NXP
SAF85XX

Document Name	RFE SW Test Report
Document Status	Release
Project Name/ID	SAF85xx RFE SW
Release	EAR 0.8.19
Date	September 29, 2023
Author	NXP RFE SW Team
Notes	Check Release Notes on the exact content of the release. - All FuSa Monitors except SM57 have been tested and found to be functional. - TxEnable and TxTransmissionEnable issue fixed Tested on WG4-1.1 and CAB boards, with ES2 E5 T1 samples (with OTP v2)

Help	PARTIALLY TESTED: - "Values Tested" columns contain the tested subset from all possible values. - "Additional Info" columns contains more information on limits of the testing. - Values or conditions mentioned outside the text scope, values and limitations, shall not be used with this release. TEST REPORT UPDATES: - "Change in Current Release" columns indicates test\feature change with respect to the previous release test report. DO NOT USE - do not use this feature in this release Test Coverage - "any" value for values with large range (e.g. int32_t) means tested using random values

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RFE SW Testing

Legend

✓	PASS
?	DO NOT USE
x	FAIL
!	Partially Tested

Notation
ul: 32bit decimal number
0x: hexadecimal
b: binary number

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Component	Functionality	Environment	Result	Additional info	Change in current release
RFE Control Application	rfeAppBasicExample	Windows PC, Simulator	✓	RFE Control Application	
	rfeAppBasicExample	APP-A53/APP-M7 Bare Metal, C (arm-gcc and GHS Compiler)	✓	RFE Control Application	
RFE Driver	RFE Driver: stand alone	APP-A53/APP-M7 Bare Metal, C (arm-gcc and GHS Compiler)	✓	internal tests, limited API functionality (see RFE Abstract API Tab). Added suppoort on APP-M7	
	RFE Driver: rfeAppBasicExample	APP-A53/APP-M7 Bare Metal, C (arm-gcc and GHS Compiler)	✓	rfeAppBasicExample functionality	
	RFE Driver: RSDK	APP-A53 Zephyr OS, C (arm-gcc and GHS Compiler)	✓	see SAF85xx RSDK release, limited API functionality (see RFE Abstract API Tab)	
	RFE Driver: Radar Xplorer \ Radar FW	APP-A53 Bare Metal, C++	✓	see Radar Xplorer \ Radar FW release, limited API functionality (see RFE Abstract API Tab)	
	RFE CDD: rfeAppAutosarBasicExample	APP-M7 Bare Metal, C++ (arm-gcc and GHS Compiler)	✓	rfeAppAutosarBasicExample functionality on APP-M7	
RFE FW	RFE FW stand alone	RFE-M7	✓	internal Unit Tests, Internal Integration Tests, limited functionality (see RFE Firmware and RFE Configuration Parameters Tabs)	
	RFE Driver: stand alone	RFE-M7	✓	rfeAppBasicExample functionality	
	RFE Driver: RSDK	RFE-M7	✓	see SAF85xx RSDK release, limited functionality (see RFE Firmware and RFE Configuration Parameters Tabs)	
	RFE Driver: Radar Xplorer \ Radar FW	RFE-M7	✓	see Radar Xplorer \ Radar FW release, limited functionality (see RFE Firmware and RFE Configuration Parameters Tabs)	
RFE Configuration Tool	RFE Configuration Tool: Stand Alone	Windows PC	✓	Dedicated RFE configuration tests, Basic Cofndgiration, Ceiling Demo configuration	
	RFE Configuration Tool: Radar Xplorer	Windows PC	✓	integrated in Radar Xplorer	
	Timing Tool: Stand Alone	Windows PC	✓	integrated in Radar Xplorer	
	Timing Tool: Radar Explorer	Windows PC	✓	integrated in Radar Xplorer	

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RFE Abstract API Testing

Legend		
✓	PASS	
?	DO NOT USE	
x	FAIL	
!	Partially Tested	

Notation
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b: binary number

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Function Tested	Parameter		Values Tested	Result	Additional info	Change in current release
rfe_sync()	[out]	RFE_ERROR	rfe_error_t	✓	error propagation tested	
	[return]	void	-	N\A		
rfe_configure()	[in]	pConfig	basic configuration	✓	fixed configuration	
			smoke test \ ceiling test configuration (TBC)	✓	fixed configuration	
			other configurations	✓		
	[in]	dynamicTableAddress	0	✓		
			rfe_sysMemAddress_t	✓		
	[out]	RFE_ERROR	rfe_error_t	✓		
	[return]	void	-	N\A		
rfe_radarCycleStart()	[in]	radarCycleCount	any	✓		
	[in]	isScheduled	false	✓		
			true	?		
	[in]	startTime	0	✓		
			other values	?		
	[out]	RFE_ERROR	rfe_error_t	✓		
	[return]	void	-	N\A		
rfe_radarCycleStop()	[out]	RFE_ERROR		✓		
	[return]	uint32_t		✓		
rfe_getTime()	[out]	RFE_ERROR	rfe_error_t	✓		
	[return]	uint32_t	any	✓		
rfe_getRadarCycleCount()	[out]	RFE_ERROR	rfe_error_t	✓		
	[return]	rfe_radarCycleCount_t	1-1000+	✓		
rfe_getState()	[out]	RFE_ERROR	rfe_error_t	✓		
	[return]	rfe_state_t	all	✓		
rfe_getFuSaFaults()	[out]	pFuSaR1R2FaultList	any	✓		
rfe_getInternalError()	[return]	uint32_t	any	✓		
rfe_getFuSaFaultStatistics()	[out]	pR1FaultPromotedToR2		✓		
	[out]	pRadarCycleCount		✓		
	[out]	pFuSaR1FaultCountList		✓		
	[return]	void	-	✓		
rfe_getBistZeroHourReferenceData()	[out]	pTxReferenceData		✓		
	[out]	pRxReferenceData		✓		
	[return]	void	-	N\A		
rfe_getVersion()	[out]	RFE_ERROR	rfe_error_t	✓		
	[return]	rfe_version_t	all	✓		
rfe_monitorRead()	[in]	monitorSelect		!	tested temperature and Tx Power, not tested: Rx saturations	
	[out]	pMonitorValues		!	tested temperature and Tx Power, not tested: Rx saturations	
	[out]	RFE_ERROR		✓		
	[return]	rfe_radarCycleCount_t		✓		
rfe_getNextRadarCycleStartTime()	[out]	pRadarCycleIndex		✓		
	[out]	RFE_ERROR		✓		
	[return]	uint32_t		✓		
rfe_setNextRadarCycleStartTime()	[in]	startTime		✓		
	[out]	RFE_ERROR		✓		
	[return]	uint16_t		✓		
rfe_continuousWaveTransmissionStart()	[in]	profileIndex		✓		
	[out]	RFE_ERROR		✓		
	[return]	uint32_t		✓		

rfe_continuousWaveTransmissionStop()	[out]	RFE_ERROR		✓		
	[return]	void	-	✓		
rfe_testSetParam()	[in]	testParam	outputDataTestPattern_e rfe_testParam_keepTxTransmissionEnabled_e chirpPllTestPinEnable_e maskError_e unmaskError_e rfe_testParam_enableClockRetuning_e enableLargerDynamicTable assertErrorNSignal deAssertErrorNSignal assertHeartBeatSignal copybackConfig	✓	outputDataTestPattern_e (sineWave, incremental, disabled) rfe_testSetParam(rfe_testParam_maskError_e, rfe_maskError_all_error,RFE, ERROR_FUNCTION_ARGUMENT);	
	[in]	value		✓		
	[out]	RFE_ERROR		✓	error propagation tested	
	[return]	void	-	✓		
rfe_updateBegin()	[out]	RFE_ERROR		✓		
	[return]	void	-	✓		
rfe_updateDynamicTable()	[in]	dynamicTableIndex		✓	partial Dynamic Table update suported	
	[in]	paramsSelect		✓		
	[out]	RFE_ERROR		✓		
	[return]	uint32_t		✓		
rfe_updateParam()	[in]	section		✓		
	[in]	param		✓		
	[in]	value		✓		
	[out]	RFE_ERROR		✓		
	[return]	void	-	✓		
rfe_updatePush()	[out]	RFE_ERROR		✓		
	[return]	uint16_t		✓		
rfe_configureInterrupt()	[in]	coreId	rfe_coreId_t	✓	rfe_configureInterrupt() configures which conditions will raise an IRQ to coreId, these conditions are: - RFE state changes - Radar Cycle count changes - Chirp Sequence count changes - Specific RFE API responses from the firmware	
	[in]	events	rfe_eventsIRQ_t	✓		
	[in]	rfeAPIs	rfe_apiIRQ_t	✓		
	[in]	apiWaitForInterrupt	rfe_apiWaitForInterrupt_f	✓		
	[out]	RFE_ERROR		✓		
	[return]	void		✓		
rfe_testGetInternalError()	[out]	RFE_ERROR		✓		
	[return]	uint32_t		✓		
rfe_clockPllLock	[out]	RFE_ERROR		✓		✓
	[return]	rfe_clk_error_t		✓		✓

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RFE FW Testing	Legend	✓	PASS	Notation ul: 32bit decimal number 0x: hexadecimal b: binary number
		?	Not Available	
		x	FAIL	
		!	Partially Tested	

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Functionality	Type	Environment	Result	Additional info	Change in current release
RFE Initialization	CLK PLL Lock \ No Lock	Boards: WG-4 1.1, CAB	✓	0xC0DE0001 \ 0xC0DE<internalCode> where internalCode = 0x10A1 => wrong 0.9[V] supply 0x10A2 => lack of\unstable XO 0x10A3 => wrong Clock PLL supply derrived from 0.9[V] 0x10A4 => CLK PLL not locked	
	Digital Clocks available (640MHz output)	Boards: WG-4 1.1, CAB	✓	0xC0DE0001	
	FuSa errors masked	Boards: WG-4 1.1, CAB	✓	All FuSa faults except SM57 Umasked	✓
	Trimming	Boards: WG-4 1.1, CAB	✓	OTP based	
RFE Synchronization		Boards: WG-4 1.1, CAB	✓		
RFE Configuration	basic demo	Boards: WG-4 1.1, CAB	✓		
	smoke test \ ceiling demo	Boards: WG-4 1.1, CAB	✓		
	arbitrary	Boards: WG-4 1.1, CAB	✓		
Radar Cycle	single chirp sequence	Boards: WG-4 1.1, CAB	✓		
	multiple chirp sequences	Boards: WG-4 1.1, CAB	✓		
	best effort execution	Boards: WG-4 1.1, CAB	✓		
	timed execution		?		
Chirp Sequence	single profile	Boards: WG-4 1.1, CAB	✓		
	multiple profile	Boards: WG-4 1.1, CAB	✓		
	Chirp CW Mode	Boards: WG-4 1.1, CAB	✓		
Chirps	profile 0-7 \ basic test \ ceiling demo	Boards: WG-4 1.1, CAB	✓		
Data Out	Packet Processor	Boards: WG-4 1.1, CAB	✓	refer to RSDK CSI2 driver (contains PPE and CSI-Rx)	
	SRAM	Boards: WG-4 1.1, CAB	✓	data patters ok, ADC data ceiling test reflections OK	
	CSI2-Tx	Boards: WG-4 1.1, CAB	✓		
	Fork (PPE + CSI2)		?		
	Virtual Channels	Boards: WG-4 1.1, CAB	✓		
	Meta data packets	Boards: WG-4 1.1, CAB	✓	CSI2 feature, not used for Packet Processor	
	SW Fields Meta Data	Boards: WG-4 1.1, CAB	✓	CSI2 feature, not used for Packet Processor	
Parameter Updates	RFE parameters	Boards: WG-4 1.1, CAB	✓		
	Dynamic Table	Boards: WG-4 1.1, CAB	✓	partial update possible	
Dynamic Tables	single chirp sequence	Boards: WG-4 1.1, CAB	✓		
	multiple sequences	Boards: WG-4 1.1, CAB	✓		
	Large and Small Dynamic Tables	Boards: WG-4 1.1, CAB	✓		
RFE States		Boards: WG-4 1.1, CAB	✓		
Front End	Cortex-M7	Boards: WG-4 1.1, CAB	✓		
	Timing Engine	Boards: WG-4 1.1, CAB	✓		
	FCCU	Boards: WG-4 1.1, CAB	!	Partially tested	
	CLK PLL	Boards: WG-4 1.1, CAB	✓		
	Chirp PLL	Boards: WG-4 1.1, CAB	✓		
	LOI	Boards: WG-4 1.1, CAB	✓		
	Tx	Boards: WG-4 1.1, CAB	✓		
	Tx Bist	Boards: WG-4 1.1, CAB	✓		
	Rx	Boards: WG-4 1.1, CAB	✓		
	Rx Bist	Boards: WG-4 1.1, CAB	✓		
	ADC	Boards: WG-4 1.1, CAB	✓		
	PDC: Decimation	Boards: WG-4 1.1, CAB	✓		
	PDC: DC Notch Filter	Boards: WG-4 1.1, CAB	✓		
	Packer	Boards: WG-4 1.1, CAB	✓		
Timing	RFE initialization timing	Boards: WG-4 1.1, CAB	✓		✓
	API timing (T1-T6)	Boards: WG-4 1.1, CAB	✓		✓
	Radar Cycle timing	Boards: WG-4 1.1, CAB	✓	use RFE Configuration tool for calculation of radar cycle time schedule	
	Chirp sequence timing	Boards: WG-4 1.1, CAB	✓		
	Chirp timing	Boards: WG-4 1.1, CAB	✓		
	Calibration Timing	Boards: WG-4 1.1, CAB	!	not optimised	
	BIST Timing	Boards: WG-4 1.1, CAB	✓		
	Fault Injection Tests	Boards: WG-4 1.1, CAB	✓	Tested at PVT	✓
	HW errors: monitoring	Boards: WG-4 1.1, CAB	!	Still testing under various conditions under progress	

Functional Safety	HW errors: mask \ unmask	Boards: WG-4 1.1, CAB	✓	see Test Modes	
	SW errors	Boards: WG-4 1.1, CAB	✓	limited error testing	
	API function returns	Boards: WG-4 1.1, CAB	✓	limited return values tested, see RFE Abstract API tab	
	RFE ERROR_N	Boards: WG-4 1.1, CAB	✓	Only tested via fault injection	
	R1 error recovery	Boards: WG-4 1.1, CAB	✓	Only tested via fault injection	✓
RFE Monitoring	temperature	Boards: WG-4 1.1, CAB	✓		
	ADC Clippping		?		
	Rx saturation		?		
Power Management	Power On to Power Down	Boards: WG-4 1.1, CAB	✓	at start-up, at the beginning of each chirp sequence, PDC\ADC (1.45V) and ChirpPLL (3.3V, 1.45V) are always on	
	Power Down to Power On	Boards: WG-4 1.1, CAB	✓	at end of each chirp sequence, PDC\ADC (1.45V) and ChirpPLL (3.3V, 1.45V) are always on	
	Power Sleep		?	not supported	
CLK PLL ReCalibration	CLK PLL	Boards: WG-4 1.1, CAB	✓		
Trimming	ATB ADC	Boards: WG-4 1.1, CAB	✓	RFE FW uses ATB ADC trimming data stored in OTP. Please check trimming data status in the sample information. In case samples do not contain trimming data for ATB ADC, the performance may deviate from trimmed samples. ATB-ADC SE (Single Ended) Trimming	
	ChirpPLL	Boards: WG-4 1.1, CAB	✓		
	GLDO	Boards: WG-4 1.1, CAB	✓		
	GBIAS	Boards: WG-4 1.1, CAB	✓		
	LDOs	Boards: WG-4 1.1, CAB	✓		
	LO	Boards: WG-4 1.1, CAB	✓		
	MCGEN	Boards: WG-4 1.1, CAB	✓		
	ADC	Boards: WG-4 1.1, CAB	✓		
	RX	Boards: WG-4 1.1, CAB	✓		
	RX BIST	Boards: WG-4 1.1, CAB	✓		
	Temp	Boards: WG-4 1.1, CAB	✓		
	TX ADC	Boards: WG-4 1.1, CAB	✓	RFE FW uses TX ADC trimming data stored in OTP. Please check trimming data status in the sample information. In case samples do not contain trimming data for ATB ADC, the performance may deviate from trimmed samples.	
	TX BIST	Boards: WG-4 1.1, CAB	✓		
Start Up Calibrations	RX-ADC	Boards: WG-4 1.1, CAB	✓		
Configuration Calibrations: profile independent	LOI Tx Buffer Calibration	Boards: WG-4 1.1, CAB	✓		
	LOI Rx Buffer Calibration	Boards: WG-4 1.1, CAB	✓		
	TX LOX2 Calibration	Boards: WG-4 1.1, CAB	✓		
	TX Buff2a Calibration	Boards: WG-4 1.1, CAB	✓		
	TX Buff2b2c Calibration	Boards: WG-4 1.1, CAB	✓		
	TX PR Calibration	Boards: WG-4 1.1, CAB	✓		
	RX LOX2 Calibration	Boards: WG-4 1.1, CAB	✓		
	RX LOX2 DAC Calibration		?		
	RX BIST LOX2 Calibration	Boards: WG-4 1.1, CAB	✓		
	RX BIST SSB Calibration	Boards: WG-4 1.1, CAB	✓		
	TX PA RTM (FuSa)	Boards: WG-4 1.1, CAB	?		
Chirp Sequence Dependent	ChirpPLL Loopfilter BW Calibration	Boards: WG-4 1.1, CAB	✓	Chirp PLL LF BW Calibration for 1GHz VCO	
Configuration Calibrations: profile dependent (per profile)	RX HPF Calibration	Boards: WG-4 1.1, CAB	✓	v2	
	RX LPF Calibration	Boards: WG-4 1.1, CAB	✓	v2	
	RX Gain Calibration	Boards: WG-4 1.1, CAB	✓	v2	
	ChirpPLL VCO Calibration	Boards: WG-4 1.1, CAB	✓		
	TX Pout Calibration	Boards: WG-4 1.1, CAB	✓	accuracy improved	
Re-Calibrations: profile independent	LOI Tx Buffer Calibration	Boards: WG-4 1.1, CAB	✓		
	LOI Rx Buffer Calibration	Boards: WG-4 1.1, CAB	✓		
	TX LOX2 Calibration	Boards: WG-4 1.1, CAB	✓		
	TX Buff2a Calibration	Boards: WG-4 1.1, CAB	✓		
	TX Buff2b2c Calibration	Boards: WG-4 1.1, CAB	✓		
	TX PR Calibration	Boards: WG-4 1.1, CAB	✓		
	RX LOX2 Calibration	Boards: WG-4 1.1, CAB	✓		
	RX BIST LOX2 Calibration	Boards: WG-4 1.1, CAB	✓		
	RX BIST SSB Calibration	Boards: WG-4 1.1, CAB	✓		
	TX PA RTM (FuSa)	Boards: WG-4 1.1, CAB	?		
Re-Calibrations: profile independent	ChirpPLL VCO (per profile)	Boards: WG-4 1.1, CAB	✓		
	TX Pout Calibration (per profile)	Boards: WG-4 1.1, CAB	✓		
RF BIST	ChirpLL LLDO	Boards: WG-4 1.1, CAB	?		
	MCGEN LLDO		?		
	TX12\23\34 phase difference	Boards: WG-4 1.1, CAB	!	Partially tested	!
	TX1\2\3\4 phase step	Boards: WG-4 1.1, CAB	!		!
	RX12\13\14 phase difference	Boards: WG-4 1.1, CAB	!		!
	RX12\13\14 gain difference	Boards: WG-4 1.1, CAB	!		!
	Datapatern sine	Boards: WG-4 1.1, CAB	✓		

Test Modes	Datapatern incremental	Boards: WG-4 1.1, CAB	✓		
	Datapatern PRB		?		
	TX Chirp Sequence Transmission Toggle	Boards: WG-4 1.1, CAB	✓	PA Toggle	
	CW Continuous (Tx Only)	Boards: WG-4 1.1, CAB	✓		
	CW Chirp Interleaved (Tx, Rx, SRAM)	Boards: WG-4 1.1, CAB	✓		
	Chirp PLL	Boards: WG-4 1.1, CAB	✓		
	Radar Cycle io	Boards: WG-4 1.1, CAB	✓	e.g. RFE_IO_5	
	Chirp Sequence io	Boards: WG-4 1.1, CAB	✓	e.g. RFE_IO_6	
	mask errors (test mode)	Boards: WG-4 1.1, CAB	✓	temporary feature for development, will be removed in the product	
	unmask errors (test mode)	Boards: WG-4 1.1, CAB	✓	temporary feature for development, will be removed in the product	
	CLK PLL enable\disable	Boards: WG-4 1.1, CAB	✓	temporary feature for development, maybe be removed in the product	
Supplies	1.3V di\dt	Boards: WG-4 1.1, CAB	Boards: WG-4 1.1, CAB		

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RFE Config Testing (all settings)	Legend	✓	Fully Tested
		?	DO NOT USE
		x	FAIL
		!	Partially Tested

Notation
ul: 32bit decimal number
0x: hexadecimal
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Component	Functionality	Value tested	Result	Test Environment	Additional info	Change in current release
metaData	chirpSequenceConfigCount	1 .. 8	✓	Boards: WG-4 1.1, CAB		
	chirpProfileCount	1 .. 8	✓	Boards: WG-4 1.1, CAB		
	majorVersion	any	✓	Boards: WG-4 1.1, CAB		
	minorVersion	any	✓	Boards: WG-4 1.1, CAB		
	patchVersion	any	✓	Boards: WG-4 1.1, CAB		
general	powerMode	1ul \ rfe_powerMode_active_e	!	Boards: WG-4 1.1, CAB	sleep power mode not tested\not supported	
	radarCycleStartSignal	all values	✓	Boards: WG-4 1.1, CAB		
	chirpActiveOut	all values	✓	Boards: WG-4 1.1, CAB		✓
	chirpSequenceActiveSignal	all values	✓	Boards: WG-4 1.1, CAB		
	clkIoConfig	0ul \ 0x0 \ b000 in="disabled" out="disabled" reduce-driver-level="false"	✓	Boards: WG-4 1.1, CAB	reduce-driver-level don't care => clk out disabled	
	pdcDecimationFilter	0ul \ rfe_pdcDecimationFilter_narrow_e 1ul \ rfe_pdcDecimationFilter_seeepNarrow_e	✓	Boards: WG-4 1.1, CAB		
	pdcBitwidth	2ul \ rfe_pdcBitwidth_16bit_e	✓	Boards: WG-4 1.1, CAB		
	dataOutDest	1ul \ 0x1 \ b01 packet-processor="true" csi2="false"	✓	Boards: WG-4 1.1, CAB	SRAM data ok: datapattern, ADC data \ reflections	
		2ul \ 0x2 \ b10 packet-processor="false" csi2="true"	✓	Boards: WG-4 1.1, CAB		
		3ul \ 0x3 \ b11 packet-processor="true" csi2="true"	?		data fork not tested	
	dataOutConfig	b00001 interleaving="true" header="false" footer="false" metadata packet="disabled" hardware-field="disabled"	✓	Boards: WG-4 1.1, CAB	Interleaving ADC1, ADC2, ADC3, ADC4, ADC1, ADC2, ADC3, ADC4, …	
		b00000 interleaving="false" header="false" footer="false" metadata packet="disabled" hardware-field="disabled"	✓	Boards: WG-4 1.1, CAB	No Interleaving ADC1, ADC1, ADC1, ADC1, ADC2, ADC2, ADC2, ADC2, ….	
	metadataPacketSwContent		✓		CSI2 feature, not used for Packet Processor	
	metadataPacketVirtualChannel		✓		CSI2 feature, not used for Packet Processor	
	jumpbackTimeTicks	2 \ 4 \ 8	✓	Boards: WG-4 1.1, CAB		
monitorAndSafety	rxSatCountResetEveryChirpSequence	true	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx1	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx2	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx3	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx4	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx1	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx2	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx3	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx4	0ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx1	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx2	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx3	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx4	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx1	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx2	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx3	1000ul	!	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx4	1000ul	!	Boards: WG-4 1.1, CAB		
	pdcClippingCountResetEveryChirpSequence	true	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh_tx12	85ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh_tx34	85ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh_xo	85ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh_rx	85ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_tx12	125ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_tx34	125ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_xo	125ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_rx	125ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_tx12	30ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_tx34	30ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_xo	30ul	!	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_rx	30ul	!	Boards: WG-4 1.1, CAB		
	thresholdValueToPromoteR1Faults	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForTxPhaseDiff_tx12	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForTxPhaseDiff_tx23	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForTxPhaseDiff_tx34	default	!	Boards: WG-4 1.1, CAB		
	txPhaseDiffThresholdTolerance	default	!	Boards: WG-4 1.1, CAB		
	txPhaseStepThresholdTolerance	default	!	Boards: WG-4 1.1, CAB		
	txPowerLevelForBist	default	!	Boards: WG-4 1.1, CAB		
	txFrequencyForBist	default	!	Boards: WG-4 1.1, CAB		
	rxFrequencyForBist	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxPhaseDiff_rx12	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxPhaseDiff_rx23	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxPhaseDiff_rx34	default	!	Boards: WG-4 1.1, CAB		

	rxPhaseDiffThresholdTolerance	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxGainDiff_rx12	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxGainDiff_rx23	default	!	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxGainDiff_rx34	default	!	Boards: WG-4 1.1, CAB		
	rxGainDiffThresholdTolerance	default	!	Boards: WG-4 1.1, CAB		
	injectTestToneBeforeLna	default	!	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx1	default	!	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx2	default	!	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx3	default	!	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx4	default	!	Boards: WG-4 1.1, CAB		
	fuSaFaultMask[0]	default	!	Boards: WG-4 1.1, CAB		
	…	default	!	Boards: WG-4 1.1, CAB	Please refer to the FuSa pass list in the release notes.	
	fuSaFaultMask[11]	default	!	Boards: WG-4 1.1, CAB		
	errorRecovery mode	non auto	!	Boards: WG-4 1.1, CAB		
radarCycle	radarCycleDuration	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceCount	1 .. 8	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_0	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_1	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_2	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_3	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_4	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_5	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_6	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_7	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_0	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_1	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_2	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_3	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_4	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_5	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_6	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_7	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_0	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_1	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_2	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_3	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_4	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_5	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_6	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileDependent_7	any	✓	Boards: WG-4 1.1, CAB		
	recalibrateProfileIndependent	any	✓	Boards: WG-4 1.1, CAB		
	bistInterval	0ul \ rfe_bistInterval_everyRadarCycle_e 1ul \ rfe_bistInterval_onceIn2RadarCycles_e 2ul \ rfe_bistInterval_onceIn4RadarCycles_e 3ul\ rfe_bistInterval_none_e	✓	Boards: WG-4 1.1, CAB	Bist interval None added	
chirpSequenceConfig[M]	[M]	1ul	✓	Boards: WG-4 1.1, CAB		
	chirpCount	1-4096ul	✓	Boards: WG-4 1.1, CAB		
	chirpProfileSequence_0	any	✓	Boards: WG-4 1.1, CAB	needed for interleaving of chirp modes	
	chirpProfileSequence_1	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequence_2	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequence_3	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequence_4	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequence_5	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequence_6	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequence_7	any	✓		needed for interleaving of chirp modes	
	chirpProfileSequenceLength	any	✓	Boards: WG-4 1.1, CAB		
	dynamicUpdatesEnabled	false \ true	✓	Boards: WG-4 1.1, CAB		
	dynamicTableIndex	any	✓	Boards: WG-4 1.1, CAB		
	chirpFrequencyDrift	any	✓	Boards: WG-4 1.1, CAB		
	fastResetEnable	false \ true	✓	Boards: WG-4 1.1, CAB	gear shift	
	txEnable	all combinations b0000 - b1111	✓	Boards: WG-4 1.1, CAB		
	rxEnable	all combinations b0000 - b1111	✓	Boards: WG-4 1.1, CAB		
	pdcNotchFilterEnable	false	✓	Boards: WG-4 1.1, CAB		
	pdcNotchFilterCoefficient	0ul	✓	Boards: WG-4 1.1, CAB		
	[N]	1	✓	Boards: WG-4 1.1, CAB		
	effectiveSamplingFrequency	0ul \ rfe_effectiveSamplingFrequency_40MHz_e 1ul \ rfe_effectiveSamplingFrequency_20MHz_e 2ul \ rfe_effectiveSamplingFrequency_10MHz_e	✓	Boards: WG-4 1.1, CAB		
	chirpIntervalTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	dwellTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	settleTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	acquisitionTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	resetTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	centerFrequency	any	✓	Boards: WG-4 1.1, CAB		
	effectiveChirpBandwidth	any	✓	Boards: WG-4 1.1, CAB		
	chirpPllVcoSelect	0ul \ rfe_chirpPllVco_1GHz_e	✓	Boards: WG-4 1.1, CAB		
	chirpSlopeDirection	0ul \ rfe_chirpSlopeDirection_falling_e 1ul \ rfe_chirpSlopeDirection_rising_e	✓	Boards: WG-4 1.1, CAB		

chirpProfile[N]	chirpPllLoopFilterBandwidth	rfe_chirpPllLoopFilterBandwidth_200kHz_e rfe_chirpPllLoopFilterBandwidth_250kHz_e rfe_chirpPllLoopFilterBandwidth_300kHz_e rfe_chirpPllLoopFilterBandwidth_350kHz_e rfe_chirpPllLoopFilterBandwidth_400kHz_e rfe_chirpPllLoopFilterBandwidth_450kHz_e rfe_chirpPllLoopFilterBandwidth_500kHz_e rfe_chirpPllLoopFilterBandwidth_550kHz_e rfe_chirpPllLoopFilterBandwidth_600kHz_e rfe_chirpPllLoopFilterBandwidth_650kHz_e rfe_chirpPllLoopFilterBandwidth_700kHz_e rfe_chirpPllLoopFilterBandwidth_750kHz_e rfe_chirpPllLoopFilterBandwidth_800kHz_e	✓	Boards: WG-4 1.1, CAB		
	txTransisssionEnable	all combinations b0000 - b1111	✓	Boards: WG-4 1.1, CAB		
	txPower	-9 to 150	✓	Boards: WG-4 1.1, CAB		
	txPhaseRotation_Tx1	any	✓	Boards: WG-4 1.1, CAB		
	txPhaseRotation_Tx2	any	✓	Boards: WG-4 1.1, CAB		
	txPhaseRotation_Tx3	any	✓	Boards: WG-4 1.1, CAB		
	txPhaseRotation_Tx4	any	✓	Boards: WG-4 1.1, CAB		
	txEnableReferenceTime	any	✓	Boards: WG-4 1.1, CAB		
	txTransmissionTimeOffset	2-4094ul	✓	Boards: WG-4 1.1, CAB		
	fastResetDelayTicks	any	✓	Boards: WG-4 1.1, CAB		
	fastResetDurationTicks	any	✓	Boards: WG-4 1.1, CAB		
	rxGain	0-7ul \ rfe_rxGain_25\28\31\34\37\40\43\46dB_e	✓	Boards: WG-4 1.1, CAB		
	rxHpfCutOffFrequency	0-6ul \ rfe_rxHpfCutOffFrequency_200\300\400\800\1600\3200\6400kHz_e	✓	Boards: WG-4 1.1, CAB		
	rxLpfCutOffFrequency	0ul-5ul \ rfe_rxLpfCutOffFrequency_10\15\20\25\30\40MHz_e	✓	Boards: WG-4 1.1, CAB		
	VirtualChannel	rfe_virtualChannel_0_e rfe_virtualChannel_1_e rfe_virtualChannel_2_e rfe_virtualChannel_3_e	✓	Boards: WG-4 1.1, CAB		

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RFE Config Testing (BasicDemo)	Legend	✓	PASS
		?	DO NOT USE
		x	FAIL

Notation
ul: 32bit decimal number
0x: hexadecimal
b: binary number

This is example configuration !

SAF85XX

Component	Functionality	Value tested	Result	Test Environment	Additional info	Change in current release
		rfeConfig.xml in rfeAppBasicExample32			Not tested for RF performance	
metaData	chirpSequenceConfigCount	1	✓	Boards: WG-4 1.1, CAB		
	chirpProfileCount	1	✓	Boards: WG-4 1.1, CAB		
	majorVersion	0	✓	Boards: WG-4 1.1, CAB		
	minorVersion	8	✓	Boards: WG-4 1.1, CAB		
	patchVersion	0	✓	Boards: WG-4 1.1, CAB		
general	powerMode	1ul \ rfe_powerMode_active_e	✓	Boards: WG-4 1.1, CAB		
	radarCycleStartSignalio	0ul \ rfe_io_none_e	✓	Boards: WG-4 1.1, CAB	disabled	
	chirpActiveOutIo	all values	✓	Boards: WG-4 1.1, CAB		✓
	chirpSequenceActiveSignalio	6ul \ rfe_io_6_e	✓	Boards: WG-4 1.1, CAB		
	clkIoConfig	0ul \ 0x0 \ b000 in="disabled" out="disabled" reduce-driver-level="false"	✓	Boards: WG-4 1.1, CAB	reduce-driver-level don't care => clk out disabled	
	pdcDecimationFilter	0ul \ rfe_pdcDecimationFilter_narrow_e	✓	Boards: WG-4 1.1, CAB		
	pdcBitwidth	2ul \ rfe_pdcBitwidth_16bit_e	✓	Boards: WG-4 1.1, CAB	16bit	
	dataOutDest	1ul \ 0x1 \ b01 packet-processor="true" csi2="false"	✓	Boards: WG-4 1.1, CAB	SRAM data ok: datapattern, ADC data \ reflections	
	dataOutConfig	0u \ 0x0 \ b00000 interleaving="false" header="false" footer="false" metadata packet="disabled" hardware-field="disabled"	✓	Boards: WG-4 1.1, CAB	No Interleaving ADC1, ADC1, ADC1, ADC1, ADC2, ADC2, ADC2, ADC2, ... Interleaving ADC1, ADC2, ADC3, ADC4, ADC1, ADC2, ADC3, ADC4, ...	
	metadataPacketSwContent	4ul \ chirpSequenceTimestamp_e	?			
	metadataPacketVirtualChannel	0ul	?			
	jumpbackTimeTicks	8ul	✓	Boards: WG-4 1.1, CAB		
monitorAndSafety	rxSatCountResetEveryChirpSequence	true	✓			
	rxSaturationThresholdStage1_rx1	0ul	✓			
	rxSaturationThresholdStage1_rx2	0ul	✓			
	rxSaturationThresholdStage1_rx3	0ul	✓			
	rxSaturationThresholdStage1_rx4	0ul	✓			
	rxSaturationThresholdStage2_rx1	0ul	✓			
	rxSaturationThresholdStage2_rx2	0ul	✓			
	rxSaturationThresholdStage2_rx3	0ul	✓			
	rxSaturationThresholdStage2_rx4	0ul	✓			
	rxSaturationCountLimitStage1_rx1	1000ul	✓			
	rxSaturationCountLimitStage1_rx2	1000ul	✓			
	rxSaturationCountLimitStage1_rx3	1000ul	✓			
	rxSaturationCountLimitStage1_rx4	1000ul	✓			
	rxSaturationCountLimitStage2_rx1	1000ul	✓			
	rxSaturationCountLimitStage2_rx2	1000ul	✓			
	rxSaturationCountLimitStage2_rx3	1000ul	✓			
	rxSaturationCountLimitStage2_rx4	1000ul	✓			
	pdcClippingCountResetEveryChirpSequence	true	✓			
	temperatureSensorThresholdHigh _tx12	85ul	✓			
	temperatureSensorThresholdHigh _tx34	85ul	✓			
	temperatureSensorThresholdHigh _xo	85ul	✓			
	temperatureSensorThresholdHigh _rx	85ul	✓			
	temperatureSensorThresholdOver_tx12	125ul	✓			
	temperatureSensorThresholdOver_tx34	125ul	✓			
	temperatureSensorThresholdOver_xo	125ul	✓			
	temperatureSensorThresholdOver_rx	125ul	✓			
	temperatureSensorThresholdUnder_tx12	30ul	✓			
	temperatureSensorThresholdUnder_tx34	30ul	✓			
	temperatureSensorThresholdUnder_xo	30ul	✓			
	temperatureSensorThresholdUnder_rx	30ul	✓			
	thresholdValueToPromoteR1Faults	default	✓			
	zeroHourReferenceForTxPhaseDiff_tx12	default	✓			
	zeroHourReferenceForTxPhaseDiff_tx23	default	✓			
	zeroHourReferenceForTxPhaseDiff_tx34	default	✓			
	txPhaseDiffThresholdTolerance	default	✓			
	txPhaseStepThresholdTolerance	default	✓			
	txPowerLevelForBist	default	✓			
	txFrequencyForBist	default	✓			
	rxFrequencyForBist	default	✓			
	zeroHourReferenceForRxPhaseDiff_rx12	default	✓			
	zeroHourReferenceForRxPhaseDiff_rx23	default	✓			
	zeroHourReferenceForRxPhaseDiff_rx34	default	✓			
	rxPhaseDiffThresholdTolerance	default	✓			
	zeroHourReferenceForRxGainDiff_rx12	default	✓			
	zeroHourReferenceForRxGainDiff_rx23	default	✓			
	zeroHourReferenceForRxGainDiff_rx34	default	✓			
	rxGainDiffThresholdTolerance	default	✓			

	injectTestToneBeforeLna	default	✓			
	txPpdThreshold_tx1	default	✓			
	txPpdThreshold_tx2	default	✓			
	txPpdThreshold_tx3	default	✓			
	txPpdThreshold_tx4	default	✓			
	fuSaFaultMask[0]	default	✓		Please refer to the FuSa pass list in the release notes.	
	…	default	✓			
	fuSaFaultMask[16]	default	✓			

radarCycle	radarCycleDuration	2000000ul	✓	Boards: WG-4 1.1, CAB	50[ms]	
	chirpSequenceCount	1ul	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_0	0ul	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_1	0ul	?			
	chirpSequence_2	0ul	?			
	chirpSequence_3	0ul	?			
	chirpSequence_4	0ul	?			
	chirpSequence_5	0ul	?			
	chirpSequence_6	0ul	?			
	chirpSequence_7	0ul	?			
	chirpSequenceStartTimeOffset_0	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_1	0ul	?			
	chirpSequenceStartTimeOffset_2	0ul	?			
	chirpSequenceStartTimeOffset_3	0ul	?			
	chirpSequenceStartTimeOffset_4	0ul	?			
	chirpSequenceStartTimeOffset_5	0ul	?			
	chirpSequenceStartTimeOffset_6	0ul	?			
	chirpSequenceStartTimeOffset_7	0ul	?			
	recalibrateProfileDependent_0	0ul	✓	Boards: WG-4 1.1, CAB	disabled	
	recalibrateProfileDependent_1	0ul	✓		disabled	
	recalibrateProfileDependent_2	0ul	✓		disabled	
	recalibrateProfileDependent_3	0ul	✓		disabled	
	recalibrateProfileDependent_4	0ul	✓		disabled	
	recalibrateProfileDependent_5	0ul	✓		disabled	
	recalibrateProfileDependent_6	0ul	✓		disabled	
	recalibrateProfileDependent_7	0ul	✓		disabled	
	recalibrateProfileIndependent	0ul	✓		disabled	
	bistInterval	0ul \ rfe_bistInterval_everyRadarCycle_e	?		BIST not included in RFE FW	

chirpSequenceConfig[M]	[M]	1ul	✓	Boards: WG-4 1.1, CAB		
	chirpCount	128ul	✓	Boards: WG-4 1.1, CAB		
	chirpProfileSequence_0	0ul	✓	Boards: WG-4 1.1, CAB		
	chirpProfileSequence_1	0ul	?			
	chirpProfileSequence_2	0ul	?			
	chirpProfileSequence_3	0ul	?			
	chirpProfileSequence_4	0ul	?			
	chirpProfileSequence_5	0ul	?			
	chirpProfileSequence_6	0ul	?			
	chirpProfileSequence_7	0ul	?			
	chirpProfileSequenceLength	0ul	✓	Boards: WG-4 1.1, CAB		
	dynamicUpdatesEnabled	false	?			
	dynamicTableIndex	0ul	?			
	chirpFrequencyDrift	1ul	?		40Hz, can be set, effect not tested	
	fastResetEnable	false	✓	Boards: WG-4 1.1, CAB	gear shift	
	txEnable	1ul \ 0x1 \ b0001	✓	Boards: WG-4 1.1, CAB	Tx1 = ON, Tx2\3\4 = OFF	
	rxEnable	15ul \ 0xF \ b1111	✓	Boards: WG-4 1.1, CAB	Rx1\2\3\4 = ON	
	pdcNotchFilterEnable	false	✓	Boards: WG-4 1.1, CAB		
	pdcNotchFilterCoefficient	0ul	✓	Boards: WG-4 1.1, CAB		

chirpProfile[N]	[N]	1	✓	Boards: WG-4 1.1, CAB	Profile 0 tested only	
	effectiveSamplingFrequency	2ul \ rfe_effectiveSamplingFrequency_10MHz_e	✓	Boards: WG-4 1.1, CAB	10[MHz]	
	chirpIntervalTimeTicks	3200ul	✓	Boards: WG-4 1.1, CAB	80[us]	
	dwellTimeTicks	400ul	✓	Boards: WG-4 1.1, CAB	10[us]	
	settleTimeTicks	400ul	✓	Boards: WG-4 1.1, CAB	10[us]	
	acquisitionTimeTicks	2048ul	✓	Boards: WG-4 1.1, CAB	51.2[us]	
	resetTimeTicks	80ul	✓	Boards: WG-4 1.1, CAB	2[us]	
	centerFrequency	76500000ul	✓	Boards: WG-4 1.1, CAB	76,5[GHz]	
	effectiveChirpBandwidth	500000ul	✓	Boards: WG-4 1.1, CAB	500[MHz]	
	chirpPllVcoSelect	0ul \ rfe_chirpPllVco_1GHz_e	✓	Boards: WG-4 1.1, CAB	1[GHz]	
	chirpSlopeDirection	1ul \ rfe_chirpSlopeDirection_rising_e	✓	Boards: WG-4 1.1, CAB	rising	
	chirpPllLoopFilterBandwidth	1ul \ rfe_chirpPllLoopFilterBandwidth_250kHz_e	✓	Boards: WG-4 1.1, CAB	250[KHz]	
	txTransissionEnable	1ul \ 0x1 \ b0001	✓	Boards: WG-4 1.1, CAB	Tx1 PA = enable, Tx2\3\4 PA = disable	
	txPower	120ul	✓	Boards: WG-4 1.1, CAB	not optimized	
	txPhaseRotation_Tx1	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txPhaseRotation_Tx2	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txPhaseRotation_Tx3	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txPhaseRotation_Tx4	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txEnableReferenceTime	1ul \ rfe_txTransmissionReferenceTime_startOfSettleTime_e	✓	Boards: WG-4 1.1, CAB	Transmit Start Time Reference = End of Settle Time	
	txTransmissionTimeOffset	2ul	✓	Boards: WG-4 1.1, CAB	50[ns]	
	fastResetDelayTicks	0ul	✓	Boards: WG-4 1.1, CAB	when gear shift is disabled, this configuration value is not taken into account by RFE FW.	
	fastResetDurationTicks	0ul	✓	Boards: WG-4 1.1, CAB	when gear shift is disabled, this configuration value is not taken into account by RFE FW.	
	rxGain	7ul \ rfe_rxGain_46dB_e	✓	Boards: WG-4 1.1, CAB		
	rxHpfCutOffFrequency	2ul \ rfe_rxHpfCutOffFrequency_400kHz_e	✓	Boards: WG-4 1.1, CAB		
	rxLpfCutOffFrequency	0ul \ rfe_rxLpfCutOffFrequency_10MHz_e	✓	Boards: WG-4 1.1, CAB		
	VirtualChannel	0ul \ rfe_virtualChannel_0_e	✓	Boards: WG-4 1.1, CAB		

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RFE Config Testing (CeilingDemo)	Legend	✓	PASS
		?	DO NOT USE
		x	FAIL

Notation
ul: 32bit decimal number
0x: hexadecimal
b: binary number

This is example configuration !

NXP SAF85XX

Component	Functionality	Value tested	Result	Test Environment	Additional info	Change in current release
		rfeConfig_ceilingDemo.xml in rfeAppBasicExample32			Tested for RF performance	
metaData	chirpSequenceConfigCount	1	✓	Boards: WG-4 1.1, CAB		
	chirpProfileCount	1	✓	Boards: WG-4 1.1, CAB		
	majorVersion	0	✓	Boards: WG-4 1.1, CAB		
	minorVersion	8	✓	Boards: WG-4 1.1, CAB		
	patchVersion	0	✓	Boards: WG-4 1.1, CAB		
general	powerMode	1ul \ rfe_powerMode_active_e	✓	Boards: WG-4 1.1, CAB		
	radarCycleStartSignalio	0ul \ rfe_io_none_e	✓	Boards: WG-4 1.1, CAB	disabled	
	chirpActiveOutIo	all values	✓	Boards: WG-4 1.1, CAB		✓
	chirpSequenceActiveSignalio	6ul \ rfe_io_6_e	✓	Boards: WG-4 1.1, CAB		
	clkIoConfig	0ul \ 0x0 \ b000 in="disabled" out="disabled" reduce-driver-level="false"	✓	Boards: WG-4 1.1, CAB	reduce-driver-level don't care => clk out disabled	
	pdcDecimationFilter	1ul \ rfe_pdcDecimationFilter_steepNarrow_e	✓	Boards: WG-4 1.1, CAB	Steep Narrow	
	pdcBitwidth	2ul \ rfe_pdcBitwidth_16bit_e	✓	Boards: WG-4 1.1, CAB	16bit	
	dataOutDest	1ul \ 0x1 \ b01 packet-processor="true" csi2="false"	✓	Boards: WG-4 1.1, CAB	SRAM data ok: datapattern, ADC data \ reflections	
	dataOutConfig	1u \ 0x1 \ b00001 interleaving="true" header="false" footer="false" metadata packet="disabled" hardware-field="disabled"	✓	Boards: WG-4 1.1, CAB	Interleaving ADC1, ADC2, ADC3, ADC4, …	
	metadataPacketSwContent	4ul \ chirpSequenceTimestamp_e	?	Boards: WG-4 1.1, CAB		
	metadataPacketVirtualChannel	0ul	?	Boards: WG-4 1.1, CAB		
	jumpbackTimeTicks	8ul	✓	Boards: WG-4 1.1, CAB		
monitorAndSafety	rxSatCountResetEveryChirpSequence	true	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx1	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx2	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx3	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage1_rx4	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx1	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx2	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx3	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationThresholdStage2_rx4	0ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx1	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx2	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx3	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage1_rx4	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx1	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx2	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx3	1000ul	✓	Boards: WG-4 1.1, CAB		
	rxSaturationCountLimitStage2_rx4	1000ul	✓	Boards: WG-4 1.1, CAB		
	pdcClippingCountResetEveryChirpSequence	true	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh _tx12	85ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh _tx34	85ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh _xo	85ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdHigh _rx	85ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_tx12	125ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_tx34	125ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_xo	125ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdOver_rx	125ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_tx12	30ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_tx34	30ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_xo	30ul	✓	Boards: WG-4 1.1, CAB		
	temperatureSensorThresholdUnder_rx	30ul	✓	Boards: WG-4 1.1, CAB		
	thresholdValueToPromoteR1Faults	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForTxPhaseDiff_tx12	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForTxPhaseDiff_tx23	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForTxPhaseDiff_tx34	default	✓	Boards: WG-4 1.1, CAB		
	txPhaseDiffThresholdTolerance	default	✓	Boards: WG-4 1.1, CAB		
	txPhaseStepThresholdTolerance	default	✓	Boards: WG-4 1.1, CAB		
	txPowerLevelForBist	default	✓	Boards: WG-4 1.1, CAB		
	txFrequencyForBist	default	✓	Boards: WG-4 1.1, CAB		
	rxFrequencyForBist	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxPhaseDiff_rx12	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxPhaseDiff_rx23	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxPhaseDiff_rx34	default	✓	Boards: WG-4 1.1, CAB		
	rxPhaseDiffThresholdTolerance	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxGainDiff_rx12	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxGainDiff_rx23	default	✓	Boards: WG-4 1.1, CAB		
	zeroHourReferenceForRxGainDiff_rx34	default	✓	Boards: WG-4 1.1, CAB		
	rxGainDiffThresholdTolerance	default	✓	Boards: WG-4 1.1, CAB		

	injectTestToneBeforeLna	default	✓	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx1	default	✓	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx2	default	✓	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx3	default	✓	Boards: WG-4 1.1, CAB		
	txPpdThreshold_tx4	default	✓	Boards: WG-4 1.1, CAB		
	fuSaFaultMask[0]	default	✓	Boards: WG-4 1.1, CAB		
	…	default	✓	Boards: WG-4 1.1, CAB	Please refer to the FuSa pass list in the release notes.	
	fuSaFaultMask[11]	default	✓	Boards: WG-4 1.1, CAB		
	errorRecovery mode	non auto	✓	Boards: WG-4 1.1, CAB		

radarCycle	radarCycleDuration	2000000ul	✓	Boards: WG-4 1.1, CAB	50[ms]	
	chirpSequenceCount	1ul	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_0	0ul	✓	Boards: WG-4 1.1, CAB		
	chirpSequence_1	0ul	?			
	chirpSequence_2	0ul	?			
	chirpSequence_3	0ul	?			
	chirpSequence_4	0ul	?			
	chirpSequence_5	0ul	?			
	chirpSequence_6	0ul	?			
	chirpSequence_7	0ul	?			
	chirpSequenceStartTimeOffset_0	any	✓	Boards: WG-4 1.1, CAB		
	chirpSequenceStartTimeOffset_1	0ul	?			
	chirpSequenceStartTimeOffset_2	0ul	?			
	chirpSequenceStartTimeOffset_3	0ul	?			
	chirpSequenceStartTimeOffset_4	0ul	?			
	chirpSequenceStartTimeOffset_5	0ul	?			
	chirpSequenceStartTimeOffset_6	0ul	?			
	chirpSequenceStartTimeOffset_7	0ul	?			
	recalibrateProfileDependent_0	0ul	✓	Boards: WG-4 1.1, CAB	disabled	
	recalibrateProfileDependent_1	0ul	✓		disabled	
	recalibrateProfileDependent_2	0ul	✓		disabled	
	recalibrateProfileDependent_3	0ul	✓		disabled	
	recalibrateProfileDependent_4	0ul	✓		disabled	
	recalibrateProfileDependent_5	0ul	✓		disabled	
	recalibrateProfileDependent_6	0ul	✓		disabled	
	recalibrateProfileDependent_7	0ul	✓		disabled	
	recalibrateProfileIndependent	0ul	✓		disabled	
	bistInterval	0ul \ rfe_bistInterval_everyRadarCycle_e 1ul \ rfe_bistInterval_onceIn2RadarCycles_e 2ul \ rfe_bistInterval_onceIn4RadarCycles_e 3ul\ rfe_bistInterval_none_e	✓		rfe_bistinterval_none_e added	

chirpSequenceConfig[M]	[M]	1ul	✓	Boards: WG-4 1.1, CAB		
	chirpCount	58ul	✓	Boards: WG-4 1.1, CAB		
	chirpProfileSequence_0	0ul	✓	Boards: WG-4 1.1, CAB		
	chirpProfileSequence_1	0ul	?			
	chirpProfileSequence_2	0ul	?			
	chirpProfileSequence_3	0ul	?			
	chirpProfileSequence_4	0ul	?			
	chirpProfileSequence_5	0ul	?			
	chirpProfileSequence_6	0ul	?			
	chirpProfileSequence_7	0ul	?			
	chirpProfileSequenceLength	0ul	✓	Boards: WG-4 1.1, CAB		
	dynamicUpdatesEnabled	false	?			
	dynamicTableIndex	0ul	?			
	chirpFrequencyDrift	0ul	✓	Boards: WG-4 1.1, CAB	disable freq drift	
	fastResetEnable	enable	✓	Boards: WG-4 1.1, CAB	gear shift	
	txEnable	1ul \ 0x1 \ b0001	✓	Boards: WG-4 1.1, CAB	Tx1 = ON, Tx2\3\4 = OFF, works for all Tx but one Tx at the time was tested	
	rxEnable	15ul \ 0xF \ b1111	✓	Boards: WG-4 1.1, CAB	Rx1\2\3\4 = ON	
	pdcNotchFilterEnable	false	✓	Boards: WG-4 1.1, CAB		
	pdcNotchFilterCoefficient	0ul	✓	Boards: WG-4 1.1, CAB		

chirpProfile[N]	[N]	1	✓	Boards: WG-4 1.1, CAB	Profile 0 tested only	
	effectiveSamplingFrequency	0ul \rfe_effectiveSamplingFrequency_40MHz_e	✓	Boards: WG-4 1.1, CAB	40[MHz]	
	chirpIntervalTimeTicks	1527ul	✓	Boards: WG-4 1.1, CAB	80[us]	
	dwellTimeTicks	6ul	✓	Boards: WG-4 1.1, CAB	156[ns]	
	settleTimeTicks	92ul	✓	Boards: WG-4 1.1, CAB	2.3[us]	
	acquisitionTimeTicks	1024ul	✓	Boards: WG-4 1.1, CAB	50.35[us]	
	resetTimeTicks	228ul	✓	Boards: WG-4 1.1, CAB	5.7[us]	
	centerFrequency	76500000ul	✓	Boards: WG-4 1.1, CAB	76,5[GHz]	
	effectiveChirpBandwidth	800000ul	✓	Boards: WG-4 1.1, CAB	800[MHz]	
	chirpPllVcoSelect	0ul \ rfe_chirpPllVco_1GHz_e	✓	Boards: WG-4 1.1, CAB	1[GHz]	
	chirpSlopeDirection	0ul \ rfe_chirpSlopeDirection_falling_e	✓	Boards: WG-4 1.1, CAB	falling	
	chirpPllLoopFilterBandwidth	4ul \ rfe_chirpPllLoopFilterBandwidth_400kHz_e	✓	Boards: WG-4 1.1, CAB	400[KHz]	
	txTransissionEnable	1ul \ 0x1 \ b0001	✓	Boards: WG-4 1.1, CAB	Tx1 PA = enable, Tx2\3\4 PA = disable	
	txPower	135ul	✓	Boards: WG-4 1.1, CAB	not optimised	
	txPhaseRotation_Tx1	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txPhaseRotation_Tx2	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txPhaseRotation_Tx3	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txPhaseRotation_Tx4	0ul	✓	Boards: WG-4 1.1, CAB	0 degrees	
	txEnableReferenceTime	1ul \ rfe_txTransmissionReferenceTime_startOfSettleTime_e	✓	Boards: WG-4 1.1, CAB	Transmit Start Time Reference = End of Settle Time	
	txTransmissionTimeOffset	2ul	✓	Boards: WG-4 1.1, CAB	50[ns]	
	fastResetDelayTicks	7ul	✓	Boards: WG-4 1.1, CAB	175[ns]	
	fastResetDurationTicks	234ul	✓	Boards: WG-4 1.1, CAB	5,850[ns]	
	rxGain	7ul \ rfe_rxGain_46dB_e	✓	Boards: WG-4 1.1, CAB		

	rxHpfCutOffFrequency	0ul \ rfe_rxHpfCutOffFrequency_800kHz_e	✓	Boards: WG-4 1.1, CAB		
	rxLpfCutOffFrequency	3ul \ rfe_rxLpfCutOffFrequency_25MHz_e	✓	Boards: WG-4 1.1, CAB		
	VirtualChannel	0ul \ rfe_virtualChannel_0_e	✓	Boards: WG-4 1.1, CAB		

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RFE Dynamic Parameters Testing	Legend	✓	PASS
		?	DO NOT USE
		x	FAIL

Notation
ul: 32bit decimal number
0x: hexadecimal
b: binary number

Component	Functionality	Value tested	Result	Test Environment	Additional info	Change in current release
Dynamic Table	chirpProfileIndex	0-7	✓	Boards: WG-4 1.1, CAB		
	tx1PhaseRotation	any	✓	Boards: WG-4 1.1, CAB		
	tx2PhaseRotation	any	✓	Boards: WG-4 1.1, CAB		
	tx3PhaseRotation	any	✓	Boards: WG-4 1.1, CAB		
	tx4PhaseRotation	any	✓	Boards: WG-4 1.1, CAB		
	txTransmissionEnable	any	✓	Boards: WG-4 1.1, CAB		
	dwellTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	chirpIntervalTimeTicks	any	✓	Boards: WG-4 1.1, CAB		
	chirpFrequencyDrift	any	✓	Boards: WG-4 1.1, CAB		

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