# 1. Description

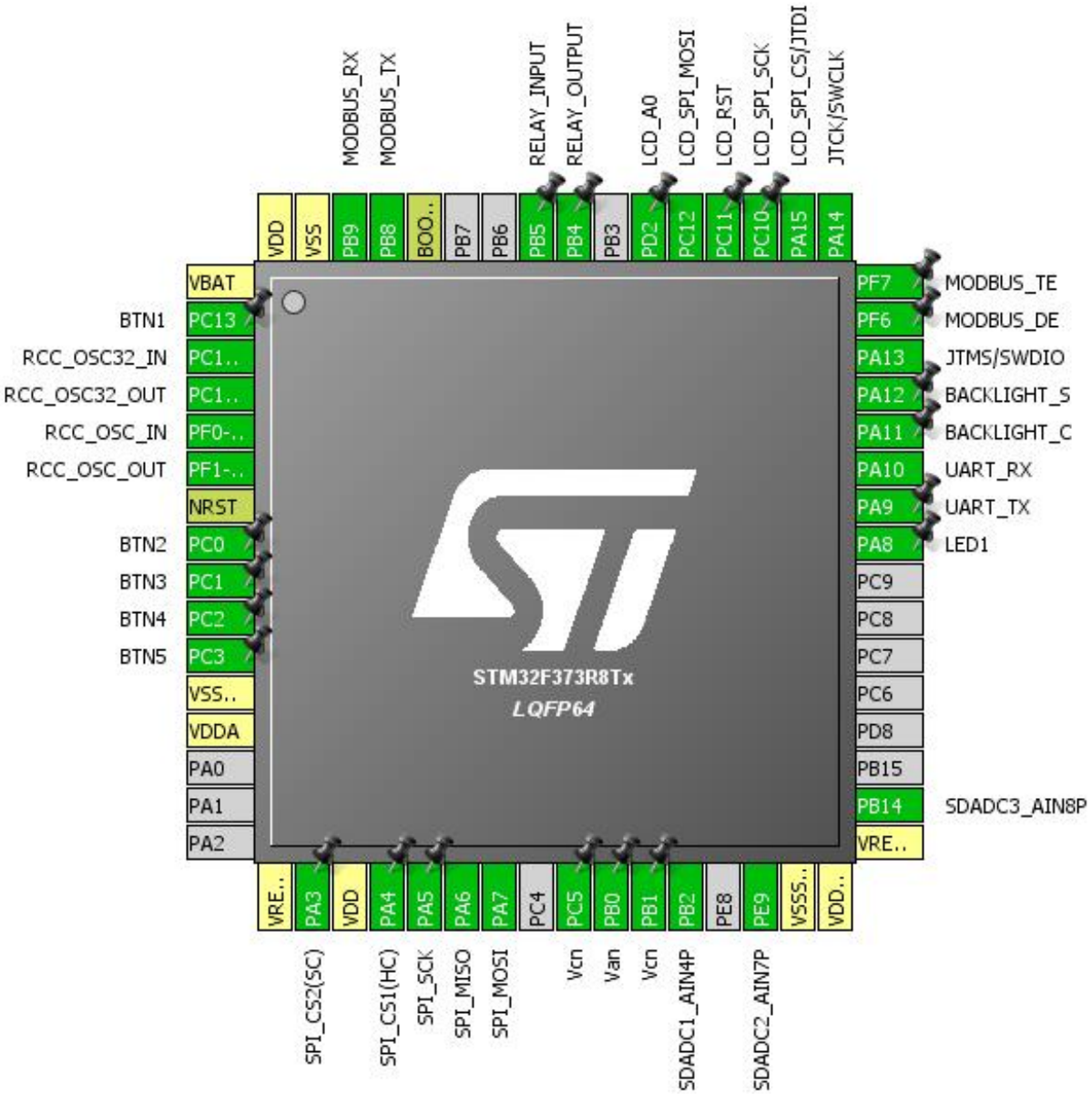
## 1.1. Project

| | |
|---|---|
| Project Name | v4ea |
| Board Name | v4ea |
| Generated with: | STM32CubeMX 4.25.0 |
| Date | 03/16/2018 |

## 1.2. MCU

| | |
|---|---|
| MCU Series | STM32F3 |
| MCU Line | STM32F373 |
| MCU name | STM32F373R8Tx |
| MCU Package | LQFP64 |
| MCU Pin number | 64 |

# 2. Pinout Configuration



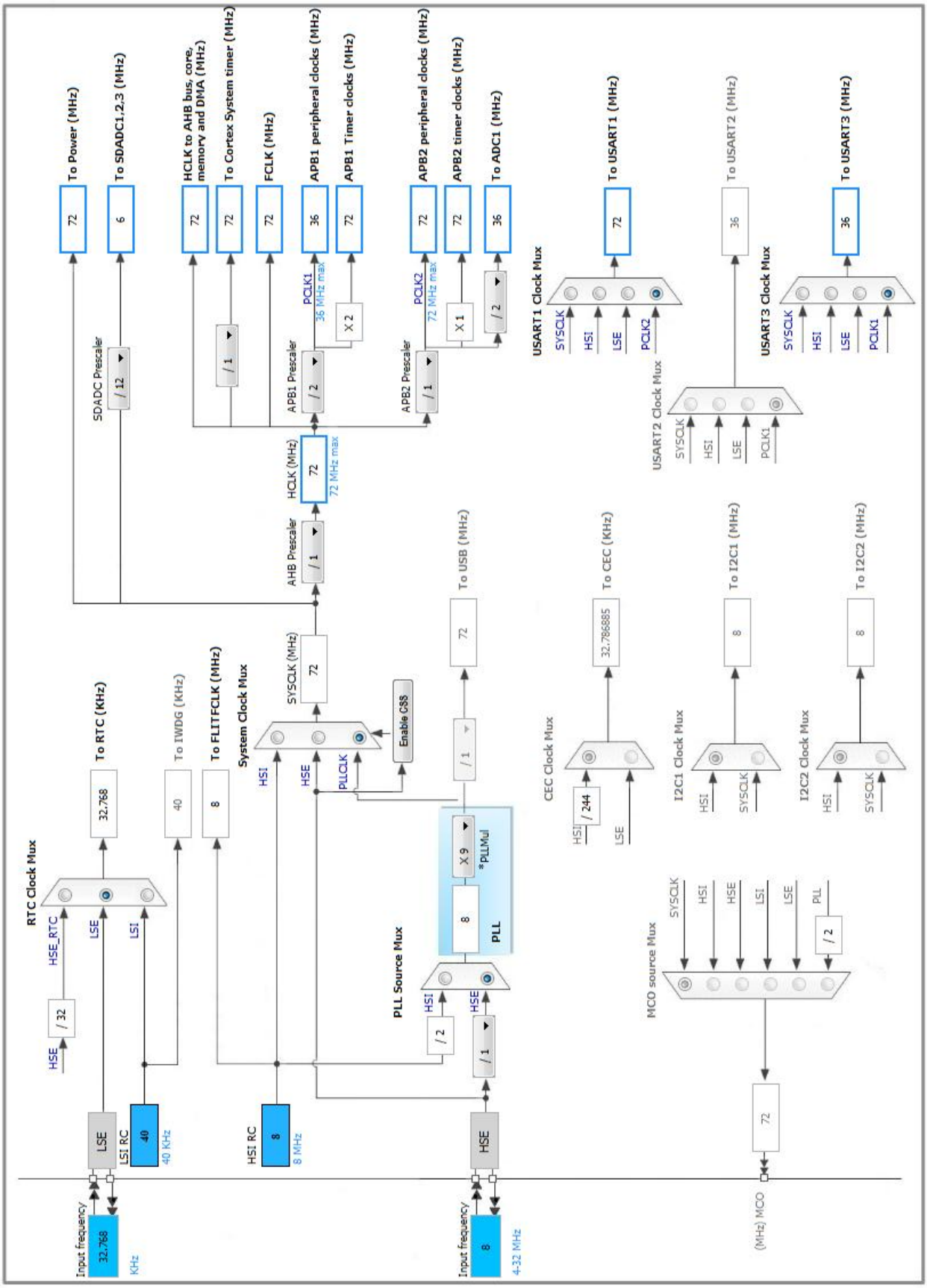
# 3. Pins Configuration

| Pin Number LQFP64 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|---|---|---|---|---|
| 1 | VBAT | Power | | |
| 2 | PC13 * | I/O | GPIO_Input | BTN1 |
| 3 | PC14-OSC32_IN | I/O | RCC_OSC32_IN | |
| 4 | PC15-OSC32_OUT | I/O | RCC_OSC32_OUT | |
| 5 | PF0-OSC_IN | I/O | RCC_OSC_IN | |
| 6 | PF1-OSC_OUT | I/O | RCC_OSC_OUT | |
| 7 | NRST | Reset | | |
| 8 | PC0 * | I/O | GPIO_Input | BTN2 |
| 9 | PC1 * | I/O | GPIO_Input | BTN3 |
| 10 | PC2 * | I/O | GPIO_Input | BTN4 |
| 11 | PC3 * | I/O | GPIO_Input | BTN5 |
| 12 | VSSA/VREF- | Power | | |
| 13 | VDDA | Power | | |
| 17 | VREF+ | Power | | |
| 18 | PA3 * | I/O | GPIO_Output | SPI_CS2(SC) |
| 19 | VDD | Power | | |
| 20 | PA4 | I/O | SPI1_NSS | SPI_CS1(HC) |
| 21 | PA5 | I/O | SPI1_SCK | SPI_SCK |
| 22 | PA6 | I/O | SPI1_MISO | SPI_MISO |
| 23 | PA7 | I/O | SPI1_MOSI | SPI_MOSI |
| 25 | PC5 | I/O | ADC1_IN15 | Vcn |
| 26 | PB0 | I/O | ADC1_IN8 | Van |
| 27 | PB1 | I/O | ADC1_IN9 | Vcn |
| 28 | PB2 | I/O | SDADC1_AIN4P | |
| 30 | PE9 | I/O | SDADC2_AIN7P | |
| 31 | VSSSD/VREFSD- | Power | | |
| 32 | VDDSD | Power | | |
| 33 | VREFSD+ | Power | | |
| 34 | PB14 | I/O | SDADC3_AIN8P | |
| 41 | PA8 * | I/O | GPIO_Output | LED1 |
| 42 | PA9 | I/O | USART1_TX | UART_TX |
| 43 | PA10 | I/O | USART1_RX | UART_RX |
| 44 | PA11 | I/O | TIM5_CH2 | BACKLIGHT_C |
| 45 | PA12 | I/O | TIM5_CH3 | BACKLIGHT_S |
| 46 | PA13 | I/O | SYS_JTMS-SWDIO | JTMS/SWDIO |
| 47 | PF6 | I/O | USART3_DE | MODBUS_DE |

| Pin Number LQFP64 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|---|---|---|---|---|
| 48 | PF7 * | I/O | GPIO_Output | MODBUS_TE |
| 49 | PA14 | I/O | SYS_JTCK-SWCLK | JTCK/SWCLK |
| 50 | PA15 | I/O | SPI3_NSS | LCD_SPI_CS/JTDI |
| 51 | PC10 | I/O | SPI3_SCK | LCD_SPI_SCK |
| 52 | PC11 * | I/O | GPIO_Output | LCD_RST |
| 53 | PC12 | I/O | SPI3_MOSI | LCD_SPI_MOSI |
| 54 | PD2 * | I/O | GPIO_Output | LCD_A0 |
| 56 | PB4 * | I/O | GPIO_Output | RELAY_OUTPUT |
| 57 | PB5 * | I/O | GPIO_Input | RELAY_INPUT |
| 60 | BOOT0 | Boot | | |
| 61 | PB8 | I/O | USART3_TX | MODBUS_TX |
| 62 | PB9 | I/O | USART3_RX | MODBUS_RX |
| 63 | VSS | Power | | |
| 64 | VDD | Power | | |

* The pin is affected with an I/O function

# 4. Clock Tree Configuration



# 5. IPs and Middleware Configuration

## 5.1. ADC1

**mode: IN8**

**mode: IN9**

**mode: IN15**

**mode: Temperature Sensor Channel**

**mode: Vrefint Channel**

**mode: Vbat Channel**

### 5.1.1. Parameter Settings:

**ADC_Settings:**

| | |
|---|---|
| Data Alignment | Right alignment |
| Scan Conversion Mode | Enabled |
| Continuous Conversion Mode | **Enabled *** |
| Discontinuous Conversion Mode | Disabled |

**ADC_Regular_ConversionMode:**

| | |
|---|---|
| Enable Regular Conversions | Enable |
| Number Of Conversion | **3 *** |
| External Trigger Conversion Source | **Timer 19 Trigger Out event *** |
| Rank | 1 |
| Channel | Channel 8 |
| Sampling Time | **7.5 Cycles *** |
| Rank | **2 *** |
| Channel | **Channel 9 *** |
| Sampling Time | **7.5 Cycles *** |
| Rank | **3 *** |
| Channel | **Channel 9 *** |
| Sampling Time | **7.5 Cycles *** |

**ADC_Injected_ConversionMode:**

| | |
|---|---|
| Number Of Conversions | **3 *** |
| External Trigger Source | Injected Conversion launched by software |
| Injected Conversion Mode | **Discontinuous Mode *** |
| Rank | 1 |
| Channel | **Channel Vbat *** |

| | |
|---|---|
| Sampling Time | 1.5 Cycles |
| Injected Offset | 0 |
| Rank | **2 *** |
| Channel | **Channel Vrefint *** |
| Sampling Time | 1.5 Cycles |
| Injected Offset | 0 |
| Rank | **3 *** |
| Channel | **Channel Temperature Sensor *** |
| Sampling Time | 1.5 Cycles |
| Injected Offset | 0 |

**WatchDog:**

| | |
|---|---|
| Enable Analog WatchDog Mode | false |

## *5.2. RCC*

**High Speed Clock (HSE): Crystal/Ceramic Resonator**

**Low Speed Clock (LSE) : Crystal/Ceramic Resonator**

### 5.2.1. Parameter Settings:

**System Parameters:**

| | |
|---|---|
| VDD voltage (V) | 3.3 |
| Prefetch Buffer | Enabled |
| Flash Latency(WS) | 2 WS (3 CPU cycle) |

**RCC Parameters:**

| | |
|---|---|
| HSI Calibration Value | 16 |
| HSE Startup Timout Value (ms) | 100 |
| LSE Startup Timout Value (ms) | 5000 |
| LSE Drive Capability | LSE oscillator low drive capability |

## *5.3. RTC*

**mode: Activate Clock Source**

### 5.3.1. Parameter Settings:

**General:**

| | |
|---|---|
| Hour Format | Hourformat 24 |

| | |
|---|---|
| Asynchronous Predivider value | 127 |
| Synchronous Predivider value | 255 |

## *5.4. SDADC1*

### IN4: IN4-Single-Ended zero reference mode: Conversion Configuration 2

### 5.4.1. Parameter Settings:

**General Settings:**

| | |
|---|---|
| Low Power Mode | None |
| Fast Conversion Mode | Disable |
| Slow Clock Mode | Disable |
| Reference Voltage | Forced externally using VREF pin |

**Conversion Configuration 2:**

| | |
|---|---|
| Input Mode | **Single-ended zero-volt reference mode *** |
| Gain | equal to 1 |
| Common Mode | SDADC VSSA |
| Offset | 0 |

**SDADC Regular Conversions Settings:**

| | |
|---|---|
| Enable Regular Conversion | Disable |

**SDADC Injected Conversions Settings:**

| | |
|---|---|
| Enable Injected Conversion | **Enable *** |
| Number of Channels To be converted | **1 *** |
| Trigger type | **External trigger *** |
| External Trigger Edge | Rising edge |
| External Trigger source | **Timer 19 Capture Compare 2 *** |
| Injected Delay | Disable |
| Injected Mulimode type | Disable |
| Continuous Mode | Disabled |
| Channel Configuration | 1 |
| Channel | Channel 4 |
| Configuration Index | Configuration 2 |

## *5.5. SDADC2*

### IN7: IN7-Single-Ended zero reference mode: Conversion Configuration 2

#### 5.5.1. Parameter Settings:

**General Settings:**

| | |
|---|---|
| Low Power Mode | None |
| Fast Conversion Mode | Disable |
| Slow Clock Mode | Disable |
| Reference Voltage | Forced externally using VREF pin |

**Conversion Configuration 2:**

| | |
|---|---|
| Input Mode | **Single-ended zero-volt reference mode *** |
| Gain | equal to 1 |
| Common Mode | SDADC VSSA |
| Offset | 0 |

**SDADC Regular Conversions Settings:**

| | |
|---|---|
| Enable Regular Conversion | Disable |

**SDADC Injected Conversions Settings:**

| | |
|---|---|
| Enable Injected Conversion | **Enable *** |
| Number of Channels To be converted | **1 *** |
| Trigger type | **Synchronous trigger *** |
| Injected Delay | Disable |
| Continuous Mode | Disabled |
| Channel Configuration | 1 |
| Channel | Channel 7 |
| Configuration Index | Configuration 2 |

## *5.6. SDADC3*

### IN8: IN8-Single-Ended zero reference mode: Conversion Configuration 2

#### 5.6.1. Parameter Settings:

**General Settings:**

| | |
|---|---|
| Low Power Mode | None |
| Fast Conversion Mode | Disable |
| Slow Clock Mode | Disable |

| | |
|---|---|
| Reference Voltage | Forced externally using VREF pin |

**Conversion Configuration 2:**

| | |
|---|---|
| Input Mode | **Single-ended zero-volt reference mode *** |
| Gain | equal to 1 |
| Common Mode | SDADC VSSA |
| Offset | 0 |

**SDADC Regular Conversions Settings:**

| | |
|---|---|
| Enable Regular Conversion | Disable |

**SDADC Injected Conversions Settings:**

| | |
|---|---|
| Enable Injected Conversion | **Enable *** |
| Number of Channels To be converted | **1 *** |
| Trigger type | **Synchronous trigger *** |
| Injected Delay | Disable |
| Continuous Mode | Disabled |
| Channel Configuration | 1 |
| Channel | Channel 8 |
| Configuration Index | Configuration 2 |

## *5.7. SPI1*

**Mode: Full-Duplex Master**

**Hardware NSS Signal: Hardware NSS Output Signal**

### 5.7.1. Parameter Settings:

**Basic Parameters:**

| | |
|---|---|
| Frame Format | Motorola |
| Data Size | 4 Bits |
| First Bit | MSB First |

**Clock Parameters:**

| | |
|---|---|
| Prescaler (for Baud Rate) | **4 *** |
| Baud Rate | **18.0 MBits/s *** |
| Clock Polarity (CPOL) | Low |
| Clock Phase (CPHA) | 1 Edge |

**Advanced Parameters:**

| | |
|---|---|
| CRC Calculation | Disabled |
| NSSP Mode | Enabled |
| NSS Signal Type | Output Hardware |

## 5.8. SPI3

**Mode: Transmit Only Master**

**Hardware NSS Signal: Hardware NSS Output Signal**

### 5.8.1. Parameter Settings:

**Basic Parameters:**

| | |
|---|---|
| Frame Format | Motorola |
| Data Size | 4 Bits |
| First Bit | MSB First |

**Clock Parameters:**

| | |
|---|---|
| Prescaler (for Baud Rate) | 2 |
| Baud Rate | **18.0 MBits/s *** |
| Clock Polarity (CPOL) | Low |
| Clock Phase (CPHA) | 1 Edge |

**Advanced Parameters:**

| | |
|---|---|
| CRC Calculation | Disabled |
| NSSP Mode | Enabled |
| NSS Signal Type | Output Hardware |

## 5.9. SYS

**Debug: Serial Wire**

**Timebase Source: SysTick**

## 5.10. TIM3

**Clock Source : Internal Clock**

### 5.10.1. Parameter Settings:

**Counter Settings:**

| | |
|---|---|
| Prescaler (PSC - 16 bits value) | 0 |
| Counter Mode | Up |
| Counter Period (AutoReload Register - 16 bits value ) | 0 |
| Internal Clock Division (CKD) | No Division |
| auto-reload preload | Disable |

**Trigger Output (TRGO) Parameters:**

| | |
|---|---|
| Master/Slave Mode (MSM bit) | Disable (Trigger input effect not delayed) |
| Trigger Event Selection | Reset (UG bit from TIMx_EGR) |

## *5.11. TIM5*

**Channel2: PWM Generation CH2**

**Channel3: PWM Generation CH3**

### 5.11.1. Parameter Settings:

**Counter Settings:**

| | |
|---|---|
| Prescaler (PSC - 16 bits value) | 0 |
| Counter Mode | Up |
| Counter Period (AutoReload Register - 32 bits value ) | 0 |
| Internal Clock Division (CKD) | No Division |
| auto-reload preload | Disable |

**Trigger Output (TRGO) Parameters:**

| | |
|---|---|
| Master/Slave Mode (MSM bit) | Disable (Trigger input effect not delayed) |
| Trigger Event Selection | Reset (UG bit from TIMx_EGR) |

**PWM Generation Channel 2:**

| | |
|---|---|
| Mode | PWM mode 1 |
| Pulse (32 bits value) | 0 |
| Fast Mode | Disable |
| CH Polarity | High |

**PWM Generation Channel 3:**

| | |
|---|---|
| Mode | PWM mode 1 |
| Pulse (32 bits value) | 0 |
| Fast Mode | Disable |
| CH Polarity | High |

## *5.12. TIM19*

**Clock Source : Internal Clock**

**Channel1: Output Compare No Output**

### 5.12.1. Parameter Settings:

#### Counter Settings:

| | |
|---|---|
| Prescaler (PSC - 16 bits value) | 0 |
| Counter Mode | Up |
| Counter Period (AutoReload Register - 16 bits value ) | 0 |
| Internal Clock Division (CKD) | No Division |
| auto-reload preload | Disable |

#### Trigger Output (TRGO) Parameters:

| | |
|---|---|
| Master/Slave Mode (MSM bit) | Disable (Trigger input effect not delayed) |
| Trigger Event Selection | Reset (UG bit from TIMx_EGR) |

#### Output Compare No Output Channel 1:

| | |
|---|---|
| Mode | Frozen (used for Timing base) |
| Pulse (16 bits value) | 0 |
| CH Polarity | High |

## *5.13. USART1*

### Mode: Asynchronous

### 5.13.1. Parameter Settings:

#### Basic Parameters:

| | |
|---|---|
| Baud Rate | 38400 |
| Word Length | 8 Bits (including Parity) |
| Parity | None |
| Stop Bits | 1 |

#### Advanced Parameters:

| | |
|---|---|
| Data Direction | Receive and Transmit |
| Over Sampling | 16 Samples |
| Single Sample | Disable |

#### Advanced Features:

| | |
|---|---|
| Auto Baudrate | Disable |
| TX Pin Active Level Inversion | Disable |
| RX Pin Active Level Inversion | Disable |
| Data Inversion | Disable |
| TX and RX Pins Swapping | Disable |
| Overrun | Enable |
| DMA on RX Error | Enable |
| MSB First | Disable |

## *5.14. USART3*

**Mode: Asynchronous**

**mode: Hardware Flow Control (RS485)**

### 5.14.1. Parameter Settings:

**Basic Parameters:**

| | |
|---|---|
| Baud Rate | 38400 |
| Word Length | 8 Bits (including Parity) |
| Parity | None |
| Stop Bits | 1 |

**Advanced Parameters:**

| | |
|---|---|
| Data Direction | Receive and Transmit |
| Over Sampling | 16 Samples |
| Single Sample | Disable |
| Polarity | High |
| Assertion Time | 0 |
| Deassertion Time | 0 |

**Advanced Features:**

| | |
|---|---|
| Auto Baudrate | Disable |
| TX Pin Active Level Inversion | Disable |
| RX Pin Active Level Inversion | Disable |
| Data Inversion | Disable |
| TX and RX Pins Swapping | Disable |
| Overrun | Enable |
| DMA on RX Error | Enable |
| MSB First | Disable |

*** User modified value**

# 6. System Configuration

## 6.1. GPIO configuration

| IP | Pin | Signal | GPIO mode | GPIO pull/up pull down | Max Speed | User Label |
|---|---|---|---|---|---|---|
| ADC1 | PC5 | ADC1_IN15 | Analog mode | No pull up pull down | n/a | Vcn |
| | PB0 | ADC1_IN8 | Analog mode | No pull up pull down | n/a | Van |
| | PB1 | ADC1_IN9 | Analog mode | No pull up pull down | n/a | Vcn |
| RCC | PC14-OSC32_IN | RCC_OSC32_IN | n/a | n/a | n/a | |
| | PC15-OSC32_OUT | RCC_OSC32_OUT | n/a | n/a | n/a | |
| | PF0-OSC_IN | RCC_OSC_IN | n/a | n/a | n/a | |
| | PF1-OSC_OUT | RCC_OSC_OUT | n/a | n/a | n/a | |
| SDADC1 | PB2 | SDADC1_AIN4P | Analog mode | No pull up pull down | n/a | |
| SDADC2 | PE9 | SDADC2_AIN7P | Analog mode | No pull up pull down | n/a | |
| SDADC3 | PB14 | SDADC3_AIN8P | Analog mode | No pull up pull down | n/a | |
| SPI1 | PA4 | SPI1_NSS | Alternate Function Push Pull | No pull up pull down | **High *** | SPI_CS1(HC) |
| | PA5 | SPI1_SCK | Alternate Function Push Pull | No pull up pull down | **High *** | SPI_SCK |
| | PA6 | SPI1_MISO | Alternate Function Push Pull | No pull up pull down | **High *** | SPI_MISO |
| | PA7 | SPI1_MOSI | Alternate Function Push Pull | No pull up pull down | **High *** | SPI_MOSI |
| SPI3 | PA15 | SPI3_NSS | Alternate Function Push Pull | No pull up pull down | **High *** | LCD_SPI_CS/JTDI |
| | PC10 | SPI3_SCK | Alternate Function Push Pull | No pull up pull down | **High *** | LCD_SPI_SCK |
| | PC12 | SPI3_MOSI | Alternate Function Push Pull | No pull up pull down | **High *** | LCD_SPI_MOSI |
| SYS | PA13 | SYS_JTMS-SWDIO | n/a | n/a | n/a | JTMS/SWDIO |
| | PA14 | SYS_JTCK-SWCLK | n/a | n/a | n/a | JTCK/SWCLK |
| TIM5 | PA11 | TIM5_CH2 | Alternate Function Push Pull | No pull up pull down | Low | BACKLIGHT_C |
| | PA12 | TIM5_CH3 | Alternate Function Push Pull | No pull up pull down | Low | BACKLIGHT_S |
| USART1 | PA9 | USART1_TX | Alternate Function Push Pull | No pull up pull down | **High *** | UART_TX |
| | PA10 | USART1_RX | Alternate Function Push Pull | No pull up pull down | **High *** | UART_RX |
| USART3 | PF6 | USART3_DE | Alternate Function Push Pull | No pull up pull down | **High *** | MODBUS_DE |
| | PB8 | USART3_TX | Alternate Function Push Pull | No pull up pull down | **High *** | MODBUS_TX |
| | PB9 | USART3_RX | Alternate Function Push Pull | No pull up pull down | **High *** | MODBUS_RX |
| GPIO | PC13 | GPIO_Input | Input mode | No pull up pull down | n/a | BTN1 |

| IP | Pin | Signal | GPIO mode | GPIO pull/up pull down | Max Speed | User Label |
|---|---|---|---|---|---|---|
| | PC0 | GPIO_Input | Input mode | No pull up pull down | n/a | BTN2 |
| | PC1 | GPIO_Input | Input mode | No pull up pull down | n/a | BTN3 |
| | PC2 | GPIO_Input | Input mode | No pull up pull down | n/a | BTN4 |
| | PC3 | GPIO_Input | Input mode | No pull up pull down | n/a | BTN5 |
| | PA3 | GPIO_Output | Output Push Pull | No pull up pull down | Low | SPI_CS2(SC) |
| | PA8 | GPIO_Output | Output Push Pull | No pull up pull down | Low | LED1 |
| | PF7 | GPIO_Output | Output Push Pull | No pull up pull down | Low | MODBUS_TE |
| | PC11 | GPIO_Output | Output Push Pull | No pull up pull down | Low | LCD_RST |
| | PD2 | GPIO_Output | Output Push Pull | No pull up pull down | Low | LCD_A0 |
| | PB4 | GPIO_Output | Output Push Pull | No pull up pull down | Low | RELAY_OUTPUT |
| | PB5 | GPIO_Input | Input mode | No pull up pull down | n/a | RELAY_INPUT |

## 6.2. DMA configuration

| DMA request | Stream | Direction | Priority |
|---|---|---|---|
| ADC1 | DMA1_Channel1 | Peripheral To Memory | **Very High *** |
| SDADC3 | DMA2_Channel5 | Peripheral To Memory | **Very High *** |
| SDADC2 | DMA2_Channel4 | Peripheral To Memory | **Very High *** |
| SDADC1 | DMA2_Channel3 | Peripheral To Memory | **Very High *** |

### *ADC1: DMA1_Channel1 DMA request Settings:*

| | |
|---|---|
| Mode: | **Circular *** |
| Peripheral Increment: | Disable |
| Memory Increment: | **Enable *** |
| Peripheral Data Width: | **Word *** |
| Memory Data Width: | Half Word |

### *SDADC3: DMA2_Channel5 DMA request Settings:*

| | |
|---|---|
| Mode: | **Circular *** |
| Peripheral Increment: | Disable |
| Memory Increment: | **Enable *** |
| Peripheral Data Width: | **Word *** |
| Memory Data Width: | **Word *** |

### *SDADC2: DMA2_Channel4 DMA request Settings:*

| | |
|---|---|
| Mode: | **Circular *** |
| Peripheral Increment: | Disable |
| Memory Increment: | **Enable *** |
| Peripheral Data Width: | **Word *** |
| Memory Data Width: | **Word *** |

### *SDADC1: DMA2_Channel3 DMA request Settings:*

| | |
|---|---|
| Mode: | **Circular *** |
| Peripheral Increment: | Disable |

| | |
|---|---|
| Memory Increment: | **Enable *** |
| Peripheral Data Width: | **Word *** |
| Memory Data Width: | **Word *** |

## 6.3. NVIC configuration

| Interrupt Table | Enable | Preenmption Priority | SubPriority |
|---|---|---|---|
| Non maskable interrupt | true | 0 | 0 |
| Hard fault interrupt | true | 0 | 0 |
| Memory management fault | true | 0 | 0 |
| Prefetch fault, memory access fault | true | 0 | 0 |
| Undefined instruction or illegal state | true | 0 | 0 |
| System service call via SWI instruction | true | 0 | 0 |
| Debug monitor | true | 0 | 0 |
| Pendable request for system service | true | 0 | 0 |
| System tick timer | true | 0 | 0 |
| DMA1 channel1 global interrupt | true | 0 | 0 |
| DMA2 channel3 global interrupt | true | 0 | 0 |
| DMA2 channel4 global interrupt | true | 0 | 0 |
| DMA2 channel5 global interrupt | true | 0 | 0 |
| PVD interrupt through EXTI line16 | unused | | |
| Flash global interrupt | unused | | |
| RCC global interrupt | unused | | |
| ADC1 interrupt | unused | | |
| TIM3 global interrupt | unused | | |
| SPI1 global interrupt | unused | | |
| USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25 | unused | | |
| USART3 global interrupt / USART3 wake-up interrupt through EXTI line 28 | unused | | |
| TIM5 global interrupt | unused | | |
| SPI3 global interrupt | unused | | |
| SDADC1 global interrupt | unused | | |
| SDADC2 global interrupt | unused | | |
| SDADC3 global interrupt | unused | | |
| TIM19 global interrupt | unused | | |
| Floating point unit interrupt | unused | | |

*** User modified value**

# 7. Power Consumption Calculator report

7.1. Microcontroller Selection

| | |
|---|---|
| Series | STM32F3 |
| Line | STM32F373 |
| MCU | STM32F373R8Tx |
| Datasheet | 022691_Rev7 |

7.2. Parameter Selection

| | |
|---|---|
| Temperature | 25 |
| Vdd | 3.6 |

# 8. Software Project

## 8.1. Project Settings

| Name | Value |
|---|---|
| Project Name | v4ea |
| Project Folder | C:\Users\Viva\Dropbox\energy analyzer archives\ea_project |
| Toolchain / IDE | MDK-ARM V5 |
| Firmware Package Name and Version | STM32Cube FW_F3 V1.9.0 |

## 8.2. Code Generation Settings

| Name | Value |
|---|---|
| STM32Cube Firmware Library Package | Copy all used libraries into the project folder |
| Generate peripheral initialization as a pair of '.c/.h' files | Yes |
| Backup previously generated files when re-generating | No |
| Delete previously generated files when not re-generated | Yes |
| Set all free pins as analog (to optimize the power consumption) | No |

# 9. Software Pack Report