- rscma\_ConfigureAnalyzerDeltaResultsDemodulationModulationDepthUserValue
- rscma\_QueryAnalyzerDeltaResultsDemodulationModulationDepthMeasuredValue
- rscma\_ConfigureAnalyzerDTMFTonesResetToStandard
- rscma\_ConfigureAnalyzerSelCallResetToStandard
- rscma\_ConfigureAnalyzerSELCALResetToStandard
- rscma\_ConfigureAnalyzerDemodulationLimitsExtended
- rscma\_ConfigureAnalyzerAFInputLimitsExtended
- rscma\_ConfigureAnalyzerSPDIFLimitsExtended
- rscma\_ConfigureAnalyzerVoIPLimitsExtended
- rscma\_ReadAnalyzerRFCarrierFrequencyResult
- rscma\_FetchAnalyzerRFCarrierFrequencyResult
- rscma\_ReadDeltaAnalyzerDemodulationResult
- rscma\_FetchDeltaAnalyzerDemodulationResult
- rscma\_FetchRXSensitivitySearchSensitivityResult
- rscma\_QueryRXSensitivitySearchSensitivityErrorCode
- rscma\_FetchRXBandwidthSearchNoiseLevelTraceResults
- rscma\_FetchRXBandwidthSearchNoiseLevelResults
- rscma\_ConfigureSwitchedSNRSearchAFSource

\* Updated (12 items):

- rscma\_ConfigureNXDNDDataPRBSSeedValue: - new default value
- rscma\_ConfigureUserDefinedData: - new default value and range for Sequence Length
- rscma\_ConfigureUserDefinedPulseShape: - new range & default value for Bandwidth
- rscma\_ConfigureAnalyzerAFInput: - new range and default value for Maximum Level
- rscma\_ConfigureAnalyzerVoIP: - updated range table for Generator Coupling
- rscma\_ConfigureAnalyzerDemodulationFilters: - new default val for Highpass Filter
- rscma\_FetchAnalyzerOscilloscopeResults: - added item to Input Type
- rscma\_ReadDeltaAnalyzerSignalFrequencyResult: - added items to Meas & Result
- rscma\_FetchDeltaAnalyzerSignalFrequencyResult: - added items to Meas & Result
- rscma\_ConfigureFFTSpectrumTrigger: - new range for Offset
- rscma\_ConfigureScenario: - updated range table
- rscma\_ConfigureTracingFile: - new default value for Start Mode and Stop Mode
- rscma\_ConfigureAnalyzerRFSignal: order changed - External Attenuation sent before Expected

Power



## 2.5 Version 1.5.600 / 05 – 2020

\* Support for CMA version 1.5.60

\* New core 3.8.0

\* Deleted:

- rscma\_SetTimeout(), rscma\_GetTimeout() - use the existing rscma\_SetOPCTimeout()  
rscma\_GetOPCTimeout()

\* New classes:

- Generator >> Digital Settings >> User Defined (Class)
- Generator >> Digital Settings >> ZigBee (Class)
- Digital Standard Measurement >> Configuration >> IQ Recorder (Class)
- Digital Standard Measurement >> Configuration >> NXDN (Class)
- AF Analyzer >> Configuration >> Delta Results
- AF Analyzer >> Results >> Multitone
- AF Analyzer >> Results >> Delta
- Search Routines >> RX Common
- Search Routines >> RX Bandwidth
- Search Routines >> RX Squelch
- Search Routines >> Switched SNR

\* New:

- rscma\_ConfigureAnalyzerMultitoneStatisticCount
- rscma\_ConfigureAnalyzerFindRFSignalFixExpPower
- rscma\_ConfigureAnalyzerFindRFSignalMode
- rscma\_ConfigureAnalyzerDemodulationFilterRobustMode
- rscma\_ConfigureAnalyzerAFFilterRobustMode
- rscma\_ConfigureAnalyzerSPDIFilterRobustMode
- rscma\_ConfigureSearchRoutineMode
- rscma\_ConfigureSearchRoutineSignalQualityType
- rscma\_ConfigureSearchRoutineSignalQualityValue
- rscma\_QueryVoIPPCMCodec
- rscma\_ConfigureDigitalMeasStandard
- rscma\_QueryDigitalMeasDMRPulseShapeRRCRollOffFactor
- rscma\_ConfigureDigitalMeasNXDNFSKDeviationErrorLimit
- rscma\_ConfigureDigitalMeasNXDNFreqErrorLimit
- rscma\_ConfigureDigitalMeasNXDNMagnitudeErrorLimit
- rscma\_ConfigureDigitalMeasTETRAEVMLimit
- rscma\_ConfigureDigitalMeasTETRAMagnitudeErrorLimit
- rscma\_QueryDigitalMeasurementMainState
- rscma\_ReadDigitalMeasDMRSymbolsHexadecimal
- rscma\_FetchDigitalMeasDMRSymbolsHexadecimal
- rscma\_ReadDigitalMeasFSKDeviationResults
- rscma\_FetchDigitalMeasFSKDeviationResults
- rscma\_ReadDigitalMeasFSKFreqErrorResults
- rscma\_FetchDigitalMeasFSKFreqErrorResults
- rscma\_ReadDigitalMeasMagnitudeErrorResults
- rscma\_FetchDigitalMeasMagnitudeErrorResults
- rscma\_ReadDigitalMeasNXDNSymbols
- rscma\_FetchDigitalMeasNXDNSymbols
- rscma\_ReadDigitalMeasNXDNSymbolsHexadecimal
- rscma\_FetchDigitalMeasNXDNSymbolsHexadecimal
- rscma\_ReadDigitalMeasPVTResults
- rscma\_FetchDigitalMeasPVTResults
- rscma\_ReadDigitalMeasConstellationFrequencyResults
- rscma\_FetchDigitalMeasConstellationFrequencyResults
- rscma\_ReadDigitalMeasConstellationIQResults

- rscma\_FetchDigitalMeasConstellationIQResults
- rscma\_ReadDigitalMeasSymbolDistributionResults
- rscma\_FetchDigitalMeasSymbolDistributionResults
- rscma\_ReadDigitalMeasTETRASymbols
- rscma\_FetchDigitalMeasTETRASymbols
- rscma\_ReadDigitalMeasTETRASymbolsHexadecimal
- rscma\_FetchDigitalMeasTETRASymbolsHexadecimal
- rscma\_ReadDigitalMeasEyeDiagramResults
- rscma\_FetchDigitalMeasEyeDiagramResults
- rscma\_FetchFFTSpectrumTimeDomain

\* Updated:

- rscma\_ConfigureDigitalDataSource - added new items User Defined, ZigBee
- rscma\_ConfigureDMRData - update 1031 and new items O153, C153
- rscma\_ConfigureGeneratorAFInternalGeneratorToneMode - add new item DualTone
- rscma\_QueryAnalyzerDemodulationMeasurementTime - command was modified
- rscma\_QueryAnalyzerAFMeasurementTime - command was modified
- rscma\_QueryAnalyzerSPDIFMeasurementTime - command was modified
- rscma\_QueryAnalyzerVoIPMeasurementTime - command was modified
- rscma\_ConfigureAnalyzerOscilloscopeXDivision - all commands was modified
- rscma\_ConfigureDigitalMeasurementStatistics - all commands was modified
- rscma\_ConfigureDigitalMeasResults - change cmds add constellation parameter
- rscma\_QueryDigitalMeasDMRDemodulationMode - command was modified
- rscma\_QueryDigitalMeasDMRDemodulationSymbolRate - command was modified
- rscma\_QueryDigitalMeasDMRPulseShape - command was modified for Filter
- rscma\_ConfigureDigitalMeasDMRFDErrorLimit - command was modified
- rscma\_ConfigureDigitalMeasDMRFreqErrorLimit - commands was modified
- rscma\_ConfigureDigitalMeasDMRMagnitudeErrorLimit - commands was modified
- rscma\_ConfigureDigitalMeasRFCarrierFreqErrorLimit - command was modified
- rscma\_ConfigureDigitalMeasRFPowerLimit - command was modified
- rscma\_InitializeDigitalMeasurement - command was modified
- rscma\_StopDigitalMeasurement - command was modified
- rscma\_AbortDigitalMeasurement - command was modified
- rscma\_QueryDigitalMeasurementStatus - command was modified
- rscma\_ReadDigitalMeasDMRSymbols - command was modified
- rscma\_FetchDigitalMeasDMRSymbols - command was modified
- rscma\_ReadDigitalMeasRFResults - commands was modified
- rscma\_FetchDigitalMeasRFResults - commands was modified
- rscma\_FetchSpectrumAnalyzerResults - add new Zero Span and Frequency Sweep
- rscma\_FetchFFTSpectrumPower - added X Values

## 2.6 Version 1.5.502 / 03 – 2019

\* Fixed:

- rscma\_ConfigureGeneratorAFModulationState
- rscma\_ConfigureGeneratorAFSPDIFOutputState

## 2.7 Version 1.5.501 / 02 – 2019

\* New:

- rscma\_ConfigureSpectrumAnalyzerRFSettings
- rscma\_ConfigureSpectrumAnalyzerRFConnector

## 2.8 Version 1.5.500 / 01 – 2019

\* New core 3.x

\* New:

- Subsystem Generator -> Digital Settings
- Subsystem Search Routines
- Subsystem Digital Standard Measurement
- Subsystem Base System -> AF Impedance
- rscma\_QueryGeneratorVoIPPTTIndicator
- rscma\_ConfigureGeneratorARBRRange
- rscma\_ConfigureVoIPURICMA
- rscma\_QueryAnalyzerVoIPPCMCodec
- rscma\_ConfigureApplyVoIPSettingsToMeasurementRF
- rscma\_ConfigureGeneratorVORAFDeviation
- rscma\_ConfigureGeneratorILSLocalizerAFFrequency
- rscma\_ConfigureAnalyzerDialingStartTimeout
- rscma\_ConfigureAnalyzerDialingEndTimeout
- rscma\_ConfigureAnalyzerFindRFSignal
- rscma\_ConfigureAnalyzerFindRFSignalLimitFreqRange
- rscma\_ConfigureAnalyzerAFInputFrequencyCounter
- rscma\_ConfigureAnalyzerSelCallTonesMeasurementAccuracy
- rscma\_ConfigureAnalyzerFreeDialingTonesMeasurementAccuracy
- rscma\_ConfigureAnalyzerFFTAllMarkersEnabled
- rscma\_ConfigureAnalyzerFFTMarkerPlacement
- rscma\_ReadAnalyzerToneRepetitions
- rscma\_FetchAnalyzerToneRepetitions
- rscma\_FetchAnalyzerFFTMarkerPosition
- rscma\_FetchAnalyzerFFTMarkerPositionSearch
- rscma\_FetchSpectrumAnalyzerFrequencyMarkerPositionValue
- rscma\_FetchSpectrumAnalyzerZeroSpanMarkerPositionValue
- rscma\_ConfigureEPSApertureTime
- rscma\_ConfigurePowerMeasurementRFConnector
- rscma\_ConfigureFFTSpectrumRFConnector
- rscma\_FetchFFTSpectrumAnalyzerFrequencyMarkerPosition
- rscma\_FetchFFTSpectrumAnalyzerFrequencyMarkerPositionValue
- rscma\_SystemReset
- rscma\_ResetAll
- rscma\_ResetBase
- rscma\_RestartDevice
- rscma\_SystemShutdown
- rscma\_SystemShutdownDevice
- rscma\_SetOPCTimeout
- rscma\_GetOPCTimeout
- rscma\_ConfigureAutoSystemErrQuery
- rscma\_ConfigureMultiThreadLocking

\* Updated:

- rscma\_ConfigureGeneratorRFSignal
- rscma\_ConfigureGeneratorARBCharacteristics
- rscma\_ConfigureGeneratorAFVoIP
- rscma\_ConfigureVoIP
- rscma\_ConfigureGeneratorVORRFSettings
- rscma\_ConfigureAnalyzerRFSignal
- rscma\_ConfigureAnalyzerChannelRFSignal
- rscma\_ConfigureAnalyzerVoIP
- rscma\_ApplyAnalyzerVoIPFrequency
- rscma\_QueryAnalyzerVoIPFrequency

- rscma\_ConfigureAnalyzerDemodulationFilterDistortionFrequency
- rscma\_ConfigureAnalyzerDTMFTone
- rscma\_ConfigureAnalyzerFreeDialingTone
- rscma\_QueryAnalyzerSIPConnectionState
- rscma\_QueryAnalyzerSIPResponse
- rscma\_QueryAnalyzerSIPCode
- rscma\_ConfigureGeneratorFreeDialingDualToneList

\* Deleted:

- rscma\_ConfigureAnalyzerDialingTimeout - replaced with rscma\_ConfigureAnalyzerDialingStartTimeout and rscma\_ConfigureAnalyzerDialingEndTimeout
- rscma\_ConfigureImpedanceMatchingUnit

\* New attributes:

- RSCMA\_ATTR\_VOIP\_PTT\_INDICATOR (VoIP PTT Indicator)
- RSCMA\_ATTR\_VOIP\_URI\_CMA (VoIP URI CMA)
- RSCMA\_ATTR\_VOIP\_APPLY\_TO\_MEASUREMENT\_RF (VoIP Apply To Measurement RF)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_DEVIATION\_ENABLED (Generator VOR AF Deviation Enabled)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOCALIZER\_AF\_FREQUENCY\_LEFT\_ENABLED (Generator ILS Localizer AF Frequency Left Enabled)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOCALIZER\_AF\_FREQUENCY\_RIGHT\_ENABLED (Generator ILS Localizer AF Frequency Right Enabled)
- RSCMA\_ATTR\_DIGITAL\_DATA\_SOURCE (Digital Data Source)
- RSCMA\_ATTR\_DMR\_MODULATION\_MODE (DMR Modulation Mode)
- RSCMA\_ATTR\_DMR\_DATA\_PATTERN (DMR Data Pattern)
- RSCMA\_ATTR\_DMR\_DATA\_PRBS\_SEED\_VALUE (DMR Data PRBS Seed Value)
- RSCMA\_ATTR\_DMR\_DATA\_SYMBOL\_RATE (DMR Data Symbol Rate)
- RSCMA\_ATTR\_DMR\_DATA\_COLOUR\_CODE (DMR Data Colour Code)
- RSCMA\_ATTR\_DMR\_DATA\_SOURCE\_ADDRESS (DMR Data Source Address)
- RSCMA\_ATTR\_DMR\_DATA\_GROUP\_ADDRESS (DMR Data Group Address)
- RSCMA\_ATTR\_DMR\_PULSE\_SHAPE\_FILTER (DMR Pulse Shape Filter)
- RSCMA\_ATTR\_DMR\_PULSE\_SHAPE\_IMPULSE\_LENGTH (DMR Pulse Shape Impulse Length)
- RSCMA\_ATTR\_DMR\_PULSE\_SHAPE\_ROLLOFF\_FACTOR (DMR Pulse Shape Roll-Off Factor)
- RSCMA\_ATTR\_NXDN\_MODULATION\_TRANSMISSION (NXDN Modulation Transmission)
- RSCMA\_ATTR\_NXDN\_MODULATION\_MODE (NXDN Modulation Mode)
- RSCMA\_ATTR\_NXDN\_DATA\_PATTERN (NXDN Data Pattern)
- RSCMA\_ATTR\_NXDN\_DATA\_PRBS\_SEED\_VALUE (NXDN Data PRBS Seed Value)
- RSCMA\_ATTR\_NXDN\_DATA\_SYMBOL\_RATE (NXDN Data Symbol Rate)
- RSCMA\_ATTR\_NXDN\_DATA\_RAN (NXDN Data RAN)
- RSCMA\_ATTR\_NXDN\_DATA\_SOURCE\_UNIT\_ID (NXDN Data Source Unit ID)
- RSCMA\_ATTR\_NXDN\_DATA\_DESTINATION\_UNIT\_ID (NXDN Data Destination Unit ID)
- RSCMA\_ATTR\_NXDN\_PULSE\_SHAPE\_FILTER (NXDN Pulse Shape Filter)
- RSCMA\_ATTR\_NXDN\_PULSE\_SHAPE\_IMPULSE\_LENGTH (NXDN Pulse Shape Impulse Length)
- RSCMA\_ATTR\_NXDN\_PULSE\_SHAPE\_ROLLOFF\_FACTOR (NXDN Pulse Shape Roll-Off Factor)
- RSCMA\_ATTR\_POCSAG\_MODULATION\_MODE (POCSAG Modulation Mode)
- RSCMA\_ATTR\_POCSAG\_MODULATION\_DEVIATION (POCSAG Modulation Deviation)
- RSCMA\_ATTR\_POCSAG\_MODULATION\_INVERTED (POCSAG Modulation Inverted)
- RSCMA\_ATTR\_POCSAG\_DATA\_SYMBOL\_RATE (POCSAG Data Symbol Rate)
- RSCMA\_ATTR\_POCSAG\_DATA\_PAGER\_ADDRESS (POCSAG Data Pager Address)
- RSCMA\_ATTR\_POCSAG\_DATA\_FUNCTION\_BITS (POCSAG Data Function Bits)
- RSCMA\_ATTR\_POCSAG\_DATA\_PAGER\_TYPE (POCSAG Data Pager Type)
- RSCMA\_ATTR\_POCSAG\_DATA\_MESSAGE\_CONTENT (POCSAG Data Message Content)
- RSCMA\_ATTR\_P25\_MODULATION\_MODE (P25 Modulation Mode)
- RSCMA\_ATTR\_P25\_DATA\_PATTERN (P25 Data Pattern)
- RSCMA\_ATTR\_P25\_DATA\_C4FM\_SYMBOL\_RATE (P25 Data C4FM Symbol Rate)
- RSCMA\_ATTR\_P25\_DATA\_CQPSK\_SYMBOL\_RATE (P25 Data CQPSK Symbol Rate)
- RSCMA\_ATTR\_P25\_DATA\_NAC (P25 Data NAC)
- RSCMA\_ATTR\_P25\_DATA\_TALK\_GROUP\_ID (P25 Data Talk Group ID)

- RSCMA\_ATTR\_P25\_DATA\_SOURCE\_ID (P25 Data Source ID)
- RSCMA\_ATTR\_P25\_DATA\_EMERGENCY\_ENABLED (P25 Data Emergency Enabled)
- RSCMA\_ATTR\_P25\_PULSE\_SHAPE\_C4FM\_FILTER (P25 Pulse Shape C4FM Filter)
- RSCMA\_ATTR\_P25\_PULSE\_SHAPE\_C4FM\_IMPULSE\_LENGTH (P25 Pulse Shape C4FM Impulse Length)
- RSCMA\_ATTR\_P25\_PULSE\_SHAPE\_C4FM\_ROLLOFF\_FACTOR (P25 Pulse Shape C4FM Roll-Off Factor)
- RSCMA\_ATTR\_P25\_PULSE\_SHAPE\_CQPSK\_FILTER (P25 Pulse Shape CQPSK Filter)
- RSCMA\_ATTR\_P25\_PULSE\_SHAPE\_CQPSK\_IMPULSE\_LENGTH (P25 Pulse Shape CQPSK Impulse Length)
- RSCMA\_ATTR\_P25\_PULSE\_SHAPE\_CQPSK\_ROLLOFF\_FACTOR (P25 Pulse Shape CQPSK Roll-Off Factor)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_DETECTION\_MODE (Analyzer Find RF Signal Detection Mode)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_TIMEOUT (Analyzer Find RF Signal Timeout)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_AUTOMATICALLY\_APPLY\_ENABLED (Analyzer Find RF Signal Automatically Apply Enabled)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_AUDIO\_GEN\_COUPLING (Analyzer Find RF Signal Audio Gen Coupling)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_AUDIO\_FREQUENCY (Analyzer Find RF Signal Audio Frequency)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_LIMIT\_FREQ\_RANGE\_ENABLED (Analyzer Find RF Signal Limit Freq Range Enabled)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_LIMIT\_FREQ\_RANGE\_LOWER (Analyzer Find RF Signal Limit Freq Range Lower)
- RSCMA\_ATTR\_ANALYZER\_FIND\_RF\_SIGNAL\_LIMIT\_FREQ\_RANGE\_UPPER (Analyzer Find RF Signal Limit Freq Range Upper)
- RSCMA\_ATTR\_ANALYZER\_AF\_INPUT\_FREQUENCY\_COUNTER (Analyzer AF Input Frequency Counter)
- RSCMA\_ATTR\_ANALYZER\_VOIP\_URI\_CMA (Analyzer VoIP URI CMA)
- RSCMA\_ATTR\_ANALYZER\_VOIP\_PCM\_CODEC (Analyzer VoIP PCM Codec)
- RSCMA\_ATTR\_ANALYZER\_VOIP\_APPLY\_TO\_MEASUREMENT\_RF (Analyzer VoIP Apply To Measurement RF)
- RSCMA\_ATTR\_ANALYZER\_FREE\_DIALING\_TONES\_MEASUREMENT\_ACCURACY (Analyzer Free Dialing Tones Measurement Accuracy)
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_TONES\_MEASUREMENT\_ACCURACY (Analyzer Sel Call Tones Measurement Accuracy)
- RSCMA\_ATTR\_ANALYZER\_FFT\_ALL\_MARKERS\_ENABLED (Analyzer FFT All Markers Enabled)
- RSCMA\_ATTR\_ANALYZER\_FFT\_MARKER\_PLACEMENT (Analyzer FFT Marker Placement)
- RSCMA\_ATTR\_SEARCH\_ROUTINE\_AUDIO\_PATH (Search Routine Audio Path)
- RSCMA\_ATTR\_INITIALIZE\_SEARCH\_ROUTINE (Initialize Search Routine)
- RSCMA\_ATTR\_STOP\_SEARCH\_ROUTINE (Stop Search Routine)
- RSCMA\_ATTR\_ANALYZER\_ABORT\_SEARCH\_ROUTINE (Abort Search Routine)
- RSCMA\_ATTR\_RX\_SENSITIVITY\_SEARCH\_MAXIMUM\_RF\_LEVEL (RX Sensitivity Search Maximum RF Level)
- RSCMA\_ATTR\_RX\_SENSITIVITY\_SEARCH\_DIALING\_BEFORE\_MEASUREMENT\_ENABLED (RX Sensitivity Search Dialing Before Measurement Enabled)
- RSCMA\_ATTR\_RX\_SENSITIVITY\_SEARCH\_TARGET\_PARAMETER (RX Sensitivity Search Target Parameter)
- RSCMA\_ATTR\_RX\_SENSITIVITY\_SEARCH\_TARGET\_PARAMETER\_VALUE (RX Sensitivity Search Target Parameter Value)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_STATISTIC\_COUNT (Digital Meas Statistic Count)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_PVT\_RESULT\_ENABLED (Digital Meas PVT Result Enabled)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_EYE\_DIAGRAM\_RESULT\_ENABLED (Digital Meas Eye Diagram Result Enabled)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_SYMBOL\_DISTRIBUTION\_RESULT\_ENABLED (Digital Meas Symbol Distribution Result Enabled)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_STATISTIC\_REPETITION\_MODE (Digital Meas Statistic Repetition Mode)

- RSCMA\_ATTR\_DIGITAL\_MEAS\_STATISTIC\_REPETITION\_COUPLING\_ENABLED (Digital Meas Statistic Repetition Coupling Enabled)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_STATISTIC\_REPETITION\_AUTOMATIC\_MODE\_ENABLED (Digital Meas Statistic Repetition Automatic Mode Enabled)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_STOP\_CONDITION (Digital Meas Stop Condition)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_TIMEOUT (Digital Meas Timeout)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_DMR\_DEMODULATION\_MODE (Digital Meas DMR Demodulation Mode)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_DMR\_DEMODULATION\_SYMBOL\_RATE (Digital Meas DMR Demodulation Symbol Rate)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_DMR\_PULSE\_SHAPE\_FILTER (Digital Meas DMR Pulse Shape Filter)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_DMR\_PULSE\_SHAPE\_IMPULSE\_LENGTH (Digital Meas DMR Pulse Shape Impulse Length)
- RSCMA\_ATTR\_DIGITAL\_MEAS\_DMR\_PULSE\_SHAPE\_ROLLOFF\_FACTOR (Digital Meas DMR Pulse Shape Roll-Off Factor)
- RSCMA\_ATTR\_INITIALIZE\_DIGITAL\_MEASUREMENT (Initialize Digital Measurement)
- RSCMA\_ATTR\_STOP\_DIGITAL\_MEASUREMENT (Stop Digital Measurement)
- RSCMA\_ATTR\_ABORT\_DIGITAL\_MEASUREMENT (Abort Digital Measurement)
- RSCMA\_ATTR\_EPS\_APERTURE\_TIME (EPS Aperture Time)
- RSCMA\_ATTR\_FFT\_SPECTRUM\_ANALYZER\_ALL\_MARKERS\_ENABLED (FFT Spectrum Analyzer All Markers Enabled)
- RSCMA\_ATTR\_FFT\_SPECTRUM\_ANALYZER\_MARKER\_PLACEMENT (FFT Spectrum Analyzer Marker Placement)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_INPUT\_EXTERNAL\_CIRCUITRY (AF Impedance Input External Circuitry)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_INPUT\_ATTENUATOR\_ENABLED (AF Impedance Input Attenuator Enabled)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_INPUT\_R\_Z600A (AF Impedance Input R Z600A)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_OUTPUT\_EXTERNAL\_CIRCUITRY (AF Impedance Output External Circuitry)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_OUTPUT\_R\_Z600A (AF Impedance Output R Z600A)
- RSCMA\_ATTR\_SYSTEM\_RESET (System Reset)
- RSCMA\_ATTR\_SYSTEM\_RESET\_ALL (System Reset All)
- RSCMA\_ATTR\_SYSTEM\_RESET\_BASE (System Reset Base)
- RSCMA\_ATTR\_SYSTEM\_RESTART\_DEVICE (System Restart Device)
- RSCMA\_ATTR\_SYSTEM\_SHUTDOWN (System Shutdown)
- RSCMA\_ATTR\_SYSTEM\_SHUTDOWN\_DEVICE (System Shutdown Device)

\* Modified attributes:

- RSCMA\_ATTR\_VOIP\_URI\_USER (VoIP URI User) - Data type modified (ViInt32 to ViString)
- RSCMA\_ATTR\_VOIP\_FREQUENCY\_ID (VoIP Frequency ID) - new range: <0.1;999.99>
- RSCMA\_ATTR\_GENERATOR\_RF\_EXTERNAL\_ATTENUATION (Generator RF External Attenuation) - new range: <-50;90>
- RSCMA\_ATTR\_ARB\_TRIGGER\_DELAY (ARB Trigger Delay) - new range: <0;100>
- RSCMA\_ATTR\_GENERATOR\_DCS\_TONE\_TURN\_OFF\_CODE\_LENGTH (Generator DCS Tone Turn Off Code Length) - Changed range
- RSCMA\_ATTR\_GENERATOR\_SEL\_CALL\_STANDARD (Generator Sel Call Standard) - New standards supported
- RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_EXTERNAL\_ATTENUATION (Generator VOR RF External Attenuation) - new range: <-50;90>
- RSCMA\_ATTR\_ANALYZER\_RF\_EXTERNAL\_ATTENUATION (Analyzer RF External Attenuation) - new range: <-50;90>
- RSCMA\_ATTR\_ANALYZER\_CHANNEL\_OFFSET (Analyzer Channel Offset) - new range: <2;2>
- RSCMA\_ATTR\_ANALYZER\_SIP\_CONNECTION\_STATE (Analyzer SIP Connection State) - Short command was modified
- RSCMA\_ATTR\_ANALYZER\_SIP\_CODE (Analyzer SIP Code) - Short command was modified
- RSCMA\_ATTR\_ANALYZER\_SIP\_RESPONSE (Analyzer SIP Response) - Short command was modified

- RSCMA\_ATTR\_ANALYZER\_VOIP\_ENABLED (Analyzer VoIP Enabled) - Short command was modified
- RSCMA\_ATTR\_ANALYZER\_VOIP\_URI\_USER (Analyzer VoIP URI User) - Data type modified (ViInt32 to ViString)
- RSCMA\_ATTR\_ANALYZER\_VOIP\_URI\_IP (Analyzer VoIP URI IP) - Short command was modified
- RSCMA\_ATTR\_ANALYZER\_VOIP\_GENERATOR\_COUPLING (Analyzer VoIP Generator Coupling) - Short command was modified
- RSCMA\_ATTR\_ANALYZER\_VOIP\_FREQUENCY\_ID (Analyzer VoIP Frequency ID) - Data type changed (ViInt32 to ViReal64)
- RSCMA\_ATTR\_ANALYZER\_APPLY\_VOIP\_FREQUENCY (Analyzer Apply VoIP Frequency) - Short command was modified
- RSCMA\_ATTR\_ANALYZER\_RF\_BANDPASS\_FILTER (Analyzer RF Bandpass Filter) - New range table values, now is writable
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_REPETITION (Analyzer Demodulation Trigger Repetition) - Changed command
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_FM\_THRESHOLD (Analyzer Demodulation Trigger FM Threshold) - new range: <-96;96>
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_STATE (Analyzer Demodulation Trigger State) - Changed command
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_REPETITION (Analyzer AF Trigger Repetition) - Changed command
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_COUPLING (Analyzer AF Trigger Coupling) - Added VoIP
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_REPETITION (Analyzer SPDIF Trigger Repetition) - Changed command
- RSCMA\_ATTR\_ANALYZER\_DTMF\_TONES\_SEQUENCE\_LENGTH (Analyzer DTMF Tones Sequence Length) - new range: <1;42>
- RSCMA\_ATTR\_ANALYZER\_FREE\_DIALING\_TONES\_SEQUENCE\_LENGTH (Analyzer Free Dialing Tones Sequence Length) - new range: <1;42>
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_TONES\_STANDARD (Analyzer Sel Call Tones Standard) - New standards supported
- RSCMA\_ATTR\_RF\_EXTERNAL\_ATTENUATION (RF External Attenuation) - new range: <-50;90>

\* Deleted attributes:

- RSCMA\_ATTR\_ARB\_RANGE (ARB Range)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_BOX\_ENABLED (AF Impedance Box Enabled)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_BOX\_IMPEDANCE (AF Impedance Box Impedance)

\* Modified Range Tables:

- rscma\_rngExtAtt - RSCMA\_ATTR\_GENERATOR\_RF\_EXTERNAL\_ATTENUATION, RSCMA\_ATTR\_ANALYZER\_RF\_EXTERNAL\_ATTENUATION, RSCMA\_ATTR\_RF\_EXTERNAL\_ATTENUATION  
Range changed to <-50.0;90.0>
- rscma\_rngARBTriggerDelay - RSCMA\_ATTR\_ARB\_TRIGGER\_DELAY  
Range changed to <0.0;100.0>
- RsCma\_rngGeneratorVORExternalAttenuation - RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_EXTERNAL\_ATTENUATION  
Range changed to <-50;90>
- RsCma\_rngAnalyzerDTMFTonesSequenceLength - RSCMA\_ATTR\_ANALYZER\_DTMF\_TONES\_SEQUENCE\_LENGTH  
Range changed to <1;42>
- RsCma\_rngAnalyzerFreeDialingTonesSequenceLength - RSCMA\_ATTR\_ANALYZER\_FREE\_DIALING\_TONES\_SEQUENCE\_LENGTH  
Range changed to <1;42>
- RsCma\_rngAFVoIPSource - RSCMA\_ATTR\_AF\_VOIP\_SOURCE  
New items: RSCMA\_VAL\_VOIP\_SOURCE\_GEN4
- RsCma\_rngVoIPFrequencyID - RSCMA\_ATTR\_VOIP\_FREQUENCY\_ID, RSCMA\_ATTR\_ANALYZER\_VOIP\_FREQUENCY\_ID  
Range changed to <0.1;999.99>

- RsCma\_rngVoIPFrequencyID - RSCMA\_ATTR\_VOIP\_FREQUENCY\_ID,  
RSCMA\_ATTR\_ANALYZER\_VOIP\_FREQUENCY\_ID  
Changed data type ("ViReal64", "ViInt32")

## 2.9 Version 1.5.400 / 04 – 2017

\* Support for CMA version 1.5.40

\* New:

- rscma\_QueryReferenceFrequencyWarmingUp
- rscma\_QueryGeneratorSIPConnectionState
- rscma\_QueryGeneratorSIPResponse
- rscma\_QueryGeneratorSIPCode
- rscma\_ConfigureGeneratorAFInternalGeneratorDialingState
- rscma\_ConfigureGeneratorAFInternalGeneratorDialingMode
- rscma\_ConfigureGeneratorAFVoIP
- rscma\_ConfigureGeneratorDCSCodeWord
- rscma\_ConfigureGeneratorDCSRateOffset
- rscma\_ConfigureGeneratorDialingDTMFEnableUserDefinedToneTable
- rscma\_ConfigureGeneratorDialingDTMFUserDefinedToneTable
- rscma\_ConfigureGeneratorDialingSelCallEnableUserDefinedToneTable
- rscma\_ConfigureGeneratorDialingSelCallUserDefinedToneTable
- rscma\_ConfigureGeneratorDialingSELCAL
- rscma\_ConfigureGeneratorDialingSELCALEnableUserDefinedToneTable
- rscma\_ConfigureGeneratorDialingSELCALUserDefinedToneTable
- rscma\_ConfigureVoIP
- rscma\_ApplyVoIPFrequency
- rscma\_QueryVoIPFrequency
- rscma\_ConfigureAnalyzerRepetitionAutomaticMode
- rscma\_ConfigureAnalyzerRepetitionCoupling
- rscma\_ConfigureAnalyzerTriggerTimeout
- rscma\_ConfigureAnalyzerDCSTimeout
- rscma\_ConfigureAnalyzerDialingTimeout
- rscma\_ConfigureAnalyzerVoIP
- rscma\_ApplyAnalyzerVoIPFrequency
- rscma\_QueryAnalyzerVoIPFrequency
- rscma\_ConfigureAnalyzerDemodulationBandpassFilterBandwidth
- rscma\_ConfigureAnalyzerVoIPFilters
- rscma\_ConfigureAnalyzerVoIPDistortionFrequency
- rscma\_ConfigureAnalyzerVoIPDistortionWidth
- rscma\_ConfigureAnalyzerDemodulationTriggerSource
- rscma\_QueryAnalyzerDemodulationMeasurementTime
- rscma\_ConfigureAnalyzerAFTriggerSource
- rscma\_QueryAnalyzerAFMeasurementTime
- rscma\_ConfigureAnalyzerSPDIFTriggerSource
- rscma\_QueryAnalyzerSPDIFMeasurementTime
- rscma\_ConfigureAnalyzerVoIPTigger
- rscma\_QueryAnalyzerVoIPMeasurementTime
- rscma\_ConfigureAnalyzerDTMFEnableUserDefinedToneTable
- rscma\_ConfigureAnalyzerDTMFUserDefinedToneTable
- rscma\_ConfigureAnalyzerSelCallFromGenerator
- rscma\_ConfigureAnalyzerSelCallSequenceLength
- rscma\_ConfigureAnalyzerSelCallEnableUserDefinedToneTable
- rscma\_ConfigureAnalyzerSelCallUserDefinedToneTable
- rscma\_ConfigureAnalyzerSELCALFromGenerator
- rscma\_ConfigureAnalyzerSELCALEnableUserDefinedToneTable



- rscma\_ConfigureAnalyzerSELCALUserDefinedToneTable
- rscma\_ConfigureAnalyzerVoIPLimits
- rscma\_QueryAnalyzerSIPConnectionState
- rscma\_QueryAnalyzerSIPResponse
- rscma\_QueryAnalyzerSIPCode
- rscma\_ReadAnalyzerToneDCSLastCodeWord
- rscma\_FetchAnalyzerToneDCSLastCodeWord
- rscma\_ReadAnalyzerToneDCSNumberOfMatches
- rscma\_FetchAnalyzerToneDCSNumberOfMatches
- rscma\_ReadAnalyzerToneDCSTurnOffCodeLength
- rscma\_FetchAnalyzerToneDCSTurnOffCodeLength
- rscma\_ConfigureSpectrumAnalyzerRepetitionCoupling
- rscma\_SelectSpectrumApplication
- rscma\_SelectSpectrumTrace
- rscma\_ConfigureEPSRepetitionCoupling
- rscma\_ConfigureEPSDisplay
- rscma\_ConfigureNRTZUsedDevice
- rscma\_ConfigureNRTZRepetitionCoupling
- rscma\_ConfigureNRTZAttenuationPort
- rscma\_ConfigureACPREpetitionCoupling
- rscma\_SelectACPApplication
- rscma\_SelectACPTrace
- rscma\_ConfigurePowerMeasurementRepetitionAutomaticMode
- rscma\_ConfigurePowerMeasurementRepetitionCoupling
- rscma\_ConfigureIQRRecorderWriteToFileSetting
- rscma\_ConfigureFFTSpectrumRepetitionCoupling
- rscma\_SelectFFTSpectrumApplication
- rscma\_SelectFFTSpectrumTrace
- rscma\_QueryOperatingMode
- rscma\_QueryBatteryInformation
- rscma\_QueryBatterySlotInformation
- rscma\_ConfigureSoundSquelchEnabled
- rscma\_IPCInit
- rscma\_QueryIPCStatus
- rscma\_QueryIPCResult
- rscma\_ConfigureGlobalDisplayTabMode
- rscma\_QueryGlobalDisplayAvailableApplications
- rscma\_SelectGlobalDisplayApplication
- rscma\_QueryActiveRFPathCorrectionFileDate
- rscma\_RestartTestSoftware
- rscma\_MinimizeTestSoftware

\* Updated:

- rscma\_ConfigureGeneratorAFInternalGeneratorToneMode
- rscma\_ConfigureGeneratorDCSTone
- rscma\_ConfigureGeneratorFreeDialing
- rscma\_ConfigureGeneratorDialingSelCallStandard
- rscma\_ConfigureGeneratorDialingSelCall
- rscma\_ConfigureAnalyzerDemodulationTrigger
- rscma\_ConfigureAnalyzerAFTrigger
- rscma\_ConfigureAnalyzerSPDIFTrigger
- rscma\_ConfigureAnalyzerOscilloscopeXDivision
- rscma\_ConfigureAnalyzerToneMode
- rscma\_ConfigureAnalyzerSelCallTone
- rscma\_ConfigureAnalyzerToneLimits
- rscma\_ReadAnalyzerSignalPowerFrequencyResults
- rscma\_FetchAnalyzerSignalPowerFrequencyResults
- rscma\_ReadAnalyzerSignalQualityResults

- rscma\_FetchAnalyzerSignalQualityResults
- rscma\_QueryAnalyzerSignalQualityLimitCheckResults
- rscma\_ReadAnalyzerOscilloscopeResults
- rscma\_FetchAnalyzerOscilloscopeResults
- rscma\_ReadAnalyzerToneResults
- rscma\_FetchAnalyzerToneResults
- rscma\_ReadAnalyzerToneSequenceResults
- rscma\_FetchAnalyzerToneSequenceResults
- rscma\_ReadAnalyzerFFTRResults
- rscma\_FetchAnalyzerFFTRResults
- rscma\_QueryACPLimitCheckResults
- rscma\_ConfigureFFTSpectrumTrigger
- rscma\_ConfigureScenario
- rscma\_ConfigureCMASound

\* New Attributes:

- RSCMA\_ATTR\_SIP\_CONNECTION\_STATE
- RSCMA\_ATTR\_SIP\_RESPONSE
- RSCMA\_ATTR\_SIP\_CODE
- RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_DIALING\_STATE
- RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_DIALING\_MODE
- RSCMA\_ATTR\_AF\_VOIP\_ENABLED
- RSCMA\_ATTR\_AF\_VOIP\_LEVEL
- RSCMA\_ATTR\_AF\_VOIP\_SOURCE
- RSCMA\_ATTR\_GENERATOR\_DCS\_CODE\_WORD
- RSCMA\_ATTR\_GENERATOR\_DCS\_TONE\_RATE\_OFFSET
- RSCMA\_ATTR\_GENERATOR\_DIALING\_DTMF\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_SEQUENCE
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_REPEAT
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_PAUSE
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_TONE\_TIME
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_TONE\_PAUSE
- RSCMA\_ATTR\_GENERATOR\_DIALING\_SEL\_CALL\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_VOIP\_ENABLED
- RSCMA\_ATTR\_VOIP\_URI\_USER
- RSCMA\_ATTR\_VOIP\_URI\_IP
- RSCMA\_ATTR\_VOIP\_FREQUENCY\_ID
- RSCMA\_ATTR\_APPLY\_VOIP\_FREQUENCY
- RSCMA\_ATTR\_ANALYZER\_REPETITION\_AUTOMATIC\_MODE
- RSCMA\_ATTR\_ANALYZER\_REPETITION\_COUPLING
- RSCMA\_ATTR\_ANALYZER\_RF\_BANDPASS\_FILTER
- RSCMA\_ATTR\_ANALYZER\_VOIP\_LOWPASS\_FILTER
- RSCMA\_ATTR\_ANALYZER\_VOIP\_HIGHPASS\_FILTER
- RSCMA\_ATTR\_ANALYZER\_VOIP\_WEIGHTING\_FILTER
- RSCMA\_ATTR\_ANALYZER\_VOIP\_BANDPASS\_FILTER
- RSCMA\_ATTR\_ANALYZER\_VOIP\_FILTER\_CENTER\_FREQUENCY
- RSCMA\_ATTR\_ANALYZER\_VOIP\_FILTER\_BANDWIDTH
- RSCMA\_ATTR\_ANALYZER\_VOIP\_DISTORTION\_FREQUENCY
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_SOURCE
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_MEASUREMENT\_TIME
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_SOURCE
- RSCMA\_ATTR\_ANALYZER\_AF\_MEASUREMENT\_TIME
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_SOURCE
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_MEASUREMENT\_TIME
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_ENABLED
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_REPETITION
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_THRESHOLD
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_SLOPE

- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_OFFSET
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_COUPLING
- RSCMA\_ATTR\_ANALYZER\_VOIP\_MEASUREMENT\_TIME
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TRIGGER\_X\_DIVISION
- RSCMA\_ATTR\_ANALYZER\_VOIP\_TONE\_MODE
- RSCMA\_ATTR\_ANALYZER\_DTMF\_TONES\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_CONFIGURATION\_FROM\_GENERATOR
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_SEQUENCE\_LENGTH
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_CONFIGURATION\_FROM\_GENERATOR
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_CONFIGURATION\_FROM\_GENERATOR
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_USER\_DEFINED\_ENABLED
- RSCMA\_ATTR\_ANALYZER\_SIP\_CONNECTION\_STATE
- RSCMA\_ATTR\_ANALYZER\_SIP\_RESPONSE
- RSCMA\_ATTR\_ANALYZER\_SIP\_CODE
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_REPETITION\_COUPLING
- RSCMA\_ATTR\_EPS\_REPETITION\_COUPLING
- RSCMA\_ATTR\_EPS\_DISPLAY
- RSCMA\_ATTR\_NRTZ\_USED\_DEVICE
- RSCMA\_ATTR\_NRTZ\_REPETITION\_COUPLING
- RSCMA\_ATTR\_NRTZ\_ATTENUATION\_PORT
- RSCMA\_ATTR\_ACP\_REPETITION\_COUPLING
- RSCMA\_ATTR\_POWER\_MEASUREMENT\_REPETITION\_MODE
- RSCMA\_ATTR\_POWER\_MEASUREMENT\_REPETITION\_COUPLING
- RSCMA\_ATTR\_IQ\_RECORDER\_SAVE\_TO\_IQ\_FILE
- RSCMA\_ATTR\_FFT\_REPETITION\_COUPLING
- RSCMA\_ATTR\_OPERATING\_MODE
- RSCMA\_ATTR\_BATTERY\_AVAILABLE
- RSCMA\_ATTR\_BATTERY\_TIME\_UNTIL\_DISCHARGE
- RSCMA\_ATTR\_BATTERY\_CAPACITY
- RSCMA\_ATTR\_SYSTEM\_SOUND\_SQUELCH\_ENABLED
- RSCMA\_ATTR\_IPC\_INITATE
- RSCMA\_ATTR\_IPC\_STATUS
- RSCMA\_ATTR\_GLOBAL\_DISPLAY\_TAB\_MODE
- RSCMA\_ATTR\_GLOBAL\_DISPLAY\_CURRENT\_APPLICATION
- RSCMA\_ATTR\_RESTART\_TEST\_SOFTWARE
- RSCMA\_ATTR\_MINIMIZE\_TEST\_SOFTWARE

## 2.10 Version 1.5.200 / 06 – 2016

\* Support for CMA version 1.5.20

\* New:

- Subsystem NRTZ
- Subsystem I/Q Recorder
- Subsystem Global Display
- rscma\_QueryGeneratorReliabilityMsg
- rscma\_ConfigureGeneratorCTCSSToneState
- rscma\_ConfigureGeneratorDCSTone
- rscma\_QueryGeneratorDCSToneDataRate
- rscma\_ConfigureGeneratorDialingDTMF
- rscma\_ConfigureGeneratorFreeDialing
- rscma\_ConfigureGeneratorFreeDialingToneType
- rscma\_ConfigureGeneratorFreeDialingSingleToneList
- rscma\_ConfigureGeneratorFreeDialingDualToneList
- rscma\_ConfigureGeneratorDialingSelCallStandard
- rscma\_ConfigureGeneratorDialingSelCall
- rscma\_ConfigureGeneratorVORState

- rscma\_ConfigureGeneratorVORRFSettings
- rscma\_ConfigureGeneratorVORRFConnectorOutput
- rscma\_ConfigureGeneratorVORAFConnectorOutput
- rscma\_ConfigureGeneratorVORAFForReferenceSignal
- rscma\_ConfigureGeneratorVORAFWithVariablePhase
- rscma\_ConfigureGeneratorVORAFIDSignal
- rscma\_ConfigureGeneratorILS
- rscma\_ConfigureGeneratorILSLocalizerRFSettings
- rscma\_ConfigureGeneratorILSLocalizerRFConnectorOutput
- rscma\_ConfigureGeneratorILSLocalizerChannel
- rscma\_ConfigureGeneratorILSLocalizerAFSettings
- rscma\_ConfigureGeneratorILSLocalizerAFConnectorOutput
- rscma\_ConfigureGeneratorILSLocalizerAFIDSignal
- rscma\_ConfigureGeneratorILSGlideSlopeRFSettings
- rscma\_ConfigureGeneratorILSGlideSlopeRFConnectorOutput
- rscma\_ConfigureGeneratorILSGlideSlopeAFSettings
- rscma\_ConfigureGeneratorILSGlideSlopeAFConnectorOutput
- rscma\_ConfigureGeneratorILSGlideSlopeChannel
- rscma\_ConfigureGeneratorMBEState
- rscma\_ConfigureGeneratorMBERFSettings
- rscma\_ConfigureGeneratorMBERFConnectorOutput
- rscma\_ConfigureGeneratorMBEAFSettings
- rscma\_ConfigureGeneratorMBEAFConnectorOutput
- rscma\_ConfigureGeneratorMBEAFIDSignal
- rscma\_ConfigureAnalyzerEnableMeasResults
- rscma\_ConfigureAnalyzerDemodulationTrigger
- rscma\_ConfigureAnalyzerAFTrigger
- rscma\_ConfigureAnalyzerSPDIFTrigger
- rscma\_ConfigureAnalyzerOscilloscopeXDivision
- rscma\_ConfigureAnalyzerToneMode
- rscma\_ConfigureAnalyzerDTMFTone
- rscma\_ConfigureAnalyzerFreeDialingTone
- rscma\_ConfigureAnalyzerSingleToneList
- rscma\_ConfigureAnalyzerDualToneList
- rscma\_ConfigureAnalyzerSelCallTone
- rscma\_ConfigureAnalyzerDCSTone
- rscma\_ConfigureAnalyzerToneLimits
- rscma\_ReadAnalyzerOscilloscopeResults
- rscma\_FetchAnalyzerOscilloscopeResults
- rscma\_ReadAnalyzerToneResults
- rscma\_FetchAnalyzerToneResults
- rscma\_ReadAnalyzerToneSequenceResults
- rscma\_FetchAnalyzerToneSequenceResults
- rscma\_ReadAnalyzerToneDCSResults
- rscma\_FetchAnalyzerToneDCSResults
- rscma\_FetchAnalyzerFrequencyCounterError
- rscma\_ConfigureSpectrumAnalyzerDetector
- rscma\_ConfigureSpectrumAnalyzerMarkersState
- rscma\_ConfigureSpectrumAnalyzerFrequencyMarkerMode
- rscma\_ConfigureSpectrumAnalyzerFrequencyMarkerRange
- rscma\_ConfigureSpectrumAnalyzerZeroSpanMarkerMode
- rscma\_ConfigureSpectrumAnalyzerZeroSpanMarkerRange
- rscma\_FetchSpectrumAnalyzerFrequencyMarkerPosition
- rscma\_FetchSpectrumAnalyzerZeroSpanMarkerPosition
- rscma\_ConfigureRFAudibleWarning
- rscma\_ConfigureCMASound
- rscma\_ConfigureSystemSpeaker
- rscma\_ConfigureSpeaker
- rscma\_QueryLatestSpecificCalibration

- rscma\_ClearStatus
- rscma\_IDQueryResponse
- rscma\_ProcessAllPreviousCommands
- rscma\_QueryOPC

\* Updated:

- rscma\_ConfigureGeneratorAFInternalGeneratorToneMode - New values in range table (DTMF, Selective Calling, Free Dialing, Square Signal)
- rscma\_ConfigureGeneratorPreemphasisFilter - New value in range table (750 us)
- rscma\_ConfigureGeneratorTones - New value in Active Tone range table (DCS)
- rscma\_ConfigureAnalyzerDemodulationFilters - New values in Lowpass Filter range table (255 Hz, 3.4 kHz)
- rscma\_ReadAnalyzerSignalPowerFrequencyResults - New values in Measurement Type range table (Demodulation Left, Demodulation Right)
- rscma\_FetchAnalyzerSignalPowerFrequencyResults - New values in Measurement Type range table (Demodulation Left, Demodulation Right)
- rscma\_ConfigureACPUpperACLRLimits - limit changed
- rscma\_ConfigurePowerMeasurementTrigger - SCPI command changed
- rscma\_ConfigureReferenceFrequency - New value in Source range table (Inv)
- rscma\_ReadToFileFromInstrument - data handling for big files
- rscma\_WriteFromFileToInstrument - data handling for big files
- rscma\_ConfigureSpectrumAnalyzerFrequencyCenterSpan - range checking removed at 'Center' control

\* Deleted:

- rscma\_FetchSpectrumAnalyzerMarkerNextPeak
- rscma\_FetchSpectrumAnalyzerReferenceMarkerSearchPeak
- rscma\_FetchSpectrumAnalyzerReferenceMarkerNextPeak

\* New attributes:

- RSCMA\_ATTR\_GENERATOR CTCSS\_TONE\_ENABLED (Generator CTCSS Tone Enabled)
- RSCMA\_ATTR\_GENERATOR DCS\_TONE\_ENABLED (Generator DCS Tone Enabled)
- RSCMA\_ATTR\_GENERATOR DCS\_TONE\_FSK\_DEVIATION (Generator DCS Tone FSK Deviation)
- RSCMA\_ATTR\_GENERATOR DCS\_TONE\_INVERTED\_FSK (Generator DCS Tone Inverted FSK)
- RSCMA\_ATTR\_GENERATOR DCS\_TONE\_DATA\_RATE (Generator DCS Tone Data Rate)
- RSCMA\_ATTR\_GENERATOR DCS\_TONE\_TURN\_OFF\_CODE (Generator DCS Tone Turn Off Code)
- RSCMA\_ATTR\_GENERATOR DCS\_TONE\_TURN\_OFF\_CODE\_LENGTH (Generator DCS Tone Turn Off Code Length)
- RSCMA\_ATTR\_GENERATOR DIALING\_START (Generator Dialing Start)
- RSCMA\_ATTR\_GENERATOR DIALING\_DTMF\_SEQUENCE (Generator Dialing DTMF Sequence)
- RSCMA\_ATTR\_GENERATOR DIALING\_DTMF\_REPEAT (Generator Dialing DTMF Repeat)
- RSCMA\_ATTR\_GENERATOR DIALING\_DTMF\_PAUSE (Generator Dialing DTMF Pause)
- RSCMA\_ATTR\_GENERATOR DIALING\_DTMF\_DIGIT\_TIME (Generator Dialing DTMF Digit Time)
- RSCMA\_ATTR\_GENERATOR DIALING\_DTMF\_DIGIT\_PAUSE (Generator Dialing DTMF Digit Pause)
- RSCMA\_ATTR\_GENERATOR FREE\_DIALING\_TONE\_TYPE (Generator Free Dialing Tone Type)
- RSCMA\_ATTR\_GENERATOR FREE\_DIALING\_SEQUENCE (Generator Free Dialing Sequence)
- RSCMA\_ATTR\_GENERATOR FREE\_DIALING\_REPEAT (Generator Free Dialing Repeat)
- RSCMA\_ATTR\_GENERATOR FREE\_DIALING\_PAUSE (Generator Free Dialing Pause)
- RSCMA\_ATTR\_GENERATOR FREE\_DIALING\_DIGIT\_TIME (Generator Free Dialing Digit Time)
- RSCMA\_ATTR\_GENERATOR FREE\_DIALING\_DIGIT\_PAUSE (Generator Free Dialing Digit Pause)
- RSCMA\_ATTR\_GENERATOR SEL\_CALL\_STANDARD (Generator Sel Call Standard)
- RSCMA\_ATTR\_GENERATOR SEL\_CALL\_SEQUENCE (Generator Sel Call Sequence)
- RSCMA\_ATTR\_GENERATOR SEL\_CALL\_REPEAT (Generator Sel Call Repeat)
- RSCMA\_ATTR\_GENERATOR SEL\_CALL\_PAUSE (Generator Sel Call Pause)
- RSCMA\_ATTR\_GENERATOR SEL\_CALL\_DIGIT\_TIME (Generator Sel Call Digit Time)

- RSCMA\_ATTR\_GENERATOR\_SEL\_CALL\_DIGIT\_PAUSE (Generator Sel Call Digit Pause)
- RSCMA\_ATTR\_GENERATOR\_SEL\_CALL\_DIGIT\_REPEAT (Generator Sel Call Digit Repeat)
- RSCMA\_ATTR\_GENERATOR\_AF\_MULTITONE\_FREQUENCY (Generator AF Multitone Frequency)
- RSCMA\_ATTR\_GENERATOR\_VOR\_ENABLED (Generator VOR Enabled)
- RSCMA\_ATTR\_GENERATOR\_VOR\_SIGNAL\_STATE (Generator VOR Signal State)
- RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_OUTPUT\_ENABLED (Generator VOR RF Output Enabled)
- RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_OUTPUT\_CONNECTOR (Generator VOR RF Output Connector)
- RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_OUTPUT\_LEVEL (Generator VOR RF Output Level)
- RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_EXTERNAL\_ATTENUATION (Generator VOR RF External Attenuation)
- RSCMA\_ATTR\_GENERATOR\_VOR\_RF\_FREQUENCY (Generator VOR RF Frequency)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_OUTPUT\_ENABLED (Generator VOR AF Output Enabled)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_OUTPUT\_CONNECTOR (Generator VOR AF Output Connector)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_OUTPUT\_LEVEL (Generator VOR AF Output Level)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_REFERENCE\_SIGNAL\_ENABLED (Generator VOR AF Reference Signal Enabled)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_MODULATION\_DEPTH (Generator VOR AF Modulation Depth)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_CARRIER\_FREQUENCY (Generator VOR AF Carrier Frequency)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_DEVIATION (Generator VOR AF Deviation)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_FREQUENCY (Generator VOR AF Frequency)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_VAR\_ENABLED (Generator VOR AF VAR Enabled)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_VAR\_MODULATION\_DEPTH (Generator VOR AF VAR Modulation Depth)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_VAR\_BEARING\_ANGLE (Generator VOR AF VAR Bearing Angle)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_VAR\_DIRECTION (Generator VOR AF VAR Direction)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_ID\_SIGNAL\_ENABLED (Generator VOR AF ID Signal Enabled)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_ID\_SIGNAL\_MODULATION\_DEPTH (Generator VOR AF ID Signal Modulation Depth)
- RSCMA\_ATTR\_GENERATOR\_VOR\_AF\_ID\_SIGNAL\_FREQUENCY (Generator VOR AF ID Signal Frequency)
- RSCMA\_ATTR\_GENERATOR\_ILS\_ENABLED (Generator ILS Enabled)
- RSCMA\_ATTR\_GENERATOR\_ILS\_SIGNAL\_STATE (Generator ILS Signal State)
- RSCMA\_ATTR\_GENERATOR\_ILS\_SOURCE (Generator ILS Source)
- RSCMA\_ATTR\_GENERATOR\_ILS\_RF\_EXTERNAL\_ATTENUATION (Generator ILS RF External Attenuation)
- RSCMA\_ATTR\_GENERATOR\_ILS\_RF\_FREQUENCY\_PAIRMENT (Generator ILS RF Frequency Pairment)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_RF\_FREQUENCY (Generator ILS Localizer RF Frequency)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_RF\_LEVEL (Generator ILS Localizer RF Level)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_RF\_OUTPUT\_ENABLED (Generator ILS Localizer RF Output Enabled)
- RSCMA\_ATTR\_GENERATOR\_ILS\_RF\_OUTPUT\_CONNECTOR (Generator ILS RF Output Connector)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_ENABLED (Generator ILS Localizer AF Enabled)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_SDM (Generator ILS Localizer AF SDM)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_DDM (Generator ILS Localizer AF DDM)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_FLY (Generator ILS Localizer AF Fly)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOCALIZER\_AF\_FREQUENCY\_LEFT (Generator ILS Localizer AF Frequency Left)
- RSCMA\_ATTR\_GENERATOR\_ILS\_LOCALIZER\_AF\_FREQUENCY\_MODULATION\_DEPTH\_LEFT (Generator ILS Localizer AF Frequency Modulation Depth Left)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOCALIZER\_AF\_FREQUENCY\_RIGHT (Generator ILS Localizer AF Frequency Right)

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RSCMA\_ATTR\_GENERATOR\_ILS\_LOCALIZER\_AF\_FREQUENCY\_MODULATION\_DEPTH\_RIGHT (Generator ILS Localizer AF Frequency Modulation Depth Right)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_PHASE\_OFFSET (Generator ILS Localizer AF Phase Offset)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_OUTPUT\_ENABLED (Generator ILS Localizer AF Output Enabled)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_OUTPUT\_CONNECTOR (Generator ILS Localizer AF Output Connector)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_OUTPUT\_LEVEL (Generator ILS Localizer AF Output Level)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_ID\_SIGNAL\_ENABLED (Generator ILS Localizer AF ID Signal Enabled)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_ID\_SIGNAL\_MODULATION\_DEPTH (Generator ILS Localizer AF ID Signal Modulation Depth)

- RSCMA\_ATTR\_GENERATOR\_ILS\_LOC\_AF\_ID\_SIGNAL\_FREQUENCY (Generator ILS Localizer AF ID Signal Frequency)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_RF\_FREQUENCY (Generator ILS Glide Slope RF Frequency)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_RF\_LEVEL (Generator ILS Glide Slope RF Level)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_RF\_OUTPUT\_ENABLED (Generator ILS Glide Slope RF Output Enabled)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_ENABLED (Generator ILS Glide Slope AF Enabled)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_SDM (Generator ILS Glide Slope AF SDM)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_DDM (Generator ILS Glide Slope AF DDM)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_FLY (Generator ILS Glide Slope AF Fly)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GLIDE\_SLOPE\_AF\_FREQUENCY\_UPPER (Generator ILS Glide Slope AF Frequency Upper)

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RSCMA\_ATTR\_GENERATOR\_ILS\_GLIDE\_SLOPE\_AF\_FREQUENCY\_MODULATION\_DEPTH\_UPPER (Generator ILS Glide Slope AF Frequency Modulation Depth Upper)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GLIDE\_SLOPE\_AF\_FREQUENCY\_LOWER (Generator ILS Glide Slope AF Frequency Lower)

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RSCMA\_ATTR\_GENERATOR\_ILS\_GLIDE\_SLOPE\_AF\_FREQUENCY\_MODULATION\_DEPTH\_LOWER (Generator ILS Glide Slope AF Frequency Modulation Depth Lower)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_PHASE\_OFFSET (Generator ILS Glide Slope AF Phase Offset)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_OUTPUT\_ENABLED (Generator ILS Glide Slope AF Output Enabled)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_OUTPUT\_CONNECTOR (Generator ILS Glide Slope AF Output Connector)

- RSCMA\_ATTR\_GENERATOR\_ILS\_GSL\_AF\_OUTPUT\_LEVEL (Generator ILS Glide Slope AF Output Level)

- RSCMA\_ATTR\_GENERATOR\_MARKER\_BEACON\_ENABLED (Generator Marker Beacon Enabled)

- RSCMA\_ATTR\_GENERATOR\_MBE\_SIGNAL\_STATE (Generator Marker Beacon Signal State)

- RSCMA\_ATTR\_GENERATOR\_MBE\_RF\_OUTPUT\_ENABLED (Generator Marker Beacon RF Output Enabled)

- RSCMA\_ATTR\_GENERATOR\_MBE\_RF\_OUTPUT\_CONNECTOR (Generator Marker Beacon RF Output Connector)

- RSCMA\_ATTR\_GENERATOR\_MBE\_RF\_FREQUENCY (Generator Marker Beacon RF Frequency)

- RSCMA\_ATTR\_GENERATOR\_MBE\_RF\_LEVEL (Generator Marker Beacon RF Level)

- RSCMA\_ATTR\_GENERATOR\_MBE\_RF\_EXTERNAL\_ATTENUATION (Generator Marker Beacon RF External Attenuation)

- RSCMA\_ATTR\_GENERATOR\_MBE\_AF\_ENABLED (Generator Marker Beacon AF Enabled)

- RSCMA\_ATTR\_GENERATOR\_MBE\_AF\_MODULATION\_DEPTH (Generator Marker Beacon AF Modulation Depth)

- RSCMA\_ATTR\_GENERATOR\_MBE\_AF\_FREQUENCY (Generator Marker Beacon AF Frequency)
- RSCMA\_ATTR\_GENERATOR\_MBE\_AF\_OUTPUT\_ENABLED (Generator Marker Beacon AF Output Enabled)
- RSCMA\_ATTR\_GENERATOR\_MBE\_AF\_OUTPUT\_CONNECTOR (Generator Marker Beacon AF Output Connector)
- RSCMA\_ATTR\_GENERATOR\_MBE\_AF\_OUTPUT\_LEVEL (Generator Marker Beacon AF Output Level)
- RSCMA\_ATTR\_GENERATOR\_MBE\_ID\_SIGNAL\_ENABLED (Generator Marker Beacon ID Signal Enabled)
- RSCMA\_ATTR\_GENERATOR\_MBE\_ID\_SIGNAL\_MODULATION\_DEPTH (Generator Marker Beacon ID Signal Modulation Depth)
- RSCMA\_ATTR\_GENERATOR\_MBE\_ID\_SIGNAL\_FREQUENCY (Generator Marker Beacon ID Signal Frequency)
- RSCMA\_ATTR\_ANALYZER\_AF\_SPECTRUM\_STATE (Analyzer AF Spectrum State)
- RSCMA\_ATTR\_ANALYZER\_OSCILLOSCOPE\_STATE (Analyzer Oscilloscope State)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_ENABLED (Analyzer Demodulation Trigger Enabled)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_REPETITION (Analyzer Demodulation Trigger Repetition)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_FM\_THRESHOLD (Analyzer Demodulation Trigger FM Threshold)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_PM\_THRESHOLD (Analyzer Demodulation Trigger PM Threshold)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_AM\_THRESHOLD (Analyzer Demodulation Trigger AM Threshold)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_SSB\_THRESHOLD (Analyzer Demodulation Trigger SSB Threshold)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_SLOPE (Analyzer Demodulation Trigger Slope)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_OFFSET (Analyzer Demodulation Trigger Offset)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_COUPLING (Analyzer Demodulation Trigger Coupling)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_STATE (Analyzer Demodulation Trigger State)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TRIGGER\_XDIVISION (Analyzer Demodulation Trigger X Division)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_ENABLED (Analyzer AF Trigger Enabled)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_REPETITION (Analyzer AF Trigger Repetition)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_THRESHOLD (Analyzer AF Trigger Threshold)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_SLOPE (Analyzer AF Trigger Slope)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_OFFSET (Analyzer AF Trigger Offset)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_COUPLING (Analyzer AF Trigger Coupling)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_STATE (Analyzer AF Trigger State)
- RSCMA\_ATTR\_ANALYZER\_AF\_TRIGGER\_XDIVISION (Analyzer AF Trigger X Division)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_ENABLED (Analyzer SPDIF Trigger Enabled)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_REPETITION (Analyzer SPDIF Trigger Repetition)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_THRESHOLD (Analyzer SPDIF Trigger Threshold)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_SLOPE (Analyzer SPDIF Trigger Slope)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_OFFSET (Analyzer SPDIF Trigger Offset)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_COUPLING (Analyzer SPDIF Trigger Coupling)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_STATE (Analyzer SPDIF Trigger State)
- RSCMA\_ATTR\_ANALYZER\_SPDIF\_TRIGGER\_XDIVISION (Analyzer SPDIF Trigger X Division)
- RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_TONE\_MODE (Analyzer Demodulation Tone Mode)
- RSCMA\_ATTR\_ANALYZER\_LEFT\_SPDIF\_TONE\_MODE (Analyzer Left SPDIF Tone Mode)
- RSCMA\_ATTR\_ANALYZER\_RIGHT\_SPDIF\_TONE\_MODE (Analyzer Right SPDIF Tone Mode)
- RSCMA\_ATTR\_ANALYZER\_AF\_INPUT\_TONE\_MODE (Analyzer AF Input Tone Mode)
- RSCMA\_ATTR\_ANALYZER\_DTMF\_TONES\_SEQUENCE\_LENGTH (Analyzer DTMF Tones Sequence Length)



- RSCMA\_ATTR\_ANALYZER\_DTMF\_TONES\_CONFIGURATION\_FROM\_GENERATOR (Analyzer DTMF Tones Configuration From Generator)
- RSCMA\_ATTR\_ANALYZER\_FREE\_DIALING\_TONES\_TYPE (Analyzer Free Dialing Tones Type)
- RSCMA\_ATTR\_ANALYZER\_FREE\_DIALING\_TONES\_SEQUENCE\_LENGTH (Analyzer Free Dialing Tones Sequence Length)
- RSCMA\_ATTR\_ANALYZER\_FREE\_DIALING\_TONES\_CONFIGURATION\_FROM\_GENERATOR (Analyzer Free Dialing Tones Configuration From Generator)
- RSCMA\_ATTR\_ANALYZER\_SEL\_CALL\_TONES\_STANDARD (Analyzer Sel Call Tones Standard)
- RSCMA\_ATTR\_ANALYZER\_DCS\_TONES\_EXPECTED\_CODE\_WORD (Analyzer DCS Tones Expected Code Word)
- RSCMA\_ATTR\_ANALYZER\_DCS\_TONES\_INVERTED\_MODULATION (Analyzer DCS Tones Inverted Modulation)
- RSCMA\_ATTR\_ANALYZER\_MAIN\_STATE (Analyzer Main State)
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_DETECTOR (Spectrum Analyzer Detector)
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRIGGER\_SOURCE\_CATALOG (Spectrum Analyzer Trigger Source Catalog)
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_ALL\_MARKERS\_ENABLED (Spectrum Analyzer All Markers Enabled)
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_MARKER\_PLACEMENT (Spectrum Analyzer Marker Placement)
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_MARKER\_ZERO\_SPAN\_PLACEMENT (Spectrum Analyzer Marker Zero Span Placement)
- RSCMA\_ATTR\_NRTZ\_REPETITION\_MODE (NRTZ Repetition Mode)
- RSCMA\_ATTR\_NRTZ\_STATISTIC\_COUNT (NRTZ Statistic Count)
- RSCMA\_ATTR\_NRTZ\_PEP\_HOLD\_TIME (NRTZ PEP Hold Time)
- RSCMA\_ATTR\_NRTZ\_DIRECTION (NRTZ Direction)
- RSCMA\_ATTR\_NRTZ\_FREQUENCY (NRTZ Frequency)
- RSCMA\_ATTR\_NRTZ\_RESOLUTION (NRTZ Resolution)
- RSCMA\_ATTR\_NRTZ\_BANDWIDTH (NRTZ Bandwidth)
- RSCMA\_ATTR\_NRTZ\_ATTENUATION\_ENABLED (NRTZ Attenuation Enabled)
- RSCMA\_ATTR\_NRTZ\_ATTENUATION (NRTZ Attenuation)
- RSCMA\_ATTR\_NRTZ\_CCDF\_THRESHOLD (NRTZ CCDF Threshold)
- RSCMA\_ATTR\_NRTZ\_FORWARD\_POWER\_RESULT (NRTZ Forward Power Result)
- RSCMA\_ATTR\_NRTZ\_REVERSE\_POWER\_RESULT (NRTZ Reverse Power Result)
- RSCMA\_ATTR\_START\_NRTZ\_ZEROING (Start NRTZ Zeroing)
- RSCMA\_ATTR\_NRTZ\_INIT (NRTZ Init)
- RSCMA\_ATTR\_NRTZ\_ABORT (NRTZ Abort)
- RSCMA\_ATTR\_NRTZ\_STOP (NRTZ Stop)
- RSCMA\_ATTR\_NRTZ\_IDENTIFICATION (NRTZ Identification)
- RSCMA\_ATTR\_POWER\_MEASUREMENT\_TRIGGER\_SOURCE\_CATALOG (Power Measurement Trigger Source Catalog)
- RSCMA\_ATTR\_FFT\_TRIGGER\_SOURCE\_CATALOG (FFT Trigger Source Catalog)
- RSCMA\_ATTR\_IQ\_RECORDER\_TIMEOUT (IQ Recorder Timeout)
- RSCMA\_ATTR\_IQ\_RECORDER\_SAMPLE\_RATIO (IQ Recorder Sample Ratio)
- RSCMA\_ATTR\_IQ\_RECORDER\_MAX\_SAMPLE\_RATE (IQ Recorder Max Sample Rate)
- RSCMA\_ATTR\_IQ\_RECORDER\_MAGNITUDE\_UNIT (IQ Recorder Magnitude Unit)
- RSCMA\_ATTR\_IQ\_RECORDER\_FILTER\_TYPE (IQ Recorder Filter Type)
- RSCMA\_ATTR\_IQ\_RECORDER\_BANDPASS\_FILTER\_BANDWIDTH (IQ Recorder Bandpass Filter Bandwidth)
- RSCMA\_ATTR\_IQ\_RECORDER\_GAUSS\_FILTER\_BANDWIDTH (IQ Recorder Gauss Filter Bandwidth)
- RSCMA\_ATTR\_IQ\_RECORDER\_RESULT\_FILE (IQ Recorder Result File)
- RSCMA\_ATTR\_IQ\_RECORDER\_RESULT\_FILE\_FORMAT (IQ Recorder Result File Format)
- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_SOURCE (IQ Recorder Trigger Source)
- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_SOURCE\_CATALOG (IQ Recorder Trigger Source Catalog)
- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_SLOPE (IQ Recorder Trigger Slope)
- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_THRESHOLD (IQ Recorder Trigger Threshold)
- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_OFFSET (IQ Recorder Trigger Offset)

- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_TIMEOUT (IQ Recorder Trigger Timeout)
- RSCMA\_ATTR\_IQ\_RECORDER\_TRIGGER\_MIN\_GAP (IQ Recorder Trigger Min Gap)
- RSCMA\_ATTR\_IQ\_RECORDER\_INIT (IQ Recorder Init)
- RSCMA\_ATTR\_IQ\_RECORDER\_ABORT (IQ Recorder Abort)
- RSCMA\_ATTR\_IQ\_RECORDER\_STOP (IQ Recorder Stop)
- RSCMA\_ATTR\_RF\_AUDIBLE\_WARNING (RF Audible Warning)
- RSCMA\_ATTR\_CMA\_SOURCE (CMA Source)
- RSCMA\_ATTR\_CMA\_SOUND\_VOLUME\_ENABLED (CMA Sound Volume Enabled)
- RSCMA\_ATTR\_CMA\_SOUND\_VOLUME (CMA Sound Volume)
- RSCMA\_ATTR\_SPEAKER\_ENABLED (Speaker Enabled)
- RSCMA\_ATTR\_SYSTEM\_SOUND\_VOLUME\_ENABLED (System Sound Volume Enabled)
- RSCMA\_ATTR\_SYSTEM\_SOUND\_VOLUME (System Sound Volume)
- RSCMA\_ATTR\_GLOBAL\_DISPLAY\_ENABLED (Global Display Enabled)

\* Modified attributes:

- RSCMA\_ATTR\_GENERATOR\_RF\_LEVEL (Generator RF Level) - Range table removed
  - RSCMA\_ATTR\_GENERATOR\_RF\_MODE (Generator RF Mode) - Removed
- RSCMA\_VAL\_GENMODE\_TRA, Tracking
- RSCMA\_ATTR\_ARB\_FREQUENCY\_OFFSET (ARB Frequency Offset) - New range, from -10.0e6 to 10.0e6 Hz
  - RSCMA\_ATTR\_ARB\_FILE\_SAMPLES (ARB File Samples) - Changed data type.
  - RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_ENABLED (AF Internal Generator Enabled) - Changed to Read Only
  - RSCMA\_ATTR\_AF\_INPUT\_MAXIMUM\_LEVEL (AF Input Maximum Level) - Range set to 0.01 mV to 30.0 V
  - RSCMA\_ATTR\_AF\_OUTPUT\_LEVEL (AF Output Level) - New range, from 10.0e-6 to 5.0 V
  - RSCMA\_ATTR\_ANALYZER\_RF\_CONNECTOR (Analyzer RF Connector) - Command in range table corrected
  - RSCMA\_ATTR\_ANALYZER\_RF\_FREQUENCY (Analyzer RF Frequency) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_RF\_EXPECTED\_POWER (Analyzer RF Expected Power) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_RF\_EXTERNAL\_ATTENUATION (Analyzer RF External Attenuation) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_AF\_INPUT\_MAXIMUM\_LEVEL (Analyzer AF Input Maximum Level) - Added range 10E-6 V to 30 V
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_LEVEL (Analyzer AF Output Level) - New range, from 10.0e-6 to 5.0 V
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_SOURCE (Analyzer AF Output Source) - Changed to Read Only, command updated
  - RSCMA\_ATTR\_RF\_EXPECTED\_NOMINAL\_POWER (RF Expected Nominal Power) - Default value changed
  - RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_FREQUENCY\_CENTER (Spectrum Analyzer Frequency Center) - Range table removed
  - RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRACKING\_GENERATOR\_CALIBRATE (Spectrum Analyzer Tracking Generator Calibrate) - Fixed command
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_STEP\_LENGTH (Power Measurement Step Length) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_MEASUREMENT\_LENGTH (Power Measurement Measurement Length) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_GAUSS\_BANDWIDTH (Power Measurement Gauss Bandwidth) - Range changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_BANDPASS\_BANDWIDTH (Power Measurement Bandpass Bandwidth) - Range changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_TRIGGER\_SLOPE (Power Measurement Trigger Slope) - Command changed.
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_TRIGGER\_GAP (Power Measurement Trigger Gap) - Command changed.
  - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_INTERNAL\_RANGE (Reference Frequency Internal Range) - New value in range table

- RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_EXTERNAL\_RANGE (Reference Frequency External Range) - New value in range table
- RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_ADJUSTMENT\_VALUE (Reference Frequency Adjustment Value) - Maximum value in range table changed

\* Modified Range Tables:

- rscma\_rngLowpassFilter - RSCMA\_ATTR\_GENERATOR\_LOWPASS\_FILTER, RSCMA\_ATTR\_ANALYZER\_DEMODULATION\_LOWPASS\_FILTER, RSCMA\_ATTR\_ANALYZER\_AF\_LOWPASS\_FILTER  
New items: RSCMA\_VAL\_LOWPASS\_F255, RSCMA\_VAL\_LOWPASS\_F3K4
- rscma\_rngGeneratorActiveTone - RSCMA\_ATTR\_GENERATOR\_TONES\_ACTIVE\_TONE  
New items: RSCMA\_VAL\_TONES\_ACTIVE\_DCS
- rscma\_rngIntExt - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_SOURCE  
New items: RSCMA\_VAL\_INV
- RsCma\_rngGeneratorPreemphasisFilter - RSCMA\_ATTR\_GENERATOR\_PREEMPHASIS\_FILTER  
New items: RSCMA\_VAL\_PREEMPHASIS\_T750
- RsCma\_rngAFInternalGeneratorToneMode - RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_TONE\_MODE  
New items: RSCMA\_VAL\_TONE\_MODE\_DTMF, RSCMA\_VAL\_TONE\_MODE\_SELCT, RSCMA\_VAL\_TONE\_MODE\_FDI, RSCMA\_VAL\_TONE\_MODE\_SQU

## 2.11 Version 1.0.300 / 06 – 2015

\* Modified:

- rscma\_FetchPowerMeasurement, rscma\_ReadPowerMeasurement - changed API, result selection is done using single argument
- rscma\_ConfigureAnalyzerAFInput
- rscma\_ConfigureGeneratorChannelDefinition
- rscma\_ConfigureAnalyzerChannelDefinition
- CMA now sends 10 digits if sending floating-point number, modifications to rscma\_InitWithOptions, rscma\_ReadToFileFromInstrument, rscma\_WriteFromFileToInstrument, rscma\_DefaultInstrSetup
- rscma\_ConfigureGeneratorARBFile - changed API, reliability indicator added

\* New:

- rscma\_ConfigureAnalyzerDemodulationFilterDistortionWidth
- rscma\_ConfigureAnalyzerAFInputFiltersDistortionWidth
- rscma\_ConfigureAnalyzerSPDIFInputFiltersDistortionWidth
- ACP subsystem

\* Removed:

- rscma\_FetchSpectrumAnalyzerReferenceMarker

\* New attributes:

- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRACKING\_GENERATOR\_CALIBRATION\_STATE (Spectrum Analyzer Tracking Generator Calibration State)
- RSCMA\_ATTR\_ACP\_TIMEOUT (ACP Timeout)
- RSCMA\_ATTR\_ACP\_REPETITION (ACP Repetition)
- RSCMA\_ATTR\_ACP\_STATISTIC\_COUNT (ACP Statistic Count)
- RSCMA\_ATTR\_ACP\_MEASURE\_ON\_EXCEPTION (ACP Measure On Exception)
- RSCMA\_ATTR\_ACP\_CHANNEL\_SPACE (ACP Channel Space)
- RSCMA\_ATTR\_ACP\_OFFSET (ACP Offset)
- RSCMA\_ATTR\_ACP\_MEASUREMENT\_BANDWIDTH (ACP Measurement Bandwidth)
- RSCMA\_ATTR\_ACP\_OBW\_PERCENTAGE (ACP OBW Percentage)
- RSCMA\_ATTR\_ACP\_OBW\_ENABLED (ACP OBW Enabled)
- RSCMA\_ATTR\_ACP\_OBW\_UPPER\_LIMIT (ACP OBW Upper Limit)
- RSCMA\_ATTR\_ACPT\_INIT (ACP Init)
- RSCMA\_ATTR\_ACP\_ABORT (ACP Abort)

- RSCMA\_ATTR\_ACP\_STOP (ACP Stop)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_BOX\_ENABLED (AF Impedance Box Enabled)
- RSCMA\_ATTR\_AF\_IMPEDANCE\_BOX\_IMPEDANCE (AF Impedance Box Impedance)
- \* Modified attributes:
  - RSCMA\_ATTR\_GENERATOR\_RF\_MODE (Generator RF Mode) - Removed
- RSCMA\_VAL\_GENMODE\_TRA, Tracking
  - RSCMA\_ATTR\_ARB\_FREQUENCY\_OFFSET (ARB Frequency Offset) - New range, from -10.0e6 to 10.0e6 Hz
  - RSCMA\_ATTR\_ARB\_FILE\_SAMPLES (ARB File Samples) - Changed data type.
  - RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_ENABLED (AF Internal Generator Enabled) - Changed to Read Only
  - RSCMA\_ATTR\_AF\_INPUT\_MAXIMUM\_LEVEL (AF Input Maximum Level) - Range set to 0.01 mV to 30.0 V
  - RSCMA\_ATTR\_AF\_OUTPUT\_LEVEL (AF Output Level) - New range, from 10.0e-6 to 5.0 V
  - RSCMA\_ATTR\_ANALYZER\_RF\_CONNECTOR (Analyzer RF Connector) - Command in range table corrected
  - RSCMA\_ATTR\_ANALYZER\_RF\_FREQUENCY (Analyzer RF Frequency) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_RF\_EXPECTED\_POWER (Analyzer RF Expected Power) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_RF\_EXTERNAL\_ATTENUATION (Analyzer RF External Attenuation) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_AF\_INPUT\_MAXIMUM\_LEVEL (Analyzer AF Input Maximum Level) - Added range 10E-6 V to 30 V
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_LEVEL (Analyzer AF Output Level) - New range, from 10.0e-6 to 5.0 V
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_SOURCE (Analyzer AF Output Source) - Changed to Read Only, command updated
  - RSCMA\_ATTR\_RF\_EXPECTED\_NOMINAL\_POWER (RF Expected Nominal Power) - Default value changed
  - RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRACKING\_GENERATOR\_CALIBRATE (Spectrum Analyzer Tracking Generator Calibrate) - Fixed command
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_STEP\_LENGTH (Power Measurement Step Length) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_MEASUREMENT\_LENGTH (Power Measurement Measurement Length) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_GAUSS\_BANDWIDTH (Power Measurement Gauss Bandwidth) - Range changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_BANDPASS\_BANDWIDTH (Power Measurement Bandpass Bandwidth) - Range changed
  - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_INTERNAL\_RANGE (Reference Frequency Internal Range) - New value in range table
  - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_EXTERNAL\_RANGE (Reference Frequency External Range) - New value in range table
  - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_ADJUSTMENT\_VALUE (Reference Frequency Adjustment Value) - Maximum value in range table changed

## 2.12 Version 1.0.201 / 03 – 2015

- \* Timeout change from 5000 to 10000 ms

## 2.13 Version 1.0.200 / 03 – 2015

- \* Support for CMA version 1.0.20 added
- \* Reliability control help updated
- \* New functions:

- rscma\_ConfigureGeneratorARBMarkerDelays
- rscma\_QueryGeneratorARBTriggerSourceCatalog
- rscma\_ConfigureGeneratorAFInternalGeneratorToneMode
- rscma\_ConfigureGeneratorAFModulationState
- rscma\_ConfigureGeneratorAFOutputState
- rscma\_ConfigureGeneratorAFSPDIFOutputState
- rscma\_ConfigureGeneratorAFMultitone
- rscma\_ConfigureGeneratorAFMultitoneFrequencies
- rscma\_ConfigureGeneratorAFMultitoneEnableIndividualTone
- rscma\_ConfigureGeneratorAFMultitoneToneList
- rscma\_ConfigureAnalyzerRFSignalState
- rscma\_ConfigureAnalyzerAFOutput
- rscma\_ConfigureAnalyzerAFSPDIFOutput
- rscma\_QueryAnalyzerAFSPDIFOutputSource
- rscma\_ConfigureAnalyzerDemodulationFilterDistortionFrequency
- rscma\_ConfigureAnalyzerRFDemodulationPMLimits
- rscma\_QueryAnalyzerRFCarrierLimitCheckResults
- rscma\_QueryAnalyzerDemodulationLimitCheckResults
- rscma\_QueryAnalyzerSignalQualityLimitCheckResults
- rscma\_FetchSpectrumAnalyzerReferenceMarker
- rscma\_ConfigureAudioSource
- rscma\_ReliabilityIndicator
- rscma\_ConfigureGeneratorPreemphasisFilter
- \* New attributes:
  - RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_TONE\_MODE (AF Internal Generator Tone Mode)
  - RSCMA\_ATTR\_AF\_OUTPUT\_ENABLED (AF Output Enabled)
  - RSCMA\_ATTR\_GENERATOR\_PREEMPHASIS\_FILTER (Generator Preemphasis Filter)
  - RSCMA\_ATTR\_GENERATOR\_AF\_MULTITONE\_ENABLE\_ALL (Generator AF Multitone Enable All)
  - RSCMA\_ATTR\_GENERATOR\_AF\_MULTITONE\_LEVEL (Generator AF Multitone Level)
  - RSCMA\_ATTR\_GENERATOR\_AF\_MULTITONE\_CRESC\_FACTOR (Generator AF Multitone Crest Factor)
  - RSCMA\_ATTR\_GENERATOR\_AF\_MULTITONE\_TOTAL\_LEVEL (Generator AF Multitone Total Level)
  - RSCMA\_ATTR\_GENERATOR\_AF\_MULTITONE\_ENABLE\_TONE (Generator AF Multitone Enable Tone)
  - RSCMA\_ATTR\_ANALYZER\_RF\_SIGNAL\_ENABLED (Analyzer RF Signal Enabled)
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_ENABLE (Analyzer AF Output Enabled)
  - RSCMA\_ANALYZER\_DEMODULATION\_RESULTS\_FILTERS\_ENABLE (Analyzer Demodulation Enable Filters For Demodulation Results)
  - RSCMA\_ATTR\_RF\_CONNECTOR (RF Connector)
  - RSCMA\_ATTR\_RF\_COUPLING (RF Coupling)
  - RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRACKING\_GENERATOR\_MODE (Spectrum Analyzer Tracking Generator Mode)
  - RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRACKING\_GENERATOR\_CALIBRATE (Spectrum Analyzer Tracking Generator Calibrate)
  - RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_TRACKING\_GENERATOR\_NORMALIZE (Spectrum Analyzer Tracking Generator Normalize)
  - RSCMA\_ATTR\_CONTROL\_CONNECTOR\_TTL2\_UPDATE (Control Connector TTL2 Update)
  - RSCMA\_ATTR\_AUDIO\_SOURCE (Audio Source)
  - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_LOCKED (Reference Frequency Locked)
- \* Modified functions:
  - rscma\_QueryGeneratorARBNumberOfSamples - changed data type to ViReal64
  - rscma\_ConfigureGeneratorARBCharacteristics - range changed at parameter 'Frequency Offset'
  - rscma\_ConfigureGeneratorAFInternalGenerator - parameter 'State' no longer used, Maximum Level has new range 0.01V to 30.0V
  - rscma\_ConfigureGeneratorAFInput - parameter 'State' no longer used
  - rscma\_ConfigureGeneratorAFOutput - range changed at parameter 'Level', values removed from parameter 'Source'
  - rscma\_ConfigureAnalyzerDemodulationFilters - FP control fixed at parameter 'Highpass Filter'

- rscma\_ConfigureAnalyzerAFInputFilters - FP control fixed at parameter 'Highpass Filter'
- rscma\_ConfigureAnalyzerSPDIFInputFilters - binary FP controls changed to input (all controls are arrays)
- rscma\_ReadAnalyzerDemodulationResults - Phase Deviation added, Array Size updated, Results help updated
- rscma\_FetchAnalyzerDemodulationResults - Phase Deviation added, Array Size updated, Results help updated
- rscma\_ReadAnalyzerSignalQualityResults - Array Size updated, Results help updated
- rscma\_FetchAnalyzerSignalQualityResults - Array Size updated, Results help updated
- rscma\_ConfigureAnalyzerFMPilotLimits - default value at parameter 'Deviation Upper' fixed
- rscma\_ConfigureAnalyzerFMRDSLimits - default value and range at parameter 'Upper' fixed
- rscma\_ConfigureAnalyzerRFCarrierLimits - ranges changed at parameters 'Frequency Error ...' and 'Power ...'
- rscma\_ReadAnalyzerFFTResults - added new Input Types and Result Types values, Array Size updated
- rscma\_FetchAnalyzerFFTResults - added new Input Types and Result Types values, Array Size updated
- rscma\_FindAnalyzerRFSignal - help updated
- rscma\_ConfigurePowerMeasurementFilter - range changed at parameter 'Bandwidth'
- rscma\_ConfigurePowerMeasurementStatistics - default values changed at parameters 'Measurement Length' and 'Step Length'
- rscma\_ConfigurePowerMeasurementRFSettings - default value changed at parameter 'Expected Nominal Power', parameters 'Frequency Offset', 'User Margin', 'Mixer Level Offset' no longer used
- rscma\_ConfigureReferenceFrequencyAdjustment - range changed at parameter 'Value'
- rscma\_ConfigureReferenceFrequency - new value at parameter 'Lock In Range'
- rscma\_ConfigureFFTSpectrumRFSettings - parameters 'Frequency Offset', 'User Margin', 'Mixer Level Offset' no longer used
- rscma\_QueryCommonReliability - control help updated
- rscma\_SetAnalyzerFrequencyAsReferenceFrequency - SCPI command in help fixed
- rscma\_ConfigureControlConnectorPinsStates - range and default value changed at parameter 'Index'
- \* Modified attributes:
  - RSCMA\_ATTR\_ARB\_FREQUENCY\_OFFSET (ARB Frequency Offset) - New range, from -10.0e6 to 10.0e6 Hz
  - RSCMA\_ATTR\_AF\_INTERNAL\_GENERATOR\_ENABLED (AF Internal Generator Enabled) - Changed to Read Only
  - RSCMA\_ATTR\_AF\_OUTPUT\_LEVEL (AF Output Level) - New range, from 10.0e-6 to 5.0 V
  - RSCMA\_ATTR\_ANALYZER\_RF\_CONNECTOR (Analyzer RF Connector) - Command in range table corrected
  - RSCMA\_ATTR\_ANALYZER\_RF\_FREQUENCY (Analyzer RF Frequency) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_RF\_EXPECTED\_POWER (Analyzer RF Expected Power) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_RF\_EXTERNAL\_ATTENUATION (Analyzer RF External Attenuation) - SCPI command fixed
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_LEVEL (Analyzer AF Output Level) - New range, from 10.0e-6 to 5.0 V
  - RSCMA\_ATTR\_ANALYZER\_AF\_OUTPUT\_SOURCE (Analyzer AF Output Source) - Changed to Read Only, command updated
  - RSCMA\_ATTR\_RF\_EXPECTED\_NOMINAL\_POWER (RF Expected Nominal Power) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_STEP\_LENGTH (Power Measurement Step Length) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_MEASUREMENT\_LENGTH (Power Measurement Measurement Length) - Default value changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_GAUSS\_BANDWIDTH (Power Measurement Gauss Bandwidth) - Range changed
  - RSCMA\_ATTR\_POWER\_MEASUREMENT\_BANDPASS\_BANDWIDTH (Power Measurement Bandpass Bandwidth) - Range changed
  - RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_INTERNAL\_RANGE (Reference Frequency Internal Range) - New value in range table (RSCMA\_VAL\_LI\_RANGE\_INV)

- RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_EXTERNAL\_RANGE (Reference Frequency External Range) - New value in range table (RSCMA\_VAL\_LI\_RANGE\_INV)
- RSCMA\_ATTR\_REFERENCE\_FREQUENCY\_ADJUSTMENT\_VALUE (Reference Frequency Adjustment Value) - Maximum value in range table changed
- RSCMA\_ATTR\_AF\_INPUT\_MAXIMUM\_LEVEL (AF Input Maximum Level) - Added range 10E-6 V to 30 V
- RSCMA\_ATTR\_ANALYZER\_AF\_INPUT\_MAXIMUM\_LEVEL (Analyzer AF Input Maximum Level) - Added range 10E-6 V to 30 V
- RSCMA\_ATTR\_ARB\_FILE\_SAMPLES (ARB File Samples) - changed data type
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_ZERO\_SPAN\_GAUSS\_RBW (Spectrum Analyzer Zero Span Gauss RBW) - Minimum value changed to 100
- RSCMA\_ATTR\_SPECTRUM\_ANALYZER\_FREQUENCY\_SWEEP\_RBW (Spectrum Analyzer Frequency Sweep RBW) - Minimum value changed to 100
- \* Deleted functions:
  - rscma\_ConfigureGeneratorAFSPDIFInput
- \* Deleted attributes:
  - RSCMA\_ATTR\_AF\_INPUT\_ENABLED (AF Input Enabled)
  - RSCMA\_ATTR\_RF\_FREQUENCY\_OFFSET (RF Frequency Offset)
  - RSCMA\_ATTR\_RF\_USER\_MARGIN (RF User Margin)
  - RSCMA\_ATTR\_RF\_MIXER\_LEVEL\_OFFSET (RF Mixer Level Offset)

## 2.14 Version 1.0.2 / 01 – 2015

- \* Updated:
  - RSCMA\_ATTR\_ID\_QUERY\_RESPONSE - bug fixed

## 2.15 Version 1.0.1 / 10 – 2014

- \* Updated:
  - RSCMA\_ATTR\_ARB\_FILE\_CLOCK\_RATE - data type changed from Int32 to Real64
  - RSCMA\_ATTR\_ID\_QUERY\_RESPONSE - bug fixed

## 2.16 Version 1.0.0 / 05 – 2014

- \* Initial release

# 3 Getting Started

## 3.1 LabWindows/CVI driver

The Rohde & Schwarz **rscma** 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:

- *rscma.c* + *rscma.h*
- *rscma\_attributes.c* + *rscma\_attributes.h*
- *rscma\_utility.c* + *rscma\_utility.h*
- *rscore.c* + *rscore.h*
- *rscma\_callbacks.c*
- *rscma.fp* + *rscma.sub*

## 3.2 VXIplug&play driver in C/C++, LabWindows/CVI

The compiled source code from LabWindows/CVI driver is used. The compiled ANSI-C libraries exist for Windows 7 64-bit and newer.

Add the following files to your 64-bit target project:

- C:\Program Files\IVI Foundation\VISA\Win64\Include\rscma.h
- C:\Program Files\IVI Foundation\VISA\Win64\Lib\_x64\msc\rscma64.lib (static)
- C:\Program Files\IVI Foundation\VISA\Win64\Bin\rscma\_64.dll (dynamic)
- C:\Program Files\IVI Foundation\VISA\Win64\rscma\rscma.fp (in CVI only)
- C:\Program Files\IVI Foundation\VISA\Win64\rscma\rscma.sub (in CVI only)

## 3.3 VXIplug&play driver in MATLAB

MATLAB instrument driver **rscma.mdd** can be found here:

**C:\Program Files\IVI Foundation\VISA\Win64\rscma\rscma.mdd**

For more, refer to [1MA171 - How to use R&S instrument in MATLAB](#)

## 3.4 Linux and Mac OS X

To be able to use Rohde & Schwarz **rscma** Instrument driver in Linux or macOS, the functioning VISA is required. Check out [R&S VISA](#) for Linux or macOS.

## 3.5 Additional Help

LabWindows/CVI and VXIplug&play instrument driver contains the documentation in a compressed HTML format (Windows CHM help file **rscma\_vxi.chm**):

**C:\Program Files\IVI Foundation\VISA\Win64\rscma\rscma\_vxi.chm**



# 4 Customer support

**Technical support – where and when you need it**

For quick, expert help with any Rohde & Schwarz product, contact our customer support center. A team of highly qualified engineers provides support and works with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz products.

**Contact information**

Contact our customer support center at [www.rohde-schwarz.com/support](http://www.rohde-schwarz.com/support) or follow this QR code:

