

1. Description

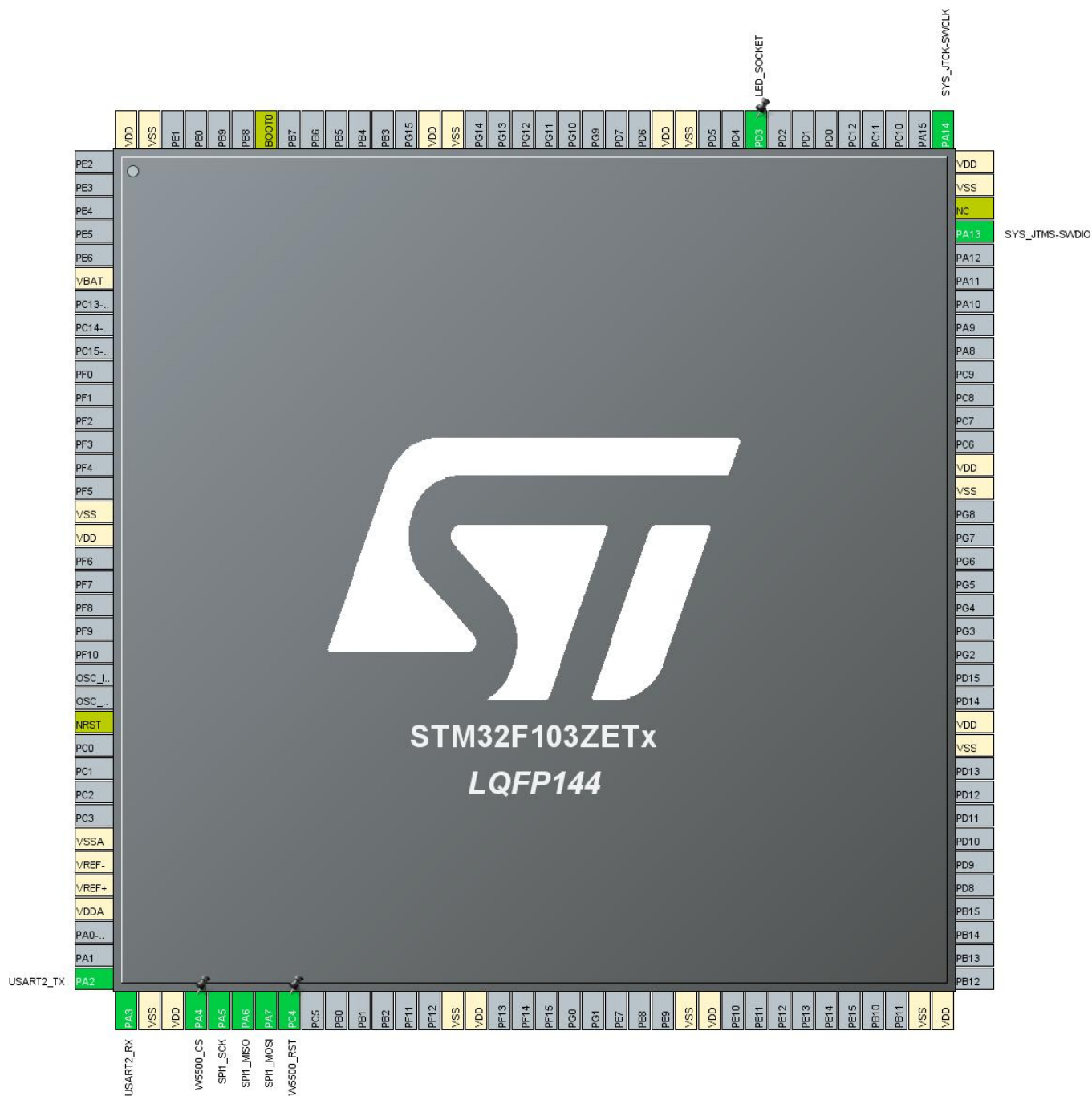
1.1. Project

Project Name	DTU0300_GPIO_2
Board Name	custom
Generated with:	STM32CubeMX 5.2.0
Date	09/24/2019

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		
25	NRST	Reset		
30	VSSA	Power		
31	VREF-	Power		
32	VREF+	Power		
33	VDDA	Power		
36	PA2	I/O	USART2_TX	
37	PA3	I/O	USART2_RX	
38	VSS	Power		
39	VDD	Power		
40	PA4 *	I/O	GPIO_Output	W5500_CS
41	PA5	I/O	SPI1_SCK	SPI1_SCK
42	PA6	I/O	SPI1_MISO	SPI1_MISO
43	PA7	I/O	SPI1_MOSI	SPI1_MOSI
44	PC4 *	I/O	GPIO_Output	W5500_RST
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		
105	PA13	I/O	SYS_JTMS-SWDIO	
106	NC	NC		
107	VSS	Power		
108	VDD	Power		
109	PA14	I/O	SYS_JTCK-SWCLK	
117	PD3 *	I/O	GPIO_Output	LED_SOCKET
120	VSS	Power		
121	VDD	Power		
130	VSS	Power		

Pin Number LQFP144	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
131	VDD	Power		
138	BOOT0	Boot		
143	VSS	Power		
144	VDD	Power		

* The pin is affected with an I/O function

5. Software Project

5.1. Project Settings

Name	Value
Project Name	DTU0300_GPIO_2
Project Folder	D:\Project_STM32CubeMX_520\DTU0300_GPIO_2
Toolchain / IDE	TrueSTUDIO
Firmware Package Name and Version	STM32Cube FW_F1 V1.7.0

5.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Copy only the necessary library files
Generate peripheral initialization as a pair of '.c/.h' files	No
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

6. Power Consumption Calculator report

6.1. Microcontroller Selection

Series	STM32F1
Line	STM32F103
MCU	STM32F103ZETx
Datasheet	14611_Rev12

6.2. Parameter Selection

Temperature	25
Vdd	3.3

7. IPs and Middleware Configuration

7.1. RCC

7.1.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Prefetch Buffer	Enabled
Flash Latency(WS)	1 WS (2 CPU cycle)

RCC Parameters:

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

7.2. SPI1

Mode: Full-Duplex Master

7.2.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	8 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	4 *
Baud Rate	12.0 MBits/s *
Clock Polarity (CPOL)	High *
Clock Phase (CPHA)	2 Edge *

Advanced Parameters:

CRC Calculation	Disabled
NSS Signal Type	Software

7.3. SYS

Debug: Serial Wire

Timebase Source: SysTick

7.4. USART2

Mode: Asynchronous

7.4.1. 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

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
SPI1	PA5	SPI1_SCK	Alternate Function Push Pull	n/a	High *	SPI1_SCK
	PA6	SPI1_MISO	Input mode	No pull-up and no pull-down	n/a	SPI1_MISO
	PA7	SPI1_MOSI	Alternate Function Push Pull	n/a	High *	SPI1_MOSI
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
USART2	PA2	USART2_TX	Alternate Function Push Pull	n/a	High *	
	PA3	USART2_RX	Input mode	No pull-up and no pull-down	n/a	
GPIO	PA4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	W5500_CS
	PC4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	W5500_RST
	PD3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LED_SOCKET

8.2. DMA configuration

nothing configured in DMA service

8.3. 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
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
SPI1 global interrupt	unused		
USART2 global interrupt	unused		

* User modified value

9. Software Pack Report