# **NUC122 Board Supporting Package Directory Introduction**

Rev.3.00.004

### **Directory Information**

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

#### **Document Information**

BSP Revision History	Show all the revision history about specific BSP.
Driver Reference Guide	Describe the definition, input and output of each API.

#### **Library Information**

CMSIS	CMSIS definitions by ARM® Corp.
Device	CMSIS compliant device header file.
StdDriver	All peripheral driver header and source files.

#### **Sample Code Information**

\SampleCode\Hard_Fault_ Sample	Show hard fault information when hard fault happened.
\SampleCode\ISP	Sample codes for In-System-Programming.
\SampleCode\Template	Software Development Template.
\SampleCode\Semihost	Show how to debug with semi-host message print.
\SampleCode\RegBased	The sample codes which access control registers directly.
\SampleCode\StdDriver	NUC122 Driver Samples

### \SampleCode\ISP

ISP_DFU	In-System-Programming Sample code through USB interface and following Device Firmware Upgrade Class Specification.
ISP_HID	In-System-Programming Sample code through USB HID interface.
ISP_I2C	In-System-Programming Sample code through I2C interface.
ISP_RS485	In-System-Programming Sample code through RS485 interface.
ISP_SPI	In-System-Programming Sample code through SPI interface.
ISP_UART	In-System-Programming Sample code through UART interface.

### **\SampleCode\RegBased**

FMC_RW	Show how to read/program embedded flash by ISP function.
GPIO_EINTAndDebounce	Show the usage of GPIO external interrupt function and debounce function.
GPIO_INT	Show the usage of GPIO interrupt function.
GPIO_OutputInput	Show how to set GPIO pin mode and use pin data input/output control.
GPIO_PowerDown	Show how to wake up system from Power-down mode by GPIO interrupt.
GPIO_SwDebounce	Demonstrate how to imeplement software debounce with GPIO interrupt and timer.
I2C_EEPROM	Show how to use I <sup>2</sup> C interface to access EEPROM.
I2C_GCMode_Master	Show how a Master uses I <sup>2</sup> C address 0x0 to write data to Slave. This sample code needs to work with I2C_GCMode_Slave.
I2C_GCMode_Slave	Show a Slave how to receive data from Master in GC (General Call) mode. This sample code needs to work with I2C_GCMode_Master.
I2C_Master	Show a Master how to access Slave. This sample code needs to work with I2C_Slave.
I2C_Slave	Show how to set I <sup>2</sup> C in Slave mode and receive the data from Master. This sample code needs to work with I2C_Master.
PS2	Show how to control PS/2 mouse movement on the screen.
PWM_Capture	Capture the PWMA Channel 1 waveform by PWMA Channel 0.
PWM_DeadZone	Demonstrate how to use PWM Dead Zone function.
PWM_DoubleBuffer	Change duty cycle and period of output waveform by PWM Double Buffer function.

RTC_PowerDown	Use RTC alarm interrupt event to wake-up system.
RTC_TimeAndTick	Get the current RTC data/time per tick.
SPI_Loopback	Implement SPI Master loop back transfer. This sample code needs to connect MISO00 pin and MOSI00 pin together. It will compare the received data with transmitted data.
SPI_MasterMode	Configure SPI0 as Master mode and demonstrate how to communicate with an off-chip SPI Slave device. This sample code needs to work with SPI_SlaveMode sample code.
SPI_SlaveMode	Configure SPI0 as Slave mode and demonstrate how to communicate with an off-chip SPI Master device. This sample code needs to work with SPI_MasterMode sample code.
SYS	Change system clock to different PLL frequency.
TIMER_Counter	Implement timer1 event counter function to count the external input event.
TIMER_PeriodicINT	Implement timer counting in periodic mode.
UART_Autoflow_Master	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Slave.
UART_Autoflow_Slave	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Master.
UART_IrDA_Master	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Slave.
UART_IrDA_Slave	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Master.
UART_RS485_Master	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Slave.
UART_RS485_Slave	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Master.
UART_TxRx_Function	Transmit and receive data from PC terminal through RS232 interface.

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UART_Wakeup	Show how to wake up system form Power-down mode by UART interrupt.
WDT_PowerDown	Use WDT time-out interrupt event to wake-up system.
WDT_TimeoutINT	Implement periodic WDT time-out interrupt event.
WDT_TimeoutReset	Show how to generate time-out reset system event while WDT time-out reset delay period expired.

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## \SampleCode\StdDriver

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GPIO_INT	Show the usage of GPIO interrupt function.
GPIO_OutputInput	Show how to set GPIO pin mode and use pin data input/output control.
GPIO_PowerDown	Show how to wake up system from Power-down mode by GPIO interrupt.
GPIO_SwDebounce	Demonstrate how to imeplement software debounce with GPIO interrupt and timer.
I2C_EEPROM	Show how to use I <sup>2</sup> C interface to access EEPROM.
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I2C_Master	Show a Master how to access Slave. This sample code needs to work with I2C_Slave.
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PS2	Show how to control PS/2 mouse movement on the screen.
PWM_Capture	Capture the PWMA Channel 1 waveform by PWMA Channel 0.
PWM_DeadZone	Demonstrate how to use PWM Dead Zone function.
PWM_DoubleBuffer	Change duty cycle and period of output waveform by PWM Double Buffer function.

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RTC_PowerDown	Use RTC alarm interrupt event to wake-up system.
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SPI_Loopback	Implement SPI Master loop back transfer. This sample code needs to connect MISO00 pin and MOSI00 pin together. It will compare the received data with transmitted data.
SPI_MasterMode	Configure SPI0 as Master mode and demonstrate how to communicate with an off-chip SPI Slave device. This sample code needs to work with SPI_SlaveMode sample code.
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UART_Autoflow_Slave	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Master.
UART_IrDA_Master	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Slave.
UART_IrDA_Slave	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Master.
UART_RS485_Master	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Slave.
UART_RS485_Slave	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Master.
UART_TxRx_Function	Transmit and receive data from PC terminal through RS232 interface.

UART_Wakeup	Show how to wake up system form Power-down mode by UART interrupt.
USBD_HID_Keyboard	Show how to implement a USB keyboard device. This sample code supports to use GPIO to simulate key input.
USBD_HID_Mouse	Show how to implement a USB mouse device. The mouse cursor will move automatically when this mouse device connecting to PC by USB.
USBD_HID_Mouse2	Demonstrate how to implement a USB mouse device. It use PC0 ~ PC5 to control mouse direction and mouse key. It also supports USB suspend and remote wakeup.
USBD_VCOM	Implement a USB virtual COM port device. It supports one virtual COM port.
USBD_HID_Transfer	Transfer data between USB device and PC through USB HID interface. A windows tool is also included in this sample code to connect with USB device.
USBD_Billboard	A a sample code to show the implementation of USB Billboard Class.
WDT_PowerDown	Use WDT time-out interrupt event to wake-up system.
WDT_TimeoutINT	Implement periodic WDT time-out interrupt event.
WDT_TimeoutReset	Show how to generate time-out reset system event while WDT time-out reset delay period expired.

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