ARM® Cortex®-M4

32-bit Microcontroller

NuMicro® Family
M460 Series BSP
Revision History

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Revision 3.00.005 (Released 2026-01-28)

1. Add Serial Flash Universal Driver (SFUD) Sample code.
2. Fix EMAC PHY init to resolve EMAC at half-duplex mode after device reset.
3. Fix rewrite command size for all HSUSBD HID transfer related sample codes.
4. Fix the buffer control issue in HSUSBH_USBH_UVC sample code.
5. Add HSUSBH_USBH_UVC sample code.
6. Add NuvotonAudioGUI_Firmware sample code to modify codec (NAU88C22) via NuVotonAudioGUI.
7. Revise array size in Crypto_AES_GCM.
8. Fix ECAP sample code.
9. Update to support UAC 2.0.
10. Update mp3 player sample code.
11. Fix EADC_EPWM_Trigger.
12. Fix EPWM_DoubleBuffer that the output waveform duty cycle was incorrect.
13. Fix FMC_MultiWordProgram and PSIO_1Wire VSCode(GCC) project run code issue.
14. Update SYS driver MFP constant definitions.
15. Enhance INT pipe qTD reclamation to handle IAAD loss in UsbHostLib/ehci.
16. Fix HSUSBD UAC2.0 sample code playback issue.
17. Fix PDMA setting issue in I2S sample codes.
18. Fix TX buffer index conflict causing hard faults in HSUSBD_RNDIS.
19. Fix protect memory allocation and free for interrupt safety in UsbHostLib.
20. Add software disconnect and reconnect API in USBD/HSUSBD.
21. Update ISP_SPI sample to add interrupt mask protection for ParseCmd().
22. Update UsbHostLib to resolve MSC disconnect issue.
23. Add HSUSBH_USBH_VCOM_MassStorage sample code.
24. Fix the issue of data loss when transferring 512-byte data in HSUSBD_VCOM_SerialEmulator.
25. Fix UART_PDMA sample code PDMA transfer done interrupt setting issue.
26. Send NAK instead of 0 to fix host not going to sleep issue in USBD_HID_RemoteWakeup
27. Add LwIP IPv6 sample code.

Revision 3.00.004 (Released 2024-11-21)

1. Correct the CANFD_GFC configuration to comply with rejecting non-matching Standard ID and Extended ID filters.
2. Modify stack_size and fix hardfault issue.
3. Add define size in VSCode sample code.
4. Update VSCode multi-toolchain projects.
5. Remove unused declaration of trustzone attribution for warning-free.
6. Add msvcr100.dll for XOM tool.
7. Fix CMake build with FMC_IAP sample code.
8. Fix stack to be located at ZI region.

Revision 3.00.003 (Released 2024-07-19)

1. Revise RTC_SPRCTL field.
2. Add Slave TX underrun handling to QSPI_Slave3Wire sample code.
3. Add a configurable setting for PHY LED status in m460_mii.c.
4. Update CANFD driver to implement transmitter delay compensation.
5. Configure the RTL8201FL PHY LED link status.
6. Modify the PWM and EPWM drivers.

7. Add the HBI_ExeInHRAM project.
8. Add slew rate control for QSPI/SPI sample codes.
9. Update xmodem library path.
10. Add CANFD_CANFD_MonitorMode and CANFD_CAN_xxx sample code.
11. Add USBD_VCOM_MultiPort sample code.
12. Adjust the timeout count in the SPIM driver's spim_wait_write_done() function to meet the requirements.
13. Fix two buffer overflow issue on HSUSBD_VCOM_SerialEmulator sample code.
14. Add HSUSBD_RNDIS sample code.
15. Fix bit define of RSA crypto accelerator driver.
16. Update crypto driver.
17. Modify FMC_GetChkSum() to check calculation address and size by FMC_FLASH_PAGE_SIZE.
18. Fix the check of FMC_GetChkSum() address and count.
19. Add LwIP_MQTT IAR and GCC project.
20. Add SDH_ResetCard function for resetting card.
21. Update SYS_PowerDown_MinCurrent sample code and CLK_EnablePLL().
22. HSUSBD_VCOM_SerialEmulator: Change Rx buffer size.
23. Fix wrong TIMER0_Init in EADC_Timer_Trigger sample code.
24. Update HSUSBD/USBD HID keyboard sample code to support LED status.
25. Support VSCode BSP.
26. Modify PDMA Enable Int function to support two more mask at the same time.
27. Update SDH for DAT3 detection mode.
28. Fix gcm_alt buffer overwrite.
29. Fix EPWM_DoubleBuffer sample code EPWM0 clock source selection.
30. Fix olen return bug in GCM ALT driver.
31. Add NuMaker_M467HJ/Xmodem sample code.
32. Fix FMC_ExeInSRAM sample code SRAM code address.
33. Update lwIP to 2.1.2 and fix DHCP fail after chip reset.
34. Fix SHA accelerator driver.
35. Add FreeRTOS TicklessIdle sample code.
36. HMAC/SHA need also wait busy when DMA Last.
37. Add LIRC clock enable for TRNG Open.

Revision 3.00.002 (Released 2023-03-14)

1. Update SPI_Loopback and QSPI_Slave3Wire sample code.
2. Update crypto accelerator library and update ccm hardware accelerator porting.
3. Add option for mbedTLS_AES sample code to support AES/CCM and GCM.
4. Add KPI sample code and updated kpi driver.
5. Move CANFD module selection define to main.c and add configuration wizard for Keil project.
6. Modify SYS_UnLockReg() time-out handler and fix UART baud rate calculation in UART_AutoBaudRate sample code.
7. Fix I2C and UI2C sample code.
8. Fix CLK_EnablePLLFN() default setting when PLLFN frequency is out of range.
9. Fix LwIP_SSL, EBI_NOR, EMAC_TxRx and SC_ReadATR sample code run fail.
10. Fix codec and buffer settings in UAC sample codes.
11. Fix to set wrong baudrate in the Classic CAN mode.
12. Fix PSIO_1Wire GCC sample code print floating point number issue.
13. Modify lwip settings and EMAC driver to improve the TCP/IP performance.

14. Change ISP_RS485 sample code pins to avoid conflict with Ethernet PHY pins on NuMaker board.
15. Fix ISP_RS485 and ISP_UART sample code UART clock source selection.
16. Call UART FIFO size from uart.h in USBD VCOM sample code
17. Fix PRNG_Start seed reload in Library/StdDriver/src/crypto.c.
18. Add temperature sensor code and update board schematic file.
19. Update HBI, ACMP driver, retarget for IAR 9.20 and add KS key status sample code.
20. Enable I/O schmitt trigger and high slew rate in BMC sample code.
21. Update driver in Library/StdDriver/inc/canfd.h and canfd.c
22. Add mcros for GPIO MFP in Library/StdDriver/inc/sys.h
23. Fix error in CANFD_SetTimingConfig() in Library/StdDriver/src/canfd.c
24. Update HSUSBD_HID_Mouse sample code to support remote-wake function.
25. Fix return in main() cause hardfault issue in SmpleCode/StdDriver/main.c
26. Remove ISBEN from FMC driver.

Revision 3.00.001 (Released 2022-06-06)

1. Initial Release.

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