

# **NUC122 Board Supporting Package Directory Introduction**

Rev.3.00.002

## Directory Information

<b>Document</b>	Driver reference manual and revision history.
<b>Library</b>	Driver header and source files.
<b>SampleCode</b>	Driver sample code.

## Document Information

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

## Library Information

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

## Sample Code Information

<b>\SampleCode\Hard_Fault_Sample</b>	Show hard fault information when hard fault happened.
<b>\SampleCode\Template</b>	Software Development Template.
<b>\SampleCode\Semihost</b>	Show how to debug with semi-host message print.
<b>\SampleCode\RegBased</b>	The sample codes which access control registers directly.
<b>\SampleCode\StdDriver</b>	NUC122 Driver Samples

## \SampleCode\RegBased

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

<b>RTC_PowerDown</b>	Use RTC alarm interrupt event to wake-up system.
<b>RTC_TimeAndTick</b>	Get the current RTC data/time per tick.
<b>SPI_Loopback</b>	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.
<b>SPI_MasterMode</b>	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.
<b>SPI_SlaveMode</b>	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.
<b>SYS</b>	Change system clock to different PLL frequency.
<b>TIMER_Counter</b>	Implement timer1 event counter function to count the external input event.
<b>TIMER_PeriodicINT</b>	Implement timer counting in periodic mode.
<b>UART_Autoflow_Master</b>	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Slave.
<b>UART_Autoflow_Slave</b>	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Master.
<b>UART_IrDA_Master</b>	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Slave.
<b>UART_IrDA_Slave</b>	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Master.
<b>UART_RS485_Master</b>	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Slave.
<b>UART_RS485_Slave</b>	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Master.
<b>UART_TxRx_Function</b>	Transmit and receive data from PC terminal through RS232 interface.

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

### **\SampleCode\StdDriver**

<b>FMC_RW</b>	Show how to read/program embedded flash by ISP function.
<b>GPIO_EINTAndDebounce</b>	Show the usage of GPIO external interrupt function and debounce function.
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<b>GPIO_OutputInput</b>	Show how to set GPIO pin mode and use pin data input/output control.
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<b>I2C_EEPROM</b>	Show how to use I <sup>2</sup> C interface to access EEPROM.
<b>I2C_GCMode_Master</b>	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.

<b>I2C_GCMode_Slave</b>	Show a Slave how to receive data from Master in GC (General Call) mode. This sample code needs to work with I2C_GCMode_Master.
<b>I2C_Master</b>	Show a Master how to access Slave. This sample code needs to work with I2C_Slave.
<b>I2C_Slave</b>	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.
<b>PS2</b>	Show how to control PS/2 mouse movement on the screen.
<b>PWM_Capture</b>	Capture the PWMA Channel 1 waveform by PWMA Channel 0.
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<b>PWM_DoubleBuffer</b>	Change duty cycle and period of output waveform by PWM Double Buffer function.
<b>RTC_PowerDown</b>	Use RTC alarm interrupt event to wake-up system.
<b>RTC_TimeAndTick</b>	Get the current RTC data/time per tick.
<b>SPI_Loopback</b>	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.
<b>SPI_MasterMode</b>	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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<b>TIMER_Counter</b>	Implement timer1 event counter function to count the external input event.
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<b>UART_Autoflow_Master</b>	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Slave.
<b>UART_Autoflow_Slave</b>	Transmit and receive data with auto flow control. This sample code needs to work with UART_Autoflow_Master.
<b>UART_IrDA_Master</b>	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Slave.
<b>UART_IrDA_Slave</b>	Transmit and receive data in UART IrDA mode. This sample code needs to work with UART_IrDA_Master.
<b>UART_RS485_Master</b>	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Slave.
<b>UART_RS485_Slave</b>	Transmit and receive data in UART RS485 mode. This sample code needs to work with UART_RS485_Master.
<b>UART_TxRx_Function</b>	Transmit and receive data from PC terminal through RS232 interface.
<b>UART_Wakeup</b>	Show how to wake up system form Power-down mode by UART interrupt.
<b>USBD_HID_Keyboard</b>	Show how to implement a USB keyboard device. This sample code supports to use GPIO to simulate key input.
<b>USBD_HID_Mouse</b>	Show how to implement a USB mouse device. The mouse cursor will move automatically when this mouse device connecting to PC by USB.
<b>USBD_HID_Mouse2</b>	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.
<b>USBD_VCOM</b>	Implement a USB virtual COM port device. It supports one virtual COM port.
<b>USBD_HID_Transfer</b>	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.
<b>USBD_Billboard</b>	A a sample code to show the implementation of USB



	Billboard Class.
<b>WDT_PowerDown</b>	Use WDT time-out interrupt event to wake-up system.
<b>WDT_TimeoutINT</b>	Implement periodic WDT time-out interrupt event.
<b>WDT_TimeoutReset</b>	Show how to generate time-out reset system event while WDT time-out reset delay period expired.

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