

1. Description

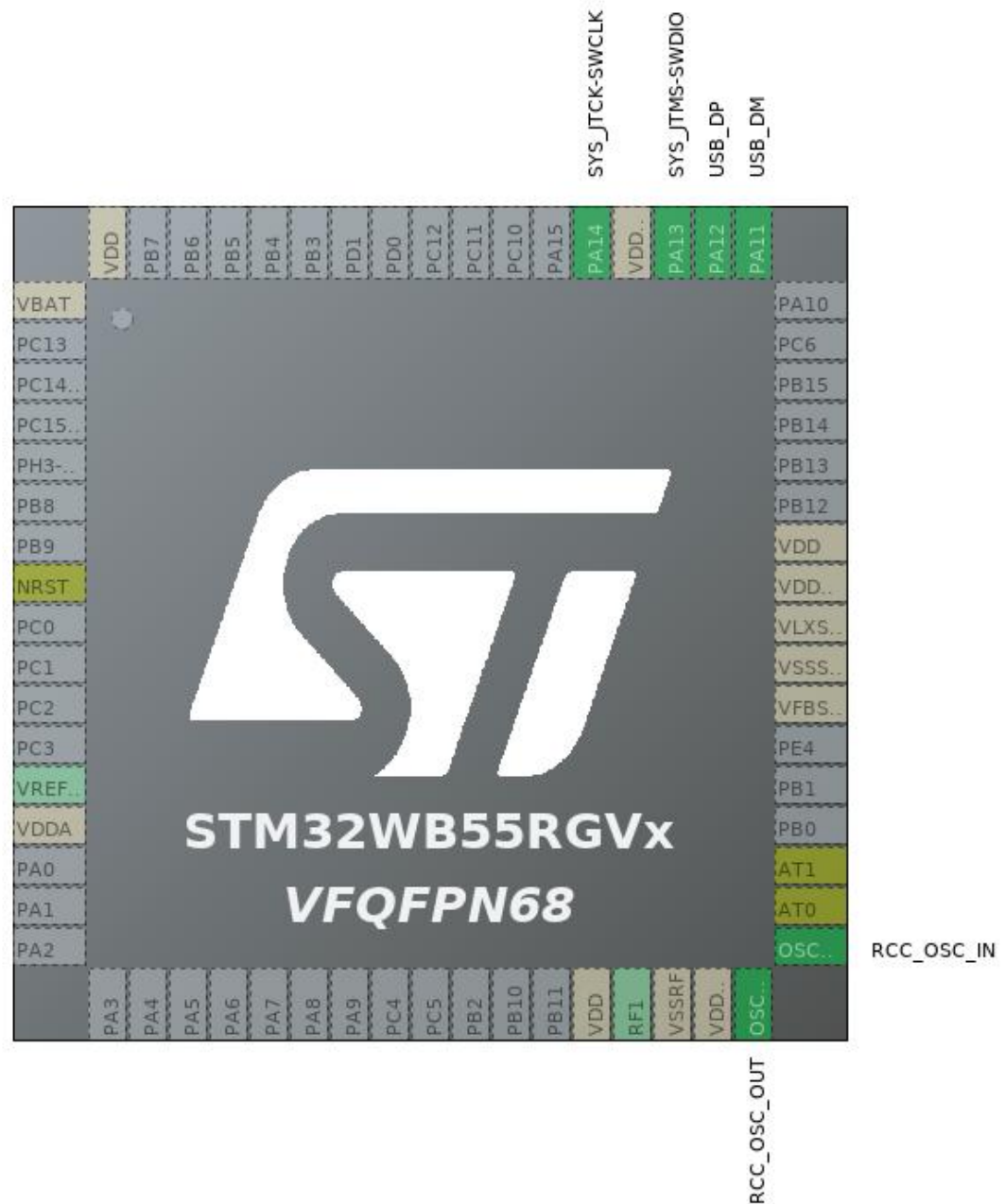
1.1. Project

Project Name	cdc_device
Board Name	custom
Generated with:	STM32CubeMX 5.4.0
Date	12/10/2019

1.2. MCU

MCU Series	STM32WB
MCU Line	STM32WBx5
MCU name	STM32WB55RGVx
MCU Package	VFQFPN68
MCU Pin number	68

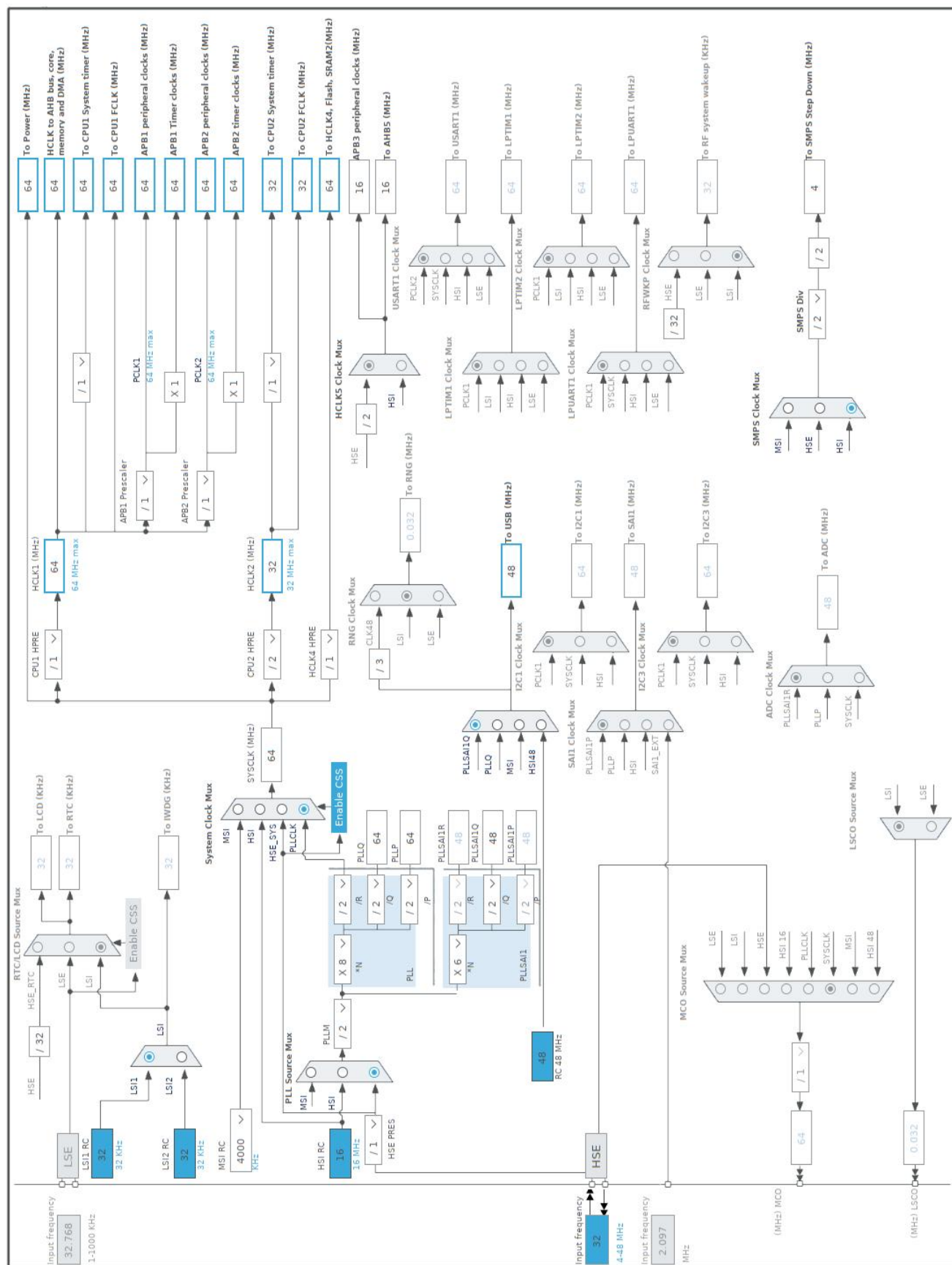
2. Pinout Configuration



3. Pins Configuration

Pin Number VFQFPN68	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
8	NRST	Reset		
14	VDDA	Power		
30	VDD	Power		
32	VSSRF	Power		
33	VDDRF	Power		
34	OSC_OUT	MonoIO	RCC_OSC_OUT	
35	OSC_IN	MonoIO	RCC_OSC_IN	
36	AT0	NC		
37	AT1	NC		
41	VFBSMPS	Power		
42	VSSSMPS	Power		
43	VLXSMPS	Power		
44	VDDSMPS	Power		
45	VDD	Power		
52	PA11	I/O	USB_DM	
53	PA12	I/O	USB_DP	
54	PA13	I/O	SYS_JTMS-SWDIO	
55	VDDUSB	Power		
56	PA14	I/O	SYS_JTCK-SWCLK	
68	VDD	Power		

4. Clock Tree Configuration



5. Software Project

5.1. Project Settings

Name	Value
Project Name	cdc_device
Project Folder	/home/nyanko/git/STM32WB-series/cdc_device
Toolchain / IDE	Makefile
Firmware Package Name and Version	STM32Cube FW_WB V1.3.0

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	Copy all used libraries into the project folder
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	STM32WB
Line	STM32WBx5
MCU	STM32WB55RGVx
Datasheet	DS11929_Rev3

6.2. Parameter Selection

Temperature	25
Vdd	3.0

7. IPs and Middleware Configuration

7.1. GPIO

7.2. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

7.2.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Disabled
Data Cache	Enabled
Flash Latency(WS)	3 WS (4 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
MSI Calibration Value	0
MSI Auto Calibration	Disabled
MSI State	Enabled
HSI State	Enabled
HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1
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Peripherals Clock Configuration:

Generate the peripherals clock configuration	TRUE
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7.3. SYS

Debug: Serial Wire

Timebase Source: SysTick

7.4. USB

mode: Device (FS)

7.4.1. Parameter Settings:

Basic Parameters:

Speed	Full Speed 12MBit/s
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Physical interface	Internal Phy
Sof Enable	Disabled

Power Parameters:

Low Power	Disabled
Link Power Management	Disabled
Battery Charging	Disabled

7.5. USB_DEVICE

Class For FS IP: Communication Device Class (Virtual Port Com)

7.5.1. Parameter Settings:

Basic Parameters:

USBD_MAX_NUM_INTERFACES (Maximum number of supported interfaces)	1
USBD_MAX_NUM_CONFIGURATION (Maximum number of supported configuration)	1
USBD_MAX_STR_DESC_SIZ (Maximum size for the string descriptors)	512
USBD_SELF_POWERED (Enabled self power)	Enabled
USBD_DEBUG_LEVEL (USBD Debug Level)	0: No debug message
USBD_LPM_ENABLED (Link Power Management)	1: Link Power Management supported

Class Parameters:

USB CDC Rx Buffer Size	2048
USB CDC Tx Buffer Size	2048

7.5.2. Device Descriptor:

Device Descriptor:

VID (Vendor Identifier)	1155
LANGID_STRING (Language Identifier)	English(United States)
MANUFACTURER_STRING (Manufacturer Identifier)	STMicroelectronics

Device Descriptor FS:

PID (Product Identifier)	22336
PRODUCT_STRING (Product Identifier)	STM32 Virtual ComPort
CONFIGURATION_STRING (Configuration Identifier)	CDC Config
INTERFACE_STRING (Interface Identifier)	CDC Interface

* User modified value

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
RCC	OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
	OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
USB	PA11	USB_DM	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA12	USB_DP	Alternate Function Push Pull	No pull-up and no pull-down	Low	

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
USB low priority interrupt, USB wake-up interrupt through EXTI line 28	true	0	0
PVD/PVM0/PVM2 interrupts through EXTI lines 16/31/33	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
USB high priority interrupt	unused		
CPU2 SEV interrupt through EXTI line 40 and PWR CPU2 HOLD wake-up interrupt	unused		
PWR switching on the fly, end of BLE activity, end of 802.15.4 activity, end of critical radio phase interrupt	unused		
FPU global interrupt	unused		

* User modified value

9. Software Pack Report