1. Description

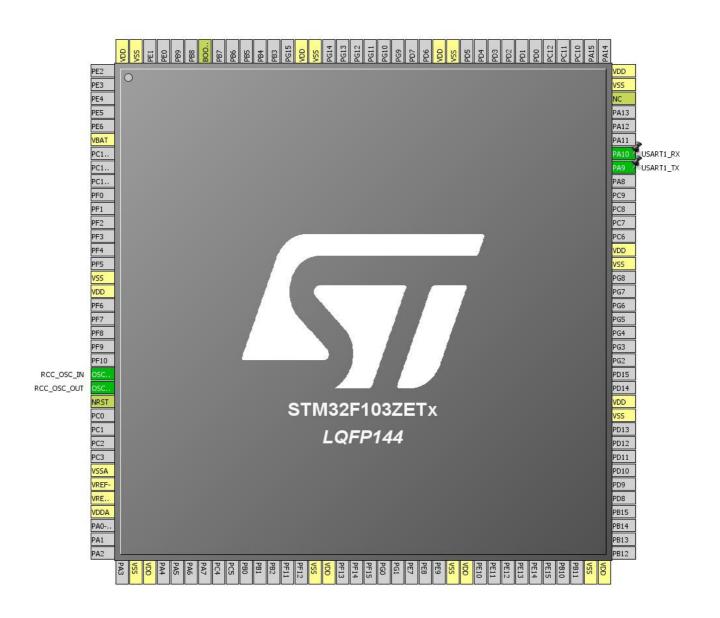
1.1. Project

| Project Name | YS-F1Pro |
|-----------------|--------------------|
| Board Name | YS-F1Pro |
| Generated with: | STM32CubeMX 4.14.0 |
| Date | 05/07/2016 |

1.2. MCU

| MCU Series | STM32F1 |
|----------------|---------------|
| MCU Line | STM32F103 |
| MCU name | STM32F103ZETx |
| MCU Package | LQFP144 |
| MCU Pin number | 144 |

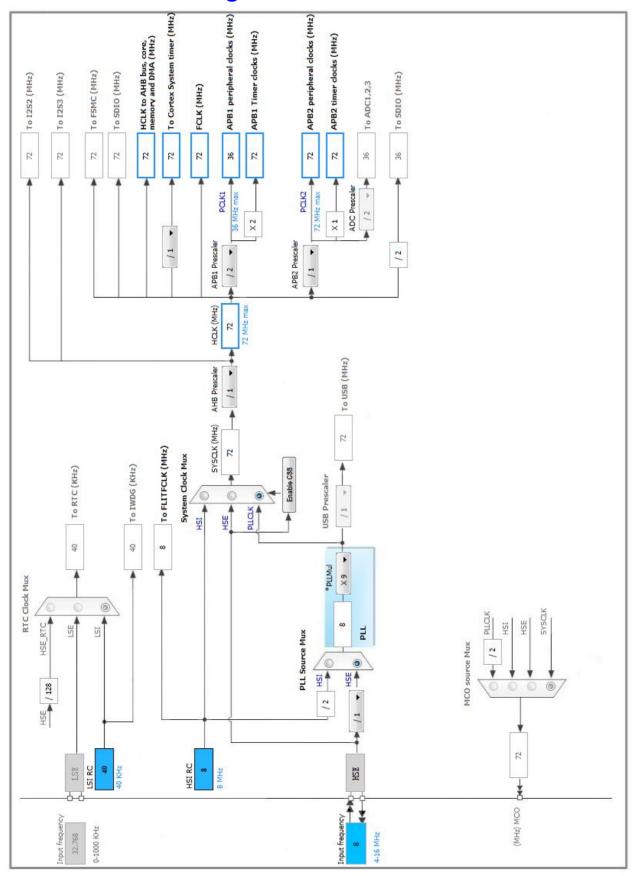
2. Pinout Configuration



3. Pins Configuration

| Pin Number LQFP144 | Pin Name (function after reset) | Pin Type | Alternate Function(s) | Label |
|-----------------------|---------------------------------------|----------|--------------------------|-------|
| 6 | VBAT | Power | | |
| 16 | VSS | Power | | |
| 17 | VDD | Power | | |
| 23 | OSC_IN | I/O | RCC_OSC_IN | |
| 24 | OSC_OUT | I/O | RCC_OSC_OUT | |
| 25 | NRST | Reset | | |
| 30 | VSSA | Power | | |
| 31 | VREF- | Power | | |
| 32 | VREF+ | Power | | |
| 33 | VDDA | Power | | |
| 38 | VSS | Power | | |
| 39 | VDD | Power | | |
| 51 | VSS | Power | | |
| 52 | VDD | Power | | |
| 61 | VSS | Power | | |
| 62 | VDD | Power | | |
| 71 | VSS | Power | | |
| 72 | VDD | Power | | |
| 83 | VSS | Power | | |
| 84 | VDD | Power | | |
| 94 | VSS | Power | | |
| 95 | VDD | Power | | |
| 101 | PA9 | I/O | USART1_TX | |
| 102 | PA10 | I/O | USART1_RX | |
| 106 | NC | NC | | |
| 107 | VSS | Power | | |
| 108 | VDD | Power | | |
| 120 | VSS | Power | | |
| 121 | VDD | Power | | |
| 130 | VSS | Power | | |
| 131 | VDD | Power | | |
| 138 | воото | Boot | | |
| 143 | VSS | Power | | |
| 144 | VDD | Power | | |

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

5.1.1. 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

5.2. SYS

Timebase Source: SysTick

5.3. **USART1**

Mode: Asynchronous

5.3.1. Parameter Settings:

Basic Parameters:

Baud Rate 115200

Word Length 8 Bits (including Parity)

Parity None Stop Bits 1

Advanced Parameters:

Data Direction Receive and Transmit

Over Sampling 16 Samples

^{*} User modified value

6. System Configuration

6.1. GPIO configuration

| IP | Pin | Signal | GPIO mode | GPIO pull/up pull | Max | User Label |
|--------|---------|-------------|------------------------------|-----------------------------|--------|------------|
| | | | | down | Speed | |
| RCC | OSC_IN | RCC_OSC_IN | n/a | n/a | n/a | |
| | OSC_OUT | RCC_OSC_OUT | n/a | n/a | n/a | |
| USART1 | PA9 | USART1_TX | Alternate Function Push Pull | n/a | High * | |
| | PA10 | USART1_RX | Input mode | No pull-up and no pull-down | n/a | |

6.2. DMA configuration

nothing configured in DMA service

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 |
| Debug monitor | true | 0 | 0 |
| System tick timer | true | 0 | 0 |
| USART1 global interrupt | true | 1 | 0 |
| PVD interrupt through EXTI line 16 | unused | | |
| Flash global interrupt | unused | | |
| RCC global interrupt | unused | | |

^{*} User modified value

7. Power Plugin report

7.1. Microcontroller Selection

| Series | STM32F1 |
|-----------|---------------|
| Line | STM32F103 |
| MCU | STM32F103ZETx |
| Datasheet | 14611_Rev11 |

7.2. Parameter Selection

| Temperature | 25 |
|-------------|-----|
| Vdd | 3.3 |

8. Software Project

8.1. Project Settings

| Name | Value |
|-----------------------------------|--|
| Project Name | YS-F1Pro |
| Project Folder | E:\\2. (HAL)\1. (HAL)\YSF1_HAL-006. USART-\1. USART1 |
| Toolchain / IDE | MDK-ARM V5 |
| Firmware Package Name and Version | STM32Cube FW_F1 V1.3.1 |

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 | No |
| consumption) | |