

Release Notes for SPD1188 Standard Peripherals Library Drivers

V1.8.0/ 31- Dec -2021

Main Changes

1. Bug Fix

- gpio.c
 - Modify GPIO_ResetAllPin()
- comp.h/.c
 - Modify COMP_Init(), add code to enable bandgap
 - Modify COMP_EnableDAC(), add code to enable bandgap
 - Modify COMP_DACBufferInit(), add code to enable bandgap
- adc.c
 - Modify ADC_SetSampleAndConvertTime()
 - Modify ADC_PowerUp(), add code to enable bandgap
- pga.c
 - Modify PGA_DifferentialInit(), add code to enable bandgap
- clock.c
 - Modify CLOCK_ConfigurePLL()
- timer.h
 - Delete TIMER_EnableCounterHold() and TIMER_DisableCounterHold()
- uart.h
 - Modify UART_ClearRxFIFO() and UART_ClearTxFIFO()
- spc1168_reg.h/spc1168_bitfield.h
 - Reserve TMRCTL.HOLD register bit-field
 - Modify the width of UARTFOR.BYTECNT register bit-field

2. Other Change

- pga.c
 - Add PGA_EnableSensorMode() and PGA_DisableSensorMode()
- flash.h/.c
 - Add FLASH_EraseBlock()
 - Modify FLASH_ProgramWord()
 - Add macro definition *FLASH_CMD_ERASE_BLOCK*
- clock.c
 - Add note for CLOCK_TrimPLL()
 - Modify CLOCK_Init()
- adc.h/.c
 - Modify ADC_CalculatePreciseTemperature() and ADC_CalculateTemperature()
 - Add ADC_EnableBandgap() and ADC_DisableBandgap()
- spc1168_reg.h/spc1168_bitfield.h
 - Reserve XOCTL.FREQSEL register bit-field

- Rename XOCTL.FEEDXOUT register bit-field to XOCTL. FEEDXIO
- `crc.h`
 - Modify `CRC_ModeEnum`
- `gpio.h`
 - Modify the post-fix of const number
- Update `SPC1168.svd`, `SPC1168.SFR`, `SPC1168.FLM` and `SPC1168_NVR.FLM` files
- `iar/startup_spc1168.s`
 - Add code comment
- `hv.h/.c`
 - Add macro definition `HV_TIMEOUT_MAX`
 - Modify `HV_Command()`
 - Modify `HV_InitReg()`
- Example Code
 - Modify `Flash_M_Access_User`
 - Modify `Flash_User_FuncWrap`
 - Modify `AES/main.c`

V1.7.0/ 26-May-2021**Main Changes**

- spc1168.h
 - Add macro function READ_BITS().
 - Add macro function WRITE_FIELD(), READ_FIELD() and CLEAR_FIELD().
 - Add macro function POSITION_VAL().
 - Add macro function UNUSED().
- spc1168_bitfield.h
 - Update TZBCTL.DCBEVT1D bit-field macro definitions.
- flash.c
 - Update function FLASH_SetTiming().
- i2c.c
 - Update function I2C_MasterWrite(), I2C_MasterRead(), I2C_MasterBulkWrite() and I2C_MasterBulkRead().
 - Update function I2C_SlaveBulkWrite().
- clock.c
 - Update CLOCK_Init(), CLOCK_InitWithRCO(), CLOCK_ConfigurePLL() and CLOCK_ConfigurePLLWithRCO().
 - Update CLOCK_HCLKSelEnum, CLOCK_RefSelEnum definitions.
- comp.c
 - Update function COMP_Init() and COMP_SetFilterWindowTimeNs().
- delay.h/delay.c
 - Update Delay method control macros.
- ssp.c
 - Update function SSP_MasterB2BTransceive() and SSP_SlaveTransceive().
- ecap.c
 - Update function ECAP_CaptureModelInit().
 - Rename function ECAP_SetInputPin() to ECAP_SetInput().
 - Update function ECAP_SetInput().
- pwm.c
 - Update function PWM_ComplementaryPairChannelInit() and PWM_SingleChannelInit().
- hv.h/hv.c
 - Add function HV_ConnectTSensorToAnalogTest().
 - Modify macro definition of pin map between HV and MCU.
 - Remove function HV_WriteRegBits() and add function HV_WriteRegField().
 - Add function HV_SetChargePumpClockDiv() and HV_GetChargePumpClockDiv().
- Demo code
 - Update ECAP_Continue_Absolute\main.c
 - Update ECAP_Continue_Delta\main.c
 - Update ECAP_Oneshot_Absolute\main.c
 - Update UART_TX_and_CheckRX\main.c
 - Update UART_RX_and_SentBack\main.c
 - Update SSP_Master_B2B_TxRx_Polling\main.c

- Update SSP_Master_TxRx_INT\main.c
- Update SSP_Master_TxRx_Polling\main.c
- Update SSP_Slave_B2B_TxRx_Polling\main.c
- Update SSP_Slave_TxRx_INT\main.c
- Update SSP_Slave_TxRx_Polling\main.c
- Update PWM_Trigger_ADC_Sample\main.c
- Update PWM_Current_Protect_Trigger_TZ\main.c
- Update PGA_Calibration\main.c
- Update I2C_Master_Polling_TxRx\main.c
- Update I2C_Master_Bulk_Polling_TxRx\main.c
- Update I2C_Master_INT_Rx\main.c
- Update GPIO_Edge_Detect\main.c
- Update Flash_EEPROM_Emulation\EWARM\spc1168.icf
- Update Flash_Frequency_Reduction\EWARM\spc1168.icf
- Update Flash_M_Access_User\EWARM\spc1168.icf
- Update Flash_Operation\EWARM\spc1168.icf
- Update Flash_Sector_Protect\EWARM\spc1168.icf
- Update Flash_User_FuncWrap\EWARM\spc1168.icf
- Update Flash_With_INT\EWARM\spc1168.icf
- Update DAC\main.c

V1.6.0/ 30-April-2020**Main Changes**

- **adc.h**
 - Update comments on ADC_GetResult(), ADC_GetTrimResult1() and ADC_GetTrimResult2().
- **clock.h/clock.c**
 - Add macro definition `__RCO0_CLOCK` and `__RCO1_CLOCK` for RCO clocks.
 - Remove macro definition `__RCO_CLOCK` and `__XO_CLOCK`.
 - Update 3 functions `CLOCK_Init()`, `CLOCK_InitWithRCO()` and `CLOCK_GetModuleClock()` for configuring WDT clock.
- **comp.h**
 - Rename function `COMP_EnableOutputInvert()` to `COMP_SetOutputActiveLow()`.
 - Rename function `COMP_DisableOutputInvert()` to `COMP_SetOutputActiveHigh()`.
- **pwm.h**
 - Rename macro function `PWM_SetTimeEventTiming()` to `PWM_SetTimeEventIntTiming()`.
 - Rename macro function `PWM_SetTimeEventPeriod()` to `PWM_SetTimeEventIntPeriod()`.
 - Add member value `ON_SYNC_PERIOD` to definition `PWM_LoadTimingEnum`.
- **system_spc1168.c**
 - Remove macro definition `__SYSTEM_CLOCK`.
- **timer.h**
 - Add macro function `TIMER_SetCounterValue()`.
- **wdt.c**
 - Update function `WDT_Init()` for enabling watchdog halted-run and lockup-run mode.
- **epwr.h**
 - Rename macro function `EPWR_DisableTripEventInputInvert()` to `EPWR_SetTripEventInputActiveHigh()`.
 - Rename macro function `EPWR_EnableTripEventInputInvert()` to `EPWR_SetTripEventInputActiveLow()`.
 - Rename macro function `EPWR_DisableTripEventOutputInvert()` to `EPWR_SetTripEventOutputActiveHigh()`.
 - Rename macro function `EPWR_EnableTripEventOutputInvert()` to `EPWR_SetTripEventOutputActiveLow()`.
- **hv.c**
 - Update function `HV_InitReg()`.

V1.5.0/ 18-November-2019**Main Changes**

- **ecap.h**
 - Rename definition *ECAP_EvtEnum* to *ECAP_EventEnum*.
 - Update function *ECAP_APWMSetDuty()*.
- **flash.c**
 - Update function *FLASH_WriteProtect()*.
- **pwm.h**
 - Update macro function *PWM_SetOneShotTripEvent()*.
 - Update macro function *PWM_SetCBCTripEvent()*.
 - Update member values of definition *PWM_TripActionEnum*.
- **system.h**
 - Rename definition *SYSTEM_ResetEvtEnum* to *SYSTEM_ResetEventEnum*.
- **wdt.h**
 - Rename macro function *WDT_GetRawIntFlag()* to *WDT_GetIntRawFlag()*.
- **spc1168_bitfield.h**
 - Update *UARTISR.XMITIR* bit-field macro definitions.
- Remove *predriver.h/.c* and *predriver_bitfield.h* files.
- Add *hv.h/.c* and *hv_bitfield.h* files.

V1.4.0/ 18-July-2019**Main Changes**

- aes.h
 - Rename function AES_EnableInputFIFOFullInt() to AES_EnableInputFullInt().
 - Rename function AES_DisableInputFIFOFullInt() to AES_DisableInputFullInt().
 - Rename function AES_EnableOutputFIFOEmptyInt() to AES_EnableOutputEmptyInt().
 - Rename function AES_DisableOutputFIFOEmptyInt() to AES_DisableOutputEmptyInt().
 - Rename function AES_ClearInputFIFOFullInt() to AES_ClearInputFullInt().
 - Rename function AES_ClearOutputFIFOEmptyInt() to AES_ClearOutputEmptyInt().
 - Rename function AES_GetInputFIFOFullIntFlag() to AES_GetInputFullIntFlag().
 - Rename function AES_GetOutputFIFOEmptyIntFlag() to AES_GetOutputEmptyIntFlag().
 - Rename function AES_GetInputFIFOFullIntRawFlag() to AES_GetInputFullIntRawFlag().
 - Rename function AES_GetOutputFIFOEmptyIntRawFlag() to AES_GetOutputEmptyIntRawFlag().
 - Rename function AES_IsInputFIFOFull() to AES_IsInputFull().
 - Rename function AES_IsOutputFIFOReady() to AES_IsOutputReady().
 - Rename function AES_IsOutputFIFOEmpty() to AES_IsOutputEmpty().
- comp.h
 - Rename function COMP_SetFilterClkDiv() to COMP_SetFilterClockDiv().
- i2c.h
 - Rename function I2C_EnableRxFullInt() to I2C_EnableRxDataAvailableInt().
 - Rename function I2C_DisableRxFullInt() to I2C_DisableRxDataAvailableInt().
 - Rename function I2C_EnableTxEmptyInt() to I2C_EnableTxDataRequestInt().
 - Rename function I2C_DisableTxEmptyInt() to I2C_DisableTxDataRequestInt().
 - Rename function I2C_GetRxFullIntFlag() to I2C_GetRxDataAvailableIntFlag().
 - Rename function I2C_GetTxEmptyIntFlag() to I2C_GetTxDataRequestIntFlag().
 - Rename function I2C_GetRxFullIntRawFlag() to I2C_GetRxDataAvailableIntRawFlag().
 - Rename function I2C_GetTxEmptyIntRawFlag() to I2C_GetTxDataRequestIntRawFlag().
 - Rename function I2C_IsTxFIFONotFull() to I2C_IsTxNotFull().
 - Rename function I2C_IsTxFIFOEmpty() to I2C_IsTxEmpty().
 - Rename function I2C_IsRxFIFONotEmpty() to I2C_IsRxNotEmpty().
 - Rename function I2C_IsRxFIFOFull() to I2C_IsRxFull().
- ssp.h
 - Rename function SSP_EnableRxFIFOOverflowInt() to SSP_EnableRxOverflowInt().
 - Rename function SSP_DisableRxFIFOOverflowInt() to SSP_DisableRxOverflowInt().
 - Rename function SSP_EnableTxFIFOUnderflowInt() to SSP_EnableTxUnderflowInt().
 - Rename function SSP_DisableTxFIFOUnderflowInt() to SSP_DisableTxUnderflowInt().
 - Rename function SSP_EnableTxFIFOEmptyInt() to SSP_EnableTxDataRequestInt().
 - Rename function SSP_DisableTxFIFOEmptyInt() to SSP_DisableTxDataRequestInt().
 - Rename function SSP_EnableRxFIFOFullInt() to SSP_EnableRxDataAvailableInt().
 - Rename function SSP_DisableRxFIFOFullInt() to SSP_DisableRxDataAvailableInt().
 - Rename function SSP_SetRxFIFOTriggerLevel() to SSP_SetRxFIFOTriggerThreshold().
 - Rename function SSP_SetTxFIFOTriggerLevel() to SSP_SetTxFIFOTriggerThreshold().
 - Rename function SSP_IsTxFIFONotFull() to SSP_IsTxNotFull().

- Rename function `SSP_IsRxFIFONotEmpty()` to `SSP_IsRxNotEmpty()`.
- Rename function `SSP_IsTxFIFOServiceRequest()` to `SSP_IsTxServiceRequest()`.
- Rename function `SSP_IsRxFIFOServiceRequest()` to `SSP_IsRxServiceRequest()`.
- Rename function `SSP_IsRxFIFOOverflow()` to `SSP_IsRxOverflow()`.
- Rename function `SSP_IsTxFIFOUnderflow()` to `SSP_IsTxUnderflow()`.
- Rename function `SSP_IsTxFIFOHasOddSample()` to `SSP_IsTxHasOddSample()`.
- Rename function `SSP_IsRxFIFOHasOddSample()` to `SSP_IsRxHasOddSample()`.
- Rename function `SSP_ClearRxFIFOOverflowInt()` to `SSP_ClearRxOverflowInt()`.
- Rename function `SSP_ClearTxFIFOUnderflowInt()` to `SSP_ClearTxUnderflowInt()`.

■ `uart.h/.c`

- Rename definition `UART_TxTriggerLevelEnum` to `UART_TxThresholdEnum`.
- Rename definition `UART_RxTriggerLevelEnum` to `UART_RxThresholdEnum`.
- Rename function `UART_ResetRxFIFO()` to `UART_ClearRxFIFO()`.
- Rename function `UART_ResetTxFIFO()` to `UART_ClearTxFIFO()`.
- Rename function `UART_IsTxFIFOEmpty()` to `UART_IsTxDone()`.
- Rename function `UART_IsBreakReceived()` to `UART_IsRxBreak()`.
- Rename function `UART_IsFrameError()` to `UART_IsRxFrameError()`.
- Rename function `UART_IsParityError()` to `UART_IsRxParityError()`.
- Rename function `UART_IsRxDataLost()` to `UART_IsRxOverflow()`.
- Rename function `UART_IsRxDataReady()` to `UART_IsRxNotEmpty()`.
- Rename function `UART_SetFIFOTriggerLevel()` to `UART_SetFIFOTriggerThreshold()`.

■ `spc1168.h`

- Add 9 new functions
 - 2 new functions to set register bits: `SET_BIT()` and `SET_BITS()`.
 - 2 new functions to clear register bits: `CLEAR_BIT()` and `CLEAR_BITS()`.
 - 1 new function to read register bit value: `READ_BIT()`.
 - 1 new function to clear register: `CLEAR_REG()`.
 - 1 new function to write value to register: `WRITE_REG()`.
 - 1 new function to read register value: `READ_REG()`.
 - 1 new function to modify register value: `MODIFY_REG()`.

■ `spc1168_reg.h/spc1168_bitfield.h`

- Rename bit definition `NRZE` to `NRZME` in `UARTIER` register.
- Rename bit definition `RSTRF` to `CLRRF` in `UARTFCR` register.
- Rename bit definition `RSTTF` to `CLRTF` in `UARTFCR` register.
- Rename bit definition `ITL` to `RXTH` in `UARTFCR` register.
- Rename bit definition `TIL` to `TXTH` in `UARTFCR` register.
- Rename bit definition `BUS` to `BUS32` in `UARTFCR` register.
- Rename bit definition `TXEMPTY` to `TXDONE` in `UARTLSR` register.
- Rename bit definition `RXFULL` to `RXDAV` in `I2CIF/I2CRAWIF/I2CIE` register.
- Rename bit definition `TXEMPTY` to `TXDREQ` in `I2CIF/I2CRAWIF/I2CIE` register.

V1.3.0/ 02-July-2019

Main Changes

- Initial release.