

**Arm® Cortex®-M23**  
**32-bit Microcontroller**

**M253 Series CMSIS BSP**  
**Revision History**

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### Revision 3.00.009 (Released 2024-10-07)

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- CMSIS: Upgraded to v6.1.0.
- Keil startup\_M253.c: Instead of ASM code.
- Standard driver
  - UART: UART\_RESET\_RXFIFO and UART\_RESET\_TXFIFO added.
- Sample code
  - Added VSCode projects with AC6/GCC toolchain.
  - I2C\_Loopback\_10bit: Merged into I2C\_Loopback.
  - I2C\_Master\_10bit: Merged into I2C\_Master.
  - I2C\_Slave\_10bit: Merged into I2C\_Slave.
  - ISP\_UART: Reset RX FIFO after response sent.

### Revision 3.00.008 (Released 2024-03-21)

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- Standard driver
  - retarget.c: Fixed \_\_ARM\_use\_no\_argv multiple definition issue in newer KEIL versions.
  - BPWM: BPWM\_ConfigOutputChannel fixed duty issue.
  - CLK
    - CLK\_PowerDown cleared CPU deep sleep mode select after wakeup.
    - CLK\_SysTickDelay Improved robustness.
  - I2C: I2C\_WAIT\_READY fixed potential blocking issue.
- Sample code
  - BPWM\_SwitchDuty: Fixed 100% duty issue.
  - ISP\_DFU, ISP\_MSC: Reduced code size.
  - SPI\_Flash: Supported more Winbond SPI flashes.
  - SYS\_PowerDown\_MinCurrent: Removed LVR disable setting.
  - USB\_D samples: Removed LPM support.
  - USB\_D HID samples: Supported LED status.

### Revision 3.00.007 (Released 2023-08-07)

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- Library
  - LDROM.icf and LDROM.sct: Fixed LDROM address.
- Standard driver
  - CANFD: Removed unused workarounds of wrong register value and wrong transmission.
- Sample code

- BPWM\_SwitchDuty, PWM\_SwitchDuty: Fixed 100% duty issue.
- CANFD\_CAN\_MonitorMode, CANFD\_CANFD\_MonitorMode: Added.
- ISP samples: Fixed LDROM download failure in IAR and KEIL.
- ISP\_DFU: Updated Windows driver with Nuvoton vendor name.
- USB samples: Removed EP1 stall while setup error occurred.

#### Revision 3.00.006 (Released 2023-02-06)

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- Sample code
  - SYS\_PowerDown\_MinCurrent: Added.
  - USB samples: Avoided wakeup failure.

#### Revision 3.00.005 (Released 2022-07-13)

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- Standard driver
  - retarget.c: Fixed print issue with IAR EWARM v9.20.
  - CANFD: Fixed potential issues of wrong register value and wrong transmission.
  - UART: UART\_RX\_IDEL replaced by UART\_RX\_IDLE.
- Sample code
  - CANFD\_CANFD\_Loopback, CANFD\_CANFD\_TxRxINT, CANFD\_CAN\_Loopback, and CANFD\_CAN\_TxRxINT: Rejected non-matched standard ID and extended ID filter.
  - FreeRTOS Blinky sample: Added.
  - I2C\_Loopback\_10bit, I2C\_Master\_10bit, and I2C\_Slave\_10bit: Added.
  - I2C samples: Improved error handling.
  - ISP\_DFU, ISP\_HID, and ISP\_MSC: Enabled USB trim function.
  - ISP\_SPI: Added GCC project.
  - ISP samples
    - Added IAR projects.
    - Added scatter file to check image size.
    - Enabled function section linking and image size optimization in KEIL projects.
  - UART\_PDMA: Fixed compiling issue of polling method.
- ThirdParty
  - FreeRTOS: Added.

### Revision 3.00.004 (Released 2022-01-24)

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- Standard driver
  - Improved infinite loop prevention with timeout counter and error code.
  - CANFD: CANFD\_TransmitTxMsg changed return type.
  - RTC: RTC\_Open added return value.
  - TIMER: TIMER\_Delay and TIMER\_ResetCounter added return value.
- Sample code
  - EADC\_Timer\_Trigger: Fixed wrong timer period.
  - I2C and USCI\_I2C samples: Enabled schmitt trigger of I2C pins.
  - I2C samples: Removed redundant code.
  - ISP\_I2C, ISP\_RS485, and ISP\_UART samples: Added GCC project.
  - ISP\_MSC: Added.
  - SPI\_HalfDuplex\_Master and SPI\_HalfDuplex\_Slave: Replaced by SPI\_HalfDuplex.
  - SPI\_PDMA\_LoopTest: QSPI0 replaced by USPI0.
  - USB\_D\_HID samples: Unified INT\_IN interval.
  - USB\_D\_Mass\_Storage\_CDROM: Fixed Linux and Mac compatibility issue.

### Revision 3.00.003 (Released 2021-05-20)

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- system\_M253.h: \_\_HXT and \_\_LXT added redefinition check.
- Standard driver
  - TIMER: TIMER\_CAPTURE\_FROM\_ACMP0, TIMER\_CAPTURE\_FROM\_ACMP1, TIMER\_CAPTURE\_FROM\_HXT, TIMER\_CAPTURE\_FROM\_LXT, TIMER\_CAPTURE\_FROM\_HIRC, TIMER\_CAPTURE\_FROM\_LIRC, and TIMER\_CAPTURE\_FROM\_MIRC added.
- Sample code
  - TIMER\_FreeCountingMode: Saved the first captured data.
  - UART\_Wakeup: Provided more wake-up methods.

### Revision 3.00.002 (Released 2021-02-24)

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- MCAN renamed to CANFD.
- Sample code
  - ISP\_CAN, SPI\_SlaveFIFOModelINT, and USCI\_SPI\_SlaveModelINT: Added.
  - ISP\_HID, ISP\_I2C, ISP\_RS485, and ISP\_UART: Enabled GPIO and SysTick clocks.
  - USB\_D\_VCOM samples: Fixed potential UART Tx FIFO overflow issue.

- USBD\_VCOM\_DaulPort, USBD\_VCOM\_MultiPort, and USBD\_VCOM\_MultiPort\_CMD: Fixed power-down blocked issue and wrong baud rate issue.

#### Revision 3.00.001 (Released 2020-12-25)

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- Initial release.

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