Consolidated LUA and mmWaveLink API Mapping in mmWaveStudio

Radar

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Table of Contents

The below table provides a mapping between the LUA API and its corresponding RadarLink API which are used in the studio.

Lua API	mmWaveLink API	Description
ar1.PowerOn	rlDevicePowerOn	Power On the device
ar1.AddDevice	rlDeviceAddDevices	AddDevice API used to connect slave devices through SPI
ar1.RemoveDevice	rlDeviceRemoveDevices	Disconnect the SPI from slave Devices
ar1.DownloadBssFwOvSPI	rlDeviceFileDownloadWrap	Download the BSS firmware over SPI
ar1.DownloadMssFwOvSPI	rlDeviceFileDownloadWrap	Download the MSS firmware over SPI
ar1.SOPControl	rlsSOPControl	SOP control
ar1.FullReset	rlsFullReset	Full reset of the device
ar1.selectRadarMode	NA	Select the Radar Mode, Single chip or cascade chip
ar1.selectCascadeMode	NA	Select the Cascade Mode, 2 Chip/4 Chip
ar1.RfEnable	rlDeviceRfStart	Rf Enable
ar1.WaitForTriggerType	NA	WaitForTriggerType API will wait until the host has received the trigger type done async event
ar1.GetStaticCharData	rlRfGetStaticCharData	Get Static Char Data
ar1.GetRFBootupStatus	rlGetRfBootupStatus	Get RF Boot Up Status
ar1.RfInit	rlRfInit	RfInit API defines the initialization of RF analog and digital base band sections
ar1.StartFrame	rlSensorStart	Sensor Frame Start
ar1.StopFrame	rlSensorStop	Sensor Frame Stop
ar1.IsConnected	NA	Is device connected check

Lua API	mmWaveLink API	Description
ar1.PowerOff	rlDevicePowerOff	Power Off the device
ar1.ChanNAdcConfigMSS	NA	MSS API only - Static device config API which defines configure the Receiver channels of Radar device and also ADC data format output
ar1.ChanNAdcConfig	rlSetChannelConfig	Static device config API which defines configure both the Transmitter and Receiver channels of Radar device and also ADC data format output
ar1.SetMiscConfig	rlRfSetMiscConfig	PerChirpPhaseShifterEnaConfig API which defines controls miscellaneous global RF controls
ar1.SetCalMonFreqLimitConfig	rlRfSetCalMonFreqLimitConfig,	SetCalMonFreqLimitConfig API which defines Radar RF calibration and monitoring frequency limit
ar1.SetApllSynthBWCtlConfig	rlRfApllSynthBwCtlConfig	SetApllSynthBWCtlConfig API controls the bandwidth of the APLL and the Synthesizer
ar1.SetRFDeviceConfig	rlRfSetDeviceCfg	SetRFDeviceConfig API which configures the direction of async event from BSS
ar1.SetMSSDeviceConfig	rlDeviceSetMiscConfig	SetMSSDeviceConfig API which configures the direction of async event from MSS
ar1.RfSetCalMonFreqTxPowLimitConfig	rlRfTxFreqPwrLimitConfig	RfSetCalMonFreqTxPowLimitConfig API which sets the limits for RF frequency transmission for each TX and also Tx power limits
ar1.SetRfRxSigImgMonConfig	rlRfRxSigImgMonConfig,	SetRfRxSigImgMonConfig API which defines containing information related to signal and image band energy
ar1.SetRfRxIfSatMonConfig	rlRfRxIfSatMonConfig	SetRfRxIfSatMonConfig API which defines containing information related to RX saturation detector monitoring
ar1.TxGainTempLutSet	rlTxGainTempLutSet	TxGainTempLutSet API used to overwrite the TX gain temperature LUT used in firmware
ar1.TxGainTempLutGet	rlTxGainTempLutGet	TxGainTempLutGet API used to read the TX gain temperature LUT used by the firmware
ar1.AdvTxGainTempLutSet	rlAdvTxGainTempLutSet	AdvTxGainTempLutSet API used to overwrite the TX gain temperature LUT used in firmware
ar1.AdvTxGainTempLutGet	rlAdvTxGainTempLutGet	AdvTxGainTempLutGet API used to read the TX gain temperature LUT used by the firmware

Lua API	mmWaveLink API	Description
ar1.RxGainTempLutSet	rlRxGainTempLutSet	RxGainTempLutSet API used to overwrite the RX gain temperature LUT used in firmware
ar1.RxGainTempLutGet	rlRxGainTempLutGet	RxGainTempLutGet API used to read the RX gain temperature LUT used by the firmware
ar1.SetRfAnaMonConfig	rlRfAnaMonConfig	SetRfAnaMonConfig API which defines consolidated configuration of all analog monitoring
ar1.SetRfAdvTxGainPhaseMismatchMonConfig	rlRfAdvTxGainPhaseMismatchMonConfig	SetRfAdvTxGainPhaseMismatchMonConfig API which defines as containing information related to Tx gain and phase mismatch monitoring
ar1.SetRfVMONMonConfig	rlRfVmonMonConfig	SetRfVMONMonConfig API which defines as containing information related to VMON monitoring
ar1.SetRfGpadcIntAnaSignalsMonConfig	rlRfGpadcIntAnaSignalsMonConfig	SetRfGpadcIntAnaSignalsMonConfig API which defines that configure the information related to GPADC internal analog signal monitoring and report the soft results from monitor
ar1.SetRfPmClkLoIntAnaSignalsMonConfig	rlRfPmClkLoIntAnaSignalsMonConfig	SetRfPmClkLoIntAnaSignalsMonConfig API which defines that configure the information related to Power management, clock generation and LO distribution circuits internal analog signal monitoring and report the soft results from monitor
ar1.SetRfRxIntAnaSignalsMonConfig	rlRfRxIntAnaSignalsMonConfig	SetRfRxIntAnaSignalsMonConfig API which defines that configure the information related to RX internal analog signals monitoring and report the soft results from monitor
ar1.SetRfTx0IntAnaSignalsMonConfig	rlRfTxIntAnaSignalsMonConfig	SetRfTx0IntAnaSignalsMonConfig API which defines that configure the information related to TX0 internal analog signals monitoring and report the soft results from monitor
ar1.SetRfTx1IntAnaSignalsMonConfig	rlRfTxIntAnaSignalsMonConfig	SetRfTx1IntAnaSignalsMonConfig API which defines that configure the information related to TX1 internal analog signals monitoring and report the soft results from monitor
ar1.SetRfTx2IntAnaSignalsMonConfig	rlRfTxIntAnaSignalsMonConfig	SetRfTx2IntAnaSignalsMonConfig API which defines that configure the information related to TX2 internal analog signals monitoring and report the soft results from monitor
ar1.SetRfTxNIntAnaSignalsMonConfig	rlRfTxIntAnaSignalsMonConfig	SetRfTxNIntAnaSignalsMonConfig API which defines that configure the information related to TX3 internal analog signals monitoring and report the soft results from monitor
ar1.SetRfTempMonConfig	rlRfTempMonConfig	SetRfTempMonConfig API which defines that configure the information related to temperature monitoring and report the soft results from monitor

Lua API	mmWaveLink API	Description
ar1.SetRfExtAnaSignalsMonConfig	rlRfExtAnaSignalsMonConfig	SetRfExtAnaSignalsMonConfig API which defines that configure the information related to external DC signals monitoring and report the soft results from monitor
ar1.SetRfDualClkCompMonConfig	rlRfDualClkCompMonConfig	SetRfDualClkCompMonConfig API which defines that configure the information related to DCC based clock frequency monitoring and report the soft results from monitor
ar1.SetRfPllContrlVoltMonConfig	rlRfPllContrlVoltMonConfig	SetRfPllContrlVoltMonConfig API which defines that configure the information related to APLL and synthesizer voltage control signals monitoring and report the soft results from monitor
ar1.SetRfSynthFreqMonConfig	rlRfSynthFreqMonConfig	SetRfSynthFreqMonConfig API which defines that configure the information related to synthesizer frequency monitoring during chirping and report the soft results from monitor
ar1.SetRfTx0PowMonConfig	rlRfTxPowrMonConfig	SetRfTx0PowMonConfig API which defines that configure the monitors of TX0 transmitter output power and report the soft results from monitor
ar1.SetRfTx1PowMonConfig	rlRfTxPowrMonConfig	SetRfTx1PowMonConfig API which defines that configure the monitors of TX1 transmitter output power and report the soft results from monitor
ar1.SetRfTx2PowMonConfig	rlRfTxPowrMonConfig	SetRfTx2PowMonConfig API which defines that configure the monitors of TX2 transmitter output power and report the soft results from monitor
ar1.SetRfTxNPowMonConfig	rlRfTxPowrMonConfig	SetRfTxNPowMonConfig API which defines that configure the monitors of TXN transmitter output power and report the soft results from monitor
ar1.DeviceLatentFaultConfig	rlDeviceLatentFaultTests	DeviceLatentFaultConfig API which used to trigger the periodic tests in MSS
ar1.DevicePeriodicTestsConfig	rlDeviceEnablePeriodicTests	DevicePeriodicTestsConfig API which used to trigger the periodic tests in MSS
ar1.SetRfRxNoiseMonConfig	rlRfRxNoiseMonConfig	SetRfRxNoiseMonConfig API which defines that configure the monitor of receiver noise and report the soft results from monitor
ar1.SetRfInterRxGainPhFreqConfig	rlRfInterRxGainPhaseConfig	SetRfInterRxGainPhFreqConfig API which used to induce different gain or phase or frequency offsets on the different RXs, for inter-RX mismatch compensation
ar1.SetRfMixerInpPowMonConfig	rlRfRxMixerInPwrConfig	SetRfMixerInpPowMonConfig API which defines that configure related information to Rx mixer input power monitoring

Lua API	mmWaveLink API	Description
ar1.SetRfRxIfStageMonConfig	rlRfRxIfStageMonConfig	SetRfRxIfStageMonConfig API which defines that configure the monitor of receiver IF filter attenuation and report the soft results from monitor
ar1.SetRfTx0BallbreakMonConfig	rlRfTxBallbreakMonConfig	SetRfTx0BallbreakMonConfig", " SetRfTx0BallbreakMonConfig API which defines that configure the monitors of TX0 transmitter balls and impedance matching and report the soft results from monitor
ar1.SetRfTx1BallbreakMonConfig	rlRfTxBallbreakMonConfig	SetRfTx1BallbreakMonConfig API which defines that configure the monitors of TX1 transmitter balls and impedance matching and report the soft results from monitor
ar1.SetRfTx2BallbreakMonConfig	rlRfTxBallbreakMonConfig	SetRfTx2BallbreakMonConfig API which defines that configure the monitors of TX2 transmitter balls and impedance matching and report the soft results from monitor
ar1.SetRfTxNBallbreakMonConfig	rlRfTxBallbreakMonConfig	SetRfTxNBallbreakMonConfig API which defines that configure the monitors of TXN transmitter balls and impedance matching and report the soft results from monitor
ar1.SetRfTxPhShiftDACMonConfig	rlRfMontxPhShiftDacConfig	SetRfTxPhShiftDACMonConfig API is a monitoring configuration API containing information related to TX phaseshifter DAC monitoring
ar1.SetRfTx0PhShiftMonConfig	rlRfTxPhShiftMonConfig	SetRfTx0PhShiftMonConfig API is a monitoring configuration API containing information related to TX0 TX loop back based phase shifter monitoring
ar1.SetRfTx1PhShiftMonConfig	rlRfTxPhShiftMonConfig	SetRfTx0PhShiftMonConfig API is a monitoring configuration API containing information related to TX1 TX loop back based phase shifter monitoring
ar1.SetRfTx2PhShiftMonConfig	rlRfTxPhShiftMonConfig	SetRfTx0PhShiftMonConfig API is a monitoring configuration API containing information related to TX2 TX loop back based phase shifter monitoring
ar1.SetRfTx3PhShiftMonConfig	rlRfTxPhShiftMonConfig	SetRfTx3PhShiftMonConfig API is a monitoring configuration API containing information related to TX3 TX loop back based phase shifter monitoring
ar1.SetRfDigMonPeriodicConfig	rlRfDigMonPeriodicConfig	SetRfDigMonPeriodicConfig API which defines that configure the of all periodic digital monitoring within Radar sub system
ar1.SetRfDigLatentFaultMonEnableConfig	rlDeviceLatentFaultTests	SetRfDigLatentFaultMonEnableConfig API which defines configure the of all digital monitoring
ar1.SetRfRxGainPhMonConfig	rlRfRxGainPhMonConfig	SetRfRxGainPhMonConfig API which defines that configure the monitors of reciever gain and phase

Lua API	mmWaveLink API	Description
ar1.SetRfOverrideDitherMonConfig	rlRfMonOvrdDitherConfig	SetRfOverrideDitherMonConfig API which defines that configure the monitors for OverRide and Dither configuration
ar1.SetCalMonTimeUnitConfig	rlRfSetCalMonFreqLimitConfig	SetCalMonTimeUnitConfig API which defines calibration and monitoring time unit configuration
ar1.SetMonTypeTriggerConfig	rlMonTypeTrigConfig	SetMonTypeTriggerConfig API which defines the control sequence of execution of monitors
ar1.RfInitCalibConfig	rlRfInitCalibConfig	RfInitCalibConfig API which defines calibration and monitoring RF initialization configuration
ar1.LowPowNNoisFifConfig	rlSetLowPowerModeConfig	LP Mod Config API which defines both Configure the ADC Mode and analog filter channel format
ar1.PowerSaveModeConfig	rlSetPowerSaveModeConfig	Power Save Mode Config API which defines power saving modes and API configuration
ar1.EnableRfLdoBypassConfig	rlRfSetLdoBypassConfig	RFLDOBypassConfig_mult API which defines enable or disable the RF LDO Bypass
ar1.ChirpConfig	rlSetChirpConfig	Chirp configuration API which defines which profile is to be used for each chirp in a frame
ar1.AdvChirpConfig	rlSetAdvChirpConfig	Advanced Chirp configuration API
ar1.AdvChirpLUTConfig	rlSetAdvChirpLUTConfig,	Advanced Chirp LUT configuration API
ar1.LoadAdvChirpLUTConfig	NA	Load Advanced Chirp LUT configuration API
ar1.SaveAdvChirpLUTConfig	NA	Save Advanced Chirp LUT configuration API
ar1.ClearAdvChirpLUTConfig	NA	Clear Advanced Chirp LUT configuration API
ar1.ReadAdvChirpConfigLUT	NA	Read Advanced Chirp LUT configuration API
ar1.WriteAdvChirpConfigLUT	NA	Write Advanced Chirp LUT configuration API
ar1.SetProfileAdvChirpConfigLUT	NA	Profile Advanced Chirp LUT configuration API

Lua API	mmWaveLink API	Description
ar1.SetFreqSlopeAdvChirpConfigLUT	NA	Freq Slope Advanced Chirp LUT configuration API
ar1.SetTxEnAdvChirpConfigLUT	NA	Tx Enable Advanced Chirp LUT configuration API
ar1.SetBpmEnAdvChirpConfigLUT	NA	BPM Enable Advanced Chirp LUT configuration API
ar1.SetTx0PhShiftAdvChirpConfigLUT	NA	Tx0 Phase shifter Advanced Chirp LUT configuration API
ar1.SetTx1PhShiftAdvChirpConfigLUT	NA	Tx1 Phase shifter Advanced Chirp LUT configuration API
ar1.SetTx2PhShiftAdvChirpConfigLUT	NA	Tx2 Phase shifter Advanced Chirp LUT configuration API
ar1.SetTx3PhShiftAdvChirpConfigLUT	NA	Tx3 Phase shifter Advanced Chirp LUT configuration API
ar1.SetStartFreqAdvChirpConfigLUT	NA	Start Freq Advanced Chirp LUT configuration API
ar1.SetIdleTimeAdvChirpConfigLUT	NA	Idle time Advanced Chirp LUT configuration API
ar1.SetADCTimeAdvChirpConfigLUT	NA	ADC time Advanced Chirp LUT configuration API
ar1.SetDynamicPowerSave	rlRfDynamicPowerSave	SetDynamicPowerSaveMode configuration API which defines enable Dynamic Power Save Mode
ar1.FrameConfig	rlSetFrameConfig	Frame Configuration API defines Frame formation which has sequence of chirps to be transmitted subsequently
ar1.BPMChirpConfig	rlSetBpmChirpConfig	Bpm Configuration API Defines static configurations related to BPM(Binary Phase Modulation) feature in each of the TXs Channels.
ar1.SetAdvBpmPatternConfig	rlSetAdvBpmPattern	SetAdvBpmPatternConfig API Defines advance BPM pattern configuration for each of the TXs Channels.
ar1.SetPerChirpPhaseShifterConfig	rlRfSetPhaseShiftConfig	SetPerChirpPhaseShifterConfig API Defines static phase configurations per chirp in each of the TXs Channels.
ar1.SetRFPALoopbackConfig	rlRfSetPALoopbackConfig	SetRFPALoopbackConfig API Defines Enables/Disables PA loopback for all enabled profiles and it used to debug both Tx and Rx chains are working correctly.

Lua API	mmWaveLink API	Description
ar1.SetRFLOLoopbackConfig	rlRfSetLOLoopbackConfig	SetRFLOLoopbackConfig API Defines Enables/Disables LO loopback for all enabled profiles and it used to debug both Tx and Rx chains are working correctly
ar1.SetRFPSLoopbackConfig	rlRfSetPSLoopbackConfig	SetRFPSLoopbackConfig API Defines Enables/Disables PS(Phase shifter) loopback for all enabled profiles and it used to debug both Tx and Rx chains
ar1.SetRFIFLoopbackConfig	rlRfSetIFLoopbackConfig	SetRFIFLoopbackConfig API Defines Enables/Disables IF loopback for all enabled profiles and it used to debug Rx IF chains
ar1.SetProgFiltCoeffRamApply	rlRfSetProgFiltCoeffRam	SetProgFiltCoeffRam API Defines externally program the filter coeff RAM
ar1.SetProgFiltCoeffRamClear	NA	etProgFiltCoeffRamClear API Defines externally program the filter coeff RAM values cleared
ar1.SetProgFiltCoeffRam1to10	NA	SetProgFiltCoeffRam1to10 API Defines externally program the filter coeff RAM from 1 to 10
ar1.SetProgFiltCoeffRam11to20	NA	SetProgFiltCoeffRam11to20 API Defines externally program the filter coeff RAM from 11 to 20
ar1.SetProgFiltCoeffRam21to30	NA	SetProgFiltCoeffRam21to30 API Defines externally program the filter coeff RAM from 21 to 30
ar1.SetProgFiltCoeffRam31to40	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 31 to 40
ar1.SetProgFiltCoeffRam41to50	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 41 to 50
ar1.SetProgFiltCoeffRam51to60	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 51 to 60
ar1.SetProgFiltCoeffRam61to70	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 61 to 70
ar1.SetProgFiltCoeffRam71to80	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 71 to 80
ar1.SetProgFiltCoeffRam81to90	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 81 to 90
ar1.SetProgFiltCoeffRam91to100	NA	SetProgFiltCoeffRam31to40 API Defines externally program the filter coeff RAM from 91 to 100

Lua API	mmWaveLink API	Description
ar1.SetProgFiltCoeffRam101to104	NA	SetProgFiltCoeffRam101to104 API Defines externally program the filter coeff RAM from 100 to 104
ar1.SetProgFilterConfig	rlRfSetProgFiltConfig	SetProgFiltConfig API Defines externally program the filter
ar1.SetExternalGpAdcConfig	rlSetGpAdcConfig	SetExternalGpAdcConfig API Defines Enables the GPADC reads for external inputs
ar1.SetTemperatureReportConfig	rlRfSetDynamicCharReportConfig	SetTemperatureReportConfig API Defines the provides the device temperature sensor information
ar1.RFTemperatureGet	rlRfGetTemperatureReport	RF Temperature Get API Defines to provide the device temperature sensor information dynamically
ar1.SetCalibDisableConfig	rlRfSetCalibDisableConfig	SetCalibDisableConfig API used to enable or disable the GPADC Temp
ar1.SetInterChirpBlockControlsConfig	rlSetInterChirpBlkCtrl	SetInterChirpBlockControlsConfig API used to trigger the chirp config from software to hardware
ar1.SetCalibDataSaveConfig	rlRfCalibDataStore	SetCalibDataSaveConfig API used to read the calibration data from device
ar1.SetCalibDataRestoreConfig	rlRfCalibDataRestore	SetCalibDataRestoreConfig API used to restore the calibration data from device
ar1.RfPhShifterCalibDataStore	rlRfPhShifterCalibDataStore	RfPhShifterCalibDataStore API used to read the phase shifter calibration data from device
ar1.rlRfPhShifterCalibDataRestore	rlRfPhShifterCalibDataRestore	RfPhShifterCalibDataRestore API used to restore the phase shifter calibration data for Tx channles
ar1.SetMCUClockOutConfig	rlDeviceMcuClkConfig	SetMCUClockOutConfig API used to configure to set up the desired frequency pf MCU clock that is output from device
ar1.SetDebugSignalsConfig	rlDeviceSetDebugSigEnableConfig	SetDebugSignalsConfig_mult API used to enable the Debug signals for the chirp cycle
ar1.SetPMICClockOutConfig	rlSetDynChirpEn	SetPMICClockOutConfig API used to to configure to set up the desired frequency pf PMIC clock that is output from device
ar1.DynChirpCfgSet	rlSetDynChirpCfg	DynChirpCfgSet API used to dynamically change chirp configuration while frame are on going

Lua API	mmWaveLink API	Description
ar1.DynamicChirpEnableCfgSet	rlSetDynChirpEn	DynamicChirpEnableCfgSet API used to trigger the copy of chirp configuration from software to hardware . the copy take place at the end of going frame
ar1.AdvDynPerChirpPhShifterCfgSet	rlSetAdvDynPerChirpPhShifterCfg	AdvDynPerChirpPhShifterCfgSet API used to dynamically change the per-chirp phase shift configuration while frame are on going
ar1.SetTestPatternConfig	rlDeviceSetTestPatternConfig	SetTestPatternConfig API used configurations to set up the test pattern to be generated and transferred over the selected high speed interface(LVDS/CSI2)
ar1.SetCSI2DelayConfig	rlDeviceSetHsiDelayDummyConfig,	SetCSI2DelayConfig API used to increase the time between the availability of chirp data and the transfer of chirp data over CSI2 interface
ar1.SetAnalogFaultInjectionConfig	rlRfAnaFaultInjConfig	SetAnalogFaultInjectionConfig API used to inject the faults in the analog circuits to test the corresponding monitors","Reserved
ar1.RfSetPdTrim1GHZConfig	rlRfSetPdTrimConfig	RfSetPdTrimConfig API used to trim peak detectors
ar1.SetRfSynthLinMonConfig	rlRfSynthLinMonConfig	SetRfSynthLinMonConfig API used to containing information related to synthesizer frequency error and linearity monitoring during chirping
ar1.SetMeasPdPowerConfig	rlRfSetMeasPdPowerConfig	SetMeasPdPowerConfig API used to measure the peak detectors power
ar1.SetTempSensTrimConfig	rlRfSetTempSensTrimCfg	SetTempSensTrimConfig API Defines the provides the temperature trim data to BSS
ar1.AdvanceFrameConfig	rlSetAdvFrameConfig	AdvanceFrameConfig API Defines advanced frame configuration
ar1.AdvanceDevFrameConfig	rlDeviceAdvFrameConfigApply	AdvanceDevFrameConfig API Defines advance dev frame configuration
ar1.LbBurstCfgSet	rlSetLoopBckBurstCfg	LbBurstCfgSet API used for introduce loop back chirps within the on-going frame
ar1.AdvChirpDynLUTAddOffConfig	rlSetAdvChirpDynLUTAddrOffConfig	AdvChirpDynLUTAddOffConfig API used to configure LUT address offset dynamically for each chirp parameters
ar1.SubFrameStartCfgSet	rlSetSubFrameStart	SubFrameStartCfgSet API used for starts or stops transmission of sub frames

Lua API	mmWaveLink API	Description
ar1.SelectCaptureDevice	NA	Select capture device type either TSW1400 or DCA1000 or TDA2XX
ar1.DisableMonitoringLogging	NA	Disable/Enable the logging of Monitoring Reports in the Output Console
ar1.CaptureCardConfig_EthInit	NA	CaptureCardConfig_EthInit API used to ethernet initialization
ar1.CaptureCardConfig_Mode	NA	ConfigureRFDCCardMode API used to configured the ethernet mode
ar1.CaptureCardConfig_StartRecord	NA	CaptureCardConfig_StartRecord API used to start record the ADC data from RF capture card
ar1.CaptureCardConfig_StopRecord	NA	CaptureCardConfig_StopRecord API Used to stop record the ADC data from RF capture card
ar1.CaptureCardConfig_ResetFPGA	NA	CaptureCardConfig_ResetFPGA API API Used to reset the RF Data capture card FPGA device
ar1.ConfigureRFDCCard_EEPROM	NA	ConfigureRFDCCard_EEPROM API used to configure the RF data capture card of EEPROM
ar1.CaptureCardConfig_PacketDelay	NA	CaptureCardConfig_PacketDelay API used to configure record data packet delay and number of bytes in a data packet sent from FPGA
ar1.CaptureCard_DisConnect	NA	CaptureCard_DisConnect API used to disconnect the socket
ar1.GetCaptureCardFPGAVersion	NA	Get RF Data Capture Card FPGA Version
ar1.GetCaptureCardDllVersion	NA	Get RF Data Capture Card dll Version
ar1.CaptureCardConfig_EthInit_WithoutSPI	NA	CaptureCardConfig_EthInit_WithoutSPI API used to ethernet initialization
ar1.CaptureCardConfig_Mode_WithoutSPI	NA	ConfigureRFDCCardMode_WithoutSPI API used to configured the ethernet mode
ar1.CaptureCardConfig_StartRecord_WithoutSPI	NA	CaptureCardConfig_StartRecord_WithoutSPI API used to start record the ADC data from RF capture card

Lua API	mmWaveLink API	Description
ar1.CaptureCardConfig_StopRecord_WithoutSPI	NA	CaptureCardConfig_StopRecord_WithoutSPI API Used to stop record the ADC data from RF capture card
ar1.CaptureCardConfig_ResetFPGA_WithoutSPI	NA	CaptureCardConfig_ResetFPGA_WithoutSPI API API Used to reset the RF Data capture card FPGA device
ar1.ConfigureRFDCCard_EEPROM_WithoutSPI	NA	ConfigureRFDCCard_EEPROM_WithoutSPI API used toconfigure the RF data capture card of EEPROM
ar1.CaptureCardConfig_PacketDelay_WithoutSPI	NA	CaptureCardConfig_PacketDelay_WithoutSPI API used to configure record data packet delay and number of bytes in a data packet sent from FPGA
ar1.CaptureCard_DisConnect_WithoutSPI	NA	CaptureCard_DisConnect_WithoutSPI API used to disconnect the socket
ar1.GetCaptureCardFPGAVersion_WithoutSPI	NA	Get RF Data Capture Card FPGA Version
ar1.GetCaptureCardDllVersion_WithoutSPI	NA	Get RF Data Capture Card dll Version
ar1.SetCalibMonConfig	NA	SetCalibMonConfig API Used to trigger individual calibration and monitoring APIs for BSS for testing purposes
ar1.gpadcMeasurement	rlRfGetGpadcData	gpadcMeasurement API Defines to read the GPADC data for specified sensor in RF device
ar1.TemperatureSensorDataRead	NA	GetTemperatureSensorDataRead
ar1.DFEStaticReportGet	rlRfRealChDfeRxStatisticsReport	DFEStaticReportGet
ar1.SelectPMICDevice	NA	Chooses the PMIC devices PMIC1 - 1, PMIC2 - 2
ar1.SetPMICBuck0	NA	Set the PMIC Buck0 voltage
ar1.SetPMICBuck1	NA	Set the PMIC Buck1 voltage
ar1.SetPMICBuck2	NA	Set the PMIC Buck2 voltage

Lua API	mmWaveLink API	Description
ar1.SetPMICBuck3	NA	Set the PMIC Buck3 voltage
ar1.GetPMICBuck0	NA	Get the PMIC Buck0 voltage
ar1.GetPMICBuck1	NA	Get the PMIC Buck1 voltage
ar1.GetPMICBuck2	NA	Get the PMIC Buck2 voltage
ar1.GetPMICBuck3	NA	Get the PMIC Buck3 voltage
ar1.SetPMICRegConfig	NA	SetPMICRegConfig API is used for configure the PMIC register
ar1.GetPMICRegConfig	NA	GetPMICRegConfig API is used for configure the PMIC register
ar1.gpioGetValue	NA	gpioGetValue API is used to get the GPIO value for the given configuration
ar1.gpioSetValue	NA	gpioSetValue API is used to set the GPIO value for the given configuration
ar1.StartTsw1400Arm	NA	StartTsw1400Arm
ar1.StartMatlabPostProc	NA	StartMatlabPostProc
ar1.StartMatlabPostProcForTDAContStream	NA	StartMatlabPostProcForTDAContStream
ar1.GetNumOfRawFiles	NA	GetNumOfRawFiles
ar1.ReturnStrongestDetectedObject	NA	ReturnStrongestDetectedObject
ar1.ReturnListOfDetectedObjects	NA	ReturnListOfDetectedObjects
ar1.SetupTSW1400	NA	SetupTSW1400
ar1.StartRlTimePostProc	NA	StartRlTimePostProc
ar1.StopRlTimePostProc	NA	StopRlTimePostProc

Lua API	mmWaveLink API	Description
ar1.setUpContMode	NA	setUpContMode
ar1.GetPostProcVersion	NA	GetPostProcVersion
ar1.GetExactMatlabPostProcVersion	NA	GetExactMatlabPostProcVersion
ar1.SavePostProcPicture	NA	SavePostProcPicture
ar1.frequencyBandSelection	NA	frequencyBandSelection defined as the select a device operating band frequency in GHz
ar1.MesureTheDCVoltage	NA	Returns the DC in Volts for the specified Rxchain with complex, real or imaginary channel
ar1.ConvertFromNonInterleavedToInterleaved	NA	ParseToStandardFormat API Converts a given file from Non-Interleaved to Interleaved. the number of samples per chirp is given by profileconfig API
ar1.CreateHistogram	NA	CreateHistogram API populates the outputfilename with the histogram of the fft output
ar1.MeasureFundPower	NA	Returns the power in dBFS, the frequency in Hz, and the phase in radians of the largest peak located in the fourier spectrum
ar1.MeasureTheSecondHarmonicCharacsteristics	NA	Returns the power(in dBFS), the frequency(in Hz), and the phase(in radians) of the second harmonic peak located in the fourier spectrum. the third harmonic is sought at fund_freq_hz x2. Once the harmonic is found , its energy is computed by integrating_bw_hz around the peak
ar1.MeasureTheThirdHarmonicCharacsteristics	NA	Returns the power(in dBFS), the frequency(in Hz), and the phase(in radians) of the third harmonic peak located in the fourier spectrum. the third harmonic is sought at fund_freq_hz x3. Once the harmonic is found , its energy is computed by integrating_bw_hz around the peak
ar1.MeasureThePowerSpectralDensity	NA	The returns the power spectral density(in dBFS/Hz) from Freq_Start_in_hz to (freq_Start_in_hz + Bandwidth_in_hz).
ar1.MeasureThePeakInBandwidth	NA	The returns the power in dBFS/Hz), the Frequency(in Hz) and the phase (in Radians of the largest peak located between two frequency-freq_start_in_hz and (freq_Start_in_hz + Bandwidth in hz)

Lua API	mmWaveLink API	Description
ar1.BasicConfigurationForAnalysisTool	NA	This functions allows the configuration of a set of parameters for the analysis tool and should be called only after the device has been placed in 'continous streaming'mode. This function also programs the HSDCPro to collect the necessary number of samples based on the NumberOfSamplesPerFFT and NumNonCohAverages
ar1.MeasureTheTxPower	NA	MeasureTheTxPower API used to measure the TX output power using the on chip peak detectors
ar1.ConfigureDetection	NA	Configure Detection
ar1.SelectBurst	NA	Selection of Burst
ar1.SaveCQData	NA	API used to Save CQ Data in a file
ar1.AdditionalConfigurationForAnalysisTool	NA	Additional Configuration For Analysis Tool
ar1.PostProcPreConfigure_Plots	NA	change the different plots present in the postproc output, 1: 2D FFT amplitude profile , 2: Range-Angle plot(per frame), 3:Detection and angles estimation results , 4: chirp config profile, 5: 1D FFT amplitude profile, 6: Time domain plot, 7: CQ-metrics - DFE wide-band energy monitor, 8:CQ metrics-ADC /IF saturation indicator, 9: CQ-metrics -DFE energy monitor, 10: chirp number per frame, 11:Profile index and channel number per frame, 12:phase stability across chirps, 13:Amplitude stability across chirps, 14:Zero-vector-bins vs. High-velocity-bin
ar1.EnableTestSource	rlTestSourceEnable	Enable TestSource
ar1.DisableTestSource	rlTestSourceEnable	Disable TestSource
ar1.ProfileConfig	rlSetProfileConfig	Profile configuration API which defines chirp profile parameters
ar1.AdvancedFrameConfig	rlSetAdvFrameConfig	Advanced Frame Config
ar1.BasicConfigurationForAnalysis	NA	This functions allows the configuration of a set of parameters for the analysis tool and should be called only after the device has been placed in 'continous streaming'mode. This function also programs the HSDCPro to collect the necessary number of samples based on the NumberOfSamplesPerFFT and NumNonCohAverages

Lua API	mmWaveLink API	Description
ar1.MeasureGain	NA	MeasureGain API defines measure the gain
ar1.CaptureCardConfig_StartRecord_ContinuousStreamData	NA	CaptureCardConfig_StartRecord_ContinuousStreamData API defines Capture the ADC Data from continuous streaming from DCA1000 device
ar1.ProcessADCData	NA	ProcessContStreamADCData API defines Processing and displaying ADC Data of Continuous streaming
ar1.ContStrModConfig	rlSetContModeConfig	Continuous Streaming Configuration API defines Configuration of the data path to transfer the captured ADC samples continuously without missing any sample to external Device(host)
ar1.EnableContStrMod	rlDeviceSetContStreamingModeConfig	Continuous Streming Mode Enable API defines Configuration needed to enable the continuous streaming mode from the device
ar1.DisableContStrMod	rlDeviceSetContStreamingModeConfig	Continuous Streaming Mode disable API defines Configuration needed to disable the continuous streaming mode from the device
ar1.GetNumberOfRadarDevicesDetected	rlsGetNumofDevices	GetNumberOfRadarDevicesDetected API defines the number of Radar devices detected
ar1.DataPathConfig	rlDeviceSetDataPathConfig	DataPathConfig API Defines the used to configure the device data path
ar1.LaneConfig	rlDeviceSetCsi2Config	LVDSLaneConfig API Defines the device data format configuration
ar1.CSI2LaneConfig	rlDeviceSetCsi2Config	CSI2LaneConfig
ar1.LvdsClkConfig	rlDeviceSetDataPathClkConfig	LvdsClkConfig API Defines the used to HSI Clock configuration
ar1.DeviceReadMemBlockConfig	rlDeviceSetTestPatternConfig	DeviceReadMemBlockConfig API Defines the used to read contiguous memory locations
ar1.SetInternalCfg	rlDeviceSetInternalConf	Set Internal Cfg of register through SPI
ar1.GetInternalCfg	rlDeviceGetInternalConf	Get Internal Cfg of register through SPI

Lua API	mmWaveLink API	Description
ar1.SetGlobalTimeout	NA	API to set the Global timeout for async events

NA - Not Applicable/ Not available in the RadarLink/mmWaveLink as they are not part of the RadarLink/ mmWaveLink.