

1. Description

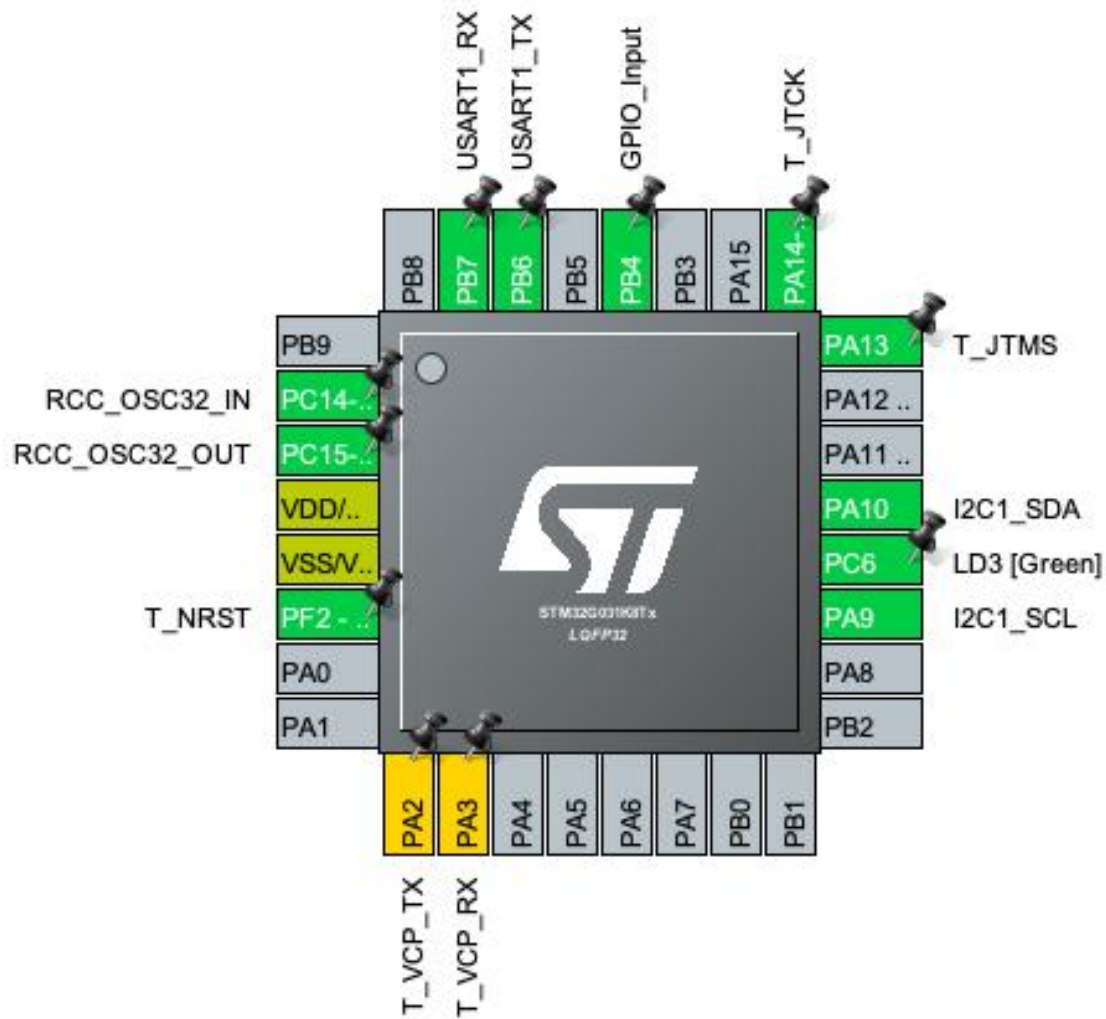
1.1. Project

Project Name	note-stm32g0
Board Name	NUCLEO-G031K8
Generated with:	STM32CubeMX 5.3.0
Date	09/30/2019

1.2. MCU

MCU Series	STM32G0
MCU Line	STM32G0x1
MCU name	STM32G031K8Tx
MCU Package	LQFP32
MCU Pin number	32

2. Pinout Configuration



3. Pins Configuration

Pin Number LQFP32	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
2	PC14-OSC32_IN (PC14)	I/O	RCC_OSC32_IN	
3	PC15-OSC32_OUT (PC15)	I/O	RCC_OSC32_OUT	
4	VDD/VDDA	MonoIO		
5	VSS/VSSA	MonoIO		
6	PF2 - NRST	I/O	GPIO_EXTI2	T_NRST
9	PA2 *	I/O	USART2_TX	T_VCP_TX
10	PA3 *	I/O	USART2_RX	T_VCP_RX
19	PA9	I/O	I2C1_SCL	
20	PC6 **	I/O	GPIO_Output	LD3 [Green]
21	PA10	I/O	I2C1_SDA	
24	PA13	I/O	SYS_SWDIO	T_JTMS
25	PA14-BOOT0	I/O	SYS_SWCLK	T_JTCK
28	PB4 **	I/O	GPIO_Input	
30	PB6	I/O	USART1_TX	
31	PB7	I/O	USART1_RX	

** The pin is affected with an I/O function

* The pin is affected with a peripheral function but no peripheral mode is activated



5. Software Project

5.1. Project Settings

Name	Value
Project Name	note-stm32g0
Project Folder	/Users/rozzie/dev/cube/note-stm32g0
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_G0 V1.3.0

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	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	STM32G0
Line	STM32G0x1
MCU	STM32G031K8Tx
Datasheet	DS12992_Rev0

6.2. Parameter Selection

Temperature	25
Vdd	3.0

7. IPs and Middleware Configuration

7.1. I2C1

I2C: I2C

7.1.1. Parameter Settings:

Timing configuration:

Custom Timing	Disabled
I2C Speed Mode	Standard Mode
I2C Speed Frequency (KHz)	100
Rise Time (ns)	0
Fall Time (ns)	0
Coefficient of Digital Filter	0
Analog Filter	Enabled
Timing	0x00303D5B

Slave Features:

Clock No Stretch Mode	Disabled
General Call Address Detection	Disabled
Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0

7.2. LPTIM1

Mode: Counts internal clock events

7.2.1. Parameter Settings:

Clock:

Clock Prescaler	Prescaler Div1
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Preload:

Update Mode	Update Immediate
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Trigger:

Trigger Source	Software Trigger
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7.3. RCC

Low Speed Clock (LSE) : Crystal/Ceramic Resonator

7.3.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Disabled
Data Cache	Enabled
Flash Latency(WS)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	64
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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7.4. SYS

mode: Debug

Timebase Source: SysTick

7.5. USART1

Mode: Asynchronous

7.5.1. Parameter Settings:

Basic Parameters:

Baud Rate	9600 *
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
ClockPrescaler	clock /1
Fifo Mode	Disable
Txfifo Threshold	1 eighth full configuration
Rxfifo Threshold	1 eighth full configuration

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**

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
I2C1	PA9	I2C1_SCL	Alternate Function Open Drain	Pull-up	Low	
	PA10	I2C1_SDA	Alternate Function Open Drain	Pull-up	Low	
RCC	PC14-OSC32_IN (PC14)	RCC_OSC32_IN	n/a	n/a	n/a	
	PC15-OSC32_OUT (PC15)	RCC_OSC32_OUT	n/a	n/a	n/a	
SYS	PA13	SYS_SWDIO	n/a	n/a	n/a	T_JTMS
	PA14-BOOT0	SYS_SWCLK	n/a	n/a	n/a	T_JTCK
USART1	PB6	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB7	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	
Single Mapped Signals	PA2	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	T_VCP_TX
	PA3	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	T_VCP_RX
GPIO	PF2 - NRST	GPIO_EXTI2	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	T_NRST
	PC6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LD3 [Green]
	PB4	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	

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
System service call via SWI instruction	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	0	0
LPTIM1 interrupt through EXTI line 29	true	0	0
I2C1 event global interrupt / I2C1 wake-up interrupt through EXTI line 23	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
EXTI line 2 and line 3 interrupts	unused		
USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25	unused		

* User modified value

9. Software Pack Report