

Release Notes for SPC1169 Standard Peripherals Library Drivers

V2.2.0/ 16- Mar -2023

Main Changes

1. Bug Fix

2. Other Change

■ Project/0_Examples

- Modify 2_4_MCU_Sleep_Wakeup_by_Event
- Modify 7_3_WDT_Rset_System
- Modify 8_4_PWM_Complementary_Pair_Channel
- Modify 8_5_PWM_TriPhase_Waveform
- Modify 8_6_PWM_Software_Global_SYNC
- Modify 8_7_PWM_Software_Group_SYNC
- Modify 8_8_PWM_GPIO_SYNC
- Modify 8_9_PWM_Timer_SYNC
- Modify 8_10_PWM_TBCNT_0_SYNC_and_Signal_Observe
- Modify 8_12_PWM_GPIO_Trigger_TZ
- Modify 9_1_ECAP_Continue_Absolute
- Modify 9_4_ECAP_APWM_Function
- Modify 9_5_ECAP_Continue_Absolute_Dual_Pin
- Modify 10_1_ADC_Calibration
- Modify 10_3_ADC_Short_Detect
- Modify 10_4_ADC_Single_End_Abs_Result
- Modify 10_5_ADC_Differential_Abs_Result
- Modify 10_6_ADC_Triggered_by_Timer
- Modify 10_7_ADC_Continuous_Mode_and_Conversion_Priority
- Modify 10_8_ADC_PPU
- Modify 10_9_ADC_With_SPGA
- Modify 10_10_ADC_With_DPGA
- Modify 14_1_DAC_to_ADC
- Modify 14_2_ADC_to_DAC
- Modify 17_1_SSP_Master_B2B_TxRx_Polling
- Modify 17_1_SSP_Slave_B2B_TxRx_Polling
- Modify 17_2_SSP_Master_TxRx_Polling
- Modify 17_2_SSP_Slave_TxRx_Polling
- Modify 17_3_SSP_Master_TxRx_Int
- Modify 17_3_SSP_Slave_TxRx_Int
- Modify 18_5_Flash_With_ISR_In_RAM
- Add 18_6_Flash_EEPROM_Emulation_Controller
- Modify 26_1_CAN_Extended_Frame_RX
- Modify 26_1_CAN_Standard_And_Extended_Frame_TX

- Modify 26_1_CAN_Standard_Frame_RX
- Modify 26_2_CANFD_Extended_Frame_RX
- Modify 26_2_CANFD_Standard_And_Extended_Frame_TX
- Modify 26_2_CANFD_Standard_Frame_RX
- Modify 27_1_I2C_Master_Bulk_Polling_TxRx
- Modify 27_1_I2C_Slave_Bulk_Polling_TxRx
- Modify 27_2_I2C_Master_Polling_TxRx
- Modify 27_2_I2C_Slave_Polling_TxRx
- Modify 27_3_I2C_Master_INT_TxRx
- Modify 27_3_I2C_Slave_INT_TxRx

V2.1.0/ 2- Mar -2023**Main Changes****1. Bug Fix**

- can.h
 - Modify CAN_GetTxPinTestMode ()
 - Modify CAN_SetTxPinTestMode ()
- clock.c
 - Modify CLOCK_ConfigurePLL ()

2. Other Change**3. Project/0_Examples**

- Modify 8_1_PWM_Single_Output_With_Up_Counting_Mode
- Modify 8_2_PWM_Single_Output_With_Down_Counting_Mode
- Modify 8_3_PWM_Single_Output_With_Up_Down_Counting_Mode
- Modify 8_5_PWM_TriPhase_Waveform
- Modify 8_6_PWM_Software_Global_SYNC
- Modify 8_7_PWM_Software_Group_SYNC
- Modify 8_8_PWM_GPIO_SYNC
- Modify 8_9_PWM_Timer_SYNC
- Modify 8_10_PWM_TBCNT_0_SYNC_and_Signal_Observe
- Modify 8_11_PWM_Trigger_ADC_Sample_and_Signal_Observe
- Modify 8_12_PWM_GPIO_Trigger_TZ
- Modify 8_13_PWM_Current_Protect_Trigger_TZ
- Modify 8_14_PWM_ADC_PPU_Trigger_TZ
- Modify 10_7_ADC_Continuous_Mode_and_Conversion_Priority
- Modify 10_8_ADC_PPU
- Modify 12_1_Comparator
- Delete 15_1_LV_TSsensor
- Modify 19_1_System_Voltage_Monitor
- Delete 26_1_CAN_TX_Data
- Delete 26_1_CAN_RX_Data1
- Delete 26_1_CAN_RX_Data2
- Add 26_1_CAN_Standard_And_Extended_Frame_TX
- Add 26_1_CAN_Standard_Frame_RX
- Add 26_1_CAN_Extended_Frame_RX
- Add 26_2_CANFD_Standard_And_Extended_Frame_TX
- Add 26_2_CANFD_Standard_Frame_RX
- Add 26_2_CANFD_Extended_Frame_RX
- clock.c
 - Add CLOCK_UpdateInfo ()
 - Delete __XO_CLOCK variable
- can.c
 - Delete CAN_SetMessageErrorStateIndicator ()

- Add CAN_ForceSendDominantErrorStateIndicator ()
- Add CAN_ForceSendRecessiveErrorStateIndicator ()
- Add CAN_DisableForceSendErrorStateIndicator ()
- Add CAN_IsForceSendErrorStateIndicator ()
- Add CAN_GetMessageErrorStateIndicator()
- Modify CAN_SetMessage ()
- system_spc1169.c
 - Modify SystemInit()
 - Modify SysInfoStruct SysInfo
- pwm.h
 - Modify PWM_SetPRDLoadTiming ()
 - Modify PWM_SetAQCSFRCLoadTiming ()
 - Modify PWM_SetDBCTLLoadTiming ()
 - Modify PWM_SetDBREDLoadTiming ()
 - Modify PWM_SetDBFEDLoadTiming ()
 - Modify PWM_LoadTimingEnum
- Clock.h
 - Modify CLOCK_GetModuleDiv ()
- pga.h
 - Modify PGA_InputSelEnum
- adc.h
 - Delete ADC_PPU_TriggerSourceEnum
- can.h
 - Modify CAN_GetMessageFrameFormat ()
- spc1169.h
 - Add CEIL_DIV ()
 - Add FLOOR_DIV ()
- License.txt
 - Modify license.txt

V2.0.0/ 11- Feb -2023**Main Changes****1. Bug Fix**

- can.c
 - CAN_SetMessage ()
- IDE_Support
 - Modify SPC1169.svd
 - Modify SPC1169.SFR

2. Other Change

- Project/0_Examples
 - Modify 19_1_System_Voltage_Monitor
 - Add 9_5_ECAP_Continue_Absolute_Dual_Pin
 - Add 9_6_ECAP_Continue_Delta_LIN
- Libraries/lin_stack/src/lin_lld_uart.c
 - Modify lin_lld_uart()
 - Modify lin_lld_uart_set_low_power_mode()

V1.9.0/ 10- Jan -2023**Main Changes****1. Bug Fix**

- IDE_Support
 - Modify DebugCtrl.mac
 - Modify SPC1169.svd
 - Modify FlashSPC1169.board
 - Modify FlashSPC1169.flash
 - Modify FlashSPC1169.out
 - Modify SPC1169.FLM
 - Modify SPC1169.SFR
- adc.c
 - Modify ADC_SetSampleAndConvertTime()
 - Modify ADC_InputSelectEnum
 - Modify ADC_EasyInit1()
 - Modify ADC_EasyInit2()
 - Modify ADC_Init()
 - Modify ADC_GetInputPinCode()
- system.h
 - Modify SYSTEM_MonitorItemEnum
 - Modify SYSTEM_GetADCREFLowThreshold()
 - Modify SYSTEM_GetADCREFHighThreshold()
 - Modify SYSTEM_GetADCREFMonitorValue()
- i2c.h
 - Modify I2C_GetTxAbortSource()
- can.h
 - Modify CAN_StatusEnum
 - Modify CAN_GetStatus()
- pga.h
 - Modify D2S_Enable()
 - Modify D2S_Disable()
- clock.c
 - Modify CLOCK_SetModuleDiv()

2. Other Change

- adc.h
 - Modify ADC_Enable()
- comp.h
 - Modify COMP_SetDACBufferInput()
- pga.c
 - Modify PGA_InitDPGA()
 - Modify PGA_InitSPGA()
- spi.c

- Modify SPI_InitSpeed()
- ecap.c
 - Modify ECAP_CaptureModelInit()
 - Modify ECAP_APWMMModelInit()
- wdt.c
 - Modify WDT_Init()
- uart.h
 - Add UART_SetRxTimeoutThreshold()
 - Add UART_GetRxTimeoutThreshold()
- spi.c
 - Delete SSP_MasterB2BTransceive ()
- Project/1_Application
 - Modify IAP_UART
- Project/0_Examples
 - Modify 10_10_ADC_With_DPGA
 - Modify 10_1_ADC_Calibration
 - Modify 10_2_ADC_Open_Detect
 - Modify 10_3_ADC_Short_Detect
 - Modify 10_4_ADC_Single_End_Abs_Result
 - Modify 10_5_ADC_Differential_Abs_Result
 - Modify 10_6_ADC_Triggered_by_Timer
 - Modify 10_7_ADC_Continuous_Mode_and_Conversion_Priority
 - Modify 10_8_ADC_PPU
 - Modify 10_9_ADC_With_SPGA
 - Modify 11_1_SPGA_Calibration
 - Modify 11_2_DPGA_Calibration
 - Modify 12_1_Comparator
 - Modify 14_1_DAC_to_ADC
 - Modify 14_2_ADC_to_DAC
 - Modify 15_1_LV_TSsensor
 - Modify 16_1_UART_RX_Int
 - Modify 16_2_UART_RX_and_SentBack
 - Modify 16_2_UART_TX_and_CheckRX
 - Modify 17_1_SSP_Master_B2B_TxRx_Polling
 - Modify 17_1_SSP_Slave_B2B_TxRx_Polling
 - Modify 17_2_SSP_Master_TxRx_Polling
 - Modify 17_2_SSP_Slave_TxRx_Polling
 - Modify 17_3_SSP_Master_TxRx_Int
 - Modify 17_3_SSP_Slave_TxRx_Int
 - Modify 18_1_Flash_Operation
 - Modify 18_2_Flash_Sector_Protect
 - Modify 18_3_Flash_Call_User_Func
 - Modify 18_3_Flash_User_Func
 - Modify 18_4_Flash_EEPROM_Emulation

- Modify 18_5_Flash_With_ISR_In_RAM
- Modify 19_1_System_Voltage_Monitor
- Modify 19_2_System_GPIO_Trigger_NMI
- Modify 19_3_System_Boot_Log_and_ECC_Error
- Modify 20_10_DMA_ADC_to_UART
- Modify 20_1_DMA_Memory_to_Memory
- Modify 20_2_DMA_Memory_to_SSP
- Modify 20_3_DMA_Memory_to_UART
- Modify 20_4_DMA_SSP_to_Memory
- Modify 20_5_DMA_UART_to_Memory
- Modify 20_6_DMA_ADC_to_Memory
- Modify 20_7_DMA_SSP_to_UART
- Modify 20_8_DMA_UART_to_SSP
- Modify 20_9_DMA_ADC_to_SSP
- Add 26_1_CAN_RX_Data1
- Add 26_1_CAN_RX_Data2
- Add 26_1_CAN_TX_Data
- Add 27_1_I2C_Master_Bulk_Polling_TxRx
- Add 27_1_I2C_Slave_Bulk_Polling_TxRx
- Add 27_2_I2C_Master_Polling_TxRx
- Add 27_2_I2C_Slave_Polling_TxRx
- Add 27_3_I2C_Master_INT_TxRx
- Add 27_3_I2C_Slave_INT_TxRx
- Add 28_1_CRC_16_CCITT
- Modify 2_1_BOD_UVOV_Int
- Modify 2_2_BOD_UVOV_Reset
- Modify 2_3_MCU_Stop_Wakeup_by_Event
- Modify 2_4_MCU_Sleep_Wakeup_by_Event
- Modify 3_1_PLL_unlock_Int
- Modify 3_2_PLL_unlock_Reset
- Modify 3_3_Clock_Detect_Error_Int
- Modify 3_4_Clock_Detect_Error_Reset
- Modify 4_1_GPIO_Edge_Detect
- Modify 4_2_GPIO_Level_Test
- Modify 6_1_GTimer_Int
- Modify 7_1_WDT_Int
- Modify 7_2_WDT_Feed_DOG
- Modify 7_3_WDT_Rset_System
- Modify 8_10_PWM_TBCNT_0_SYNC_and_Signal_Observe
- Modify 8_11_PWM_Trigger_ADC_Sample_and_Signal_Observe
- Modify 8_12_PWM_GPIO_Trigger_TZ
- Modify 8_13_PWM_Current_Protect_Trigger_TZ
- Modify 8_14_PWM_ADC_PPU_Trigger_TZ
- Modify 8_1_PWM_Single_Output_With_Up_Counting_Mode

- Modify 8_2_PWM_Single_Output_With_Down_Counting_Mode
- Modify 8_3_PWM_Single_Output_With_Up_Down_Counting_Mode
- Modify 8_4_PWM_Complementary_Pair_Channel
- Modify 8_5_PWM_TriPhase_Waveform
- Modify 8_6_PWM_Software_Global_SYNC
- Modify 8_7_PWM_Software_Group_SYNC
- Modify 8_8_PWM_GPIO_SYNC
- Modify 8_9_PWM_Timer_SYNC
- Modify 9_1_ECAP_Continue_Absolute
- Modify 9_2_ECAP_Continue_Delta
- Modify 9_3_ECAP_Oneshot_Absolute
- Modify 9_4_ECAP_APWM_Function
- Delete IAP_LIN_Phy

V1.8.0/ 29- Dec -2022**Main Changes****1. Bug Fix**

- spi.h
 - Modify SPI_SetTestSFRMLock()
- iar
 - Modify startup_spc1169.s

2. Other Change

- adc.h
 - Modify ADC_SetChannelIntTriggerSOC ()
 - Modify ADC_SetChannelSOCTriggerSource()
- uart.c
 - Modify LIN_Init()
- Project/1_Application
 - Add LIN_Slave_node

V1.7.0/ 25- Oct -2022**Main Changes、ZZXSA****3. Bug Fix**

- Example Code
 - Modify 18_4_Flash_EEPROM_Emulation

4. Other Change

- clock.h
 - Modify CLOCK_SetPLLInputDiv()
 - Modify CLOCK_SetPLLFeedbackDiv()
 - Modify CLOCK_SetWDT0ClockSource()
 - Modify CLOCK_SetWDT1ClockSource()
- power.c
 - Modify POWER_SetVDD12UVThreshold()
 - Modify POWER_SetVDD12OVThreshold()
 - Modify POWER_SetVDD33UVThreshold()
 - Modify POWER_SetVDD33OVThreshold()
- adc.h
 - Modify ADC_SH0_P_VBAT_DIV to ADC_SH0_P_VBATM_DIV
- delay.h/.c
 - Modify Delay_Init()
 - Modify Delay_Us()
- comp.c
 - Modify COMP_Init()
 - Modify COMP_SetFilterWindowTimeNs()
- phcomp.c
 - Modify PHCOMP_SetFilterWindowTimeNs()
- spc1169_bitfield.h
 - Modify ADCCHCTL0_SHINSELP_VBAT_DIV to ADCCHCTL0_SHINSELP_VBATM_DIV
- Example Code
 - Modify 18_1_Flash_Operation
 - Modify 18_2_Flash_Sector_Protect
 - Modify 18_3_Flash_Call_User_Func
 - Modify 18_3_Flash_User_Func
 - Modify 18_4_Flash_EEPROM_Emulation
 - Modify 18_5_Flash_With_ISR_In_RAM
- Application code
 - Add IAP_UART
- SPC1169.svd/.SFR
 - Rename PHC to VBATM_DIV

V1.6.0/ 26- Aug -2022**Main Changes****5. Bug Fix**

- Example Code
 - Modify 20_10_DMA_ADC_to_UART/main.c
 - Modify 20_9_DMA_ADC_to_SSP/main.c
 - Modify 20_6_DMA_ADC_to_Memory/main.c

6. Other Change

- hv.h
 - Rename to spd1179_hv.h
- hv.c
 - Rename to spd1179_hv.c
- hv_bitfield.h
 - Rename to spd1179_hv_bitfield.h
- Example Code
 - Modify 18_4_Flash_EEPROM_Emulation/data_manage.c
 - Modify 18_4_Flash_EEPROM_Emulation/data_manage.h
 - Modify 18_4_Flash_EEPROM_Emulation/main.c
 - Modify 19_1_System_Voltage_Monitor/main.c
 - Modify Template/main.c
 - Modify 20_6_DMA_ADC_to_Memory/main.c
 - Modify 20_10_DMA_ADC_to_UART/main.c
 - Modify 20_1_DMA_Memory_to_Memory/main.c
 - Modify 20_2_DMA_Memory_to_SSP/main.c
 - Modify 20_3_DMA_Memory_to_UART/main.c
 - Modify 20_4_DMA_SSP_to_Memory/main.c
 - Modify 20_5_DMA_UART_to_Memory/main.c
 - Modify 20_7_DMA_SSP_to_UART/main.c
 - Modify 20_8_DMA_UART_to_SSP/main.c
 - Modify 20_9_DMA_ADC_to_SSP/main.c
 - Modify 24_1_LIN_Master_TX/isr.c
 - Modify 24_1_LIN_Master_TX/main.c
 - Modify 24_1_LIN_Slave_RX/main.c
 - Modify 24_2_LIN_Master_RX/main.c
 - Modify 24_2_LIN_Slave_TX/isr.c
 - Modify 24_2_LIN_Slave_TX/main.c
 - Modify 9_1_ECAP_Continue_Absolute/main.c
 - Modify 9_2_ECAP_Continue_Delta/main.c
 - Modify 9_3_ECAP_Oneshot_Absolute/main.c

V1.4.0/ 20- May -2022**Main Changes****7. Bug Fix**

- adc.h
 - Rename ADC_SH0_P_PHC to VBAT_DIV to ADC_SH0_P_VBAT_DIV

8. Other Change

- pwm.h
 - Rename PWM_RISING_EDGE_DELAT_PATH to PWM_RISING_EDGE_DELAY_PATH

V1.3.0/ 17- December -2021**Main Changes****1. Bug Fix**

- adc.c
 - Modify the ADC_SetSampleAndConvertTime()

2. Other Change

- pga.c
 - Add D2S_Enable() and D2S_Disable()
- hv.c
 - In HV_ConnectTPMUToAnalogTest(), use (__IO uint32_t *) instead of (uint32_t *)
- Example Code
 - Modify 13_1_BEMF_Comparator\main.c

V1.2.0/ 26- September -2021**Main Changes****1. Bug Fix**

- adc.h
 - Add parameter ADCx in ADC_ForceMultiChannelSOC()
 - Add parameter ADCx in ADC_DisablePPUInt()
- dma.h
 - Modify DMA_GetTransferType()
 - Modify DMA_IsFIFOEmpty()
- pin.h
 - Modify defination PIN_EXTPU5V_Msk and PIN_EXTPU5V_Pos
- uart.h
 - Modify LIN_SetSyncBreak()
 - Modify parameter UARTx in UART_WDIS()
- phcomp.h
 - Modify input parameter of PHCOMP_SelectReference()
- pwm.h
 - Modify PWM_EnableTripWhenDebug()

2. Other Change

- adc.h
 - Add definition ADC_MAX_SAMPLE_TIME and ADC_MAX_CONVERSION_TIME
 - Delete definition __ADC_RESOLUTION_BITS
- clock.h
 - Rename CLOCK_IsXOEnabled() to CLOCK_IsEnableXO()
- phcomp.h
 - Add enum PHCOMP_IntEnum
 - Add enum PHCOMP_ModeEnum
 - Delete PHCOMP_SetNormalComparatorMode()
 - Delete PHCOMP_SetPhaseComparatorMode()
 - Add PHCOMP_SetMode()
 - Delete PHCOMP_EnableIntU(), PHCOMP_EnableIntV(), PHCOMP_EnableIntW()
 - Delete PHCOMP_DisableIntU(), PHCOMP_DisableIntV(), PHCOMP_DisableIntW()
 - Delete PHCOMP_ClearIntU(), PHCOMP_ClearIntV(), PHCOMP_ClearIntW()
 - Delete PHCOMP_GetIntRawFlagU(), PHCOMP_GetIntRawFlagV(), PHCOMP_GetIntRawFlagW()
 - Delete PHCOMP_GetIntFlagU(), PHCOMP_GetIntFlagV(), PHCOMP_GetIntFlagW()
 - Delete PHCOMP_GetGlobalIntFlag(), PHCOMP_GetAllIntFlag()
 - Modify input parameter of PHCOMP_EnableInt()
 - Modify input parameter of PHCOMP_DisableInt()
 - Modify input parameter of PHCOMP_GetIntRawFlag()
 - Modify input parameter of PHCOMP_GetIntFlag()
 - Modify input parameter of PHCOMP_ClearInt()
 - Delete PHCOMP_ClearGlobalInt() and PHCOMP_GetAllIntRawFlag()

■ pwm.h

- Rename enum PWM_EdgeEnum to PWM_DeadBandOutputSourceEnum
- Rename enum PWM_TripIntEventEnum to PWM_TripIntEnum
- Add TRIP_INT_GLOBAL and TRIP_INT_ALL in PWM_TripIntEnum
- Rename PWM_SetCHAContinuesForceOutputAction() to PWM_SetCHAContinuousForceOutputAction()
- Rename PWM_SetCHBContinuesForceOutputAction() to PWM_SetCHBContinuousForceOutputAction()
- Rename PWM_GetCHAContinuesForceOutputAction() to PWM_GetCHAContinuousForceOutputAction()
- Rename PWM_GetShadowCHAContinuesForceOutputAction() to PWM_GetShadowCHAContinuousForceOutputAction()
- Rename PWM_GetCHBContinuesForceOutputAction() to PWM_GetCHBContinuousForceOutputAction()
- Rename PWM_GetShadowCHBContinuesForceOutputAction() to PWM_GetShadowCHBContinuousForceOutputAction()
- Rename PWM_EnableDBDelayDualEdge() to PWM_EnableDBDualEdgeDelayMode()
- Rename PWM_DisableDBDelayDualEdge() to PWM_DisableDBDualEdgeDelayMode()
- Rename PWM_SetDBOutputChannelASource() to PWM_SetDBOutputASource()
- Rename PWM_SetDBOutputChannelBSource() to PWM_SetDBOutputBSource()
- Modify input parameter of PWM_SetCHAOneShotForceOutputAction()
- Modify input parameter of PWM_SetCHBOneShotForceOutputAction()
- Modify input parameter of PWM_GetCHAOneShotForceOutputAction()
- Modify input parameter of PWM_GetCHBOneShotForceOutputAction()
- Delete PWM_EnableOneShotTripInt()
- Delete PWM_DisableOneShotTripInt()
- Delete PWM_EnableCBCTripInt()
- Delete PWM_DisableCBCTripInt()
- Delete PWM_EnableDCAEVT0TripInt()
- Delete PWM_DisableDCAEVT0TripInt()
- Delete PWM_EnableDCAEVT1TripInt()
- Delete PWM_DisableDCAEVT1TripInt()
- Delete PWM_EnableDCBEVT0TripInt()
- Delete PWM_DisableDCBEVT0TripInt()
- Delete PWM_EnableDCBEVT1TripInt()
- Delete PWM_DisableDCBEVT1TripInt()
- Delete PWM_GetOneShotTripIntRawFlag()
- Delete PWM_GetCBCTripIntRawFlag()
- Delete PWM_GetDCAEVT0TripIntRawFlag()
- Delete PWM_GetDCAEVT1TripIntRawFlag()
- Delete PWM_GetDCBEVT0TripIntRawFlag()
- Delete PWM_GetDCBEVT1TripIntRawFlag()
- Delete PWM_GetOneShotTripIntFlag()
- Delete PWM_GetCBCTripIntFlag()

- Delete PWM_GetDCAEVT0TripIntFlag()
- Delete PWM_GetDCAEVT1TripIntFlag()
- Delete PWM_GetDCBEVT0TripIntFlag()
- Delete PWM_GetDCBEVT1TripIntFlag()
- Delete PWM_GetGlobalTripIntFlag()
- Delete PWM_ClearOneShotTripInt()
- Delete PWM_ClearCBCTripInt()
- Delete PWM_ClearDCAEVT0TripInt()
- Delete PWM_ClearDCAEVT1TripInt()
- Delete PWM_ClearDCBEVT0TripInt()
- Delete PWM_ClearDCBEVT1TripInt()
- Delete PWM_ClearGlobalTripInt()

■ comp.h

- Delete COMP_ClearAllFilterOutputFlag()
- Delete COMP_SetDAC0RampReloadValue()
- Delete COMP_SetDAC1RampReloadValue()
- Delete COMP_GetDAC0RampReloadValue()
- Delete COMP_GetDAC1RampReloadValue()
- Delete COMP_SetDAC0RampDelay()
- Delete COMP_SetDAC1RampDelay()
- Delete COMP_GetDAC0RampDelay()
- Delete COMP_GetDAC1RampDelay()
- Delete COMP_GetDAC0RampDecrement()
- Delete COMP_GetDAC1RampDecrement()

■ dma.h

- Rename DMA_GetChannelInt() to DMA_IsEnableChannelInt() and the return value form (0 or 1) to (0 or not 0)
- Rename DMA_GetSuspend() to DMA_IsEnableSuspend() and the return value form (0 or 1) to (0 or not 0)
- Rename DMA_GetTransferCompleteInt() to DMA_IsEnableTransferCompleteInt()
- Rename DMA_GetTransferErrorInt() to DMA_IsEnableTransferErrorInt()
- Rename DMA_IsEnabled() to DMA_IsEnable()
- Rename DMA_GetChannelTransfer() to DMA_IsEnableChannelTransfer()
- Use the defination DMATCIE_CHOWE_Pos, DMAERRIE_CHOWE_Pos, DMACHEN_CHOWE_Pos to replace NUM_OF_DMA_CHANNEL

■ ecap.h

- Rename ECAP_APWMSetActiveHigh() to ECAP_SetAPWMOutputActiveHigh()
- Rename ECAP_APWMSetActiveLow() to ECAP_SetAPWMOutputActiveLow()

■ ssp.h

- Modify PSP_SlotEnum
- Rename SSP_IsSetPSPNetFrameTxActiveSlot() to SSP_IsEnablePSPNetFrameTxActiveSlot()
- Rename SSP_IsSetPSPNetFrameRxActiveSlot() to SSP_IsEnablePSPNetFrameRxActiveSlot()
- Rename SSP_EnableLockSFRMOutput() to SSP_EnableSFRMLock()
- Rename SSP_DisableLockSFRMOutput() to SSP_DisableSFRMLock()

- Rename SSP_IsEnableLockSFRMOutput() to SSP_IsEnableSFRMLock()
- Delete enum SSP_TrailingBytesHandlerEnum
- Delete SSP_SetTrailingBytesHandler()
- Delete SSP_GetTrailingBytesHandler()
- timer.h
 - Add TIMER_WALLOW() and TIMER_WDIS()
- uart.h
 - Rename enum UART_BusWidthEnum to UART_FIFOAccessWidthEnum
 - Modify UART_WriteByte(), LIN_WriteByte(), UART_ReadByte(), LIN_ReadByte()
 - Rename UART_GetRx() to UART_IsEnableRx()
 - Rename UART_GetTx() to UART_IsEnableTx()
 - Rename UART_GetRxDMA() to UART_IsEnableRxDMA()
 - Rename UART_GetTxDMA() to UART_IsEnableTxDMA()
 - Delete UART_GetBreak()
 - Delete UART_GetAutoBaud()
 - Rename UART_IsAutoBaudEnabled() to UART_IsEnableAutoBaud()
 - Rename UART_SetBusWidth() to UART_SetFIFOAccessWidth()
 - Rename UART_GetBusWidth() to UART_GetFIFOAccessWidth()
 - Rename LIN_Get() to LIN_IsEnable()
 - Rename UART_GetRxSIR() to UART_IsEnableRxSIR()
 - Rename UART_GetTxSIR() to UART_IsEnableTxSIR()
 - Rename UART_GetInt() to UART_IsEnableInt()
- system.h
 - Add enum MemoryEnum
 - Rename SSYSTEM_GetGPIONMIInputSourcePolarity() to SYSTEM_GetGPIONMIInputSourcePolarity()
 - Rename SYSTEM_GetNonMaskableInt() to SYSTEM_IsEnableNonMaskableInt()
 - Rename SYSTEM_GetResetEvent() to SYSTEM_IsEnableResetEvent()
 - Delete SYSTEM_GetROMErrorAddress()
 - Delete SYSTEM_GetFlashErrorAddress()
 - Delete SYSTEM_GetIRAMErrorAddress()
 - Delete SYSTEM_GetDRAMErrorAddress()
 - Add SYSTEM_GetMemoryErrorAddress()
- Example Code
 - Modify 12_1_Comparator\main.c
 - Modify 13_1_BEMF_Comparator\main.c
 - Modify 20_10_DMA_ADC_to_UART\main.c
 - Modify 20_2_DMA_Memory_to_SSP\main.c
 - Modify 20_3_DMA_Memory_to_UART\main.c
 - Modify 20_4_DMA_SSP_to_Memory\main.c
 - Modify 20_5_DMA_UART_to_Memory\main.c
 - Modify 20_6_DMA_ADC_to_Memory\main.c
 - Modify 20_7_DMA_SSP_to_UART\main.c
 - Modify 20_8_DMA_UART_to_SSP\main.c

- Modify 20_9_DMA_ADC_to_SSP\main.c
- Modify 8_12_PWM_GPIO_Trigger_TZ\main.c
- Modify 8_13_PWM_Current_Protect_Trigger_TZ\main.c
- Modify 8_14_PWM_ADC_PPU_Trigger_TZ\main.c

V1.1.0/ 23-June-2021**Main Changes**

- spc1169_bitfield.h
 - Rename TXDREQ/RXDAV to TXREQ/RXRED in UARTRAWIF/IF/IE registers
 - Update TXREQ/RXRED description in SSPRAWIF/IF/IE registers
 - Rename TXDREQ/RXDAV to TXREQ/RXRED in I2CRAWIF/IF/IE/IC registers
- ecap.c
 - Update ECAP_CaptureModelInit()
- ecap.h
 - Delete ECAP_SetRunMode().
 - Rename ECAP_SetCounterModeOnCPUHaltCMP() to ECAP_SetCounterModeOnCPUHalt()
 - Delete ECAP_GetCEVT0IntRawFlag(ECAPx)
 - Delete ECAP_GetCEVT1IntRawFlag(ECAPx)
 - Delete ECAP_GetCEVT2IntRawFlag(ECAPx)
 - Delete ECAP_GetCEVT3IntRawFlag(ECAPx)
 - Delete ECAP_GetCounterOverflowIntRawFlag(ECAPx)
 - Delete ECAP_GetCounterEqualPRDIntRawFlag(ECAPx)
 - Delete ECAP_GetCounterEqualCMPIntRawFlag(ECAPx)
 - Delete ECAP_GetAllIntRawFlag(ECAPx)
 - Delete ECAP_GetCEVT0IntFlag(ECAPx)
 - Delete ECAP_GetCEVT1IntFlag(ECAPx)
 - Delete ECAP_GetCEVT2IntFlag(ECAPx)
 - Delete ECAP_GetCEVT3IntFlag(ECAPx)
 - Delete ECAP_GetCounterOverflowIntFlag(ECAPx)
 - Delete ECAP_GetCounterEqualPRDIntFlag(ECAPx)
 - Delete ECAP_GetCounterEqualCMPIntFlag(ECAPx)
 - Delete ECAP_GetGlobalIntFlag(ECAPx)
 - Delete ECAP_IsGlobalIntPending(ECAPx)
 - Delete ECAP_GetAllIntFlag(ECAPx)
 - Delete ECAP_EnableCEVT0Int(ECAPx)
 - Delete ECAP_DisableCEVT0Int(ECAPx)
 - Delete ECAP_EnableCEVT1Int(ECAPx)
 - Delete ECAP_DisableCEVT1Int(ECAPx)
 - Delete ECAP_EnableCEVT2Int(ECAPx)
 - Delete ECAP_DisableCEVT2Int(ECAPx)
 - Delete ECAP_EnableCEVT3Int(ECAPx)
 - Delete ECAP_DisableCEVT3Int(ECAPx)
 - Delete ECAP_EnableCounterOverflowInt(ECAPx)
 - Delete ECAP_DisableCounterOverflowInt(ECAPx)
 - Delete ECAP_EnableCounterEqualPRDInt(ECAPx)
 - Delete ECAP_DisableCounterEqualPRDInt(ECAPx)
 - Delete ECAP_EnableCounterEqualCMPInt(ECAPx)
 - Delete ECAP_DisableCounterEqualCMPInt(ECAPx)

- Delete ECAP_EnableAllInt(ECAPx)
- Delete ECAP_DisableAllInt(ECAPx)
- Delete ECAP_ForceCEVT0Int(ECAPx)
- Delete ECAP_ForceCEVT1Int(ECAPx)
- Delete ECAP_ForceCEVT2Int(ECAPx)
- Delete ECAP_ForceCEVT3Int(ECAPx)
- Delete ECAP_ForceCounterOverflowInt(ECAPx)
- Delete ECAP_ForceCounterEqualPRDInt(ECAPx)
- Delete ECAP_ForceCounterEqualCMPInt(ECAPx)
- Delete ECAP_ClearCEVT0Int(ECAPx)
- Delete ECAP_ClearCEVT1Int(ECAPx)
- Delete ECAP_ClearCEVT2Int(ECAPx)
- Delete ECAP_ClearCEVT3Int(ECAPx)
- Delete ECAP_ClearCounterOverflowInt(ECAPx)
- Delete ECAP_ClearCounterEqualPRDInt(ECAPx)
- Delete ECAP_ClearCounterEqualCMPInt(ECAPx)
- Delete ECAP_ClearGlobalInt(ECAPx)
- Delete ECAP_ClearAllInt(ECAPx)

■ comp.c

- Update COMP_Init().
- Update COMP_SetFilterWindowTimeNs()

■ comp.h

- Delete COMP_SetOutputActiveHigh().
- Delete COMP_SetOutputActiveLow().
- Delete COMP_SetOutputActiveHighForPWM().
- Delete COMP_SetOutputActiveLowForPWM().
- Delete COMP_SetOutputActiveHighForGPIO().
- Delete COMP_SetOutputActiveLowForGPIO().
- Add COMP_SetOutputPolarity().
- Add COMP_SetOutputPolarityForPWM().
- Add COMP_SetOutputPolarityForGPIO()

■ power.h

- Delete POWER_DeepSleepMode()
- Delete POWER_StopMode()

■ ssp.h

- Delete SSP_IsTxNotFull(SSPx)
- Delete SSP_IsTxEmpty(SSPx)
- Delete SSP_IsRxFull(SSPx)
- Delete SSP_IsRxNotEmpty(SSPx)
- Delete SSP_IsBusy(SSPx)
- Delete SSP_IsBusySyncSlaveClock(SSPx)
- Delete SSP_IsSlaveNotReady(SSPx)
- Delete SSP_IsTxHasEvenSample(SSPx)
- Delete SSP_IsRxHasEvenSample(SSPx)

- Delete SSP_IsNetworkBusy(SSPx)
- Delete SSP_IsSFRMLocked(SSPx)
- Delete SSP_GetRxUnderflowIntRawFlag(SSPx)
- Delete SSP_GetRxOverflowIntRawFlag(SSPx)
- Delete SSP_GetRxServiceRequestIntRawFlag(SSPx)
- Delete SSP_GetRxTimeoutIntRawFlag(SSPx)
- Delete SSP_GetTxUnderflowIntRawFlag(SSPx)
- Delete SSP_GetTxOverflowIntRawFlag(SSPx)
- Delete SSP_GetTxServiceRequestIntRawFlag(SSPx)
- Delete SSP_GetBitCountErrorIntRawFlag(SSPx)
- Delete SSP_GetTrailByteIntRawFlag(SSPx)
- Delete SSP_GetDMAEndOfChainIntRawFlag(SSPx)
- Delete SSP_GetRxUnderflowIntFlag(SSPx)
- Delete SSP_GetRxOverflowIntFlag(SSPx)
- Delete SSP_GetRxServiceRequestIntFlag(SSPx)
- Delete SSP_GetRxTimeoutIntFlag(SSPx)
- Delete SSP_GetTxUnderflowIntFlag(SSPx)
- Delete SSP_GetTxOverflowIntFlag(SSPx)
- Delete SSP_GetTxServiceRequestIntFlag(SSPx)
- Delete SSP_GetBitCountErrorIntFlag(SSPx)
- Delete SSP_GetTrailByteIntFlag(SSPx)
- Delete SSP_GetDMAEndOfChainIntFlag(SSPx)
- Delete SSP_GetGlobalIntFlag(SSPx)
- Delete SSP_EnableRxUnderflowInt(SSPx)
- Delete SSP_DisableRxUnderflowInt(SSPx)
- Delete SSP_EnableRxOverflowInt(SSPx)
- Delete SSP_DisableRxOverflowInt(SSPx)
- Delete SSP_EnableRxServiceRequestInt(SSPx)
- Delete SSP_DisableRxServiceRequestInt(SSPx)
- Delete SSP_EnableRxTimeoutInt(SSPx)
- Delete SSP_DisableRxTimeoutInt(SSPx)
- Delete SSP_EnableTxUnderflowInt(SSPx)
- Delete SSP_DisableTxUnderflowInt(SSPx)
- Delete SSP_EnableTxOverflowInt(SSPx)
- Delete SSP_DisableTxOverflowInt(SSPx)
- Delete SSP_EnableTxServiceRequestInt(SSPx)
- Delete SSP_DisableTxServiceRequestInt(SSPx)
- Delete SSP_EnableBitCountErrorInt(SSPx)
- Delete SSP_DisableBitCountErrorInt(SSPx)
- Delete SSP_EnableTrailByteInt(SSPx)
- Delete SSP_DisableTrailByteInt(SSPx)
- Delete SSP_EnableDMAEndOfChainInt(SSPx)
- Delete SSP_DisableDMAEndOfChainInt(SSPx)
- Delete SSP_ClearRxUnderflowInt(SSPx)

- Delete SSP_ClearRxOverflowInt(SSPx)
- Delete SSP_ClearRxTimeoutInt(SSPx)
- Delete SSP_ClearTxUnderflowInt(SSPx)
- Delete SSP_ClearTxOverflowInt(SSPx)
- Delete SSP_ClearBitCountErrorInt(SSPx)
- Delete SSP_ClearTrailByteInt(SSPx)
- Delete SSP_ClearDMAEndOfChainInt(SSPx)
- Delete SSP_ClearGlobalInt(SSPx)

■ system.h

- Delete SYSTEM_EnableSingleMonitorItem(eltem)
- Delete SYSTEM_EnableSingleNonMaskableInt(eNMIEvt)
- Delete SYSTEM_EnableAllNonMaskableInt()
- Delete SYSTEM_DisableAllNonMaskableInt()
- Delete SYSTEM_ClearNonMaskableGlobalInt()
- Delete SYSTEM_GetAllNonMaskableIntRawFlag()
- Delete SYSTEM_GetNonMaskableGlobalIntFlag()
- Delete SYSTEM_GetAllNonMaskableIntFlag()
- Delete SYSTEM_EnableSingleResetEvent(eRSTEvt)
- Delete SYSTEM_EnableAllResetEvent()
- Delete SYSTEM_DisableAllResetEvent()
- Delete SYSTEM_GetAllResetEventFlag()

■ uart.h

- Delete UART_IsRxNotEmpty(UARTx)
- Delete UART_IsRxFull(UARTx)
- Delete UART_IsTxEmpty(UARTx)
- Delete UART_IsTxNotFull(UARTx)
- Delete UART_IsRxParityError(UARTx)
- Delete UART_IsRxFrameError(UARTx)
- Delete UART_IsRxBreak(UARTx)
- Delete UART_IsRxError(UARTx)
- Delete UART_IsRxBusy(UARTx)
- Delete UART_IsTxBusy(UARTx)
- Delete UART_GetRxOverflowIntRawFlag(UARTx)
- Delete UART_GetRxUnderflowIntRawFlag(UARTx)
- Delete UART_GetRxDataAvailableIntRawFlag(UARTx)
- Delete UART_GetRxParityErrorIntRawFlag(UARTx)
- Delete UART_GetRxFrameErrorIntRawFlag(UARTx)
- Delete UART_GetRxBreakIntRawFlag(UARTx)
- Delete UART_GetRxTimeoutIntRawFlag(UARTx)
- Delete UART_GetTxOverflowIntRawFlag(UARTx)
- Delete UART_GetTxDataRequestIntRawFlag(UARTx)
- Delete UART_GetAutoBaudLockedIntRawFlag(UARTx)
- Delete UART_GetLINRxIDMatchIntRawFlag(UARTx)
- Delete UART_GetLINBitErrorIntRawFlag(UARTx)

- Delete UART_GetLINChecksumErrorIntRawFlag(UARTx)
- Delete UART_GetDMAEndOfChainIntRawFlag(UARTx)
- Delete UART_GetRxOverflowIntFlag(UARTx)
- Delete UART_GetRxUnderflowIntFlag(UARTx)
- Delete UART_GetRxDataAvailableIntFlag(UARTx)
- Delete UART_GetRxParityErrorIntFlag(UARTx)
- Delete UART_GetRxFrameErrorIntFlag(UARTx)
- Delete UART_GetRxBreakIntFlag(UARTx)
- Delete UART_GetRxTimeoutIntFlag(UARTx)
- Delete UART_GetTxOverflowIntFlag(UARTx)
- Delete UART_GetTxDataRequestIntFlag(UARTx)
- Delete UART_GetAutoBaudLockedIntFlag(UARTx)
- Delete UART_GetLINRxIDMatchIntFlag(UARTx)
- Delete UART_GetLINBitErrorIntFlag(UARTx)
- Delete UART_GetLINChecksumErrorIntFlag(UARTx)
- Delete UART_GetDMAEndOfChainIntFlag(UARTx)
- Delete UART_GetGlobalIntFlag(UARTx)
- Delete UART_ClearRxOverflowInt(UARTx)
- Delete UART_ClearRxUnderflowInt(UARTx)
- Delete UART_ClearRxParityErrorInt(UARTx)
- Delete UART_ClearRxFrameErrorInt(UARTx)
- Delete UART_ClearRxBreakInt(UARTx)
- Delete UART_ClearRxTimeoutInt(UARTx)
- Delete UART_ClearTxOverflowInt(UARTx)
- Delete UART_ClearAutoBaudLockedInt(UARTx)
- Delete UART_ClearLINRxIDMatchInt(UARTx)
- Delete UART_ClearLINBitErrorInt(UARTx)
- Delete UART_ClearLINChecksumErrorInt(UARTx)
- Delete UART_ClearDMAEndOfChainInt(UARTx)
- Delete UART_ClearGlobalInt(UARTx)
- Delete UART_EnableRxOverflowInt(UARTx)
- Delete UART_DisableRxOverflowInt(UARTx)
- Delete UART_EnableRxUnderflowInt(UARTx)
- Delete UART_DisableRxUnderflowInt(UARTx)
- Delete UART_EnableRxAvailableInt(UARTx)
- Delete UART_DisableRxAvailableInt(UARTx)
- Delete UART_EnableRxParityErrorInt(UARTx)
- Delete UART_DisableRxParityErrorInt(UARTx)
- Delete UART_EnableRxFrameErrorInt(UARTx)
- Delete UART_DisableRxFrameErrorInt(UARTx)
- Delete UART_EnableRxBreakInt(UARTx)
- Delete UART_DisableRxBreakInt(UARTx)
- Delete UART_EnableRxTimeoutInt(UARTx)
- Delete UART_DisableRxTimeoutInt(UARTx)

- Delete UART_EnableTxOverflowInt(UARTx)
- Delete UART_DisableTxOverflowInt(UARTx)
- Delete UART_EnableTxDataRequestInt(UARTx)
- Delete UART_DisableTxDataRequestInt(UARTx)
- Delete UART_EnableAutoBaudLockedInt(UARTx)
- Delete UART_DisableAutoBaudLockedInt(UARTx)
- Delete UART_EnableLINRxIDMatchInt(UARTx)
- Delete UART_DisableLINRxIDMatchInt(UARTx)
- Delete UART_EnableLINBitErrorInt(UARTx)
- Delete UART_DisableLINBitErrorInt(UARTx)
- Delete UART_EnableLINChecksumErrorInt(UARTx)
- Delete UART_DisableLINChecksumErrorInt(UARTx)
- Delete UART_EnableDMAEndOfChainInt(UARTx)
- Delete UART_DisableDMAEndOfChainInt(UARTx)

■ Example Code

- Modify 10_10_ADC_With_DPGA\main.c
- Modify 10_4_ADC_Single_End_Abs_Result\main.c
- Modify 10_5_ADC_Differential_Abs_Result\main.c
- Modify 10_6_ADC_Triggered_by_Timer\main.c
- Modify 10_7_ADC_Continuous_Mode and Conversion_Priority\main.c
- Modify 10_9_ADC_With_SPGA\main.c
- Modify 14_1_DAC_to_ADC\main.c
- Modify 14_2_ADC_to_DAC\main.c
- Modify 15_1_LV_TSensor\main.c
- Modify 16_1_UART_RX_Int\main.c
- Modify 16_1_UART_RX_Int\main.c
- Modify 16_2_UART_RX_and_SentBack\main.c
- Modify 17_1_SSP_Master_B2B_TxRx_Polling\main.c
- Modify 17_1_SSP_Slave_B2B_TxRx_Polling\main.c
- Modify 17_2_SSP_Master_TxRx_Polling\main.c
- Modify 17_2_SSP_Slave_TxRx_Polling\main.c
- Modify 17_3_SSP_Master_TxRx_Int\main.c
- Modify 17_3_SSP_Slave_TxRx_Int\main.c
- Modify 18_1_Flash_Operation\main.c
- Modify 18_2_Flash_Sector_Protect\main.c
- Modify 18_3_Flash_User_Func\main.c
- Modify 18_3_Flash_Call_User_Func\main.c
- Modify 19_2_System_GPIO_Trigger_NMI\main.c
- Modify 20_10_DMA_ADC_to_UART\main.c
- Modify 20_1_DMA_Memory_to_Memory\main.c
- Modify 20_2_DMA_Memory_to_SSP\main.c
- Modify 20_3_DMA_Memory_to_UART\main.c
- Modify 20_4_DMA_SSP_to_Memory\main.c
- Modify 20_5_DMA_UART_to_Memory\main.c

- Modify 20_6_DMA_ADC_to_Memory\main.c
- Modify 20_7_DMA_SSP_to_UART\main.c
- Modify 20_8_DMA_UART_to_SSP\main.c
- Modify 20_9_DMA_ADC_to_SSP\main.c
- Modify 24_1_LIN_Master_TX\main.c
- Modify 24_1_LIN_Slave_RX\main.c
- Modify 24_2_LIN_Master_RX\main.c
- Modify 24_2_LIN_Slave_TX\main.c
- Modify 24_3_LIN_TX_Timeout_Shutdown\main.c
- Modify 25_1_MON_Int\main.c
- Modify 3_1_PLL_unlock_Int\main.c
- Modify 3_2_PLL_unlock_Reset\main.c
- Modify 3_3_Clock_Detect_Error_Int\main.c
- Modify 3_4_Clock_Detect_Error_Reset\main.c
- Modify 4_1_GPIO_Edge_Detect\main.c
- Modify 4_2_GPIO_Level_Test\main.c
- Modify 6_1_GTimer_Int\main.c
- Modify 7_1_WDT_Int\main.c
- Modify 7_2_WDT_Feed_DOG\main.c
- Modify 8_10_PWM_TBCNT_0_SYNC_and_Signal_Observe\main.c
- Modify 8_12_PWM_GPIO_Trigger_TZ\main.c
- Modify 8_13_PWM_Current_Protect_Trigger_TZ\main.c
- Modify 8_14_PWM_ADC_PPU_Trigger_TZ\main.c
- Modify 9_1_ECAP_Continue_Absolute\main.c
- Modify 9_2_ECAP_Continue_Delta\main.c
- Modify 9_3_ECAP_Oneshot_Absolute\main.c

V1.0.0/ 19-January-2021

Main Changes

- Created