

# ARM® Cortex®-M4 32-bit Microcontroller

## NuMicro<sup>®</sup> Family M460 Series BSP Revision History

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#### Revision 3.00.003 (Released 2024-07-19)

- 1. Add default error.c for mbedtls library and add mbedtls automatically genereated files.
- 2. Revise RTC SPRCTL field.
- 3. Add NuEclipse project and split hex file script.
- 4. Fix FMC IAP CMake build.
- 5. Add Slave TX underrun handling to QSPI\_Slave3Wire sample code.
- 6. Update CMake script to support GCC.
- 7. Add NuMicro.h header including.
- 8. Add a configurable setting for PHY LED status in m460 mii.c.
- 9. Update CANFD driver to implement transmitter delay compensation.
- 10. Configure the RTL8201FL PHY LED link status.
- 11. Modify the PWM and EPWM drivers.
- 12. Add the HBI\_ExeInHRAM project.
- 13. Add slew rate control for QSPI/SPI sample codes.
- 14. Update xmodem library path.
- 15. Add CANFD\_CANFD\_MonitorMode and CANFD\_CAN\_xxx sample code.
- 16. Add USBD\_VCOM\_MultiPort sample code.
- 17. Adjust the timeout count in the SPIM driver's spim\_wait\_write\_done() function to meet the requirements.
- 18. Fix two buffer overflow issue on HSUSBD VCOM SerialEmulator sample code.
- 19. Add HSUSBD RNDIS sample code.
- 20. Fix bit define of RSA crypto accelerator driver.
- 21. Update crypto driver.
- 22. Modify FMC\_GetChkSum() to check calculation address and size by FMC\_FLASH\_PAGE\_SIZE.
- 23. Fix the check of FMC GetChkSum() address and count.
- 24. Add LwIP\_MQTT IAR and GCC project.
- 25. Add SDH ResetCard function for resetting card.
- 26. Update SYS PowerDown MinCurrent sample code and CLK EnablePLL().
- 27. HSUSBD\_VCOM\_SerialEmulator: Change Rx buffer size.
- 28. Fix wrong TIMER0 Init in EADC Timer Trigger sample code.
- 29. Update HSUSBD/USBD HID keyboard sample code to support LED status.
- 30. Support VSCode BSP.
- 31. Fix u32Mask parameters of enable int function.
- 32. Modify PDMA Enable Int function to support two more mask at the same time.
- 33. Update SDH for DAT3 detection mode.
- 34. Add ECC\_X2, ECC\_Y2 zero initial.
- 35. Fix gcm alt buffer overwrite.
- 36. Fix EPWM DoubleBuffer sample code EPWM0 clock source selection.
- 37. Add IAR and GCC project for crypto sample codes.
- 38. Fix olen return bug in GCM ALT driver.
- 39. Add NuMaker M467HJ/Xmodem sample code.
- 40. Increase stack size to fix stack overflow.
- 41. Fix FMC\_ExeInSRAM sample code SRAM code address.
- 42. Update the brief description of EMAC TxRx.
- 43. Update IwIP to 2.1.2 and fix DHCP fail after chip reset.
- 44. Fix SHA accelerator driver.
- 45. Add FreeRTOS TicklessIdle sample code.
- 46. Fix negative signal source and fix comments.
- 47. HMAC/SHA need also wait busy when DMA Last.
- 48. 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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