ARM® Cortex®-M23

32-bit Microcontroller

NuMicro® Family
M2354 Series BSP
Revision History

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Revision 3.00.006 (Released 2025-12-22)

1. Add I2C SMBus master and slave sample code.
2. Update SPII2S multi-function pins to avoid using the LED IOs on the NuMaker board.
3. Modify PDMD_FLAG_ADDR flag address for not overwrite with stack in SYS_PowerManagement sample code.
4. Secure code creates NSC library and Nonsecure code adds NSC library in TrustZone sample code.
5. Fix SCU, UART driver and some description typo.
6. To support GCC 14.3.1 in VSCode.
7. Add software disconnect and reconnect API in USBD sample code.
8. Update ISP_SPI sample to add interrupt mask protection for ParseCmd().
9. Update UsbHostLib to resolve MSC disconnect issue.
10. Fix PDMA setting issue in I2S sample codes.
11. Revised i2c driver and BPWM driver.
12. To support VSCode multi-toolchain projects.
13. Add SecureBootDemo_P521 for ECC P-521 ECDSA trusted image.
14. Update FwSign.exe to support signing ECC P-521 ECDSA signature image.
15. Add a check for the STOP bit when I2C transmission is complete.
16. Send NAK instead of 0 to fix host not going to sleep issue in USBD_HID_RemoteWakeup sample code.
17. Add a macro to wait for the I2C bus status to be cleared.
18. Fix the slave addressing header for I2C_Master in 10-bit mode.
19. Add Slave TX underrun handling to QSPI_Slave3Wire sample code.
20. Remove additional UI2C Master EndFlag settings to prevent premature communication stoppage.
21. Add USBD_VCOM_MultiPort sample code.
22. Fix hardfault when running in nonsecure region in startup_M2354.s.
23. Add CAN_BasicMode_SilentMode and CAN_NormalMode_SilentMode sample code.
24. Add slew rate control for QSPI/SPI sample codes.
25. Remove USBD LPM function.
26. Update SYS_PowerDown_MinCurrent sample code and CLK_EnablePLL().
27. Update USBD HID keyboard sample code to support LED status.

Revision 3.00.005 (Released 2023-09-04)

1. Fix hash buffer size and ghash input buffer in Library/CryptoAccelerator/gcm_alt.c and gcm_alt.h.
2. Add ECC_X2, ECC_Y2 zero initital in Library/StdDriver/src/crypto.c
3. Update CMake files.
4. Add a long test pattern for GCM.
5. Fix gcm_alt buffer overwrite.
6. Fix I2C_EEPROM failed at IAR/GCC.
7. Fix potential errors in I2C_Master for 10-bit mode.
8. Fix UI2C_Master_10bit, UI2C_Wakeup_Slave failed at Keil/IAR/GCC.
9. Fix UI2C_EEPROM, UI2C_MultiBytes_Master failed at GCC.
10. Fix ACMP and FMC sample code issue.
11. Update multi-function pins for NuMaker board in USBD_Mass_Storage_SD.
12. Add stack limitation check by MSPLIM.
13. Add hardware accelerator for mbedtls library.
14. Add FreeRTOS/Blinky and FreeRTOS/Blinky_ns sample code main_full() demo.
15. Fix FMC_ExeInSRAM IAR/GCC sample code not run in SRAM issue.
16. Modify I2C_Master sample code to support 10bit mode by compiler option.

17. Change the verification conditions for read and write operations in I2C_Master to check each address group.
18. Add FreeRTOS TicklessIdle sample code.
19. Modify VendorName of Nu_DFU.inf
20. Fix ACMP VBG and DAC source setting. Modify the input to ACMP1_P0 (PA10)
21. Update SYS_PowerDown_MinCurrent sample code.
22. Update SPI_Loopback sample code.
23. Update Windows driver of USBD_Printer_And_HID_Transfer sample code.
24. Add FreeRTOS sample code GCC project.
25. Fix USBH_MassStorage IAR project hardfault issue.
26. Modify SYS_UnLockReg() time-out handler.

Revision 3.00.004 (Released 2022-12-07)

1. Fix message buffer alignment for DMA and ECC Interrupt in CRYPTO_ECC_SM2 sample code.
2. Fix NuMaker/Audio sample code PlaySin target build error.
3. Fix ft command error in SDH_FATFS sample code.
4. Update LED pins of TrustZone sample code for NuMaker board.
5. USBD VCOM sample code: Call UART FIFO size from uart.h.
6. Add pin different descriptions and relative document.
7. Fix prng start with preload in I2C_GCMode_Slave sample code.
8. Correct the wrong comments of dac.h macro in Library/StdDriver/inc/dac.h.
9. Remove printf for PowerDown in USBD sample code.
10. Fix return in main() cause hardfault issue.
11. Update Wifi module and LED pins of SecureOTADemo sample code for NuMaker and NuMaker-IOT board.
12. Update Wifi module and LED pins of SecureOTABankRemapDemo sample code for NuMaker and NuMaker-IOT board.
13. Fix RSA driver allocates not enough memory for MADDR6 in SCAP with non-CRT mode.
14. Update ThirdParty/FreeRTOS to v10.4.6.
15. Fix SYS_SetPowerRegulator() return value type in Library/StdDriver/inc/sys.h, sys.c and uart.c.
16. Fix tag check of AES CCM sample code and add CMake.
17. Update crypto driver for SM2 and Update SM2, SM3 sample code. To support CMake.
18. Fix ECC_GenerateSecretZ_KS writing key to key store in Library/StdDriver/inc/crypto.h and crypto.c.
19. Revise infinite loop timeout handler.

Revision 3.00.003 (Released 2022-03-07)

1. Fix UART TX FIFO control issue in USBD VCOM sample code.
2. Fix debug information option of IAR compiler of TrustZone template sample code.
3. I2C pins enable schmitt trigger and add I2C hangup/recover flow in I2C and USCI_I2C sample code.
4. Update auto trim to use HW boundary function in USBD sample code.
5. Update CRYPTO_AES_GCM sample code to support DMA cascade mode and fix Tag calculation.
6. Fix display flicker issue in lcdlib.c.
7. Add timer init code in CRYPTO_ECC_Demo sample code.

8. Add XOM protect mechanism to prevent illegal region configuration in fmc.h and fmc.c.
9. Add BME680 sensor data displayed on LCD at NuMakerIoT board.
10. Update MFP configure of SDH_FATFS sample code by Numaker board.
11. Fix USBD_Mass_Storage_CDROM crash on Linux.
12. Modify USBD_HID polling interval - bInterval to 10.
13. Fix an external hub driver bug in UsbHostLib/src_core/hub.c
14. Add prebuild binary of mbedOS6 for AWS IoT Cloud connection.
15. Add WiFi, LoRa_Master/Slave sample code for NuMakerIoT board.
16. Add I/O control in SYS_DPD/SPDMode_Wakeup sample code to prevent I/O floating.
17. Add timeout handler for infinite loop.
18. Modify LCD StdDriver, LCDLib and BME680_and_LCD sample code to meet LCDView tool.

Revision 3.00.002 (Released 2020-12-10)

1. Fix data access fail issue in USBD_Mass_Storage_CDROM sample code.
2. Fix CLK_SetModuleClock function parameter description for LCDCP_MOSupport segment LCD driver, demo.
3. Revise LCD sample codes for VLCD source from internal charge pump.
4. Add emWin v5.48k.3 lib and samples.
5. Add UART and USCI(UART) deglitch function bit field definition.
6. Add Crypto AES CCM and GCM sample code.
7. Remove PCLKDIV setting to fix QSPI, SPI, SPII2S and USCI_SPI sample code.

Revision 3.00.001 (Released 2020-09-22)

1. Initial Release.

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