

NUC029FAE 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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1 Document Information

CMSIS.html	Document of CMSIS version 4.5.0
NuMicro NUC029FAE CMSIS BSP Revision History.pdf	This document shows the revision history of NUC029FAE BSP.
NuMicro NUC029FAE Driver Reference Guide.html	This document describes the usage of drivers in NUC029FAE BSP.

2 Library Information

CMSIS	Cortex® Microcontroller Software Interface Standard (CMSIS) V4.5.0 definitions by ARM® Corp.
Device	CMSIS compliant device header file.
StdDriver	All peripheral driver header and source files.

3 Sample Code Information

Hard_Fault_Sample	Show hard fault information when hard fault happened.
ISP	ISP firmware samples.
NuTiny-NUC029FAE	Same codes for NUC029FAE Tiny Board
RegBased	Sample codes implemented without access standard library but access registers directly.
Semihost	Show how to print and get character with IDE console window.
StdDriver	Demonstrate the usage of NUC029FAE MCU peripheral driver APIs.
Template	A project template for NUC029FAE MCU.

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ISP_I2C	Sample ISP firmware communicated with ISP tool through an I ² C interface.
ISP_RS485	Sample ISP firmware communicated with ISP tool through a RS485 interface.
ISP_SPI	Sample ISP firmware communicated with ISP tool through a SPI interface.
ISP_UART	Sample ISP firmware communicated with ISP tool through a UART interface.

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LED

Toggle P2.4 to turn on / off the board LED.

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ACMP	Demonstrate Analog comparator (ACMP) comparison by comparing CPP0 (P1.5) with Band-gap voltage and shows the result on UART console.
ACMP_TriggerTimerCapture	Show how to use Analog comparator (ACMP) state change to trigger timer capture function. P1.5 is used as comparator positive input and Band-gap voltage as negative input.
ADC_Compare	Demonstrate ADC conversion and comparison function by monitoring the conversion result of channel 0.
ADC_Convert	Demonstrate ADC function by repeatedly convert the input of ADC channel 0 (P5.3) and shows the result on UART console.
FMC_RW	Show FMC read flash IDs, erase, read, and write functions.
GPIO_Debounce	Demonstrate GPIO de-bounce function.
GPIO_Interrupt	Shows the usage of GPIO interrupt function.
GPIO_Toggle	Show how to toggle GPIO pin.
GPIO_Wakeup	Show how to wake up system from Power-down mode by GPIO interrupt.
I2C_Interrupt_EEPROM	Read/write EEPROM via I ² C interface using interrupt mode.
I2C_Master	Demonstrate how a Master access Slave. This sample code needs to work with I2C_SLAVE.
I2C_Slave	Demonstrate how to set I2C in Slave mode to receive the data of a Master. This sample code needs to work with I2C_MASTER.
PWM_DeadZone	Demonstrate the dead-zone feature with PWM.
PWM_DoubleBuffer	Demonstrate the PWM double buffer feature.

SPI_LoopBack	Demonstrate SPI function by connect MOSI (P0.5) with MISO (P0.6).
SPI_MasterFIFOmode	Demonstrate how to communicate with an off-chip SPI slave device using FIFO mode.
SPI_MasterMode	Demonstrate how to communicate with an off-chip SPI slave device. This sample code needs to work with SPI_SlaveMode.
SPI_SlaveFIFOmode	Demonstrate how to communicate with an off-chip SPI master device using FIFO mode.
SPI_SlaveMode	Demonstrate how to communicate with an off-chip SPI master device. This sample code needs to work with SPI_MasterMode.
Timer_EventCounter	Use pin P3.4 to demonstrates timer event counter function.
Timer_FreeCountingMode	Use the timer pin P3.2 to demonstrate timer free counting 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 P3.4.
Timer_TriggerCountingMode	Use the timer pin P3.2 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_AutoFlow	Show how to transmit and receive data using auto flow control.
UART_IrDA	Show how to transmit and receive UART data in UART IrDA mode.
UART_RS485	Transmit and receive data in UART RS485 mode.
UART_TxRx_Function	Transmit and receive data from PC terminal through RS232 interface.

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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ACMP	Demonstrate Analog comparator (ACMP) comparison by comparing CPP0 (P1.5) with Band-gap voltage and shows the result on UART console.
ADC_Compare	Demonstrate ADC conversion and comparison function by monitoring the conversion result of channel 0.
ADC_Convert	Demonstrate ADC function by repeatedly convert the input of ADC channel 0 (P5.3) and shows the result on UART console.
FMC_IAP	This sample code includes LDROM image (fmc_ld_iap) and APROM image (fmc_ap_main). It shows how to branch between APROM and LDROM. To run this sample code, the boot mode must be "Boot from APROM with IAP".
FMC_RW	Show FMC read flash IDs, erase, read, and write functions.
GPIO_Debounce	Demonstrate GPIO de-bounce function.
GPIO_Interrupt	Shows the usage of GPIO interrupt function.
GPIO_Toggle	Show how to toggle GPIO pin.
GPIO_Wakeup	Show how to wake up system from Power-down mode by GPIO interrupt.
I2C_Interrupt_EEPROM	Read/write EEPROM via I ² C interface using interrupt mode.
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SPI_MasterMode	Demonstrate how to communicate with an off-chip SPI slave device. This sample code needs to work with SPI_SlaveMode.
SPI_SlaveFIFOmode	Demonstrate how to communicate with an off-chip SPI master device using FIFO mode.
SPI_SlaveMode	Demonstrate how to communicate with an off-chip SPI master device. This sample code needs to work with SPI_MasterMode.
SYS	Demonstrate how to get PDID, get and clear reset source, configure BOD, and output system clock to CKO pin with the system clock / 4 frequency.
Timer_Delay	Demonstrate the usage of TIMER_Delay() API to generate a 1 second delay
Timer_EventCounter	Use pin P3.4 to demonstrates timer event counter function.
Timer_FreeCountingMode	Use the timer pin P3.2 to demonstrate timer free counting 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 P3.4.
Timer_TriggerCountingMode	Use the timer pin P3.2 to demonstrate timer trigger counting mode function. And displays the measured input frequency to UART console.
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UART_IrDA	Show how to transmit and receive UART data in UART IrDA mode.
UART_RS485	Transmit and receive data in UART RS485 mode.
UART_TxRx_Function	Transmit and receive data from PC terminal through RS232 interface.
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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