NuMicro® Family

Arm® Cortex®-M0-based Microcontroller

M031 Series CMSIS BSP
Revision History

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

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Revision 3.09.000 (Released 2025-08-12)

1. Fixed the Keil project so that NU_LINK debugger is selected by default.
2. Revised i2c/ui2c driver and fixed ISP_I2C/ISP_SPI sample.

Revision 3.08.000 (Released 2025-06-07)

1. Fix typo.
2. Update spi driver.
3. Add Add annotations to remind users to unlock system register before using FMC.
4. Modify USB HID sample code to send NAK instead of 0 to fix host can't sleep issue.
5. Add VSCode project to each sample.
6. Update PDMA driver - the order of settings int Scatter-gather mode.
7. Upgrade CMSIS to 6.1.0 2. update project include path for CMSIS 6.1.0.
8. Add timeout to I2C slave sample code.
9. Update CLK_ClockDetector sample code for PF2 (XT1_OUT) and PF3 (XT1_IN).

Revision 3.07.000 (Released 2024-10-16)

1. Added I^2C error condition process.
2. Added .uvprojx project file for Keil5.
3. Removed .uvproj file for Keil4.
4. Minor changes for sample code.
5. Minor bug fix.

Revision 3.06.000 (Released 2023-11-14)

1. Added PWM_Brake and ADC_SingleCycleScanMode2 samples.
2. Added LED status for USBD samples.
3. Fixed USB MSC sample access fail issue.
4. Fixed Keil Compiler 6 issue.
5. Minor changes for sample code.
6. Minor bug fix.

Revision 3.05.000 (Released 2022-03-18)

1. BLE supported GCC and IAR toolchain.
2. Removed emWin samples and library.
3. Minor changes for sample code.
4. Minor bug fix.

Revision 3.04.000 (Released 2021-12-28)

1. Supported BLE for M031BT/M032BT.
2. Added I2C_SMBus_Master and I2C_SMBus_Slave samples.
3. Added Sample codes for FreeRTOS V2020.12.
4. Added ISP_MSC sample.
5. Added Cache invalidation for FMC Write related functions.
6. Added new API for TIMER.
7. Updated I^2C driver to check STOP bit when I^2C transmission completed.
8. Updated HID samples polling interval to 10.
9. Updated samples to avoid infinite loop.
10. Fixed the missing UART6/UART7 in UART_Open function.
11. Minor changes for sample code.
12. Minor bug fix.

Revision 3.03.000 (Released 2020-09-14)

1. Added Apache-2.0 license declaration into BSP.
2. Added fmc_ap_main.uvproj Keil project in FMC_IAP sample.
3. Updated preferences.ini for Eclipse V1.01.016 or later.
4. FMC_IAP sample uses hardware reset instead of software reset.
5. Fixed HIRC trim setting in USBD_Audio_NAU8822_Headset, USBD_Audio_NAU8822_Microphone, and USBD_Audio_NAU8822_Speaker samples.
6. Fixed I^2C wakeup done flag checking fail issue.
7. Minor changes for sample code.
8. Minor bug fix.

Revision 3.02.000 (Released 2019-10-4)

1. Supported GPIOE, GPIOG, GPIOH, UART3/4/5/6/7, USCI-1, BPWM, QSPI and RTC for new M031 part numbers.
2. Removed I2C_Master_PDMA, I2C_PDMA, I2C_Slave_PDMA and USBD_Audio_NAU8822 samples.
3. Added ISP related samples.
4. Added BPWM, QSPI and RTC related samples.
5. Added emWin sample codes and library.
6. Updated I2C_PDMA_TRX, USCI_SPI_PDMA_LoopTest, USCI_I2C_Loopback_10bit, USCI_I2C_Loopback, FMC_CRC32, FMC_ExeInSRAM, FMC_MultiBoot, FMC_MultiWordProgram, FMC_ReadAllOne, USBD_Audio_NAU8822_HeadSet, USBD_Audio_NAU8822_Microphone and USBD_Audio_NAU8822_Speaker samples.
7. Minor changes for sample code.
8. Minor bug fix.

Revision 3.01.000 (Released 2019-04-12)

1. Added USBD_Audio_NAU8822 sample for UAC class.
2. Removed I2C_Double_Buffer_Slave sample.
3. Updated default stack size from 1KB to 512B.
4. Updated definition from SYS_xx_ADC_xx to SYS_xx_ADC0_xx.
5. Updated samples for M031EB0AE, M031FB0AE and M031TB0AE.
6. Minor changes for sample code.
7. Minor bug fix.

Revision 3.00.000 (Released 2018-06-29)

1. Preliminary release version.

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