1. Description

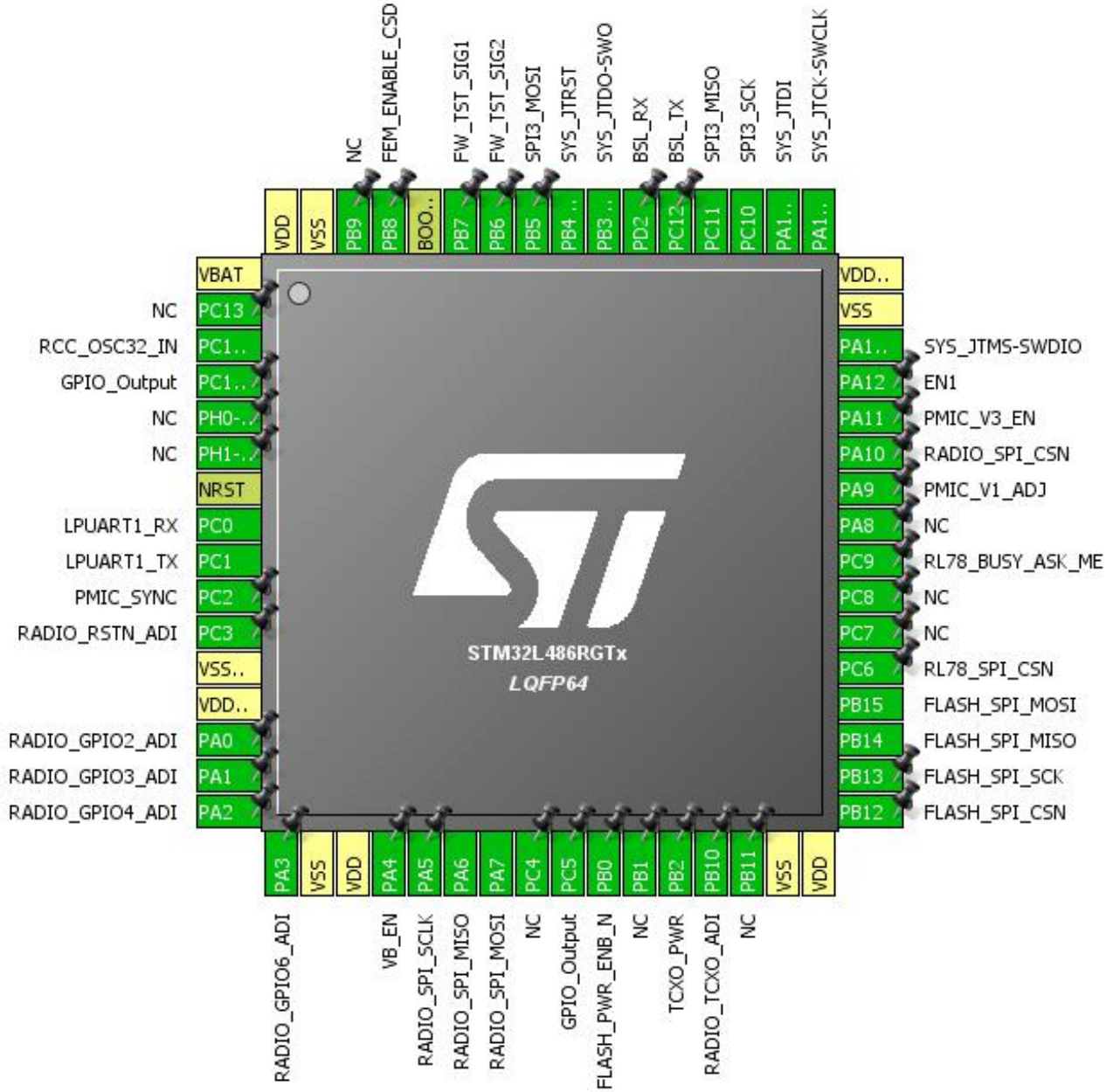
1.1. Project

Project Name	STM32_Pin_Config_Play
Board Name	custom
Generated with:	STM32CubeMX 4.27.0
Date	02/28/2019

1.2. MCU

MCU Series	STM32L4
MCU Line	STM32L4x6
MCU name	STM32L486RGTx
MCU Package	LQFP64
MCU Pin number	64

2. Pinout Configuration



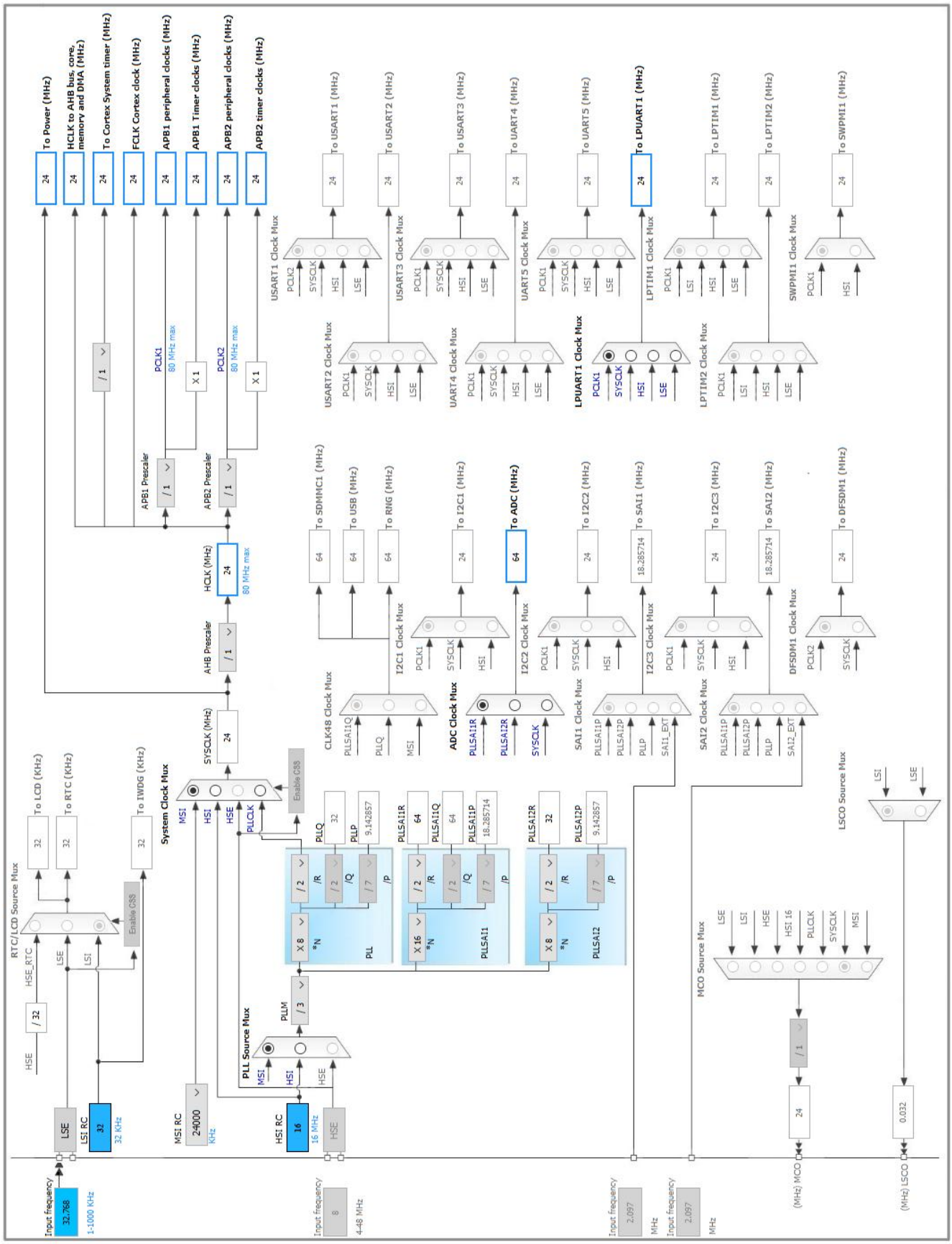
3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13 *	I/O	GPIO_Output	NC
3	PC14-OSC32_IN (PC14)	I/O	RCC_OSC32_IN	
4	PC15-OSC32_OUT (PC15) *	I/O	GPIO_Output	
5	PH0-OSC_IN (PH0) *	I/O	GPIO_Output	NC
6	PH1-OSC_OUT (PH1) *	I/O	GPIO_Output	NC
7	NRST	Reset		
8	PC0	I/O	LPUART1_RX	
9	PC1	I/O	LPUART1_TX	
10	PC2 *	I/O	GPIO_Output	PMIC_SYNC
11	PC3 *	I/O	GPIO_Output	RADIO_RSTN_ADI
12	VSSA/VREF-	Power		
13	VDDA/VREF+	Power		
14	PA0 *	I/O	GPIO_Input	RADIO_GPIO2_ADI
15	PA1 *	I/O	GPIO_Input	RADIO_GPIO3_ADI
16	PA2 *	I/O	GPIO_Input	RADIO_GPIO4_ADI
17	PA3 *	I/O	GPIO_Input	RADIO_GPIO6_ADI
18	VSS	Power		
19	VDD	Power		
20	PA4 *	I/O	GPIO_Output	VB_EN
21	PA5	I/O	SPI1_SCK	RADIO_SPI_SCLK
22	PA6	I/O	SPI1_MISO	RADIO_SPI_MISO
23	PA7	I/O	SPI1_MOSI	RADIO_SPI_MOSI
24	PC4 *	I/O	GPIO_Output	NC
25	PC5 *	I/O	GPIO_Output	
26	PB0 *	I/O	GPIO_Output	FLASH_PWR_ENB_N
27	PB1 *	I/O	GPIO_Output	NC
28	PB2 *	I/O	GPIO_Output	TCXO_PWR
29	PB10 *	I/O	GPIO_Input	RADIO_TCXO_ADI
30	PB11 *	I/O	GPIO_Output	NC
31	VSS	Power		
32	VDD	Power		
33	PB12 *	I/O	GPIO_Output	FLASH_SPI_CSN
34	PB13	I/O	SPI2_SCK	FLASH_SPI_SCK
35	PB14	I/O	SPI2_MISO	FLASH_SPI_MISO

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
36	PB15	I/O	SPI2_MOSI	FLASH_SPI_MOSI
37	PC6 *	I/O	GPIO_Output	RL78_SPI_CSN
38	PC7 *	I/O	GPIO_Output	NC
39	PC8 *	I/O	GPIO_Output	NC
40	PC9 *	I/O	GPIO_Input	RL78_BUSY_ASK_ME
41	PA8 *	I/O	GPIO_Output	NC
42	PA9 *	I/O	GPIO_Output	PMIC_V1_ADJ
43	PA10 *	I/O	GPIO_Output	RADIO_SPI_CSN
44	PA11 *	I/O	GPIO_Output	PMIC_V3_EN
45	PA12 *	I/O	GPIO_Output	EN1
46	PA13 (JTMS-SWDIO)	I/O	SYS_JTMS-SWDIO	
47	VSS	Power		
48	VDDUSB	Power		
49	PA14 (JTCK-SWCLK)	I/O	SYS_JTCK-SWCLK	
50	PA15 (JTDI)	I/O	SYS_JTDI	
51	PC10	I/O	SPI3_SCK	
52	PC11	I/O	SPI3_MISO	
53	PC12 *	I/O	GPIO_Output	BSL_TX
54	PD2 *	I/O	GPIO_Output	BSL_RX
55	PB3 (JTDO-TRACESWO)	I/O	SYS_JTDO-SWO	
56	PB4 (NJTRST)	I/O	SYS_JTRST	
57	PB5	I/O	SPI3_MOSI	
58	PB6 *	I/O	GPIO_Output	FW_TST_SIG2
59	PB7 *	I/O	GPIO_Output	FW_TST_SIG1
60	BOOT0	Boot		
61	PB8 *	I/O	GPIO_Output	FEM_ENABLE_CSD
62	PB9 *	I/O	GPIO_Output	NC
63	VSS	Power		
64	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC1

mode: Temperature Sensor Channel

5.1.1. Parameter Settings:

ADCs_Common_Settings:

Mode	Independent mode

ADC_Settings:

Clock Prescaler	Asynchronous clock mode divided by 1
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Scan Conversion Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	Disabled
End Of Conversion Selection	End of single conversion
Overrun behaviour	Overrun data preserved
Low Power Auto Wait	Disabled

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Enable Regular Oversampling	Disable
Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
External Trigger Conversion Edge	None
Rank	1
Channel	Channel Temperature Sensor
Sampling Time	2.5 Cycles
Offset Number	No offset

ADC_Injected_ConversionMode:

Enable Injected Conversions	Disable

Analog Watchdog 1:

Enable Analog WatchDog1 Mode	false

Analog Watchdog 2:

Enable Analog WatchDog2 Mode	false

Analog Watchdog 3:

Enable Analog WatchDog3 Mode	false

5.2. LPUART1

Mode: Asynchronous

5.2.1. Parameter Settings:

Basic Parameters:

Baud Rate	209700
Word Length	7 Bits (including Parity)
Parity	None
Stop Bits	1

Advanced Parameters:

Data Direction	Receive and Transmit
Single Sample	Disable

Advanced Features:

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

5.3. RCC

Low Speed Clock (LSE) : BYPASS Clock Source

5.3.1. Parameter Settings:

System Parameters:

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

RCC Parameters:

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

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1

5.4. SPI1

Mode: Full-Duplex Master

5.4.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	8000000
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

5.5. SPI2

Mode: Full-Duplex Master

5.5.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	8000000
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

5.6. SPI3

Mode: Full-Duplex Master

5.6.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	8000000
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

5.7. SYS

Debug: JTAG (5 pins)

Timebase Source: SysTick

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
LPUART1	PC0	LPUART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PC1	LPUART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
RCC	PC14-OSC32_IN (PC14)	RCC_OSC32_IN	n/a	n/a	n/a	
SPI1	PA5	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	RADIO_SPI_SCLK
	PA6	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	RADIO_SPI_MISO
	PA7	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	RADIO_SPI_MOSI
SPI2	PB13	SPI2_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	FLASH_SPI_SCK
	PB14	SPI2_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	FLASH_SPI_MISO
	PB15	SPI2_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	FLASH_SPI_MOSI
SPI3	PC10	SPI3_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PC11	SPI3_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PB5	SPI3_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
SYS	PA13 (JTMS-SWDIO)	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14 (JTCK-SWCLK)	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PA15 (JTDI)	SYS_JTDI	n/a	n/a	n/a	
	PB3 (JTDO-TRACESWO)	SYS_JTDO-SWO	n/a	n/a	n/a	
	PB4	SYS_JTRST	n/a	n/a	n/a	

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	(NJTRST)					
GPIO	PC13	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PC15-OSC32_OUT (PC15)	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PH0-OSC_IN (PH0)	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PH1-OSC_OUT (PH1)	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PC2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PMIC_SYNC
	PC3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	RADIO_RSTN_ADI
	PA0	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	RADIO_GPIO2_ADI
	PA1	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	RADIO_GPIO3_ADI
	PA2	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	RADIO_GPIO4_ADI
	PA3	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	RADIO_GPIO6_ADI
	PA4	GPIO_Output	Output Push Pull	**Pull-down ***	Low	VB_EN
	PC4	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PC5	GPIO_Output	Output Push Pull	**Pull-down ***	Low	
	PB0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	FLASH_PWR_ENB_N
	PB1	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PB2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	TCXO_PWR
	PB10	GPIO_Input	Input mode	**Pull-down ***	n/a	RADIO_TCXO_ADI
	PB11	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PB12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	FLASH_SPI_CSN
	PC6	GPIO_Output	Output Push Pull	**Pull-down ***	Low	RL78_SPI_CSN
	PC7	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PC8	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PC9	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	RL78_BUSY_ASK_ME
	PA8	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC
	PA9	GPIO_Output	Output Push Pull	**Pull-down ***	Low	PMIC_V1_ADJ
	PA10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	RADIO_SPI_CSN
	PA11	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	PMIC_V3_EN
	PA12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	EN1
	PC12	GPIO_Output	Output Push Pull	**Pull-down ***	Low	BSL_TX
	PD2	GPIO_Output	Output Push Pull	**Pull-down ***	Low	BSL_RX
	PB6	GPIO_Output	Output Push Pull	**Pull-down ***	Low	FW_TST_SIG2
	PB7	GPIO_Output	Output Push Pull		Low	FW_TST_SIG1

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
				Pull-down *		
	PB8	GPIO_Output	Output Push Pull	**Pull-down ***	Low	FEM_ENABLE_CSD
	PB9	GPIO_Output	Output Push Pull	**Pull-down ***	Low	NC

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
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/PVM1/PVM2/PVM3/PVM4 interrupts through EXTI lines 16/35/36/37/38	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1 and ADC2 interrupts	unused		
SPI1 global interrupt	unused		
SPI2 global interrupt	unused		
SPI3 global interrupt	unused		
LPUART1 global interrupt	unused		
FPU global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32L4
Line	STM32L4x6
MCU	STM32L486RGTx
Datasheet	025977_Rev5

7.2. Parameter Selection

Temperature	25
Vdd	null

8. Software Pack Report