Release Note

SPC2188 SDK Release Note

版本历史

本节记录发布说明文档自身的修改情况,以保证版本元数据的可审计性与受控性。

版本	日期	作者	状态	变更
V6.0.0	2026-08-07	xuqinghe	已发布	1. 增加 V6.0.0 版本

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1 全局系统环境与前提条件

以下要求定义了正确重新构建并运行标准外设库所需的、经过验证的开发工具、编译器及硬件目标。

- 支持的芯片：SPC2188 MCU 系列
- Keil MDK IDE：v5.23
- IAR Embedded Workbench：EWARM v8.32.4

2 版本 6.0.0 / 2026-08-07

2.1 BUG 修复

模块	条目	描述
POWER	POWER_VDD33OVEnum	修改 VDD33 和 VDD12 的过压和欠压的值
	POWER_VDD33UVEnum	
	POWER_VDD12OVEnum	
	POWER_VDD12UVEnum	

2.2 API 变更

模块	类型	旧 API	新 API	描述
CAN	删除	CAN_EnableMailboxResponseRemoteFrame CAN_DisableMailboxResponseRemoteFrame CAN_IsEnableMailboxResponseRemoteFrame	NONE	CANMBOXMCTL 寄存器的 RMTEN 位段不支持
	修改	CAN_SetMessage	CAN_SetMessage	删除远程帧自动响应功能
		CAN_GetMessage	CAN_GetMessage	删除远程帧自动响应功能

2.3 杂项

条目	类型	描述
SPC2188.svd	[SDK LIB]	修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段
CAN_MailboxControlEnum		删除 CAN_MBOX_ENABLE_RESPONSE_REMOTE/ CAN_MBOX_IS_ENABLE_RESPONSE_REMOTE 枚举成员
CAN_MessageTypeDef		删除 eRmtRspEn 变量成员
PGA_PositiveInputEnum		增加 PGA1_CH_P_ANA_IN2 枚举成员

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条目	类型	描述
PGA_NegativeInputEnum		增加 PGA0_CH_N_ANA_IN1/ PGA1_CH_N_ANA_IN3/ PGA1_CH_N_ANA_IN15 枚举成员
Spc2188_bitfield.h		修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段
BOD_UVOV_Int	[DEMO]	修改 VDD33 的过压和欠压值
BOD_UVOV_Reset		修改 VDD33 的过压和欠压值
SPC2188.svd	[IED SUPPORT]	修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段
SPC2188.SFR		修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段

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3 版本 5.0.0/2025-07-21

1. Bug Fix

- IAR startup_spc2188.s
  - Modify IAR startup_spc2188.s
- Clock.c
  - Modify CLOCK_InitWithXO, CLOCK_InitWithRCO

2. Other Change

- Example Code
  - Modify 23_CPU0_Start_CPU1
  - Modify 23_CPU0_Write_to_CPU1
  - Add 8_UART_Rx_Undefined_Length
  - Add W25Q16_FLASH

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4 版本 4.0.0/2024-12-23

1. Bug Fix

- uart.c
  - Modify UART_Init

2. Other Change

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5 版本 3.0.0/2024-11-14

1. Bug Fix

- SPC2188.SFR
  - Modify SPC2188.SFR
- SPC2188.svd
  - Modify SPC2188.svd
- Can.h
  - Modify CAN_EnableTestMode, CAN_DisableTestMode, CAN_IsEnableTestMode
- I2c.h
  - Modify I2C_MasterReadCmd, I2C_WriteByte, I2C_ReadByte
- Pga.h
  - Modify PGA_GainEnum
- Pga.c
  - Delete PGA_OnlyPositiveEndedInit,PGA_OnlyNegativeEndedInit,PGA_SingleEndedInit,PGA_DifferentialInit
- Add PGA_InitSingleModePositiveEnded,PGA_InitSingleModeNegativeEnded, PGA_InitSingleModeBothEnded, PGA_InitDifferentialMotorMode, PGA_InitDifferentialSensorMode
- Clock.c
  - Modify CLOCK_ConfigurePLL
- Power.h
  - Modify POWER_VDD33OVEnum,POWER_VDD33UVEnum,POWER_VDD12OVEnum,POWER_VDD12UVEnum
- Spc2188_bitfield.h
  - Modify Spc2188_bitfield.h
- Spc2188_reg.h
  - Modify Spc2188_reg.h

2. Other Change

- SPC2188_1M.FLM
  - Add SPC2188_1M.FLM
- SPC2188_2M.FLM
  - Add SPC2188_2M.FLM
- SPC2188.FLM
  - Delete SPC2188.FLM
- DebugCtrl.mac
  - Delete DebugCtrl.mac
- FlashSPC2188.board
  - Modify FlashSPC2188.board
- FlashSPC2188.flash
  - Modify FlashSPC2188.flash
- Gpio.c
  - Add GPIO_SetOpenDrainOutputHigh, GPIO_SetOpenDrainOutputLow
- Crc.h
  - Add CRC_GetMode

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- Crc.c
  - Modify CRC_Init, CRC_Calculate
  - Delete CRC_FeedStream
- Spi.h
  - Delect SPI_EnableFIFOPack, SPI_DisableFIFOPack, SPI_IsEnableFIFOPack
- Uart.h
  - Add UART_SetRxTimeoutThreshold, UART_GetRxTimeoutThreshold
- Clock.c
  - Modify CLOCK_InitWithXO, CLOCK_InitWithRCO, CLOCK_ConfigurePLL
- I2c.h
  - Modify I2C_SetSDASetupCount, I2C_GetSDASetupCount, I2C_SetSDAHoldCount, I2C_GetSDAHoldCount, I2C_SetBusStuckThreshold, I2C_GetBusStuckThreshold
- Example Code
  - Modify 24_DMA_SPI_to_Memory
  - Modify 24_DMA_Memory_to_SPI
  - Modify 24_DMA_ADC_to_SPI
  - Modify 14_Differential_PGA_To_ADC
  - Modify 14_PGA_Calibration
  - Modify 14_Single_Ended_PGA_To_ADC
  - Modify 23_CPU1_WTD_Int
  - Modify 23_CPU0_Write_to_CPU1
  - Modify 17_PWM_GPIO_SYNC
  - Modify 17_PWM_Software_Global_SYNC
  - Modify 17_PWM_Software_Group_SYNC
  - Modify 17_PWM_TBCNT_0_SYNC_and_Signal_Observe
  - Modify 17_PWM_Timer_SYNC
  - Modify 22_Flash_With_ISR_In_RAM
  - Delete 19_CRC_16_CCITT
  - Add 19_CRC
- Example Code
  - 1_Application
  - Modify IAP_CAN
  - Modify Math_Lib

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6 版本 2.0.0/2024-03-22

1. Bug Fix

- comp.h
  - modify COMP_SetDACCode, COMP_SetDACVoltage
- clock.c
  - modify CLOCK_ConfigurePLL, CLOCK_InitWithXO, CLOCK_InitWithRCO
- pga.h
  - modify PGA_NegativeInputEnum
- pwm.h
  - modify PWM_LoadTimingEnum
- spc2188.h
  - Delete SET_BIT, READ_BIT
  - Add XOR_BITS
- crc.c
  - modify uint32_t CRC_Calculate(CRC_REGS *CRCx, const uint8_t *pu8DataStr, uint32_t u32DataLen) -→ ErrorStatus CRC_Calculate(CRC_REGS *CRCx, const uint8_t *pu8DataStr, uint32_t u32DataLen, uint32_t *u32Result)
- pin.c
  - modify PIN_SetPinAsEC, PIN_SetPinAsAnalog

2. Other Change

- adc.c
  - modify ADC_IsEnable, ADC_IsEnablePPU, ADC_IsEnableTSensor, ADC_IsEnableMultiChannelInt, ADC_IsEnableChannelInt, ADC_IsEnableMultiChannelDMA, ADC_IsEnableChannelDMA, ADC_IsEnableMultiChannelIntTriggerSOC, ADC_IsEnableChannelIntTriggerSOC, ADC_IsEnableChannelFractionalResult, ADC_IsEnablePPUCycleClear, ADC_IsEnablePPUInt, ADC_IsEnablePPUTripEvent
- clock.h
  - modify CLOCK_IsEnableRCO, CLOCK_IsEnableXO, CLOCK_IsEnablePLL,
- dma.h
  - modify DMA_IsEnableTransferCompleteInt, DMA_IsEnableTransferErrorInt, DMA_IsEnable, DMA_IsEnableChannelTransfer
- eqep.h
  - modify EQEP_IsEnableInt, EQEP_Enable, EQEP_Disable, EQEP_IsEnable, EQEP_EnableWatchdog, EQEP_DisableWatchdog, EQEP_IsEnableWatchdog, EQEP_EnableUnitTimer, EQEP_DisableUnitTimer, EQEP_IsEnableUnitTimer, EQEP_ForceLoadPositionCounter, EQEP_GetQa, EQEP_GetQb, EQEP_GetQz, EQEP_GetQs, EQEP_EnableZeroGate, EQEP_DisableZeroGate, EQEP_IsEnableZeroGate, EQEP_EnableSwap, EQEP_DisableSwap, EQEP_IsEnableSwap, EQEP_EnableCapture, EQEP_DisableCapture, EQEP_IsEnableCapture, EQEP_EnablePositionCompare, EQEP_DisablePositionCompare, EQEP_IsEnablePositionCompare, EQEP_EnableCompareSyncOut, EQEP_DisableCompareSyncOut, EQEP_IsEnableCompareSyncOut, EQEP_EnableFilter, EQEP_DisableFilter, EQEP_IsEnableFilter, EQEP_ReloadFilter
- spi.h
  - modify SPI_IsEnable, SPI_IsEnableLoopback, SPI_IsEnablePinSwap, SPI_IsEnableSFRMHold, SPI_IsEnableRxDMA, SPI_IsEnableTxDMA, SPI_IsEnableFIFOPack, SPI_IsEnableInt

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- system.h
  - modify SYSTEM_IsEnableNonMaskableInt, SYSTEM_IsEnableResetEvent
- timer.h
  - modify TIMER_IsEnable, TIMER_IsRun
- uart.h
  - modify UART_IsEnableRx, UART_IsEnableTx, UART_IsEnableRxDMA, UART_IsEnableTxDMA, UART_IsEnableAutoBaud, LIN_IsEnable, UART_IsEnableRxSIR, UART_IsEnableTxSIR, UART_IsEnableInt
- wdt.h
  - modify WDT_IsEnable, WDT_IsRun,
- aes.c
  - modify AES_EncryptData, AES_DecryptData
- can.c
  - modify CAN_Reset
- i2c.c
  - modify I2C_MasterWrite, I2C_MasterRead, I2C_MasterBulkWrite, I2C_MasterBulkRead,
- pwm.c
  - modify PWM_InitComplementaryPairChannel, PWM_InitSingleChannel
- pin.h
  - modify PIN_EnableInputChannel, PIN_DisableInputChannel
- Example Code
  - Modify CAN IAP demo
  - Modify IAPLoader.exe
  - Add 25_Flash_With_ISR_In_RAM
  - Modify 24_DMA_ADC_to_Memory
  - Modify 24_DMA_ADC_to_SPI
  - Modify 24_DMA_Memory_to_Memory
  - Modify 24_DMA_Memory_to_SPI
  - Modify 24_DMA_Memory_to_UART
  - Modify 24_DMA_SPI_to_Memory
  - Modify 24_DMA_UART_to_Memory
  - Add 19_EQEP_Bidirectional_Counting_Mode
  - Add 19_EQEP_CW_CCW_Counting_Mode
  - Add 19_EQEP_Quadrature_Counting_Mode_M
  - Add 19_EQEP_Quadrature_Counting_Mode_MT
  - Add 19_EQEP_Quadrature_Counting_Mode_T
  - Add 19_EQEP_Unidirectional_Counting_Mode

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7 版本 1.7.0/2023-11-27

Main Changes

1. Bug Fix

- Comp.h
  - Modify COMP_ReferenceChannelEnum
- Pga.h
  - Modify PGA_PositiveInputEnum、PGA_NegativeInputEnum
- spi.c
  - Delete SPI_MasterTransceive()
  - Delete SPI_MasterB2BTransceive()
  - Delete SPI_MasterB2BTransceiveWithSFRMHold()
  - Delete SPI_MasterTransmitHalfDuplex()
  - Delete SPI_MasterB2BTransmitHalfDuplex()
  - Delete SPI_SlaveTransceive()
  - Delete SPI_SlaveReceiveHalfDuplex()
  - Add SPI_HalfDuplexTx()
  - Add SPI_HalfDuplexRx()
  - Add SPI_FullDuplexTransceive()

2. Other Change

- Example Code
  - Modify the demo name based on the TRM section
  - Modify 12_CAN_Extended_Frame_RX
  - Modify 12_CAN_INT_RX
  - Modify 12_CAN_INT_TX
  - Modify 12_CAN_Standard_And_Extended_Frame_TX
  - Modify 12_CAN_Standard_Frame_RX
  - Modify 12_CANFD_Extended_Frame_RX
  - Modify 12_CANFD_Standard_And_Extended_Frame_TX
  - Modify 12_CANFD_Standard_Frame_RX
  - Delete 9_SPI_Master_B2B_TxRx_Polling
  - Delete 9_SPI_Slave_B2B_TxRx_Polling
  - Modify 9_SPI_Master_TxRx_Int
  - Modify 9_SPI_Master_TxRx_Polling
  - Modify 9_SPI_Slave_TxRx_Int
  - Modify 9_SPI_Slave_TxRx_Polling
  - Add IAP_CAN
  - Modify IAPLoader.exe
  - Modify 14_PGA_Calibration
  - Modify 11_I2C_Master_Bulk_Polling_TxRx
  - Modify 11_I2C_Master_INT_TxRx
  - Modify 11_I2C_Master_Polling_TxRx
  - Modify 11_I2C_Slave_Bulk_Polling_TxRx
  - Modify 11_I2C_Slave_INT_TxRx
  - Modify 11_I2C_Slave_Polling_TxRx

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8 版本 1.6.0/2023-10-27

Main Changes

1. Bug Fix

- Comp.h
  - Modify COMP_InputChannelEnum、COMP_ReferenceChannelEnum
- Pga.h
  - Modify PGA_PositiveInputEnum、PGA_NegativeInputEnum
- Qspi.h
  - Add QSPI_IsEnableCache()
- Clock.c
  - Modify CLOCK_InitWithRCO()
- Comp.c
  - Modify COMP_Init()、COMP_SetFilterWindowTimeNs()
- Flash.c
  - Modify FLASH_Init()、FLASH_SetTiming()、FLASH_DisableXIP()、FLASH_ReadStatus()、FLASH_WriteStatus()、FLASH_ReadUID()、FLASH_ReadID()、FLASH_ReadOTP()、FLASH_EraseOTP()、FLASH_ProgramOTP()、FLASH_Read()、FLASH_EraseSector()、FLASH_EraseBlock()、FLASH_EraseChip()、FLASH_Program()、FLASH_EnableCache()、FLASH_DisableCache()

2. Other Change

- SPC2188.svd
  - Modify SPC2188.svd
- SPC2188.SFR
  - Modify SPC2188.svd
- Startup_spc2188.s
  - Modify Startup_spc2188.s
- Adc.h
  - Delete ADC_InputSelectEnum
- Adc.h
  - Delete CLOCK_CPUFreqEnum、CLOCK_XORefSelEnum
- Spc2188_bitfield.h
  - Delete the description of the DMAEOC and MODEM bit fields
- Sdfm.c
  - Add SDFM_SerialInit()、SDFM_ParallelInit()
- Example Code
  - Modify 10_5_ADC_Differential_Abs_Result
  - Modify 10_6_ADC_Triggered_by_Timer
  - Modify 11_1_Comparator
  - Modify 12_1_PGA_Calibration
  - Modify 12_2_Single_End_PGA_To_ADC
  - Modify 12_3_Differential_PGA_To_ADC
  - Modify 13_1_DAC_to_ADC
  - Add 20_1_Flash_ECC_Verify
  - Add 20_2_ROM_RAM_ECC_Verify
  - Add 21_1_SDFM_Serial_Filter_Int

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- Add 21_2_SDFM_Serial_Filter_DMA
- Add 21_3_SDFM_Parallel_Filter_DMA
- Add 21_4_SDFM_Parallel_Filter_PWM_SYNC
- Add 21_5_SDFM_Filter_Clock_Absence_Detect
- Add 21_6_SDFM_Filter_Data_Short_Detect
- Add Math_Lib application
- Add RTT_Printf application

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9 版本 1.5.0/2023-08-21

Main Changes

1. Bug Fix

- Clock.c
  - Modify CLOCK_InitWithXO()、CLOCK_InitWithRCO()、 CLOCK_ConfigurePLL()
- Flash.c
  - Add flash.c file
- Retarget.c
  - Modify Retarget.c
- Delay.c
  - Modify Delay_Init()
- Modify IAR KEIL config
- Eqep.h
  - Modify EQEP_SetUnitTimerReloadValue()、EQEP_SetWatchdogReloadValue()
- I2c.h
  - Modify I2C_MasterRead() 、 I2C_SlaveWrite() 、 I2C_MasterBulkRead() 、 I2C_SlaveBulkWrite()
- Pwm.c
  - Modify PWM_InitComplementaryPairChannel()、PWM_InitSingleChannel()
- Can.h
  - Modify CAN_GetMessageStandardIdentifier()、CAN_GetMessageStandardIdentifierMask()
- Sdfm.h
  - Modify SDFM_WriteParallelChannel32BitData()
- Adc.c
  - Modify ADC_Init()
- Uart.c
  - Modify UART_Init()、LIN_Init()

2. Other Change

- Hwlib.h
  - Add FLASH_Init 、 FLASH_SetTiming 、 FLASH_DisableXIP 、 FLASH_ReadStatus 、 FLASH_WriteStatus 、 FLASH_ReadUID 、 FLASH_ReadID 、 FLASH_ReadOTP 、 FLASH_EraseOTP 、 FLASH_ProgramOTP 、 FLASH_Read 、 FLASH_EraseSector 、 FLASH_EraseBlock 、 FLASH_EraseChip 、 FLASH_Program 、 FLASH_EnableCache 、 FLASH_DisableCache Function declarations
- System.c
  - Rename FLASH_EraseOTP -> FLASH_EraseOTPData
  - Rename FLASH_ProgramOTP -> FLASH_ProgramOTPData
  - Rename FLASH_ReadOTP -> FLASH_ReadOTP
- I2c.c
  - Delete I2C_InitSpee()
  - Add I2C_InitStandardSpeed() 、 I2C_InitFastSpeed() 、 I2C_InitHighSpeed() 、 I2C_InitUltrafastSpeed()
- Spc2188.svd

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- Modify spc2188.svd

- spc2188.SFR
  - Modify spc2188.SFR
- Can.h
  - Add CAN_EnableAutoBusOffRecovery()、CAN_DisabeAutoBusOffRecovery()
- Eqep.h
  - Rename EQEP_GetCaptureTimerDiv()-> EQEP_GetCaptureTimerClockDiv()
- Spc2188_CPU1.FLM
  - Add Spc2188_CPU1.FLM
- Pwm.h
  - Add PWM_GetClockDiv()
- Debugctl.mac
  - Modify Debugctl.mac
- I2c.c
  - Rename I2C_EnableClockStretchWhenRxFull-> I2C_EnableClockStretch
  - Rename I2C_DisableClockStretchWhenRxFull-> I2C_DisableClockStretch
  - Rename I2C_IsEnableClockStretchWhenRxFull-> I2C_IsEnableClockStretch
  - Rename I2C_AckDeviceId-> I2C_EnableAckUponDeviceId
  - Rename I2C_NotAckDeviceId-> I2C_DisableAckUponDeviceId
  - Rename I2C_IsAckDeviceId-> I2C_IsEnableAckUponDeviceId
  - Rename I2C_AckGeneralCall-> I2C_EnableAckUponGeneralCall
  - Rename I2C_NotAckGeneralCall-> I2C_DisableAckUponGeneralCall
  - Rename I2C_IsAckGeneralCall-> I2C_IsEnableAckUponGeneralCall
  - Rename I2C_SetUltraFastSpikeCount-> I2C_SetUltraFastSpeedSpikeCount
  - Rename I2C_GetUltraFastSpikeCount-> I2C_GetUltraFastSpeedSpikeCount
  - Modify I2C_SetSDASetupCount()、I2C_GetSDASetupCount()、I2C_SetSDAHoldCount()、I2C_GetSDAHoldCount()

- Example Code
  - Modify 10_8_ADC_PPU
  - Add 16_3_CAN_INT_RX
  - Add 16_3_CAN_INT_TX
  - Modify 2_4_Clock_Detect_Error_Reset
  - Modify 7_1_Flash_Operation
  - Modify 19_1_CPU0_Write_to_CPU1
  - Modify 19_2_CPU0_Start_CPU1
  - Modify AT24C02_EEPROM
  - 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_Continous_Mode_and_Conversion_Priority
  - Modify 12_2_Single_End_PGA_To_ADC
  - Modify 12_3_Differential_PGA_To_ADC
  - Modify 13_1_DAC_to_ADC
  - Modify 13_2_ADC_to_DAC

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- Modify 17_6_DMA_ADC_to_Memory
- Modify 17_7_DMA_ADC_to_SSP
- Modify 16_1_CAN_Extended_Frame_RX
- Modify 16_1_CAN_Standard_And_Extended_Frame_TX
- Modify 16_1_CAN_Standard_Frame_RX
- Modify 16_2_CANFD_Extended_Frame_RX
- Modify 16_2_CANFD_Standard_And_Extended_Frame_TX
- Modify 16_2_CANFD_Standard_Frame_RX
- Modify 2_1_PLL_unlock_Int
- Modify 2_2_PLL_unlock_Reset
- Modify IAP_UART

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10 版本 1.3.0/2023-05-18

Main Changes

1. Bug Fix

- Clock.c
  - Modify CLOCK_InitWithXO()
  - Delete CLOCK_Init()
  - Delete CLOCK_ConfigurePLLWithRCO()
  - Delete CLOCK_DetectionInitWithRCO()
  - Modify CLOCK_ConfigurePLL()

2. Other Change

- spc2188_bitfield.h
  - Modfiy spc2188_bitfield.h
  - system_spc2188.c
  - Delete __SYSTEM_CLOCK
- Adc.h
  - Modify ADC_InputSelectEnum
  - Modify ADC_GetPPURawResult()
- Clock.h
  - Delete CLOCK_PLLRefSelEnum
  - Add CLOCK_XORefSelEnum
- Comp.h
  - Modify COMP_InputChannelEnum
  - Modify COMP_ReferenceChannelEnum
- Examples code
  - Modify 10_1_ADC_Calibration
  - Modify 10_2_ADC_Open_Detect
  - Modify 10_3_ADC_Short_Detect
  - Modify 12_1_PGA_Calibration
  - Modify 12_2_Single_End_PGA_To_ADC
  - Modify 12_3_Differential_PGA_To_ADC
  - Modify 17_2_DMA_Memory_to_SSP
  - Modify 17_4_DMA_SSP_to_Memory
  - Modify 17_7_DMA_ADC_to_SSP
- Application code
  - Add AT24C02_EEPROM
  - Add IAP_UART

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11 版本 1.2.0/2023-04-17

Main Changes

1. **Bug Fix**
2. **Other Change**

- Spc2188.h
  - Modify GPIOG0_LEVEL_IRQn to GPIOP0_LEVEL_IRQn
  - Modify GPIOG1_LEVEL_IRQn to GPIOP1_LEVEL_IRQn
  - Modify GPIOG2_LEVEL_IRQn to GPIOP2_LEVEL_IRQn
  - Modify GPIOG0_EDGE_IRQn to GPIOP0_EDGE_IRQn
  - Modify GPIOG1_EDGE_IRQn to GPIOP1_EDGE_IRQn
  - Modify GPIOG2_EDGE_IRQn to GPIOP2_EDGE_IRQn
  - Modify CAN0TRG0_IRQn to CAN0MBG0_IRQn
  - Modify CAN0TRG1_IRQn to CAN0MBG1_IRQn
  - Modify CAN0TRG2_IRQn to CAN0MBG2_IRQn
  - Modify CAN0TRG3_IRQn to CAN0MBG3_IRQn
  - Modify CAN0TRG4_IRQn to CAN0MBG4_IRQn
  - Modify CAN0TRG5_IRQn to CAN0MBG5_IRQn
  - Modify CAN0TRG6_IRQn to CAN0MBG6_IRQn
  - Modify CAN0TRG7_IRQn to CAN0MBG7_IRQn
  - Modify CAN1TRG0_IRQn to CAN1MBG0_IRQn
  - Modify CAN1TRG1_IRQn to CAN1MBG1_IRQn
  - Modify CAN1TRG2_IRQn to CAN1MBG2_IRQn
  - Modify CAN1TRG3_IRQn to CAN1MBG3_IRQn
  - Modify CAN1TRG4_IRQn to CAN1MBG4_IRQn
  - Modify CAN1TRG5_IRQn to CAN1MBG5_IRQn
  - Modify CAN1TRG6_IRQn to CAN1MBG6_IRQn
  - Modify CAN1TRG7_IRQn to CAN1MBG7_IRQn
- startup_spc2188.s
  - modify startup_spc2188.s
- adc.h
  - Modify ADC_SH_PositiveInputEnum
  - Modify ADC_SH_NegativeInputEnum
  - Modify ADC_InputSelectEnum
- Aes.h
  - Modify aes.h
- Can.h
  - Modify CAN_EnableLoopback()
  - Modify CAN_DisableLoopback()
  - Modify CAN_IsEnableLoopback()
  - Modify CAN_DisableExternalLoopback()
  - Modify CAN_IsEnableExternalLoopback()
  - Modify CAN_EnablePinSwap()
  - Modify CAN_DisablePinSwap()
- clock.h
  - Modify CLOCK_GetModuleDiv()
- Comp.h

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- Modify COMP_SetDACValue10Bit()
- Modify COMP_GetDACValue10Bit()

- Pin.h
  Modify pin.h
- Pwm.h
  - Modify PWM_LoadTimingEnum
  - Spc2168_bitfield.h
  - Modify Spc2168_bitfield.h
  - Spc2188_reg.h
  - Modify spc2188_reg.h
- Uart.h
  - Modify UART_IntEnum
- Clock.c
  - Modify CLOCK_ConfigurePLL()
- Dma.c
  - Modify dma.c
- I2c.c
  - Modify I2C_InitSpeed()
  - Add I2C_InitMasterWithHighSpeedMode()
  - Modify I2C_MasterInit()
  - Modify I2C_SlaveInit()
- Delay.c
  - Modify delay.c
- retarget.c
  - Modify retarget.c
- Example Code
  - Add Example Code
- SPC2188.SFR
  - Modify SPC2188.SFR
- SPC2188.svd
  - Modify SPC2188.svd

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Main Changes

3. Bug Fix

4. Other Change

- SPC2188.svd
  - Modify SPC2188.svd
- SPC2188.SFR
  - Modify SPC2188.SFR
- startup_spc1168.s
  - Delete startup_spc1168.s
- startup_spc2188.s
  - Add startup_spc2188.s
- system_spc2188.c
  - Modify SysInfoStruct SysInfo
- System_spc2188.h
  - Modify SysInfoStruct
- adc.h
  - Modify ADC_SetChannelIntTriggerSOC()
  - Modify ADC_GetChannelIntTriggerSOC()
- can.h
  - Modify CAN_Enable()
  - Modify CAN_Disable()
  - Modify CAN_IsEnable()
- clock.h
  - Modify CLOCK_GetModuleDiv()
- comp.h
  - Modify comp.h
- dma.h
  - Modify DMA_BurstTransferLenEnum
- i2c.h
  - Modify i2c.h
- pga.h
  - Modify pga.h
- pwm.h
  - Modify PWM_LoadTimingEnum
- spc2188_bitfield.h
  - Modify spc2188_bitfield.h
- spc2188_reg.h
  - Modify spc2188_reg.h
- spc2188.h
  - Add CEIL_DIV()
  - Add FLOOR_DIV()
- spi.h
  - Modify spi.h
- system.h
  - Modify system.h

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- uart.h
  - Modify uart.h
- can.c
  - Modify CAN_SetMessage()
- clock.c
  - Delete __XO_CLOCK
  - Modify CLOCK_UpdateInfo()
  - Modify CLOCK_SetModuleDiv()
- comp.c
  - Modify comp.c
- i2c.c
  - Modify I2C_SlaveInit()
- pga.c
  - Modify pga.c
- spi.c
  - Modify spi.c
- system.c
  - Modify SYSTEM_SetStopWakeUpByGPIO()
  - Modify SYSTEM_SetSleepWakeUpByGPIO()
- uart.c
  - Modify uart.c
- delay.c
  - Modify delay.c
- delay.h
  - Modify delay.h
- retarget.c
  - Modify retarget.c

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- **Created.**

14 限制

模块	描述

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