

**ARM<sup>®</sup> Cortex<sup>®</sup>-M4  
32-bit Microcontroller**

**NuMicro<sup>™</sup> Family  
NUC505 Series BSP  
Revision History**

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**Revision 3.04.000** (Released 2020-09-18)

1. Added Apache-2.0 license declaration into BSP.
2. Supported to play wav with 8-bit sample.
3. Minor changes for sample code.
4. Minor bug fix.

**Revision 3.03.001** (Released 2019-11-07)

1. Added ISP sample codes.
2. Minor changes for sample code.
3. Minor bug fix.

**Revision 3.03.000** (Released 2018-11-26)

1. Added USBD\_VCOM\_And\_HID sample code.
2. Added Eclipse project support.
3. Updated FreeRTOS from V7.4.0 to V10.0.0
4. Minor changes for sample code.
5. Minor bug fix.

**Revision 3.02.000** (Released 2017-07-31)

1. Fixed CLK\_DisablePLL() function implementation.
2. Fixed CLK\_Idle() function implementation.
3. Fixed RTC\_Open() implementation for Wakeup Key.
4. Fixed the last audio data not played in I2S\_NAU8822\_WAVPLAYER\_SD, I2S\_NAU8822\_WAVPLAYER\_USB, I2S\_NAU8822\_WAVRECORDER\_SD, I2S\_WAVPLAYER\_SD, I2S\_WAVPLAYER\_USB and I2S\_WAVRECORDER\_SD samples.
5. Updated I<sup>2</sup>S engine clock source for accurate 8 kHz sampling rate in I2S\_WAVPLAYER\_SD, I2S\_WAVPLAYER\_USB and I2S\_WAVRECORDER\_SD samples.
6. Removed CLK\_USBH\_SRC\_EXT definition.
7. Redefined HID\_DEV\_T structure.
8. Redefined TD\_T structure.
9. Updated CMSIS to V4.5.0.
10. Updated RXCLKDLY register definition in SPIM IP.
11. Updated USBD\_Audio\_Microphone and USBD\_Audio\_Speaker sample codes.
12. Added Overlay sample in BootTemplate folder.
13. Added ISP sample code.
14. Added USBD\_Audio\_Headset sample code.
15. Added USBH\_UAC\_HID sample code.
16. Enhanced id3 tags parsing in I2S\_MP3PLAYER\_SD, I2S\_MP3PLAYER\_USB, I2S\_NAU8822\_MP3PLAYER\_SD and I2S\_NAU8822\_MP3PLAYER\_USB samples.
17. Supported UAC in UsbHostLib.
18. Supported Winbond SPI flash in SPIM\_CheckIF, SPIM\_DMA, SPIM\_DMM, SPIM\_IO and SPIM\_SPIROM samples.
19. Supported digital microphone in I2S\_InternalCODEC sample.
20. Minor changes for sample code.
21. Minor bug fix.

**Revision 3.01.000** (Released 2016-02-24)

1. Supported NUC505YO13Y device selected by default in the Keil project file with the latest Nu\_Link Keil driver.
2. Modified S\_USBD\_INFO\_T structure definition for USB IF Test.
3. Fixed the AER Enable fail issue for each RTC API.
4. Modified macro PWM\_ENABLE\_OUTPUT\_INVERTER(pwm, u32ChannelNum) to PWM\_ENABLE\_OUTPUT\_INVERTER(pwm, u32ChannelMask).
5. Removed RXCLKDLY register definition in SPIM IP.
6. Removed TIMER\_CAPTURE\_FALLING\_THEN\_RISING\_EDGE and TIMER\_CAPTURE\_RISING\_THEN\_FALLING\_EDGE definitions and added TIMER\_CAPTURE\_FALLING\_AND\_RISING\_EDGE definition.
7. Fixed the bug of USB transfer length equal to maximum packet size for the control endpoint in USB sample.
8. Fixed the incorrect reset delay period issue in WDT\_Open() function.
9. Updated RSTSTS register offset from 0x10 to 0x20 for WDT.
10. Updated FATFS from R0.09b to R0.11a version and made sample code related modifications for this FATFS update.
11. Added LOWPWREN to USBD\_PHYCTL[3] bit field for USB low power mode.
12. Added extra 8 SD clock cycles after CMD7 in SD\_SelectCardType() and SD\_Get\_SD\_info() function.
13. Added USBD\_HID\_Transfer, USBD\_VCOM\_SerialEmulator and USBD\_Audio\_Microphone sample code.
14. Added I2S\_SetFIFO() to set TX and RX FIFO in one API.
15. Added CLK\_STICK\_SRC\_EXT and CLK\_STICK\_SRC\_HCLK definitions.
16. Added CLK\_EnableSysTick() and CLK\_DisableSysTick() functions to enable and disable system tick.
17. Minor changes for sample code.
18. Minor bug fix.

**Revision 3.00.003** (Released 2015-03-19)

1. Supported eMMC in SD driver.
2. Redefined GPIO\_T and GPIO\_DB\_T structures to unify the NuMicro™ calling style.
3. Redefined SPIM\_Open() function to detect internal SPI interface automatically.
4. Renamed SYS\_GPA\_MFPH\_PA9MFP\_SPIM\_SCLK to SYS\_GPA\_MFPH\_PA9MFP\_SPIM\_CLK.
5. Renamed SYS\_GP\*\_MFPH\_P\*\*\*MFP\_TMR\*\_CNT\_OUT to SYS\_GP\*\_MFPH\_P\*\*\*MFP\_TM\*\_CNT\_OUT.
6. Renamed SYS\_GP\*\_MFPH\_P\*\*\*MFP\_TMR\*\_EXT to SYS\_GP\*\_MFPH\_P\*\*\*MFP\_TM\*\_EXT.
7. Renamed SYS\_GPB\_MFP\*\_PB\*MFP\_SPI\*\_SCLK to SYS\_GPB\_MFP\*\_PB\*MFP\_SPI\*\_CLK.
8. Renamed SYS\_GPD\_MFPL\_PD4MFP\_RIGHT\_LINE\_IN to SYS\_GPD\_MFPL\_PD4MFP\_RLINEIN.
9. Added SPIM\_CheckIF sample.
10. Added SPIM\_SetIF() function to change SPI interface.
11. Minor changes for sample code.
12. Minor bug fix.

**Revision 3.00.002** (Released 2014-12-02)

1. Supported IAR project.

2. Removed Demo\_CodeOnSPIFlash and Demo\_CodeOnSRAM samples.
3. Renamed UPLL to PLL.
4. Renamed command code for SPIM Quad mode.
5. Renamed RTC\_INIT\_INIT\_ACTIVE\_Pos to RCT\_INIT\_ACTIVE\_Pos and RCT\_INIT\_INIT\_ACTIVE\_Msk to RCT\_INIT\_ACTIVE\_Msk.
6. Renamed I2S\_ExternalCODEC sample to I2S\_NAU8822.
7. Updated USBD register definition.
8. Minor changes for some bit field definitions.
9. Added BootTemplate, I2S\_MP3PLAYER\_SD, I2S\_MP3PLAYER\_USB, I2S\_NAU8822\_MP3PLAYER\_SD, I2S\_NAU8822\_MP3PLAYER\_USB, I2S\_NAU8822\_WAVPLAYER\_SD, I2S\_NAU8822\_WAVPLAYER\_USB, I2S\_NAU8822\_WAVRECORDER\_SD, I2S\_WAVPLAYER\_SD, I2S\_WAVPLAYER\_USB, I2S\_WAVRECORDER\_SD and USBD\_Mass\_Storage\_SD samples.
10. Minor changes for sample code.
11. Minor bug fix.

### Revision 3.00.001 (Released 2014-10-09)

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1. Removed NVIC\_EnableIRQ() function call in I2S\_Open() and SD\_Open().
2. Removed Multi-function pin control in SD\_Open().
3. Removed uCOS-II and uCOS-III samples.
4. Added Cortex-M4 BitBand and MPU sample codes.
5. Updated original USBH HID library with Nuvoton HID library with less footprint.
6. Redefined GPIO\_T structure.
7. Renamed pin names.
8. Renamed MIC1/MIC2 to MIC0/MIC1.
9. Added SYS\_PowerDownConsumption sample code.
10. Minor changes for sample code.
11. Minor bug fix.

### Revision 3.00.000 (Released 2014-08-07)

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1. First release version.

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