

1. Description

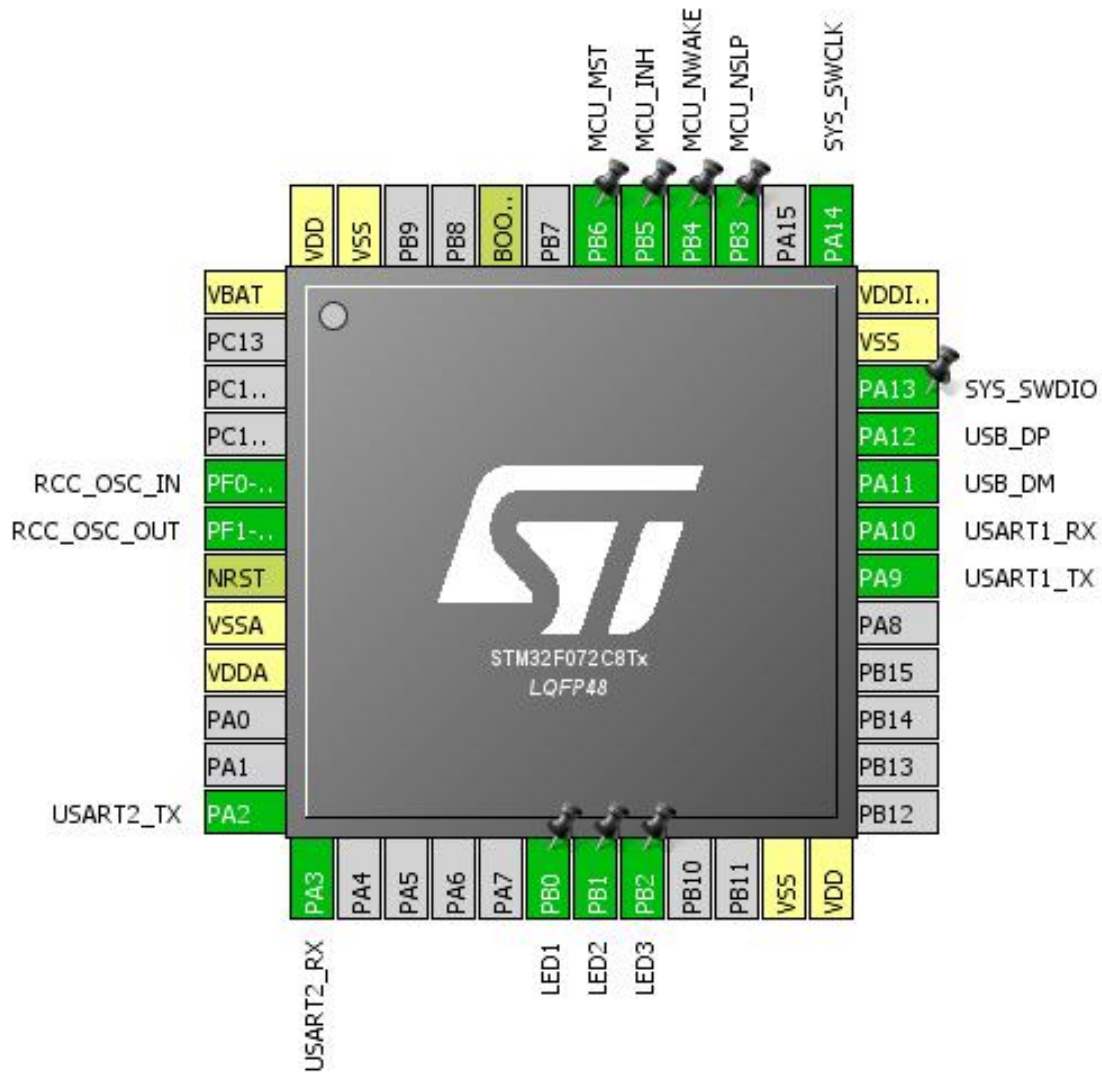
1.1. Project

Project Name	LINDIY
Board Name	No information
Generated with:	STM32CubeMX 4.25.0
Date	05/11/2018

1.2. MCU

MCU Series	STM32F0
MCU Line	STM32F0x2
MCU name	STM32F072C8Tx
MCU Package	LQFP48
MCU Pin number	48

2. Pinout Configuration

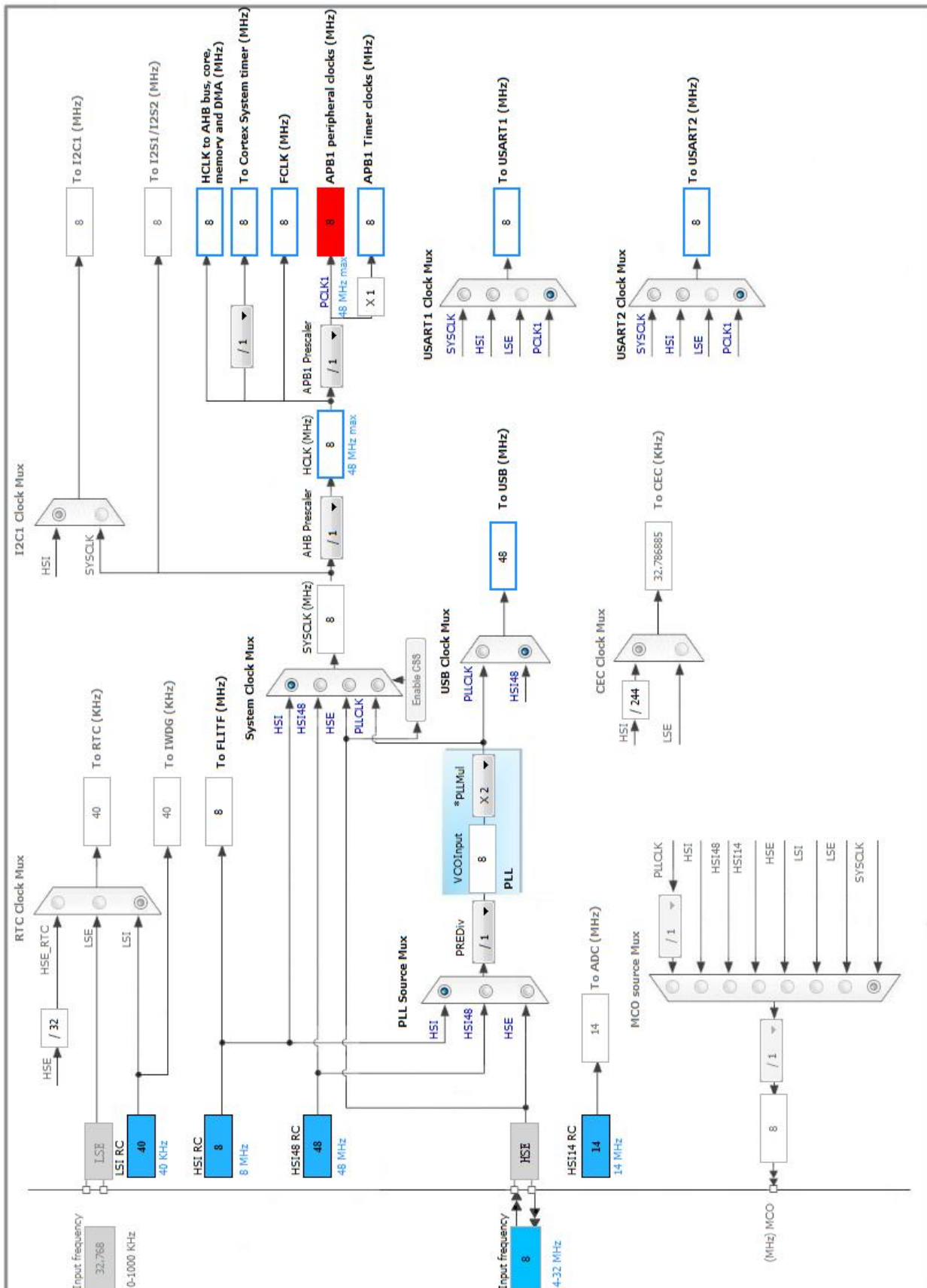


3. Pins Configuration

Pin Number LQFP48	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
5	PF0-OSC_IN	I/O	RCC_OSC_IN	
6	PF1-OSC_OUT	I/O	RCC_OSC_OUT	
7	NRST	Reset		
8	VSSA	Power		
9	VDDA	Power		
12	PA2	I/O	USART2_TX	
13	PA3	I/O	USART2_RX	
18	PB0 *	I/O	GPIO_Output	LED1
19	PB1 *	I/O	GPIO_Output	LED2
20	PB2 *	I/O	GPIO_Output	LED3
23	VSS	Power		
24	VDD	Power		
30	PA9	I/O	USART1_TX	
31	PA10	I/O	USART1_RX	
32	PA11	I/O	USB_DM	
33	PA12	I/O	USB_DP	
34	PA13	I/O	SYS_SWDIO	
35	VSS	Power		
36	VDDIO2	Power		
37	PA14	I/O	SYS_SWCLK	
39	PB3 *	I/O	GPIO_Output	MCU_NSLP
40	PB4 *	I/O	GPIO_Output	MCU_NWAKE
41	PB5 *	I/O	GPIO_Input	MCU_INH
42	PB6 *	I/O	GPIO_Output	MCU_MST
44	BOOT0	Boot		
47	VSS	Power		
48	VDD	Power		

* The pin is affected with an I/O function

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)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

5.2. SYS

mode: Debug Serial Wire

Timebase Source: SysTick

5.3. USART1

Mode: LIN

5.3.1. 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
Break Detect Length	10 Bits

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

5.4. USART2

Mode: Asynchronous

5.4.1. Parameter Settings:

Basic Parameters:

Baud Rate	38400
Word Length	7 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

5.5. USB

mode: Device (FS)

5.5.1. Parameter Settings:

Basic Parameters:

Speed	Full Speed 12MBit/s
Endpoint 0 Max Packet size	64 Bytes
Physical interface	Internal Phy

Power Parameters:

Low Power	Disabled
Link Power Management	Disabled

* User modified value

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
RCC	PF0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PF1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	
	PA14	SYS_SWCLK	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	High *	
	PA10	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	High *	
USART2	PA2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	High *	
	PA3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	High *	
USB	PA11	USB_DM	n/a	n/a	n/a	
	PA12	USB_DP	n/a	n/a	n/a	
GPIO	PB0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED1
	PB1	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED2
	PB2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED3
	PB3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	MCU_NSLP
	PB4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	MCU_NWAKE
	PB5	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	MCU_INH
	PB6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	MCU_MST

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
System service call via SWI instruction	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	0	0
PVD and VDDIO2 supply comparator interrupts through EXTI lines 16 and 31	unused		
Flash global interrupt	unused		
RCC and CRS global interrupts	unused		
USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25	unused		
USART2 global interrupt / USART2 wake-up interrupt through EXTI line 26	unused		
USB global interrupt / USB wake-up interrupt through EXTI line 18	unused		

* User modified value

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F0
Line	STM32F0x2
MCU	STM32F072C8Tx
Datasheet	025004_Rev5

7.2. Parameter Selection

Temperature	25
Vdd	3.6

8. Software Pack Report