

# **ARM® Cortex®-M4 32-bit Microcontroller**

## **NuMicro® Family M460 Series BSP Revision History**

*The information described in this document is the exclusive intellectual property of Nuvoton Technology Corporation and shall not be reproduced without permission from Nuvoton.*

*Nuvoton is providing this document only for reference purposes of NuMicro microcontroller based system design. Nuvoton assumes no responsibility for errors or omissions.*

*All data and specifications are subject to change without notice.*

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

[www.nuvoton.com](http://www.nuvoton.com)

### 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 USB 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 HSUSB\_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.

### Important Notice

Nuvoton Products are neither intended nor warranted for usage in systems or equipment, any malfunction or failure of which may cause loss of human life, bodily injury or severe property damage. Such applications are deemed, "Insecure Usage".

Insecure usage includes, but is not limited to: equipment for surgical implementation, atomic energy control instruments, airplane or spaceship instruments, the control or operation of dynamic, brake or safety systems designed for vehicular use, traffic signal instruments, all types of safety devices, and other applications intended to support or sustain life.

All Insecure Usage shall be made at customer's risk, and in the event that third parties lay claims to Nuvoton as a result of customer's Insecure Usage, customer shall indemnify the damages and liabilities thus incurred by Nuvoton.

---

*Please note that all data and specifications are subject to change without notice.  
All the trademarks of products and companies mentioned in this datasheet belong to their respective owners.*