

Nano100AN CMSIS BSP Directory

Directory Introduction for 32-bit NuMicro[®] Family

Directory Information

Document	Driver reference manual and revision history.
Library	Driver header and source files.
SampleCode	Driver sample code.

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For sample code mentioned in this document, please download Nano100A series (Nano100A/Nano120A) BSP from the link below or check other related application sample code.

www.nuvoton.com/NuSoftware

1 Document Information

<p>NuMicro Nano100AN Series CMSIS BSP Revision History.pdf</p>	<p>This document shows the revision history of Nano100AN BSP.</p>
<p>NuMicro Nano100AN Series Driver Reference Guide.chm</p>	<p>This document describes the usage of drivers in Nano100AN BSP.</p>

2 Library Information

CMSIS	Cortex [®] Microcontroller Software Interface Standard (CMSIS) V3.01 definitions by ARM [®] Corp.
Device	CMSIS compliant device header file.
SDCardLib	Library for accessing a SD Card via SPI interface.
SmartcardLib	Library for accessing a smartcard.
StdDriver	All peripheral driver header and source files.

3 Sample Code Information

CardReader	Smartcard reader sample code.
Hard_Fault_Sample	Show hard fault information when hard fault happened.
POWERDOWN_Chk	Sample code which implements a function to test system state before entering power-down mode. If a system consumes more power than expected in power-down mode, this function can be used to check if there is any system setting that may cause power leakage.
PWRDWN_DEMO	Demonstrate system enters Power-down mode.
Semihost	Show how to print and get character with IDE console window.
StdDriver	Demonstrate the usage of Nano100AN series MCU peripheral driver APIs.
Template	A project template for Nano100AN series MCU.

4 \SampleCode\CardReader

USBD_CCID	CCID (Circuit card interface device) smart card reader sample code.
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5 \SampleCode\StdDriver

ADC_Compare	Demonstrate ADC conversion and comparison function by monitoring the conversion result of channel 0.
ADC_ContinuousScan	Convert ADC channel 0, 1, 2 in Continuous Scan mode and print conversion results.
ADC_PDMA	Use PDMA channel 1 to move ADC channel 0, 1, 2 converted data to SRAM.
ADC_Single	Convert ADC channel 0 in Single mode and print conversion results.
ADC_SingleCycleScan	Convert ADC channel 0, 1, 2 in Single Cycle Scan mode and print conversion results.
ADC_TimerTrigger	Configure Timer0 to ADC and move converted data to SRAM using PDMA.
EBI_NOR	Configure EBI interface to access NOR Flash connected to EBI interface.
EBI_SRAM	Configure EBI interface to access SRAM connected to EBI interface.
FMC_RW	Show FMC read Flash IDs, erase, read, and write function.
FMC_VECMAP	Show how to branch programs between LDR0M, APROM start page, and APROM other page.
GPIO_IOTest	Use GPIO driver to control the GPIO pin direction and the high/low state, and show how to use GPIO interrupts.
GPIO_PowerDown	Demonstrate how to wake system up form Power-down mode by GPIO interrupt.
I2C_EEPROM	Read/write EEPROM via an I ² C interface.
I2C_Loopback	An I ² C master/slave demo by connecting I ² C0 and I ² C1 interface.

I2S_NAU8822	An I ² S demo using NAU8822 audio codec, used to play back the input from line-in or MIC interface.
PDMA_Memory	Use PDMA channel 2 to demonstrate memory to memory transfer.
PWM_Capture	Demonstrate PWM Capture function by using PWM0 channel 2 to capture the output of PWM0 channel 0.
PWM_CapturePDMA	Demonstrate PWM Capture function by using PWM0 channel 2 to capture the output of PWM0 channel 0 and move captured data to SRAM with PDMA.
PWM_DeadZone	Demonstrate the dead-zone feature with PWM0.
RTC_Alarm_Test	Demonstrate the RTC alarm function which sets an alarm 10 seconds after execution.
RTC_Time_Display	Demonstrate the RTC function and display the current time to the UART console.
RTC_Wakeup	Demonstrate how to wake up system periodically with RTC interrupt.
SC_ReadATR	Read the smartcard ATR from smartcard 0 interface.
SC_ReadSimPhoneBook	Demonstrate how to read phone book information in the SIM card.
SPI_2BIT_Loopback	Demonstrate SPI 2 bit mode loop back transfer.
SPI_FIFO_FLASH	Access SPI Flash using FIFO mode.
SPI_SDCARD	Access a SD card formatted in FAT file system.
SPI_TxRxLoopback_PDMA	Demonstrate SPI loop back transfer with PDMA.
SYS_Control	Demonstrate how to change different PLL settings for the system clock source, and output system clock to CLK0 (PC.5) pin with the system clock / 4 frequency.
SYS_TrimIRC	Demonstrate how to use LXT to trim HIRC.

Timer_Delay	Demonstrate the usage of TIMER_Delay() API to generate a 1 second delay.
Timer_EventCounter	Use the pin PB.8 to demonstrate timer event counter function.
Timer_FreeCountingMode	Use the timer pin PC.6 to demonstrate timer free counting mode function. Also display the measured input frequency to UART console.
Timer_InterTimerTriggerMode	Use the timer pin PB.8 to demonstrate inter timer trigger mode function. Also display the measured input frequency to UART console.
Timer_Periodic	Use the timer periodic mode to generate timer interrupt every 1 second.
Timer_ToggleOut	Demonstrate the timer 0 toggle out function on pin PB.8.
Timer_TriggerCountingMode	Use the timer pin PC.6 to demonstrate timer trigger counting mode function. And displays the measured input frequency to UART console.
Timer_Wakeup	Use timer to wake up system from Power-down mode periodically.
UART_AutoBaudRate	Demonstrate how to use auto baud rate detection function.
UART_FlowCtrl	Transmit and receive data using auto flow control.
UART_IrDA	Show how to transmit and receive UART data in UART IrDA mode.
UART_LIN	Demonstrate how to transmit LIN header and response.
UART_PDMA	Demonstrate UART transmit and receive function with PDMA.
UART_RS485_Receive	Demonstrate how to receive data in UART RS485 mode.
UART_RS485_Transmit	Demonstrate how to transmit data in UART RS485 mode.

UART_Rx_Wakeup	Demonstrate how to wake up system form Power-down mode by UART interrupt.
UART_TxRx_Function	Transmit and receive data from PC terminal through RS232 interface.
USBD_Audio_Speaker	Demonstrate how to implement a USB audio class device. NAU8822 is used in this sample code to play the audio data from Host. It also supports to record data from NAU8822 to Host.
USBD_HID_Keyboard	Demonstrate how to implement a USB keyboard device. It supports to use GPIO to simulate key input.
USBD_HID_Mouse	Simulate an USB mouse and draws circle on the screen.
USBD_HID_MouseKeyboard	Simulate an USB HID mouse and HID keyboard. Mouse draws circle on the screen and Keyboard use GPIO to simulate key input.
USBD_HID_Touch	Demonstrate how to implement a USB touch digitizer device. Two lines demo in Paint.
USBD_HID_Transfer	Demonstrate how to transfer data between USB device and PC through USB HID interface. A windows tool is also included in this sample code to connect with a USB device.
USBD_HID_Transfer_And_Keyboard	Demonstrate how to implement a composite device (HID Transfer and keyboard). Transfer data between USB device and PC through USB HID interface. A windows tool is also included in this sample code to connect with a USB device.
USBD_HID_Transfer_And_MSC	Demonstrate how to implement a composite device (HID Transfer and Mass storage). Transfer data between USB device and PC through USB HID interface. A windows tool is also included in this sample code to connect with a USB device.
USBD_Mass_Storage_CDROM	USB Mass Storage Device CD-ROM Emulation.
USBD_Mass_Storage_Flash	Use internal Flash as back end storage media to simulate a USB pen drive.

USBD_Micro_Printer	Demonstrate how to implement a USB micro printer device.
USBD_VCOM_And_HID_Keyboard	Demonstrate how to implement a composite device.(VCOM and HID keyboard)
USBD_VCOM_SerialEmulator	Demonstrate how to implement a USB virtual com port device.
WDT_Polling	Use Polling mode to check WDT time-out state and reset WDT after time-out occurs.
WDT_Wakeup	Use WDT to wake up system from Power-down mode periodically.

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