1. Description

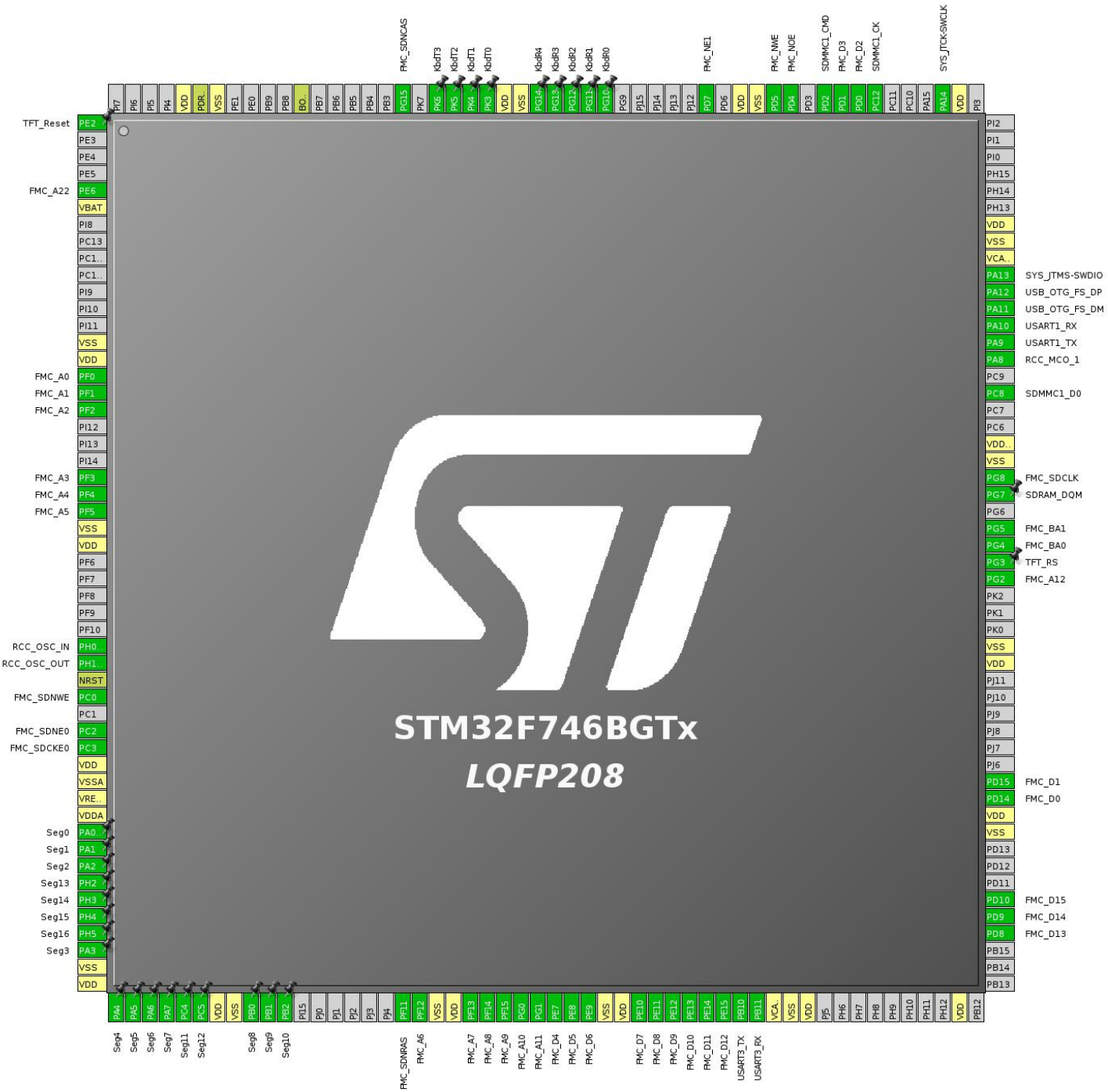
1.1. Project

Project Name	f7_8bitram
Board Name	f7_8bitram
Generated with:	STM32CubeMX 4.25.1
Date	07/08/2018

1.2. MCU

MCU Series	STM32F7
MCU Line	STM32F7x6
MCU name	STM32F746BGTx
MCU Package	LQFP208
MCU Pin number	208

2. Pinout Configuration



3. Pins Configuration

Pin Number LQFP208	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	PE2 *	I/O	GPIO_Output	TFT_Reset
5	PE6	I/O	FMC_A22	
6	VBAT	Power		
14	VSS	Power		
15	VDD	Power		
16	PF0	I/O	FMC_A0	
17	PF1	I/O	FMC_A1	
18	PF2	I/O	FMC_A2	
22	PF3	I/O	FMC_A3	
23	PF4	I/O	FMC_A4	
24	PF5	I/O	FMC_A5	
25	VSS	Power		
26	VDD	Power		
32	PH0/OSC_IN	I/O	RCC_OSC_IN	
33	PH1/OSC_OUT	I/O	RCC_OSC_OUT	
34	NRST	Reset		
35	PC0	I/O	FMC_SDNWE	
37	PC2	I/O	FMC_SDNE0	
38	PC3	I/O	FMC_SDCKE0	
39	VDD	Power		
40	VSSA	Power		
41	VREF+	Power		
42	VDDA	Power		
43	PA0/WKUP *	I/O	GPIO_Output	Seg0
44	PA1 *	I/O	GPIO_Output	Seg1
45	PA2 *	I/O	GPIO_Output	Seg2
46	PH2 *	I/O	GPIO_Output	Seg13
47	PH3 *	I/O	GPIO_Output	Seg14
48	PH4 *	I/O	GPIO_Output	Seg15
49	PH5 *	I/O	GPIO_Output	Seg16
50	PA3 *	I/O	GPIO_Output	Seg3
51	VSS	Power		
52	VDD	Power		
53	PA4 *	I/O	GPIO_Output	Seg4
54	PA5 *	I/O	GPIO_Output	Seg5
55	PA6 *	I/O	GPIO_Output	Seg6

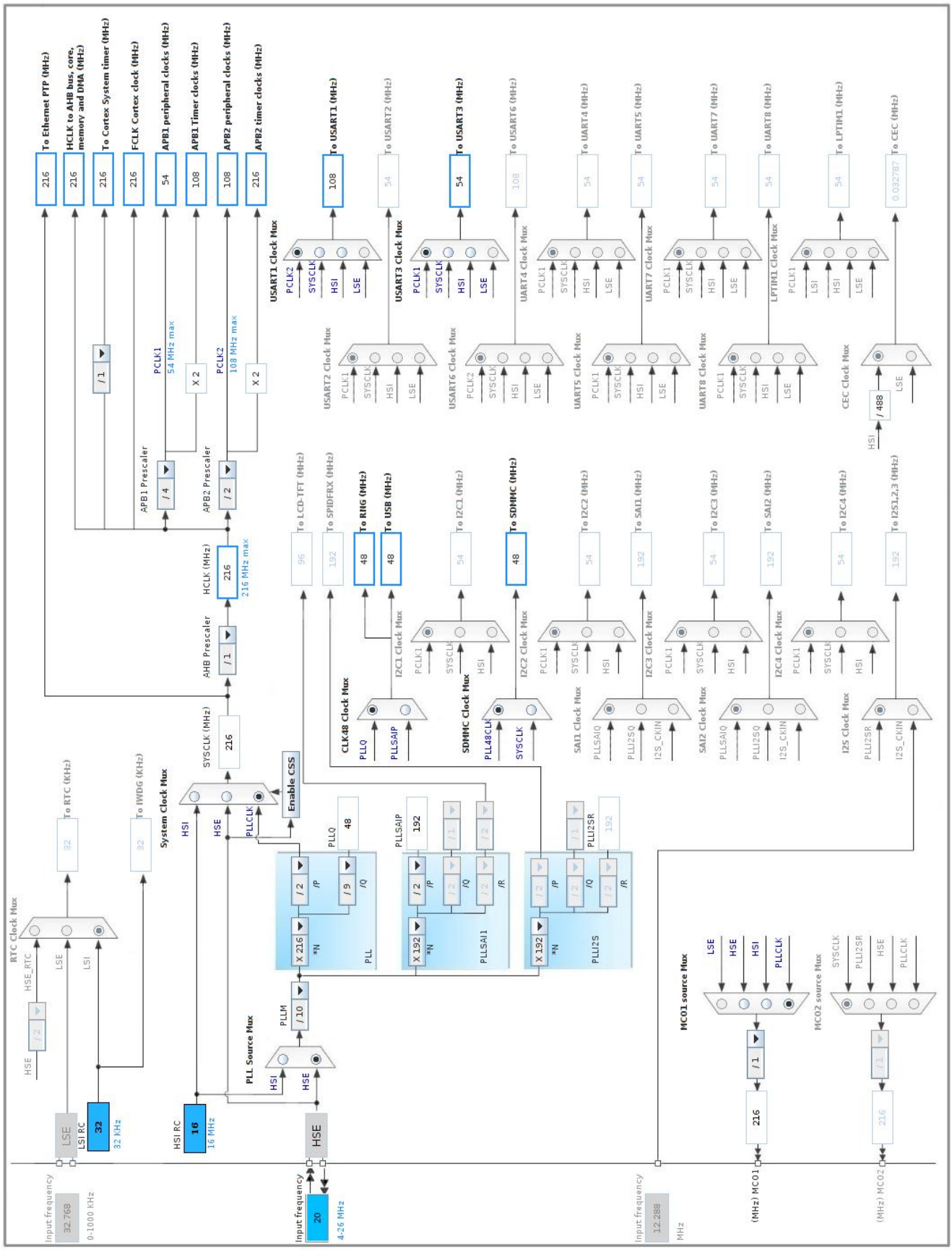
Pin Number LQFP208	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
56	PA7 *	I/O	GPIO_Output	Seg7
57	PC4 *	I/O	GPIO_Output	Seg11
58	PC5 *	I/O	GPIO_Output	Seg12
59	VDD	Power		
60	VSS	Power		
61	PB0 *	I/O	GPIO_Output	Seg8
62	PB1 *	I/O	GPIO_Output	Seg9
63	PB2 *	I/O	GPIO_Output	Seg10
70	PF11	I/O	FMC_SDNRAS	
71	PF12	I/O	FMC_A6	
72	VSS	Power		
73	VDD	Power		
74	PF13	I/O	FMC_A7	
75	PF14	I/O	FMC_A8	
76	PF15	I/O	FMC_A9	
77	PG0	I/O	FMC_A10	
78	PG1	I/O	FMC_A11	
79	PE7	I/O	FMC_D4	
80	PE8	I/O	FMC_D5	
81	PE9	I/O	FMC_D6	
82	VSS	Power		
83	VDD	Power		
84	PE10	I/O	FMC_D7	
85	PE11	I/O	FMC_D8	
86	PE12	I/O	FMC_D9	
87	PE13	I/O	FMC_D10	
88	PE14	I/O	FMC_D11	
89	PE15	I/O	FMC_D12	
90	PB10	I/O	USART3_TX	
91	PB11	I/O	USART3_RX	
92	VCAP_1	Power		
93	VSS	Power		
94	VDD	Power		
103	VDD	Power		
108	PD8	I/O	FMC_D13	
109	PD9	I/O	FMC_D14	
110	PD10	I/O	FMC_D15	
114	VSS	Power		
115	VDD	Power		

Pin Number LQFP208	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
116	PD14	I/O	FMC_D0	
117	PD15	I/O	FMC_D1	
124	VDD	Power		
125	VSS	Power		
129	PG2	I/O	FMC_A12	
130	PG3 *	I/O	GPIO_Output	TFT_RS
131	PG4	I/O	FMC_BA0	
132	PG5	I/O	FMC_BA1	
134	PG7 *	I/O	GPIO_Output	SDRAM_DQM
135	PG8	I/O	FMC_SDCLK	
136	VSS	Power		
137	VDDUSB	Power		
140	PC8	I/O	SDMMC1_D0	
142	PA8	I/O	RCC_MCO_1	
143	PA9	I/O	USART1_TX	
144	PA10	I/O	USART1_RX	
145	PA11	I/O	USB_OTG_FS_DM	
146	PA12	I/O	USB_OTG_FS_DP	
147	PA13	I/O	SYS_JTMS-SWDIO	
148	VCAP_2	Power		
149	VSS	Power		
150	VDD	Power		
158	VDD	Power		
159	PA14	I/O	SYS_JTCK-SWCLK	
163	PC12	I/O	SDMMC1_CK	
164	PD0	I/O	FMC_D2	
165	PD1	I/O	FMC_D3	
166	PD2	I/O	SDMMC1_CMD	
168	PD4	I/O	FMC_NOE	
169	PD5	I/O	FMC_NWE	
170	VSS	Power		
171	VDD	Power		
173	PD7	I/O	FMC_NE1	
179	PG10 *	I/O	GPIO_Input	KbdR0
180	PG11 *	I/O	GPIO_Input	KbdR1
181	PG12 *	I/O	GPIO_Input	KbdR2
182	PG13 *	I/O	GPIO_Input	KbdR3
183	PG14 *	I/O	GPIO_Input	KbdR4
184	VSS	Power		

Pin Number LQFP208	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
185	VDD	Power		
186	PK3 *	I/O	GPIO_Output	KbdT0
187	PK4 *	I/O	GPIO_Output	KbdT1
188	PK5 *	I/O	GPIO_Output	KbdT2
189	PK6 *	I/O	GPIO_Output	KbdT3
191	PG15	I/O	FMC_SDNCAS	
197	BOOT0	Boot		
202	VSS	Power		
203	PDR_ON	Reset		
204	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. DMA2D

mode: Activated

5.1.1. Parameter Settings:

Basic Parameters:

Transfer Mode	Memory to Memory
Color Mode	**RGB565 ***
Output Offset	0

Foreground layer Configuration:

DMA2D Input Color Mode	RGB565
DMA2D ALPHA MODE	No modification of the alpha channel value
Input Alpha	**255 ***
Input Offset	0

5.2. FMC

NOR Flash/PSRAM/SRAM/ROM/LCD 1

Chip Select: NE1

Memory type: LCD Interface

LCD Register Select: A22

Data: 16 bits

SDRAM 1

Clock and chip enable: SDCKE0+SDNE0

Internal bank number: 4 banks

Address: 13 bits

Data: 8 bits

5.2.1. NOR/PSRAM 1:

NOR/PSRAM control:

Memory type	LCD Interface
Bank	Bank 1 NOR/PSRAM 1
Write operation	Enabled

Write FIFO	**Disabled ***
Extended mode	Disabled

NOR/PSRAM timing:

Address setup time in HCLK clock cycles	**4 ***
Data setup time in HCLK clock cycles	**4 ***
Bus turn around time in HCLK clock cycles	**4 ***

5.2.2. SDRAM 1:

SDRAM control:

Bank	SDRAM bank 1
Number of column address bits	**10 bits ***
Number of row address bits	13 bits
CAS latency	**3 memory clock cycles ***
Write protection	Disabled
SDRAM common clock	**2 HCLK clock cycles ***
SDRAM common burst read	**Enabled ***
SDRAM common read pipe delay	**1 HCLK clock cycle ***

SDRAM timing in memory clock cycles:

Load mode register to active delay	**2 ***
Exit self-refresh delay	**7 ***
Self-refresh time	**4 ***
SDRAM common row cycle delay	**7 ***
Write recovery time	**3 ***
SDRAM common row precharge delay	**2 ***
Row to column delay	**2 ***

5.3. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator
mode: Master Clock Output 1

5.3.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Flash Latency(WS)	7 WS (8 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	Enabled
Power Regulatror Voltage Scale	Power Regulator Voltage Scale 1

5.4. RNG

mode: Activated

5.5. SDMMC1

Mode: SD 1 bit

5.5.1. 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

5.6. SYS

Debug: Serial Wire

Timebase Source: SysTick

5.7. TIM6

mode: Activated

5.7.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**10800 ***

Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**1000 ***
auto-reload preload	Disable

Trigger Output (TRGO) Parameters:

Trigger Event Selection	Reset (UG bit from TIMx_EGR)

5.8. TIM7

mode: Activated

5.8.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**10800 ***
Counter Mode	Up
Counter Period (AutoReload Register - 16 bits value)	**10 ***
auto-reload preload	**Enable ***

Trigger Output (TRGO) Parameters:

Trigger Event Selection	Reset (UG bit from TIMx_EGR)

5.9. USART1

Mode: Asynchronous

5.9.1. 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

5.10. USART3

Mode: Asynchronous

5.10.1. 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

5.11. USB_OTG_FS

Mode: Device_Only

5.11.1. Parameter Settings:

Speed	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	Disabled
Signal start of frame	Disabled

5.12. FATFS

mode: SD Card

5.12.1. Set Defines:

Version:

FATFS version	R0.12c

Function Parameters:

FS_READONLY (Read-only mode)	Disabled
FS_MINIMIZE (Minimization level)	**Enabled with 9 functions removed ***
USE_STRFUNC (String functions)	**Enabled without LF -> CRLF conversion ***
USE_FIND (Find functions)	Disabled
USE_MKFS (Make filesystem function)	**Disabled ***
USE_FASTSEEK (Fast seek function)	Enabled
USE_EXPAND (Use f_expand function)	Disabled
USE_CHMOD (Change attributes function)	Disabled
USE_LABEL (Volume label functions)	Disabled
USE_FORWARD (Forward function)	Disabled

Locale and Namespace Parameters:

CODE_PAGE (Code page on target)	Latin 1
USE_LFN (Use Long Filename)	Disabled
MAX_LFN (Max Long Filename)	255
LFN_UNICODE (Enable Unicode)	ANSI/OEM
STRF_ENCODE (Character encoding)	UTF-8
FS_RPATH (Relative Path)	Disabled

Physical Drive Parameters:

VOLUMES (Logical drives)	1
MAX_SS (Maximum Sector Size)	512
MIN_SS (Minimum Sector Size)	512
MULTI_PARTITION (Volume partitions feature)	Disabled
USE_TRIM (Erase feature)	Disabled
FS_NOFSINFO (Force full FAT scan)	0

System Parameters:

FS_TINY (Tiny mode)	Disabled
FS_EXFAT (Support of exFAT file system)	Disabled
FS_NORTC (Timestamp feature)	**Fixed timestamp ***
NORTC_YEAR (Year for timestamp)	**2018 ***
NORTC_MON (Month for timestamp)	**7 ***
NORTC_MDAY (Day for timestamp)	**3 ***
FS_REENTRANT (Re-Entrancy)	Disabled
FS_TIMEOUT (Timeout ticks)	1000
SYNC_t (O/S sync object)	osSemaphoreId
FS_LOCK (Number of files opened simultaneously)	2

5.12.2. IPs instances:

SDIO/SDMMC:

SDMMC instance	SDMMC1
Use dma template	**Disabled ***

5.13. USB_DEVICE

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

5.13.1. 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_SUPPORT_USER_STRING (Enable user string descriptor)	Disabled
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

5.13.2. 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
SERIALNUMBER_STRING (Serial number)	00000000001A
CONFIGURATION_STRING (Configuration Identifier)	CDC Config
INTERFACE_STRING (Interface Identifier)	CDC Interface

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
FMC	PE6	FMC_A22	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF0	FMC_A0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF1	FMC_A1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF2	FMC_A2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF3	FMC_A3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF4	FMC_A4	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF5	FMC_A5	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC0	FMC_SDNWE	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC2	FMC_SDNE0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PC3	FMC_SDCKE0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF11	FMC_SDNRAS	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF12	FMC_A6	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF13	FMC_A7	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF14	FMC_A8	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PF15	FMC_A9	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PG0	FMC_A10	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PG1	FMC_A11	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE7	FMC_D4	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE8	FMC_D5	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE9	FMC_D6	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE10	FMC_D7	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE11	FMC_D8	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE12	FMC_D9	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE13	FMC_D10	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE14	FMC_D11	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PE15	FMC_D12	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD8	FMC_D13	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD9	FMC_D14	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD10	FMC_D15	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD14	FMC_D0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD15	FMC_D1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PG2	FMC_A12	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PG4	FMC_BA0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PG5	FMC_BA1	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
	PG8	FMC_SDCLK	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD0	FMC_D2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD1	FMC_D3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD4	FMC_NOE	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD5	FMC_NWE	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD7	FMC_NE1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PG15	FMC_SDNCAS	Alternate Function Push Pull	No pull-up and no pull-down	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	
	PA8	RCC_MCO_1	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
SDMMC1	PC8	SDMMC1_D0	Alternate Function Push Pull	**Pull-up ***	Very High	
	PC12	SDMMC1_CK	Alternate Function Push Pull	No pull-up and no pull-down	Very High	
	PD2	SDMMC1_CMD	Alternate Function Push Pull	**Pull-up ***	Very High	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
USART1	PA9	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
	PA10	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
USART3	PB10	USART3_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
	PB11	USART3_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
USB_OTG_FS	PA11	USB_OTG_FS_DM	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
	PA12	USB_OTG_FS_DP	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	
GPIO	PE2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	TFT_Reset
	PA0/WKUP	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg0
	PA1	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg1
	PA2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg2
	PH2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg13
	PH3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg14
	PH4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg15

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PH5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg16
	PA3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg3
	PA4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg4
	PA5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg5
	PA6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg6
	PA7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg7
	PC4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg11
	PC5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg12
	PB0	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg8
	PB1	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg9
	PB2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	Seg10
	PG3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	TFT_RS
	PG7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	SDRAM_DQM
	PG10	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	KbdR0
	PG11	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	KbdR1
	PG12	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	KbdR2
	PG13	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	KbdR3
	PG14	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	KbdR4
	PK3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	KbdT0
	PK4	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	KbdT1
	PK5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	KbdT2
	PK6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	KbdT3

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
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
TIM6 global interrupt, DAC1 and DAC2 underrun error interrupts	true	0	0
TIM7 global interrupt	true	0	0
USB On The Go FS global interrupt	true	0	0
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
USART1 global interrupt	unused		
USART3 global interrupt	unused		
FMC global interrupt	unused		
SDMMC1 global interrupt	unused		
HASH and RNG global interrupts	unused		
FPU global interrupt	unused		
DMA2D global interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F7
Line	STM32F7x6
MCU	STM32F746BGTx
Datasheet	027590_Rev4

7.2. Parameter Selection

Temperature	25
Vdd	3.3

7.3. Battery Selection

Battery	Alkaline(AA LR6)
Capacity	2850.0 mAh
Self Discharge	0.3 %/month
Nominal Voltage	1.5 V
Max Cont Current	1000.0 mA
Max Pulse Current	0.0 mA
Cells in series	1
Cells in parallel	1

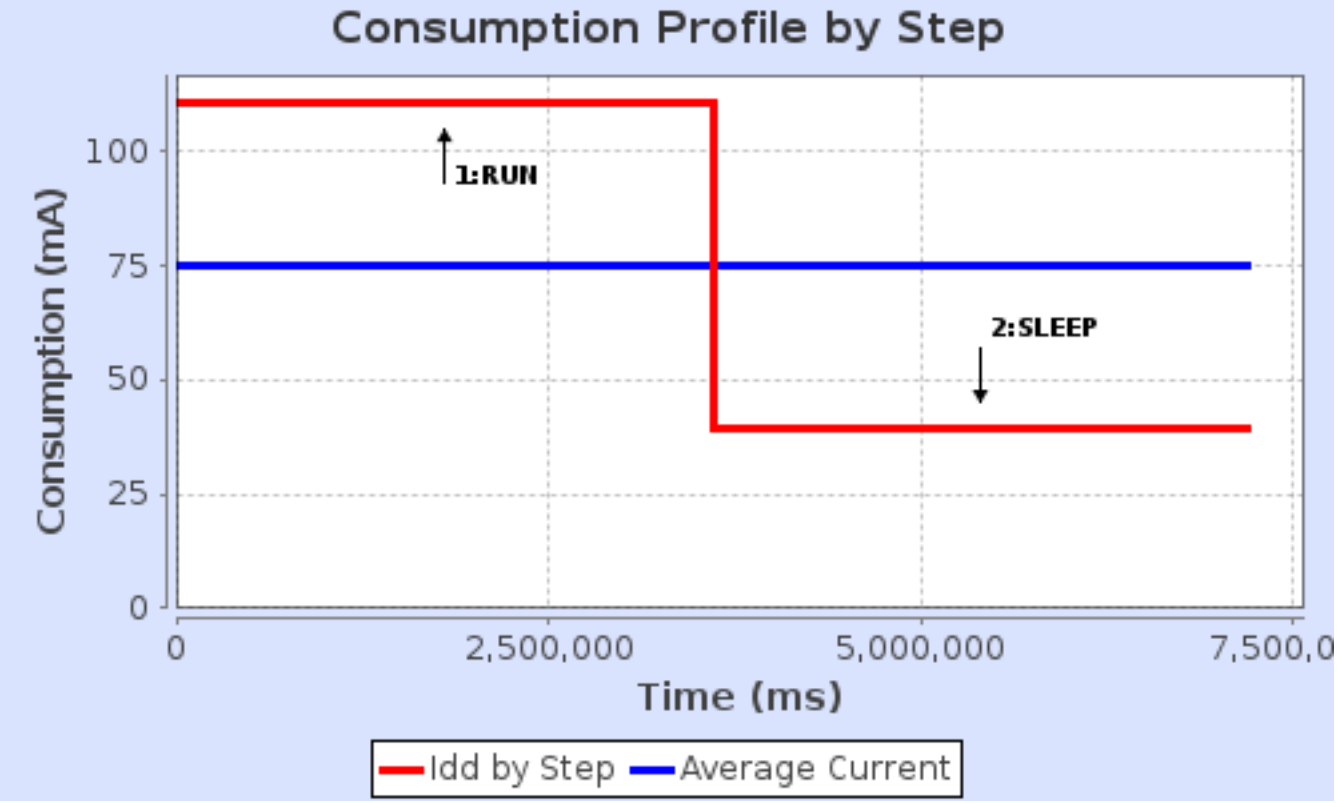
7.4. Sequence

Step	Step1	Step2
Mode	RUN	SLEEP
Vdd	3.3	3.3
Voltage Source	Battery	Battery
Range	Scale1-High	Scale1-High
Fetch Type	SRAM/FLASH/REGON	RAM/FLASH REGON
Clock Configuration	HSE PLL	HSE PLL
Clock Source Frequency	4 MHz	4 MHz
CPU Frequency	216 MHz	216 MHz
Peripherals	FMC RNG TIM7 USART1	FMC
Additional Cons.	0 mA	0 mA
Average Current	110.96 mA	39.08 mA
Duration	3600 s	3600 s
DMIPS	462.24002	462.24002
Ta Max	98.04	102.55
Category	In DS Table	In DS Table

7.5. RESULTS

Sequence Time	7,200 s	Average Current	75.02 mA
Battery Life	1 day, 13 hours	Average DMIPS	462.24 DMIPS

7.6. Chart


Consumption Profile by Step
Consumption (mA)
100
75
50
25
0
1:RUN
2:SLEEP
0
2,500,000
5,000,000
7,500,0
Time (ms)
Idd by Step
Average Current

8. Software Project

8.1. Project Settings

Name	Value
Project Name	f7_8bitram
Project Folder	/home/lisa/eclipse_workspaces/workspace_stm32/f7_8bitram
Toolchain / IDE	Makefile
Firmware Package Name and Version	STM32Cube FW_F7 V1.11.0

8.2. 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	Yes
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)	Yes

9. Software Pack Report