ARM® Cortex®-M

32-bit Microcontroller

NANO102/112 CMSIS Series BSP Revision History

For additional information or questions, please contact: Nuvoton Technology Corporation.

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Revision 3.03.001(Released 2019-11-7)

1. Added ISP related samples.
2. Minor bug fix.

Revision 3.03.000 (Released 2018-09-17)

1. Added Eclipse project support.
2. Minor bug fix.

Revision 3.02.001 (Released 2016-07-28)

1. Updated CMSIS to v4.5.0.
2. Added sample code ADC_PWMTrigger.
3. Fixed the TEMPCTL register offset definition error.
4. Minor bug fixes.

Revision 3.02.000 (Released 2015-07-08)

1. Removed CLK_APBCLK_TK_EN macro in clk.h.
2. Removed ACMP_ENABLE_OUTPUT_INVERSE and ACMP_DISABLE_OUTPUT_INVERSE macros in acmp.h.
3. Removed FMC_EnableAPUpdate(),FMC_DisableAPUpdate(),FMC_EnableLDUpdate(), FMC_DisableAPUpdate(),FMC_EnableConfigUpdate(), and FMC_DisableConfigUpdate() in fmc.h and fmc.c.
4. Removed all IAR projects' [Debug] configuration.
5. Modified all IAR projects' reset entry as Reset_Handler.
6. Modified all Keil projects' device type as NANO112VC2AN.
7. Renamed SYS_IRCTRIMINT_32KERR_ENNT as SYS_IRCTRIMINT_32KERR_INT in sys.h.
8. Renamed CHER as CHEN in adc.h.
9. Renamed SYS_IPRSTCTL2_LCD to SYS_IPRST_CTL2_LCD_RST_Msk in lcd.h.
10. Renamed StdDriver sample GPIO to GPIO_IOTest.
11. Renamed StdDriver sample CRC to CRC_CCITT.
12. Renamed StdDriver sample PDMA to PDMA_Memory.
13. Renamed StdDriver sample SYS to SYS_Control.
14. Fixed SYS_PA_L_MFP_PA0_MFP_GPA0 and SYS_PA_L_MFP_PA0_MFP_GPA0 implementation errors in sys.h.
15. Fixed DMA_CRC_CTL_CRC_RST_Msk implementation error in crc.h.
16. Fixed PDMA_IS_CH_BUSY implementation error in pdma.h.
17. Fixed ADC_SET_INPUT_CHANNEL() implementation error in adc.h.
18. Fixed SC_SET_STOP_BIT_LEN implementation error in sc.h.
19. Fixed UART_IS_TX_EMPTY implementation error in uart.h.
20. Fixed LCD_CPUMP_DIV128 implementation error in lcd.h.
21. Fixed PWM_ENABLE_OUTPUT_INVERTER() error in pwm.h.
22. Fixed ADC_IS_DATA_OVERRUN() and ADC_IS_DATA_VALID() errors in adc.h.
23. Fixed I^2C register CON2 and STATUS2 offset bug in Nano1X2Series.h.
24. Fixed the bug that timer_delay() set prescale to wrong register in timer.c.
25. Fixed ACMP_SetSigmaDeltaConv() parameter u32PosPin implementation bug in acmp.c.
26. Fixed RTC_CLEAR_TAMPER_FLAG() implementation bug rtc.h.
27. Fixed Frame counter calculate error of LCD_EnableFrameCounter() in lcd.c.
28. Fixed SYS_IsRegLocked() return value bug in sys.c.

29. Fixed SCUART_Open() and SCUART_SetLineConfig() baudrate calculation prescale setting error in scuart.c.
30. Fixed bug of SPI_EnableAutoSS () and SPI_SetBusClock () in spi.c. Cleared bit mask of register field before writing input parameter to it.
31. Modified UART_SelectIrDAMode() to reload UART clock before calculating baudrate in uart.c.
32. Modified SYS_LockReg() and SYS_UnlockReg() as inline function in sys.h.
33. Modified RTC_WRITE_KEY program flow to avoid be overwritten by ISR, in rtc.c.
34. Modified GP_DBNCECON_PUEN_* as GP_DBNCECON_DBCLKSEL_* in Nano1X2Series.h.
35. Modified Timer_Open() to not start timer in it, in timer.c.
36. Disabled Rx before raising RST high during cold reset in SmartCardLib library.
37. Check SC_RST and SC_DAT_O pin status during deactivation in SmartCardLib library.
38. Added I2C_ClearIntFlag() function in i2c.c.
39. Added macros CLK_PLLCTL_*MHz_HXT and CLK_PLLCTL_*MHz_HIRC for setting PLLCTL vaule in clk.h.
40. Added ACMP_SELECT_P in acmp.h.
41. Added SYS_GET_IRCTRIM_INT_FLAG() and SYS_CLEAR_IRCTRIM_INT_FLAG() in sys.h.
42. Added UART_FUNC_SEL_LIN macro in uart.h.
43. Added CLK_EnableSysTick() and CLK_DisableSysTick() in clk.c.
44. Added SYS_EnableIRCTrim() and SYS_DisableIRCTrim() in sys.c.
45. Added UART_SelectLINMode() in uart.c.
46. Added Nano112 learning board samples in Nu-LB-NANO112 folder.
47. Added sample SYS_TrimIRC to StdDriver.
48. Added sample Timer_Wakeup to StdDriver.
49. Added sample UART_PDMA to StdDriver.

Revision 3.01.000 (Released 2014-11-28)

1. Fixed GPIO_DISABLE_DIGITAL_PATH(), GPIO_ENABLE_DIGITAL_PATH(),GPIO_DISABLE_DOUT_MASK(), GPIO_ENABLE_DOUT_MASK(),GPIO_DISABLE_PULL_UP(), and GPIO_ENABLE_PULL_UP() implementation error.
2. Fixed SYS_PC_L_MFP_PC0_MFP_LCD_S11, SYS_PC_L_MFP_PC0_MFP_LCD_S18, SYS_PC_L_MFP_PC0_MFP_LCD_S22, SYS_PC_H_MFP_PC10_MFP_I2C1_SCL, SYS_PC_H_MFP_PC11_MFP_I2C1_SDA, SYS_PD_H_MFP_PD13_MFP_EINT1, SYS_PD_H_MFP_PD10_MFP_LCD_COM0, SYS_PD_H_MFP_PD10_MFP_LCD_COM0, SYS_PD_H_MFP_PD9_MFP_LCD_COM1, SYS_PD_H_MFP_PD8_MFP_LCD_COM2, SYS_PF_L_MFP_PF5_MFP_ICE_DAT, and SYS_PF_L_MFP_PF4_MFP_ICE_CLK definition errors.
3. Fixed SYS_DISABLE_BOD*(), and SYS_ENABLE_BOD*() implementation error.
4. Fixed PDMA_WIDTH_* definition error.
5. Fixed PWM_ConfigOutputChannel() and PWM_ConfigCaptureChannel() PWM channel 2 and 3 clock setting error.
6. Fixed SPI_SET_SSx_LOW(), SPI_SET_SSx_HIGH(), SPI_CLR_3WIRE_START_INT_FLAG(), and SPI_CLR_UNIT_TRANS_INT_FLAG()implementation error.

7. Fixed SPI_Open(), SPI_SetBusClock() and SPI_GetBusClock() clock frequency calculation.
8. Fixed I2C_Open(), I2C_GetBusClockFreq(), and I2C_SetBusClockFreq() clock frequency calculation error.
9. Replaced the *_MFP_TIMERx_EXT setting with *_MFP_TIMERx_CNT and *_TIMERx_OUT.
10. Renamed *_MFP_CKOHZ to *_MFP_CLK_Hz.
11. Renamed SYS_PA_L_MFP_PA5_MFP_SC2_RST to SYS_PA_L_MFP_PA5_MFP_SC0_PWR.
12. Renamed SYS_PA_H_MFP_PA10_MFP_SC0_DAT to SYS_PA_H_MFP_PA10_MFP_SC0_CLK.
13. Renamed SYS_PA_H_MFP_PA12_MFP_I2C1_SCL to SYS_PA_H_MFP_PA12_MFP_I2C0_SCL.
14. Renamed SYS_PA_H_MFP_PA15_MFP_I2C_DAT to SYS_PA_H_MFP_PA15_MFP_I2C1_SDA.
15. Renamed SYS_PB_L_MFP_PB3_MFP_I2C_DAT to SYS_PB_L_MFP_PB3_MFP_I2C0_DAT.
16. Renamed SYS_PB_L_MFP_PB5_MFP_SPI2_MOSI1 to SYS_PB_L_MFP_PB5_MFP_SPI1_MOSI1.
17. Renamed SYS_PB_L_MFP_PB7_MFP_CD to SYS_PB_L_MFP_PB7_MFP_SC0_CD.
18. Renamed SYS_PB_H_MFP_PB10_MFP_SPI1_MOSI1 to SYS_PB_H_MFP_PB10_MFP_SPI0_MOSI1.
19. Renamed SYS_PD_L_MFP_PD7_MFP_LCD_S3 to SYS_PD_L_MFP_PD7_MFP_LCD_COM3.
20. Renamed SYS_PD_H_MFP_PD11_MFP_LCD_DH1 to SYS_PD_H_MFP_PD11_MFP_LCD_DH2.
21. Renamed SYS_PD_H_MFP_PD12_MFP_LCD_DH2 to SYS_PD_H_MFP_PD12_MFP_LCD_DH1.
22. Renamed SYS_PF_L_MFP_PF2_MFP_HXT_OUT to SYS_PF_L_MFP_PF2_MFP_XT1_IN.
23. Renamed SYS_PF_L_MFP_PF3_MFP_HXT_IN to SYS_PF_L_MFP_PF3_MFP_XT1_OUT.
24. Renamed SYS_PF_L_MFP_PF1_MFP_ICE_CLK to SYS_PF_L_MFP_PF4_MFP_ICE_CLK.
25. Renamed SYS_PF_L_MFP_PF0_MFP_ICE_DAT to SYS_PF_L_MFP_PF5_MFP_ICE_DAT.
26. Updated CLK_EnableCKO() to set clock source before output enable.
27. Updated I2C_WAIT_READY() to clear I2C_INTSTS_INTSTS_Msk before exiting macro.
28. Updated FMC_Erase() to avoid modifying FMC->ISPCON register setting.
29. Added SYS_PD_H_MFP_PD11_MFP_PWM0_CH1 definition.
30. Added ADC_PDMA, ADC_TimerTrigger, GPIO_PowerDown, Hard_Fault_Sample, PWM_CapturePDMA, SPI_TxRxLoopback_PDMA, SYS_PLLClockOutput, UART_FlowCtrl, and UART_Rx_Wakeup samples.

Revision 3.00.001 (Released 2014-03-31)

1. Improved PWM capture function performance.
2. Added ADC_SET_REF_VOLTAGE macro to configure ADC reference voltage.

3. Minor bug fix.

Revision 3.00.000 (Released 2014-03-03)

1. Renamed I2C_SetClockBusFreq() to I2C_SetBusClockFreq().
2. Renamed I2C_SetSlaveMask() to I2C_SetSlaveAddrMask().
3. Renamed RTC_GetDatAndTime() to RTC_GetDateAndTime().
4. Added Learning Board sample.
5. Moved Smartcard libraries one directory level up to Library\SmartcardLib\.
6. Minor bug fix.

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