RCC CDD

for

LCD\_LED\_UART

Prepared by: Moustafa Ghareeb

Mar 27, 2020

**Contents**

[**1.** **Global Variables** 1](#_Toc36227208)

[**2.** **Configurations** 1](#_Toc36227209)

[**3.** **RCC APIs** 2](#_Toc36227210)

# **Global Variables**

**N/A**

# **Configurations**

**N/A**

1. **RCC APIs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8SystemClockSelect(u8 source) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | source:   * Type: u8 * Description: System clock source [HIS-HSE-PLL] | Output signal | N/A |
| **Description** | The functionality of this API is to switch the SYSCLK to the desired input clock . | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8EnableClock(u8 source) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | source:   * Type: u8 * Description: System clock source [HIS-HSE-PLL] | Output signal | N/A |
| **Description** | The functionality of this API is to enables a certain clock. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8DisableClock(u8 source) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | source:   * Type: u8 * Description: System clock source  [HIS-HSE-PLL] | Output signal | N/A |
| **Description** | The functionality of this API is to disables a certain clock. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8BusPrescaler(u8 bus,u16 division) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | bus:   * Type: u8 * Description: System bus [APB2-APB1-AHB]   division:   * Type: u16 * Description: prescaler for the bus [1-2-4-8-16] + [64-128-256-512] "for th AHB" | Output signal | N/A |
| **Description** | The functionality of this API is to configure the prescaler of any desired bus by the desired value. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8PLLConfigure(u8 source,u8 division,u8 multiplier) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | bus:   * Type: u8 * Description: System bus [HSI-HSE]   division:   * Type: u8 * Description: prescaler divider for the PLL source [1-2]   multiplier:   * Type: u8 * Description: prescaler multiplier for the PLL source [2-3-4-5-6-7-8-9-10-11-12-13-14-15-16] | Output signal | N/A |
| **Description** | The functionality of this API is to configure the prescaler of the PLL clock and its source. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8MCOConfigure(u32 source) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | source:   * Type: u32 * Description: Clock source for the MCO pin [MCO\_SYS-MCO\_HSI-MCO\_HSE-MCO\_PLL] | Output signal | N/A |
| **Description** | The functionality of this API is to configure the clock for the MCO pin. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8EnablePeripheral(u32 peripheral) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | peripheral:   * Type: u32 * Description: Microprocessor’s peripheral [SDIO-FSMC-CRC-FLIT-SRAM-DMA2-DMA1-TIM11-TIM10-TIM9-ADC3-USART1-TIM8-SPI1-TIM1-ADC2-ADC1-IOPG-IOPF-IOPE-IOPD-IOPC-IOPB-IOPA-AFIO] | Output signal | N/A |
| **Description** | The functionality of this API is to enable the clock on a certain peripheral. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8DisablePeripheral(u32 peripheral) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | peripheral:   * Type: u32 * Description: Microprocessor’s peripheral [SDIO-FSMC-CRC-FLIT-SRAM-DMA2-DMA1-TIM11-TIM10-TIM9-ADC3-USART1-TIM8-SPI1-TIM1-ADC2-ADC1-IOPG-IOPF-IOPE-IOPD-IOPC-IOPB-IOPA-AFIO] | Output signal | N/A |
| **Description** | The functionality of this API is to disable the clock on a certain peripheral. | | |
| **Type (Public/Private)** | Public | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | RCC | | |
| **API Name** | STD\_ERROR RCC\_u8GetPeripheralFreq(u32 peripheral ,u32 \*local\_sysclk) | | |
| **Return type** | It’s u8 Error\_Status, it returns OK or NOT\_OK   |  |  | | --- | --- | | OK | 0 | | NOT\_OK | 1 | | | |
| **Input signal** | peripheral :   * Type: u32 * Description: Microprocessor’s peripheral [SDIO-FSMC-CRC-FLIT-SRAM-DMA2-DMA1- SYSTK-TIM11-TIM10-TIM9-ADC3-USART1-TIM8-SPI1-TIM1-ADC2-ADC1-IOPG-IOPF-IOPE-IOPD-IOPC-IOPB-IOPA-AFIO] | Output signal | local\_sysclk:   * Type: u32\* * Description: Peripheral’s frequency in MHz. |
| **Description** | The functionality of this API is to get the frequency of a certain peripheral in MHz. | | |
| **Type (Public/Private)** | Public | | |