Arm® Cortex®-M55

32-bit Microcontroller

NuMicro® Family
M5531 Series BSP
Revision History

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

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Revision 3.01.003 (Released 2025-10-29)

- Peripheral register
  - eadc_reg.h: Removed some redundant bit-field macros.
- Standard driver
  - retarget.c: Improved compatibility with CMSIS RTE.
  - CLK: Removed CLK_APLLCTL_APLLSRC_HXT_DIV2.
  - LPPDMA: Redefined LPPDMA_INT_TRANS_DONE and LPPDMA_INT_TEMPTY to support multi-bit mask.
  - PDMA
    - PDMA_INT_TRANS_DONE, PDMA_INT_TEMPTY, PDMA_INT_TIMEOUT, PDMA_DisableInt, PDMA_EnableInt: Supported multi-bit mask.
    - PDMA_INT_ALIGN: Added.
  - SPIM: Removed voltage raise for HyperBus device and octal SPI flash.
- CMSIS driver
  - RTE_Device.h: Improved compatibility with CMSIS packs.
  - I2C: Master added I3C IP support.
  - USBD: Added HSUSBD IP support.
  - VIO: Added NuMaker board support.
- Library
  - UsbHostLib: Improved robustness of memory management and EHCI interrupt handling.
- Sample code
  - DMIC_I2S_Play, I2S_Codec_PDMA, I2S_MP3Player, I2S_WAVEPlaye: Fixed cache line alignment issues of I2S PDMA buffers.
  - EADC_AverageCMP: Added.
  - MP3_Recorder: Added USB storage device support.
  - VS Code projects upgraded to use GCC 14.3.1.

Revision 3.01.002 (Released 2025-8-8)

- Peripheral register
  - canfd_reg.h
    - CANFD_RXF0A_F0AI_Msk: Replaced CANFD_RXF0A_F0A_Msk.
    - CANFD_RXF0A_F0AI_Pos: Replaced CANFD_RXF0A_F0A_Pos.
  - hsusbd_reg.h: Fixed definitions of HSUSBD_EPBUFSTART_SADDR_Msk and HSUSBD_EPBUFSTART_SADDR_Pos.
- Startup
  - SysTick vector on flash used Default_Handler.
- Standard driver
  - CANFD: Removed unsupported UTSU function.
  - HSUSBD: Added HSUSBD_DISABLE_HS_HANDSHAKE and HSUSBD_ENABLE_HS_HANDSHAKE.
  - SPI: Added SPI_DISABLE_3WIRE_MODE and SPI_ENABLE_3WIRE_MODE.
  - SPIM
    - Raised voltage to 1.2V for HyperBus device and octal SPI flash.
    - Supported Infineon octal SPI flash.
  - SYS

    - SYS_GPC_MFP0_PC2MFP_UTCPD0_CCDB2: Replaced SYS_GPC_MFP0_PC2MFP_UTCPD0_CCDB1.
    - SYS_GPC_MFP0_PC3MFP_UTCPD0_CCDB1: Replaced SYS_GPC_MFP0_PC3MFP_UTCPD0_CCDB2.
    - SYS_ResetModule: Added SPIM clock setting handling.
- CMSIS driver
  - CAN, ETH_MAC, Flash, GPIO, I2C, MCI, SAI, SPI, USART, USBD, USBH: Added.
- Library
  - CryptoAccelerator: Improved cache coherence.
  - JpegAcceleratorLib: Improved performance.
  - UsbHostLib: Added UVC support.
- Sample code
  - AWF_GSensor_Wakeup: Used I/O buffer to replace fixed address.
  - DMIC_VAD_Wakeup: Increased VAD power threshold.
  - HSUSBD_Audio20_Codec and HSUSBD_Audio20_Headset: Fixed no sound issue.
  - HSUSBD_HID_Mouse: Improved LPM stability.
  - HSUSBD_RNDIS: Added.
  - HSUSBD_Video_CAM: Fixed UVC image noise issue.
  - HSUSBH_USBH_UVC: Added.
  - I3C samples: I3C pins enable Schmitt trigger.
  - ISP_DFU_20 and ISP_HID_20: Fixed USB high-speed issue.
  - ISP_I2C and ISP_SPI: Fixed potential command failure.
  - KS_AESKey: Improved cache coherence.
  - RTC_TimeAndTick: Removed because almost the same as RTC_Time_Display.
  - SecureApplication samples: VS Code projects require Python 3.12 at least for post-build.
  - SPIM_HYPER_ExeInHRAM: Fixed I/O buffer alignment and GCC project execution failure.
  - SPIM_HYPER_RW_MemMap: Fixed I/O buffer alignment.
  - USBD samples: Improved stability and performance.
  - VS Code projects updated for Nuvoton NuMicro Cortex-M Pack.

Revision 3.01.001 (Released 2025-3-26)

- Initial release.

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