1. Description

1.1. Project

Project Name	px4fmu-v5
Board Name	custom
Generated with:	STM32CubeMX 5.0.0
Date	12/15/2018

1.2. MCU

MCU Series	STM32F7
MCU Line	STM32F7x5
MCU name	STM32F765IIKx
MCU Package	UFBGA176
MCU Pin number	201

2. Pinout Configuration
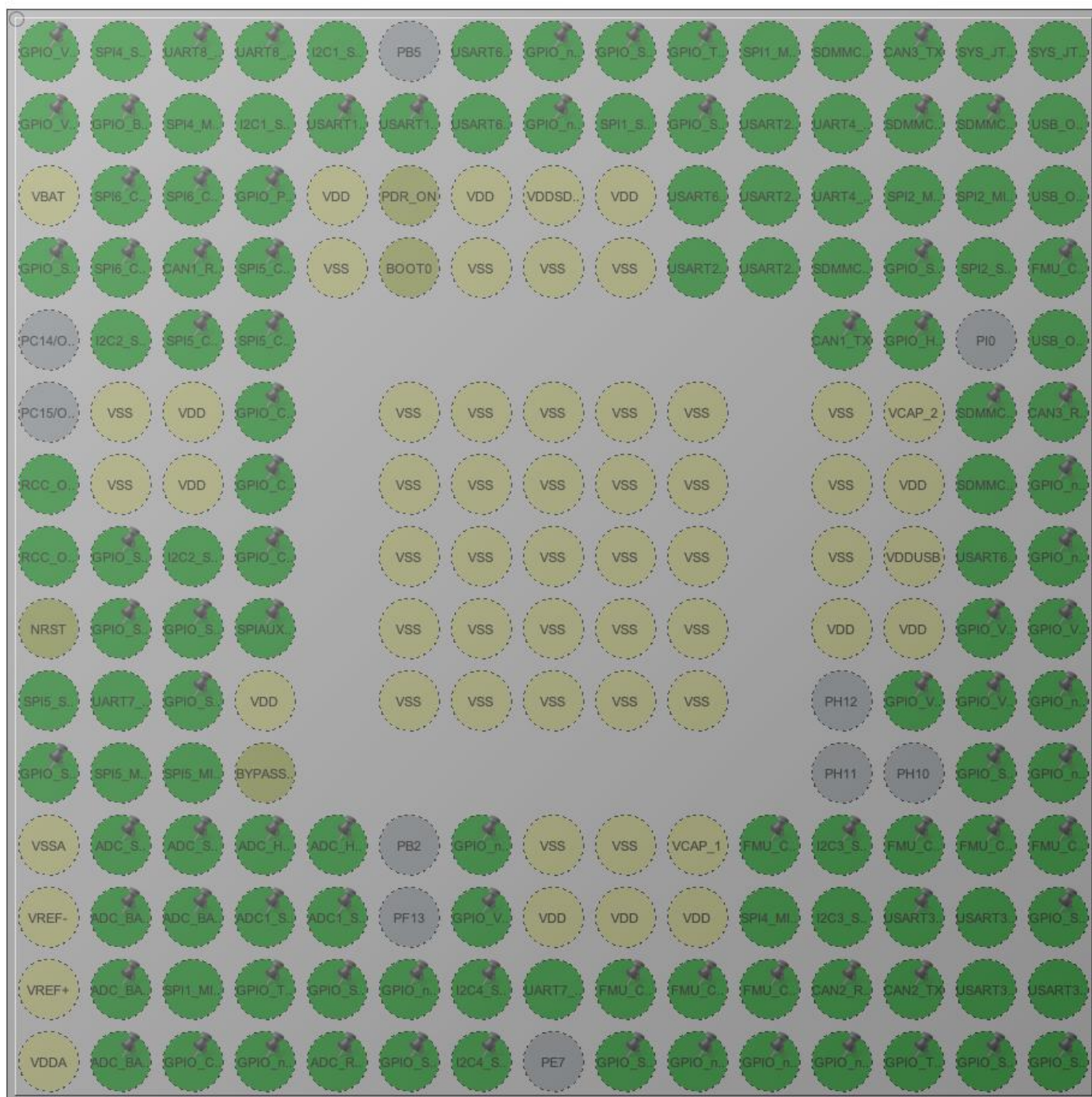
UFBGA176 +25 (Top view)

3. Pins Configuration

Pin Number UFBGA176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
A1	PE3 *	I/O	GPIO_Output	GPIO_VDD_3V3_SENSORS_EN
A2	PE2	I/O	SPI4_SCK	
A3	PE1	I/O	UART8_TX	
A4	PE0	I/O	UART8_RX	
A5	PB8	I/O	I2C1_SCL	
A7	PG14	I/O	USART6_TX	
A8	PG13 *	I/O	GPIO_Input	GPIO_nVDD_5V_HIPOWER_OC
A9	PB4 *	I/O	GPIO_Input	GPIO_SPI1_DRDY1_ICM20689
A10	PB3	I/O	TIM2_CH2	GPIO_TIM2_CH2_IN
A11	PD7	I/O	SPI1_MOSI	
A12	PC12	I/O	SDMMC1_CK	
A13	PA15	I/O	CAN3_TX	
A14	PA14	I/O	SYS_JTCK-SWCLK	
A15	PA13	I/O	SYS_JTMS-SWDIO	
B1	PE4 *	I/O	GPIO_Output	GPIO_VDD_3V3_SPEKTRUM_POWER_EN
B2	PE5 *	I/O	GPIO_Output	GPIO_BUZZER_1
B3	PE6	I/O	SPI4_MOSI	
B4	PB9	I/O	I2C1_SDA	
B5	PB7	I/O	USART1_RX	
B6	PB6	I/O	USART1_TX	
B7	PG15	I/O	USART6_CTS	
B8	PG12 *	I/O	GPIO_Output	GPIO_nVDD_5V_HIPOWER_EN
B9	PG11	I/O	SPI1_SCK	
B10	PG10 *	I/O	GPIO_Output	GPIO_SPI1_CS4_BMI055_ACC
B11	PD6	I/O	USART2_RX	
B12	PD0	I/O	UART4_RX	
B13	PC11	I/O	SDMMC1_D3	
B14	PC10	I/O	SDMMC1_D2	
B15	PA12	I/O	USB_OTG_FS_DP	
C1	VBAT	Power		
C2	PI7 *	I/O	GPIO_Output	SPI6_CS2_EXTERNAL2

Pin Number UFBGA176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
C3	PI6 *	I/O	GPIO_Output	SPI6_CS1_EXTERNAL2
C4	PI5 *	I/O	GPIO_Output	GPIO_PPM_IN_AS_OUT
C5	VDD	Power		
C6	PDR_ON	Reset		
C7	VDD	Power		
C8	VDDSDMMC	Power		
C9	VDD	Power		
C10	PG9	I/O	USART6_RX	
C11	PD5	I/O	USART2_TX	
C12	PD1	I/O	UART4_TX	
C13	PI3	I/O	SPI2_MOSI	
C14	PI2	I/O	SPI2_MISO	
C15	PA11	I/O	USB_OTG_FS_DM	
D1	PC13 *	I/O	GPIO_Input	GPIO_SPI1_DRDY5_BMI055_GYRO
D2	PI8 *	I/O	GPIO_Output	SPI6_CS3_EXTERNAL2
D3	PI9	I/O	CAN1_RX	
D4	PI4 *	I/O	GPIO_Output	SPI5_CS1_EXTERNAL1
D5	VSS	Power		
D6	BOOT0	Boot		
D7	VSS	Power		
D8	VSS	Power		
D9	VSS	Power		
D10	PD4	I/O	USART2_RTS	
D11	PD3	I/O	USART2_CTS	
D12	PD2	I/O	SDMMC1_CMD	
D13	PH15 *	I/O	GPIO_Output	GPIO_SPI5_SYNC_EXTERNAL1
D14	PI1	I/O	SPI2_SCK	
D15	PA10	I/O	TIM1_CH3	FMU_CH2
E2	PF0	I/O	I2C2_SDA	
E3	PI10 *	I/O	GPIO_Output	SPI5_CS1_EXTERNAL1
E4	PI11 *	I/O	GPIO_Output	SPI5_CS3_EXTERNAL1
E12	PH13	I/O	CAN1_TX	
E13	PH14 *	I/O	GPIO_Output	GPIO_HW_REV_DRIVE
E15	PA9	I/O	USB_OTG_FS_VBUS	
F2	VSS	Power		
F3	VDD	Power		
F4	PH2 *	I/O	GPIO_Output	GPIO_CAN1_SILENT_S0
F6	VSS	Power		

Pin Number UFBGA176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
F7	VSS	Power		
F8	VSS	Power		
F9	VSS	Power		
F10	VSS	Power		
F12	VSS	Power		
F13	VCAP_2	Power		
F14	PC9	I/O	SDMMC1_D1	
F15	PA8	I/O	CAN3_RX	
G1	PH0/OSC_IN	I/O	RCC_OSC_IN	
G2	VSS	Power		
G3	VDD	Power		
G4	PH3 *	I/O	GPIO_Output	GPIO_CAN2_SILENT_S1
G6	VSS	Power		
G7	VSS	Power		
G8	VSS	Power		
G9	VSS	Power		
G10	VSS	Power		
G12	VSS	Power		
G13	VDD	Power		
G14	PC8	I/O	SDMMC1_D0	
G15	PC7 *	I/O	GPIO_Output	GPIO_nLED_BLUE
H1	PH1/OSC_OUT	I/O	RCC_OSC_OUT	
H2	PF2 *	I/O	GPIO_Output	GPIO_SPI1_CS1_ICM20689
H3	PF1	I/O	I2C2_SCL	
H4	PH4 *	I/O	GPIO_Output	GPIO_CAN2_SILENT_S1
H6	VSS	Power		
H7	VSS	Power		
H8	VSS	Power		
H9	VSS	Power		
H10	VSS	Power		
H12	VSS	Power		
H13	VDDUSB	Power		
H14	PG8	I/O	USART6_RTS	
H15	PC6 *	I/O	GPIO_Output	GPIO_nLED_GREEN
J1	NRST	Reset		
J2	PF3 *	I/O	GPIO_Output	GPIO_SPI1_CS2_ICM20602
J3	PF4 *	I/O	GPIO_Output	GPIO_SPI1_CS3_BMI055_GYRO

Pin Number UFBGA176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
J4	PH5 *	I/O	GPIO_Output	SPIAUX_CS_MEM
J6	VSS	Power		
J7	VSS	Power		
J8	VSS	Power		
J9	VSS	Power		
J10	VSS	Power		
J12	VDD	Power		
J13	VDD	Power		
J14	PG7 *	I/O	GPIO_Output	GPIO_VDD_3V3_SD_CARD_EN
J15	PG6 *	I/O	GPIO_Output	GPIO_VDD_5V_WIFI_EN
K1	PF7	I/O	SPI5_SCK	
K2	PF6	I/O	UART7_RX	
K3	PF5 *	I/O	GPIO_Output	GPIO_SPI2_CS_FRAM
K4	VDD	Power		
K6	VSS	Power		
K7	VSS	Power		
K8	VSS	Power		
K9	VSS	Power		
K10	VSS	Power		
K13	PG5 *	I/O	GPIO_Output	GPIO_VDD_5V_RC_EN
K14	PG4 *	I/O	GPIO_Input	GPIO_VDD_5V_PERIPH_EN
K15	PG3 *	I/O	GPIO_Input	GPIO_nPOWER_IN_C
L1	PF10 *	I/O	GPIO_Output	GPIO_SPI2_CS_FRAM
L2	PF9	I/O	SPI5_MOSI	
L3	PF8	I/O	SPI5_MISO	
L4	BYPASS_REG	Reset		
L14	PD15 *	I/O	GPIO_Input	GPIO_SPI5_DRDY7_EXTERNAL1
L15	PG2 *	I/O	GPIO_Input	GPIO_nPOWER_IN_B
M1	VSSA	Power		
M2	PC0	I/O	ADC1_IN10	ADC_SCALED_V5_CHANNEL
M3	PC1	I/O	ADC1_IN11	ADC_SCALED_VDD_3V3_SENSORS_CHANNEL
M4	PC2	I/O	ADC1_IN12	ADC_HW_VER_SENSE_CHANNEL
M5	PC3	I/O	ADC1_IN13	ADC_HW_REV_SENSE_CHANNEL
M7	PG1 *	I/O	GPIO_Input	GPIO_nPOWER_IN_A

Pin Number UFBGA176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
M8	VSS	Power		
M9	VSS	Power		
M10	VCAP_1	Power		
M11	PH6	I/O	TIM12_CH1	FMU_CH7
M12	PH8	I/O	I2C3_SDA	
M13	PH9	I/O	TIM12_CH2	FMU_CH8
M14	PD14	I/O	TIM4_CH3	FMU_CH6
M15	PD13	I/O	TIM4_CH2	FMU_CH5
N1	VREF-	Power		
N2	PA1	I/O	ADC1_IN1	ADC_BATTERY1_CURRENT_CHANNEL
N3	PA0/WKUP	I/O	ADC1_IN0	ADC_BATTERY1_VOLTAGE_CHANNEL
N4	PA4	I/O	ADC1_IN4	ADC1_SPARE_2_CHANNEL
N5	PC4	I/O	ADC1_IN14	ADC1_SPARE_1_CHANNEL
N7	PG0 *	I/O	GPIO_Output	GPIO_VDD_5V_RC_EN
N8	VDD	Power		
N9	VDD	Power		
N10	VDD	Power		
N11	PE13	I/O	SPI4_MISO	
N12	PH7	I/O	I2C3_SCL	
N13	PD12	I/O	USART3_RTS	
N14	PD11	I/O	USART3_CTS	
N15	PD10 *	I/O	GPIO_Input	GPIO_SPI1_DRDY6_BMI055_ACC
P1	VREF+	Power		
P2	PA2	I/O	ADC1_IN2	ADC_BATTERY2_VOLTAGE_CHANNEL
P3	PA6	I/O	SPI1_MISO	
P4	PA5	I/O	TIM2_CH1	GPIO_TIM2_CH1_IN
P5	PC5 *	I/O	GPIO_Input	GPIO_SPI1_DRDY4_ICM20602
P6	PF12 *	I/O	GPIO_Input	GPIO_nVDD_5V_HIPOWER_EN
P7	PF15	I/O	I2C4_SDA	
P8	PE8	I/O	UART7_TX	
P9	PE9	I/O	TIM1_CH1	FMU_CH4
P10	PE11	I/O	TIM1_CH2	FMU_CH3
P11	PE14	I/O	TIM1_CH4	FMU_CH1

Pin Number UFBGA176	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
P12	PB12	I/O	CAN2_RX	
P13	PB13	I/O	CAN2_TX	
P14	PD9	I/O	USART3_RX	
P15	PD8	I/O	USART3_TX	
R1	VDDA	Power		
R2	PA3	I/O	ADC1_IN3	ADC_BATTERY2_CURRENT_CHANNEL
R3	PA7 *	I/O	GPIO_Output	GPIO_CAN2_SILENT_S1
R4	PB1 *	I/O	GPIO_Output	GPIO_nLED_RED
R5	PB0	I/O	ADC1_IN8	ADC_RSSI_IN_CHANNEL
R6	PF11 *	I/O	GPIO_Output	GPIO_SPI4_CS2
R7	PF14	I/O	I2C4_SCL	
R9	PE10 *	I/O	GPIO_Input	GPIO_SAFETY_SWITCH_IN
R10	PE12 *	I/O	GPIO_Output	GPIO_nSAFETY_SWITCH_LED_OUT
R11	PE15 *	I/O	GPIO_Input	GPIO_nVDD_5V_PERIPH_OC
R12	PB10 *	I/O	GPIO_Output	GPIO_nSPI5_RESET_EXTERNAL1
R13	PB11	I/O	TIM2_CH4	GPIO_TIM2_CH4_IN
R14	PB14 *	I/O	GPIO_Input	GPIO_SPI1_DRDY2_BMI055_GYRO
R15	PB15 *	I/O	GPIO_Input	GPIO_SPI1_DRDY3_BMI055_ACC

* The pin is affected with an I/O function

4. Clock Tree Configuration
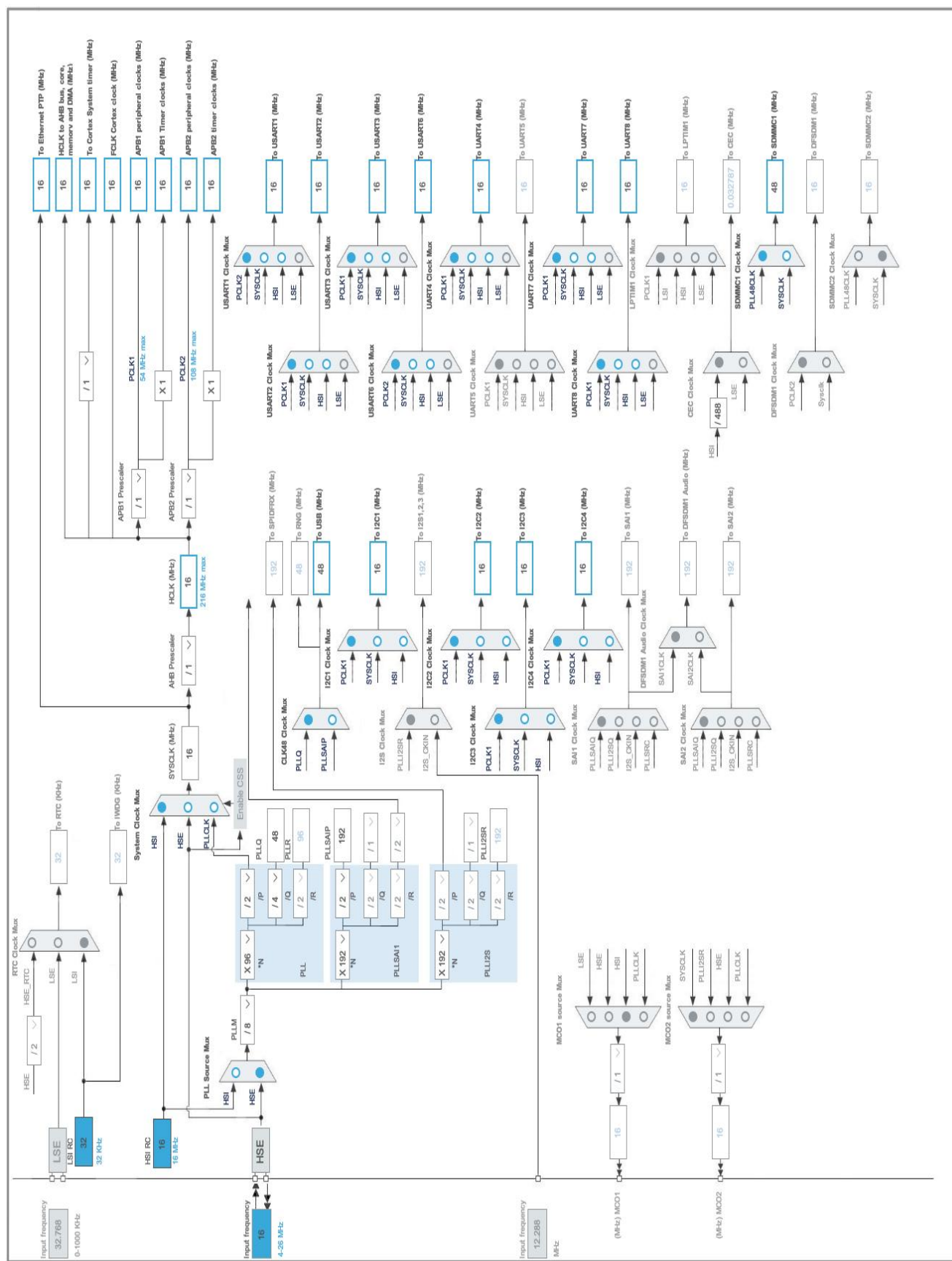
5. Software Project

5.1. Project Settings

Name	Value
Project Name	px4fmu-v5
Project Folder	/Users/dagar/git/Firmware/boards/px4/fmu-v5/documentation
Toolchain / IDE	Makefile
Firmware Package Name and Version	STM32Cube FW_F7 V1.14.0

5.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	Add necessary library files as reference in the toolchain project configuration file
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	STM32F7
Line	STM32F7x5
MCU	STM32F765IIKx
Datasheet	029041_Rev4

6.2. Parameter Selection

Temperature	25
Vdd	3.3

7. IPs and Middleware Configuration

7.1. ADC1

mode: IN0

mode: IN1

mode: IN2

mode: IN3

mode: IN4

mode: IN8

mode: IN10

mode: IN11

mode: IN12

mode: IN13

mode: IN14

7.1.1. Parameter Settings:

ADCs_Common_Settings:

Mode	Independent mode

ADC_Settings:

Clock Prescaler	PCLK2 divided by 2
Resolution	12 bits (15 ADC Clock cycles)
Data Alignment	Right alignment
Scan Conversion Mode	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	Disabled
End Of Conversion Selection	EOC flag at the end of single channel conversion

ADC_Regular_ConversionMode:

Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
External Trigger Conversion Edge	None
Rank	1
Channel	Channel 0
Sampling Time	3 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0

WatchDog:

Enable Analog WatchDog Mode	false

7.2. CAN1

mode: Mode

7.2.1. Parameter Settings:

Bit Timings Parameters:

Prescaler (for Time Quantum)	16
Time Quantum	**1000.0 ***
Time Quanta in Bit Segment 1	1 Time
Time Quanta in Bit Segment 2	1 Time
ReSynchronization Jump Width	1 Time

Basic Parameters:

Time Triggered Communication Mode	Disable
Automatic Bus-Off Management	Disable
Automatic Wake-Up Mode	Disable
No-Automatic Retransmission	Disable
Receive Fifo Locked Mode	Disable
Transmit Fifo Priority	Disable

Advanced Parameters:

Operating Mode	Normal

7.3. CAN2

mode: Mode

7.3.1. Parameter Settings:

Bit Timings Parameters:

Prescaler (for Time Quantum)	16
Time Quantum	**1000.0 ***
Time Quanta in Bit Segment 1	1 Time
Time Quanta in Bit Segment 2	1 Time
ReSynchronization Jump Width	1 Time

Basic Parameters:

Time Triggered Communication Mode	Disable
Automatic Bus-Off Management	Disable
Automatic Wake-Up Mode	Disable
No-Automatic Retransmission	Disable
Receive Fifo Locked Mode	Disable

Transmit Fifo Priority	Disable
Advanced Parameters:	
Operating Mode	Normal

7.4. CAN3

mode: Mode

7.4.1. Parameter Settings:

Bit Timings Parameters:

Prescaler (for Time Quantum)	16
Time Quantum	**1000.0 ***
Time Quanta in Bit Segment 1	1 Time
Time Quanta in Bit Segment 2	1 Time
ReSynchronization Jump Width	1 Time

Basic Parameters:

Time Triggered Communication Mode	Disable
Automatic Bus-Off Management	Disable
Automatic Wake-Up Mode	Disable
No-Automatic Retransmission	Disable
Receive Fifo Locked Mode	Disable
Transmit Fifo Priority	Disable

Advanced Parameters:

Operating Mode	Normal

7.5. I2C1

I2C: I2C

7.5.1. Parameter Settings:

Timing configuration:

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

7.6. I2C2

I2C: I2C

7.6.1. Parameter Settings:

Timing configuration:

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

7.7. I2C3

I2C: I2C

7.7.1. Parameter Settings:

Timing configuration:

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

7.8. I2C4

I2C: I2C

7.8.1. Parameter Settings:

Timing configuration:

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

7.9. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

7.9.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Flash Latency(WS)	0 WS (1 CPU cycle)

RCC Parameters:

HSI Calibration Value	16
TIM Prescaler Selection	Disabled
HSE Startup Timout Value (ms)	100

LSE Startup Timout Value (ms)   5000

Power Parameters:

Power Over Drive   Disabled

Power Regulatror Voltage Scale   Power Regulator Voltage Scale 3

7.10. SDMMC1

Mode: MMC 4 bits Wide bus

7.10.1. Parameter Settings:

SDMMC parameters:

Clock transition on which the bit capture is made   Rising transition

SDMMC Clock divider bypass   Disable

SDMMC Clock output enable when the bus is idle   Disable the power save for the clock

SDMMC hardware flow control   The hardware control flow is disabled

SDMMCCLK clock divide factor   0

7.11. SPI1

Mode: Full-Duplex Master

7.11.1. Parameter Settings:

Basic Parameters:

Frame Format   Motorola

Data Size   4 Bits

First Bit   MSB First

Clock Parameters:

Prescaler (for Baud Rate)   2

Baud Rate   **8.0 MBits/s ***

Clock Polarity (CPOL)   Low

Clock Phase (CPHA)   1 Edge

Advanced Parameters:

CRC Calculation   Disabled

NSSP Mode   Enabled

NSS Signal Type   Software

7.12. SPI2

Mode: Full-Duplex Master
7.12.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**8.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

7.13. SPI4

Mode: Full-Duplex Master
7.13.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**8.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

7.14. SPI5

Mode: Full-Duplex Master

7.14.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	4 Bits
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	2
Baud Rate	**8.0 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

7.15. SYS

Debug: Serial Wire

Timebase Source: SysTick

7.16. TIM1

Channel1: PWM Generation CH1

Channel2: PWM Generation CH2

Channel3: Output Compare CH3

Channel4: PWM Generation CH4

7.16.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	0
Internal Clock Division (CKD)	No Division
Repetition Counter (RCR - 16 bits value)	0
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection TRGO	Reset (UG bit from TIMx_EGR)
Trigger Event Selection TRGO2	Reset (UG bit from TIMx_EGR)

Break And Dead Time management - BRK Configuration:

BRK State	Disable
BRK Polarity	High
BRK Filter (4 bits value)	0
BRK Sources Configuration	
- Digital Input	Disable
- DFSDM	Disable

Break And Dead Time management - BRK2 Configuration:

BRK2 State	Disable
BRK2 Polarity	High
BRK2 Filter (4 bits value)	0
BRK2 Sources Configuration	
- Digital Input	Disable
- DFSDM	Disable

Break And Dead Time management - Output Configuration:

Automatic Output State	Disable
Off State Selection for Run Mode (OSSR)	Disable
Off State Selection for Idle Mode (OSSI)	Disable
Lock Configuration	Off

PWM Generation Channel 1:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

PWM Generation Channel 2:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

Output Compare Channel 3:

Mode	Frozen (used for Timing base)
Pulse (16 bits value)	0
CH Polarity	High
CH Idle State	Reset

PWM Generation Channel 4:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High
CH Idle State	Reset

7.17. TIM2

Channel1: Input Capture direct mode
Channel2: Input Capture direct mode
Channel4: Input Capture direct mode
7.17.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 32 bits value)	0
Internal Clock Division (CKD)	No Division
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection TRGO	Reset (UG bit from TIMx_EGR)

Input Capture Channel 1:

Polarity Selection	Rising Edge
IC Selection	Direct
Prescaler Division Ratio	No division
Input Filter (4 bits value)	0

Input Capture Channel 2:

Polarity Selection	Rising Edge
IC Selection	Direct
Prescaler Division Ratio	No division
Input Filter (4 bits value)	0

Input Capture Channel 4:

Polarity Selection	Rising Edge
IC Selection	Direct
Prescaler Division Ratio	No division
Input Filter (4 bits value)	0

7.18. TIM4

Channel2: PWM Generation CH2
Channel3: PWM Generation CH3
7.18.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	0
Internal Clock Division (CKD)	No Division
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Master/Slave Mode (MSM bit)	Disable (Trigger input effect not delayed)
Trigger Event Selection TRGO	Reset (UG bit from TIMx_EGR)

PWM Generation Channel 2:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High

PWM Generation Channel 3:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High

7.19. TIM12

Channel1: PWM Generation CH1
Channel2: PWM Generation CH2
7.19.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	0
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	0
Internal Clock Division (CKD)	No Division
auto-reload preload	Disable

PWM Generation Channel 1:

Mode	PWM mode 1

Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High

PWM Generation Channel 2:

Mode	PWM mode 1
Pulse (16 bits value)	0
Fast Mode	Disable
CH Polarity	High

7.20. UART4

Mode: Asynchronous

7.20.1. Parameter Settings:

Basic Parameters:

Baud Rate	**57600 ***
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

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

7.21. UART7

Mode: Asynchronous

7.21.1. 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
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

7.22. UART8

Mode: Asynchronous

7.22.1. 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
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

7.23. USART1

Mode: Asynchronous

7.23.1. Parameter Settings:

Basic Parameters:

Baud Rate	**57600 ***
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

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

7.24. USART2

Mode: Asynchronous

Hardware Flow Control (RS232): CTS/RTS

7.24.1. 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

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

7.25. USART3

Mode: Asynchronous

Hardware Flow Control (RS232): CTS/RTS

7.25.1. 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
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

7.26. USART6

Mode: Asynchronous
Hardware Flow Control (RS232): CTS/RTS
7.26.1. 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
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

7.27. USB_OTG_FS

Mode: Device_Only
mode: Activate_VBUS
7.27.1. Parameter Settings:

Speed	Device Full Speed 12MBit/s
Endpoint 0 Max Packet size	64 Bytes
Enable internal IP DMA	Disabled
Low power	Disabled
Link Power Management	Disabled
VBUS sensing	Enabled
Signal start of frame	Disabled

* User modified value

8. System Configuration

8.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC1	PC0	ADC1_IN10	Analog mode	No pull-up and no pull-down	n/a	ADC_SCALED_V5_CHANNEL
	PC1	ADC1_IN11	Analog mode	No pull-up and no pull-down	n/a	ADC_SCALED_VDD_3V3_SENSORS_CHANNEL
	PC2	ADC1_IN12	Analog mode	No pull-up and no pull-down	n/a	ADC_HW_VER_SENSE_CHANNEL
	PC3	ADC1_IN13	Analog mode	No pull-up and no pull-down	n/a	ADC_HW_REV_SENSE_CHANNEL
	PA1	ADC1_IN1	Analog mode	No pull-up and no pull-down	n/a	ADC_BATTERY1_CURRENT_CHANNEL
	PA0/WKUP	ADC1_IN0	Analog mode	No pull-up and no pull-down	n/a	ADC_BATTERY1_VOLTAGE_CHANNEL
	PA4	ADC1_IN4	Analog mode	No pull-up and no pull-down	n/a	ADC1_SPARE_2_CHANNEL
	PC4	ADC1_IN14	Analog mode	No pull-up and no pull-down	n/a	ADC1_SPARE_1_CHANNEL
	PA2	ADC1_IN2	Analog mode	No pull-up and no pull-down	n/a	ADC_BATTERY2_VOLTAGE_CHANNEL
	PA3	ADC1_IN3	Analog mode	No pull-up and no pull-down	n/a	ADC_BATTERY2_CURRENT_CHANNEL
	PB0	ADC1_IN8	Analog mode	No pull-up and no pull-down	n/a	ADC_RSSI_IN_CHANNEL
CAN1	PI9	CAN1_RX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
	PH13	CAN1_TX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
CAN2	PB12	CAN2_RX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
	PB13	CAN2_TX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
CAN3	PA15	CAN3_TX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
	PA8	CAN3_RX	Alternate Function Push Pull	No pull-up and no pull-down	Very High *	
I2C1	PB8	I2C1_SCL	Alternate Function Open Drain	Pull-up	Very High *	
	PB9	I2C1_SDA	Alternate Function Open Drain	Pull-up	Very High	

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
					*	
I2C2	PF0	I2C2_SDA	Alternate Function Open Drain	Pull-up	**Very High** *	
	PF1	I2C2_SCL	Alternate Function Open Drain	Pull-up	**Very High** *	
I2C3	PH8	I2C3_SDA	Alternate Function Open Drain	Pull-up	**Very High** *	
	PH7	I2C3_SCL	Alternate Function Open Drain	Pull-up	**Very High** *	
I2C4	PF15	I2C4_SDA	Alternate Function Open Drain	Pull-up	**Very High** *	
	PF14	I2C4_SCL	Alternate Function Open Drain	Pull-up	**Very High** *	
RCC	PH0/OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PH1/OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SDMMC1	PC12	SDMMC1_CK	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC11	SDMMC1_D3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC10	SDMMC1_D2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD2	SDMMC1_CMD	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC9	SDMMC1_D1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC8	SDMMC1_D0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
SPI1	PD7	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PG11	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PA6	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
SPI2	PI3	SPI2_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PI2	SPI2_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PI1	SPI2_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
SPI4	PE2	SPI4_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PE6	SPI4_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High**	

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
					*	
	PE13	SPI4_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
SPI5	PF7	SPI5_SCK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PF9	SPI5_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PF8	SPI5_MISO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
SYS	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
TIM1	PA10	TIM1_CH3	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH2
	PE9	TIM1_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH4
	PE11	TIM1_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH3
	PE14	TIM1_CH4	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH1
TIM2	PB3	TIM2_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	GPIO_TIM2_CH2_IN
	PA5	TIM2_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	GPIO_TIM2_CH1_IN
	PB11	TIM2_CH4	Alternate Function Push Pull	No pull-up and no pull-down	Low	GPIO_TIM2_CH4_IN
TIM4	PD14	TIM4_CH3	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH6
	PD13	TIM4_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH5
TIM12	PH6	TIM12_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH7
	PH9	TIM12_CH2	Alternate Function Push Pull	No pull-up and no pull-down	Low	FMU_CH8
UART4	PD0	UART4_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD1	UART4_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
UART7	PF6	UART7_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PE8	UART7_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
UART8	PE1	UART8_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PE0	UART8_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
USART1	PB7	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PB6	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
USART2	PD6	USART2_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD5	USART2_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD4	USART2_RTS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD3	USART2_CTS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
USART3	PD12	USART3_RTS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD11	USART3_CTS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD9	USART3_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PD8	USART3_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
USART6	PG14	USART6_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PG15	USART6_CTS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PG9	USART6_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PG8	USART6_RTS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
USB_OTG_FS	PA12	USB_OTG_FS_DP	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PA11	USB_OTG_FS_DM	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	
	PA9	USB_OTG_FS_VBUS	Input mode	No pull-up and no pull-down	**n/a**	
GPIO	PE3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_VDD_3V3_SENSORS_EN
	PG13	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_nVDD_5V_HIPOWER_OC
	PB4	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI1_DRDY1_ICM20689

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PE4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_VDD_3V3_SPEKTRUM_POWER_EN
	PE5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_BUZZER_1
	PG12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_nVDD_5V_HIPOWER_EN
	PG10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI1_CS4_BMI055_ACC
	PI7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPI6_CS2_EXTERNAL2
	PI6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPI6_CS1_EXTERNAL2
	PI5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_PPM_IN_AS_OUT
	PC13	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI1_DRDY5_BMI055_GYRO
	PI8	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPI6_CS3_EXTERNAL2
	PI4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPI5_CS1_EXTERNAL1
	PH15	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI5_SYNC_EXTERNAL1
	PI10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPI5_CS1_EXTERNAL1
	PI11	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPI5_CS3_EXTERNAL1
	PH14	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_HW_REV_DRIVE
	PH2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_CAN1_SILENT_S0
	PH3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_CAN2_SILENT_S1
	PC7	GPIO_Output	**Output Open Drain ***	No pull-up and no pull-down	**Very High ***	GPIO_nLED_BLUE
	PF2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI1_CS1_ICM20689
	PH4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_CAN2_SILENT_S1
	PC6	GPIO_Output	**Output Open Drain ***	No pull-up and no pull-down	**Very High ***	GPIO_nLED_GREEN
	PF3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI1_CS2_ICM20602
	PF4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI1_CS3_BMI055_GYRO
	PH5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SPIAUX_CS_MEM
	PG7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_VDD_3V3_SD_CARD_EN
	PG6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_VDD_5V_WIFI_EN
	PF5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI2_CS_FRAM
	PG5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_VDD_5V_RC_EN
	PG4	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_VDD_5V_PERIPH_EN
	PG3	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_nPOWER_IN_C
	PF10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI2_CS_FRAM

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PD15	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI5_DRDY7_EXTERNAL1
	PG2	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_nPOWER_IN_B
	PG1	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_nPOWER_IN_A
	PG0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_VDD_5V_RC_EN
	PD10	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI1_DRDY6_BMI055_ACC
	PC5	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI1_DRDY4_ICM20602
	PF12	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_nVDD_5V_HIPOWER_EN
	PA7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_CAN2_SILENT_S1
	PB1	GPIO_Output	**Output Open Drain ***	No pull-up and no pull-down	**Very High** *****	GPIO_nLED_RED
	PF11	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_SPI4_CS2
	PE10	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SAFETY_SWITCH_IN
	PE12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_nSAFETY_SWITCH_LED_OUT
	PE15	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_nVDD_5V_PERIPH_OC
	PB10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GPIO_nSPI5_RESET_EXTERNAL1
	PB14	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI1_DRDY2_BMI055_GYRO
	PB15	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	GPIO_SPI1_DRDY3_BMI055_ACC

8.2. DMA configuration

DMA request	Stream	Direction	Priority
USART1_RX	DMA2_Stream5	Peripheral To Memory	Low
USART6_RX	DMA2_Stream2	Peripheral To Memory	Low
SDMMC1	DMA2_Stream3	Peripheral To Memory	Low
UART8_RX	DMA1_Stream6	Peripheral To Memory	Low
UART8_TX	DMA1_Stream0	Memory To Peripheral	Low

USART1_RX: DMA2_Stream5 DMA request Settings:

Mode:	Normal
Use fifo:	Disable
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

USART6_RX: DMA2_Stream2 DMA request Settings:

Mode:	Normal
Use fifo:	Disable
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

SDMMC1: DMA2_Stream3 DMA request Settings:

Mode:	**Peripheral Flow Control ***
Use fifo:	**Enable ***
FIFO Threshold:	Full
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	**Word ***
Memory Data Width:	Word
Peripheral Burst Size:	**4 Increment ***
Memory Burst Size:	4 Increment

UART8_RX: DMA1_Stream6 DMA request Settings:

Mode:	Normal
Use fifo:	Disable
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

UART8_TX: DMA1_Stream0 DMA request Settings:

Mode:	Normal
Use fifo:	Disable
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Byte
Memory Data Width:	Byte

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
Pre-fetch 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
DMA1 stream0 global interrupt	true	0	0
DMA1 stream6 global interrupt	true	0	0
DMA2 stream2 global interrupt	true	0	0
DMA2 stream3 global interrupt	true	0	0
DMA2 stream5 global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1, ADC2 and ADC3 global interrupts	unused		
CAN1 TX interrupts	unused		
CAN1 RX0 interrupts	unused		
CAN1 RX1 interrupt	unused		
CAN1 SCE interrupt	unused		
TIM1 break interrupt and TIM9 global interrupt	unused		
TIM1 update interrupt and TIM10 global interrupt	unused		
TIM1 trigger and commutation interrupts and TIM11 global interrupt	unused		
TIM1 capture compare interrupt	unused		
TIM2 global interrupt	unused		
TIM4 global interrupt	unused		
I2C1 event interrupt	unused		
I2C1 error interrupt	unused		
I2C2 event interrupt	unused		
I2C2 error interrupt	unused		
SPI1 global interrupt	unused		
SPI2 global interrupt	unused		
USART1 global interrupt	unused		
USART2 global interrupt	unused		
USART3 global interrupt	unused		

Interrupt Table	Enable	Preenmption Priority	SubPriority
TIM8 break interrupt and TIM12 global interrupt		unused	
SDMMC1 global interrupt		unused	
UART4 global interrupt		unused	
CAN2 TX interrupts		unused	
CAN2 RX0 interrupts		unused	
CAN2 RX1 interrupt		unused	
CAN2 SCE interrupt		unused	
USB On The Go FS global interrupt		unused	
USART6 global interrupt		unused	
I2C3 event interrupt		unused	
I2C3 error interrupt		unused	
FPU global interrupt		unused	
UART7 global interrupt		unused	
UART8 global interrupt		unused	
SPI4 global interrupt		unused	
SPI5 global interrupt		unused	
I2C4 event interrupt		unused	
I2C4 error interrupt		unused	
CAN3 TX interrupt		unused	
CAN3 RX0 interrupt		unused	
CAN3 RX1 interrupt		unused	
CAN3 SCE interrupt		unused	

* User modified value

9. Software Pack Report