1. Description

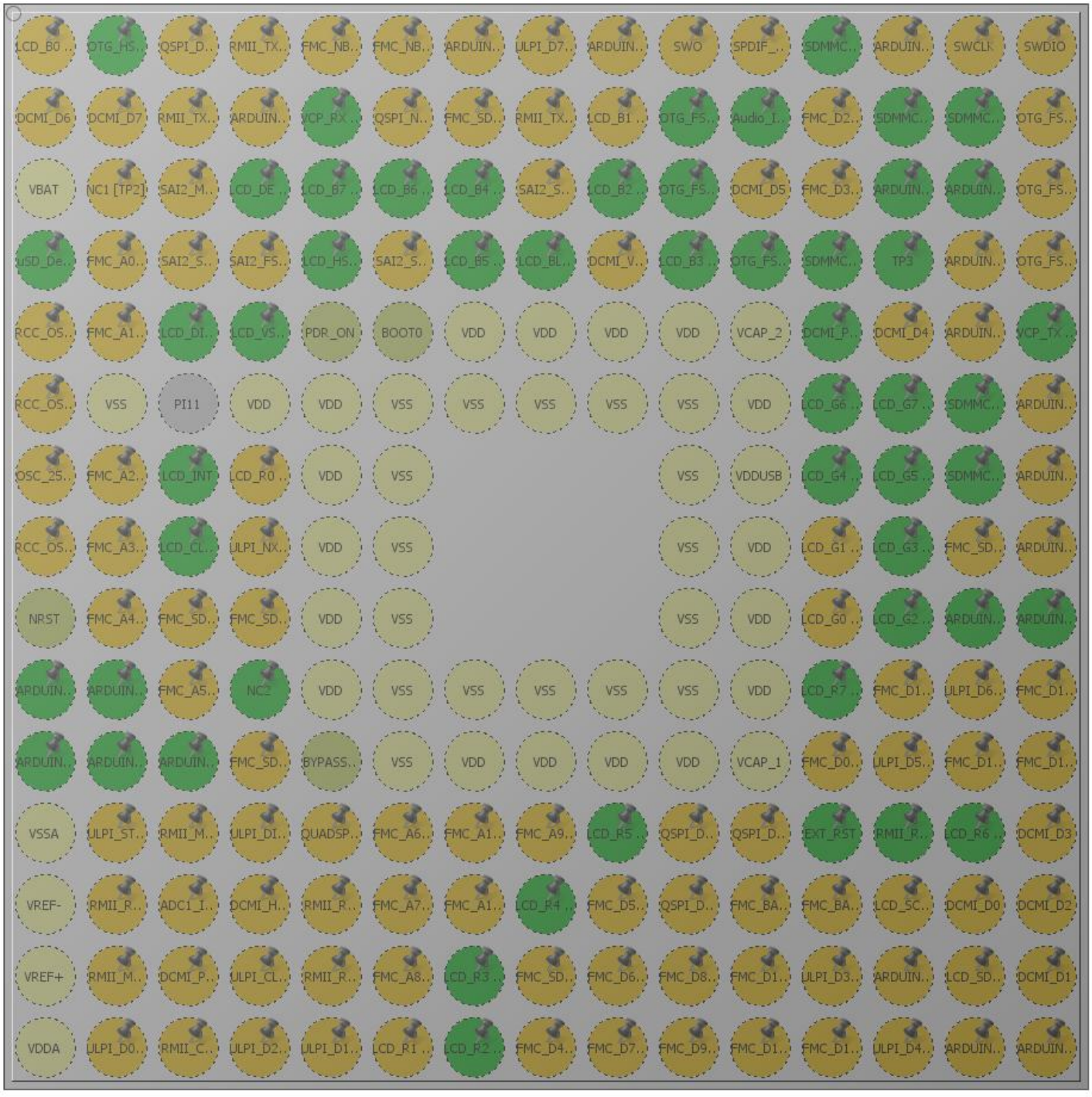
1.1. Project

Project Name	Teun
Board Name	STM32F746G-DISCO
Generated with:	STM32CubeMX 4.21.0
Date	12/19/2017

1.2. MCU

MCU Series	STM32F7
MCU Line	STM32F7x6
MCU name	STM32F746NGHx
MCU Package	TFBGA216
MCU Pin number	216

2. Pinout Configuration



STM32F746NGHx

TFBGA216

3. Pins Configuration

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
A1	PE4 *	I/O	LTDC_B0	LCD_B0 [RK043FN48H-CT672B_B0]
A2	PE3 **	I/O	GPIO_Input	OTG_HS_OverCurrent [STMPS2151STR_FAULT]
A3	PE2 *	I/O	QUADSPI_BK1_IO2	QSPI_D2 [N25Q128A13EF840E_DQ2]
A4	PG14 *	I/O	ETH_TXD1	RMII_TXD1 [LAN8742A-CZ-TR_TXD1]
A5	PE1 *	I/O	FMC_NBL1	FMC_NBL1 [MT48LC4M32B2B5-6A_DQM1]
A6	PE0 *	I/O	FMC_NBL0	FMC_NBL0 [MT48LC4M32B2B5-6A_DQM0]
A7	PB8 *	I/O	I2C1_SCL	ARDUINO SCL/D15
A8	PB5 *	I/O	USB_OTG_HS_ULPI_D7	ULPI_D7 [USB3320C-EZK_D7]
A9	PB4 *	I/O	TIM3_CH1	ARDUINO PWM/D3
A10	PB3 *	I/O	SYS_JTDO-SWO	SWO
A11	PD7 *	I/O	SPDIFRX_IN0	SPDIF_RX0 [74LVC1G04SE_4]
A12	PC12	I/O	SDMMC1_CK	SDMMC_CK
A13	PA15 *	I/O	TIM2_CH1	ARDUINO PWM/D9
A14	PA14 *	I/O	SYS_JTCK-SWCLK	SWCLK
A15	PA13 *	I/O	SYS_JTMS-SWDIO	SWDIO
B1	PE5 *	I/O	DCMI_D6	DCMI_D6
B2	PE6 *	I/O	DCMI_D7	DCMI_D7
B3	PG13 *	I/O	ETH_TXD0	RMII_TXD0 [LAN8742A-CZ-TR_TXD0]
B4	PB9 *	I/O	I2C1_SDA	ARDUINO SDA/D14
B5	PB7	I/O	USART1_RX	VCP_RX [STM32F103CBT6_PA2]
B6	PB6 *	I/O	QUADSPI_BK1_NCS	QSPI_NCS [N25Q128A13EF840E_S]
B7	PG15 *	I/O	FMC_SDNCAS	FMC_SDNCAS [MT48LC4M32B2B5-6A_CAS]

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
B8	PG11 *	I/O	ETH_TX_EN	RMII_TX_EN [LAN8742A-CZ-TR_TXEN]
B9	PJ13 *	I/O	LTDC_B1	LCD_B1 [RK043FN48H-CT672B_B1]
B10	PJ12 **	I/O	GPIO_Input	OTG_FS_VBUS
B11	PD6	I/O	GPIO_EXTI6	Audio_INT
B12	PD0 *	I/O	FMC_D2	FMC_D2 [MT48LC4M32B2B5-6A_DQ2]
B13	PC11	I/O	SDMMC1_D3	SDMMC_D3
B14	PC10	I/O	SDMMC1_D2	SDMMC_D2
B15	PA12 *	I/O	USB_OTG_FS_DP	OTG_FS_P
C1	VBAT	Power		
C2	PI8 *	I/O	RTC_TS	NC1 [TP2]
C3	PI4 *	I/O	SAI2_MCLK_A	SAI2_MCLKA [WM8994ECS/R_MCLK1]
C4	PK7	I/O	LTDC_DE	LCD_DE [RK043FN48H-CT672B_DE]
C5	PK6	I/O	LTDC_B7	LCD_B7 [RK043FN48H-CT672B_B7]
C6	PK5	I/O	LTDC_B6	LCD_B6 [RK043FN48H-CT672B_B6]
C7	PG12	I/O	LTDC_B4	LCD_B4 [RK043FN48H-CT672B_B4]
C8	PG10 *	I/O	SAI2_SD_B	SAI2_SDB [WM8994ECS/R_ADCDAT1]
C9	PJ14	I/O	LTDC_B2	LCD_B2 [RK043FN48H-CT672B_B2]
C10	PD5 **	I/O	GPIO_Output	OTG_FS_PowerSwitchOn [STMPS2141STR_EN]
C11	PD3 *	I/O	DCMI_D5	DCMI_D5
C12	PD1 *	I/O	FMC_D3	FMC_D3 [MT48LC4M32B2B5-6A_DQ3]
C13	PI3 **	I/O	GPIO_Output	ARDUINO D7
C14	PI2 **	I/O	GPIO_Output	ARDUINO D8
C15	PA11 *	I/O	USB_OTG_FS_DM	OTG_FS_N
D1	PC13 **	I/O	GPIO_Input	uSD_Detect
D2	PF0 *	I/O	FMC_A0	FMC_A0 [MT48LC4M32B2B5-6A_A0]
D3	PI5 *	I/O	SAI2_SCK_A	SAI2_SCKA [WM8994ECS/R_BCLK1]

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
D4	PI7 *	I/O	SAI2_FS_A	SAI2_FSA [WM8994ECS/R_LRCLK1]
D5	PI10	I/O	LTDC_HSYNC	LCD_HSYNC [RK043FN48H-CT672B_HSYNC]
D6	PI6 *	I/O	SAI2_SD_A	SAI2_SDA [WM8994ECS/R_DACDAT1]
D7	PK4	I/O	LTDC_B5	LCD_B5 [RK043FN48H-CT672B_B5]
D8	PK3 **	I/O	GPIO_Output	LCD_BL_CTRL [STLD40DPUR_EN]
D9	PG9 *	I/O	DCMI_VSYNC	DCMI_VSYNC
D10	PJ15	I/O	LTDC_B3	LCD_B3 [RK043FN48H-CT672B_B3]
D11	PD4 **	I/O	GPIO_Input	OTG_FS_OverCurrent [STMPS2141STR_Fault]
D12	PD2	I/O	SDMMC1_CMD	SDMMC_D0
D13	PH15 **	I/O	GPIO_Input	TP3
D14	PI1 *	I/O	SPI2_SCK	ARDUINO SCK/D13
D15	PA10 *	I/O	USB_OTG_FS_ID	OTG_FS_ID
E1	PC14/OSC32_IN *	I/O	RCC_OSC32_IN	RCC_OSC32_IN
E2	PF1 *	I/O	FMC_A1	FMC_A1 [MT48LC4M32B2B5-6A_A1]
E3	PI12 **	I/O	GPIO_Output	LCD_DISP [RK043FN48H-CT672B_DISP]
E4	PI9	I/O	LTDC_VSYNC	LCD_VSYNC [RK043FN48H-CT672B_VSYNC]
E5	PDR_ON	Reset		
E6	BOOT0	Boot		
E7	VDD	Power		
E8	VDD	Power		
E9	VDD	Power		
E10	VDD	Power		
E11	VCAP_2	Power		
E12	PH13 **	I/O	GPIO_Output	DCMI_PWR_EN
E13	PH14 *	I/O	DCMI_D4	DCMI_D4
E14	PI0 *	I/O	TIM5_CH4	ARDUINO PWM/CS/D10
E15	PA9	I/O	USART1_TX	VCP_TX [STM32F103CBT6_PA3]
F1	PC15/OSC32_OUT *	I/O	RCC_OSC32_OUT	RCC_OSC32_OUT

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
F2	VSS	Power		
F4	VDD	Power		
F5	VDD	Power		
F6	VSS	Power		
F7	VSS	Power		
F8	VSS	Power		
F9	VSS	Power		
F10	VSS	Power		
F11	VDD	Power		
F12	PK1	I/O	LTDC_G6	LCD_G6 [RK043FN48H-CT672B_G6]
F13	PK2	I/O	LTDC_G7	LCD_G7 [RK043FN48H-CT672B_G7]
F14	PC9	I/O	SDMMC1_D1	
F15	PA8 *	I/O	TIM1_CH1	ARDUINO PWM/D5
G1	PH0/OSC_IN *	I/O	RCC_OSC_IN	OSC_25M [NZ2520SB-25.00M_OUT]
G2	PF2 *	I/O	FMC_A2	FMC_A2 [MT48LC4M32B2B5-6A_A2]
G3	PI13	I/O	GPIO_EXTI13	LCD_INT
G4	PI15 *	I/O	LTDC_R0	LCD_R0 [RK043FN48H-CT672B_R0]
G5	VDD	Power		
G6	VSS	Power		
G10	VSS	Power		
G11	VDDUSB	Power		
G12	PJ11	I/O	LTDC_G4	LCD_G4 [RK043FN48H-CT672B_G4]
G13	PK0	I/O	LTDC_G5	LCD_G5 [RK043FN48H-CT672B_G5]
G14	PC8	I/O	SDMMC1_D0	
G15	PC7 *	I/O	USART6_RX	ARDUINO RX/D0
H1	PH1/OSC_OUT *	I/O	RCC_OSC_OUT	
H2	PF3 *	I/O	FMC_A3	FMC_A3 [MT48LC4M32B2B5-6A_A3]
H3	PI14	I/O	LTDC_CLK	LCD_CLK [RK043FN48H-CT672B_CLK]
H4	PH4 *	I/O	USB_OTG_HS_ULPI_NXT	ULPI_NXT [USB3320C-EZK_NXT]
H5	VDD	Power		
H6	VSS	Power		

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
H10	VSS	Power		
H11	VDD	Power		
H12	PJ8 *	I/O	LTDC_G1	LCD_G1 [RK043FN48H-CT672B_G1]
H13	PJ10	I/O	LTDC_G3	LCD_G3 [RK043FN48H-CT672B_G3]
H14	PG8 *	I/O	FMC_SDCLK	FMC_SDCLK [MT48LC4M32B2B5-6A_CLK]
H15	PC6 *	I/O	USART6_TX	ARDUINO TX/D1
J1	NRST	Reset		
J2	PF4 *	I/O	FMC_A4	FMC_A4 [MT48LC4M32B2B5-6A_A4]
J3	PH5 *	I/O	FMC_SDNWE	FMC_SDNME [MT48LC4M32B2B5-6A_WE]
J4	PH3 *	I/O	FMC_SDNE0	FMC_SDNE0 [MT48LC4M32B2B5-6A_CS]
J5	VDD	Power		
J6	VSS	Power		
J10	VSS	Power		
J11	VDD	Power		
J12	PJ7 *	I/O	LTDC_G0	LCD_G0 [RK043FN48H-CT672B_G0]
J13	PJ9	I/O	LTDC_G2	LCD_G2 [RK043FN48H-CT672B_G2]
J14	PG7 **	I/O	GPIO_Output	ARDUINO D4
J15	PG6 **	I/O	GPIO_Output	ARDUINO D2
K1	PF7	I/O	ADC3_IN5	ARDUINO A4
K2	PF6	I/O	ADC3_IN4	ARDUINO A5
K3	PF5 *	I/O	FMC_A5	FMC_A5 [MT48LC4M32B2B5-6A_A5]
K4	PH2 **	I/O	GPIO_Input	NC2
K5	VDD	Power		
K6	VSS	Power		
K7	VSS	Power		
K8	VSS	Power		
K9	VSS	Power		
K10	VSS	Power		
K11	VDD	Power		

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
K12	PJ6	I/O	LTDC_R7	LCD_R7 [RK043FN48H-CT672B_R7]
K13	PD15 *	I/O	FMC_D1	FMC_D1 [MT48LC4M32B2B5-6A_DQ1]
K14	PB13 *	I/O	USB_OTG_HS_ULPI_D6	ULPI_D6 [USB3320C-EZK_D6]
K15	PD10 *	I/O	FMC_D15	FMC_D15 [MT48LC4M32B2B5-6A_DQ15]
L1	PF10	I/O	ADC3_IN8	ARDUINO A1
L2	PF9	I/O	ADC3_IN7	ARDUINO A2
L3	PF8	I/O	ADC3_IN6	ARDUINO A3
L4	PC3 *	I/O	FMC_SDCKE0	FMC_SDCKE0 [MT48LC4M32B2B5-6A_CKE]
L5	BYPASS_REG	Reset		
L6	VSS	Power		
L7	VDD	Power		
L8	VDD	Power		
L9	VDD	Power		
L10	VDD	Power		
L11	VCAP_1	Power		
L12	PD14 *	I/O	FMC_D0	FMC_D0 [MT48LC4M32B2B5-6A_DQ0]
L13	PB12 *	I/O	USB_OTG_HS_ULPI_D5	ULPI_D5 [USB3320C-EZK_D5]
L14	PD9 *	I/O	FMC_D14	FMC_D14 [MT48LC4M32B2B5-6A_DQ14]
L15	PD8 *	I/O	FMC_D13	FMC_D13 [MT48LC4M32B2B5-6A_DQ13]
M1	VSSA	Power		
M2	PC0 *	I/O	USB_OTG_HS_ULPI_STP	ULPI_STP [USB3320C-EZK_STP]
M3	PC1 *	I/O	ETH_MDC	RMII_MDC [LAN8742A-CZ-TR_MDC]
M4	PC2 *	I/O	USB_OTG_HS_ULPI_DIR	ULPI_DIR [USB3320C-EZK_DIR]
M5	PB2 *	I/O	QUADSPI_CLK	

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
M6	PF12 *	I/O	FMC_A6	FMC_A6 [MT48LC4M32B2B5-6A_A6]
M7	PG1 *	I/O	FMC_A11	FMC_A11 [MT48LC4M32B2B5-6A_A11]
M8	PF15 *	I/O	FMC_A9	FMC_A9 [MT48LC4M32B2B5-6A_A9]
M9	PJ4	I/O	LTDC_R5	LCD_R5 [RK043FN48H-CT672B_R5]
M10	PD12 *	I/O	QUADSPI_BK1_IO1	QSPI_D1 [N25Q128A13EF840E_DQ1]
M11	PD13 *	I/O	QUADSPI_BK1_IO3	QSPI_D3 [N25Q128A13EF840E_DQ3]
M12	PG3 **	I/O	GPIO_Output	EXT_RST
M13	PG2 **	I/O	GPIO_Input	RMII_RXER
M14	PJ5	I/O	LTDC_R6	LCD_R6 [RK043FN48H-CT672B_R6]
M15	PH12 *	I/O	DCMI_D3	DCMI_D3
N1	VREF-	Power		
N2	PA1 *	I/O	ETH_REF_CLK	RMII_REF_CLK [LAN8742A-CZ-TR_REFCLK0]
N3	PA0/WKUP *	I/O	ADC1_IN0, ADC2_IN0, ADC3_IN0	
N4	PA4 *	I/O	DCMI_HSYNC	DCMI_HSYNC
N5	PC4 *	I/O	ETH_RXD0	RMII_RXD0 [LAN8742A-CZ-TR_RXD0]
N6	PF13 *	I/O	FMC_A7	FMC_A7 [MT48LC4M32B2B5-6A_A7]
N7	PG0 *	I/O	FMC_A10	FMC_A10 [MT48LC4M32B2B5-6A_A10]
N8	PJ3	I/O	LTDC_R4	LCD_R4 [RK043FN48H-CT672B_R4]
N9	PE8 *	I/O	FMC_D5	FMC_D5 [MT48LC4M32B2B5-6A_DQ5]
N10	PD11 *	I/O	QUADSPI_BK1_IO0	QSPI_D0 [N25Q128A13EF840E_DQ0]

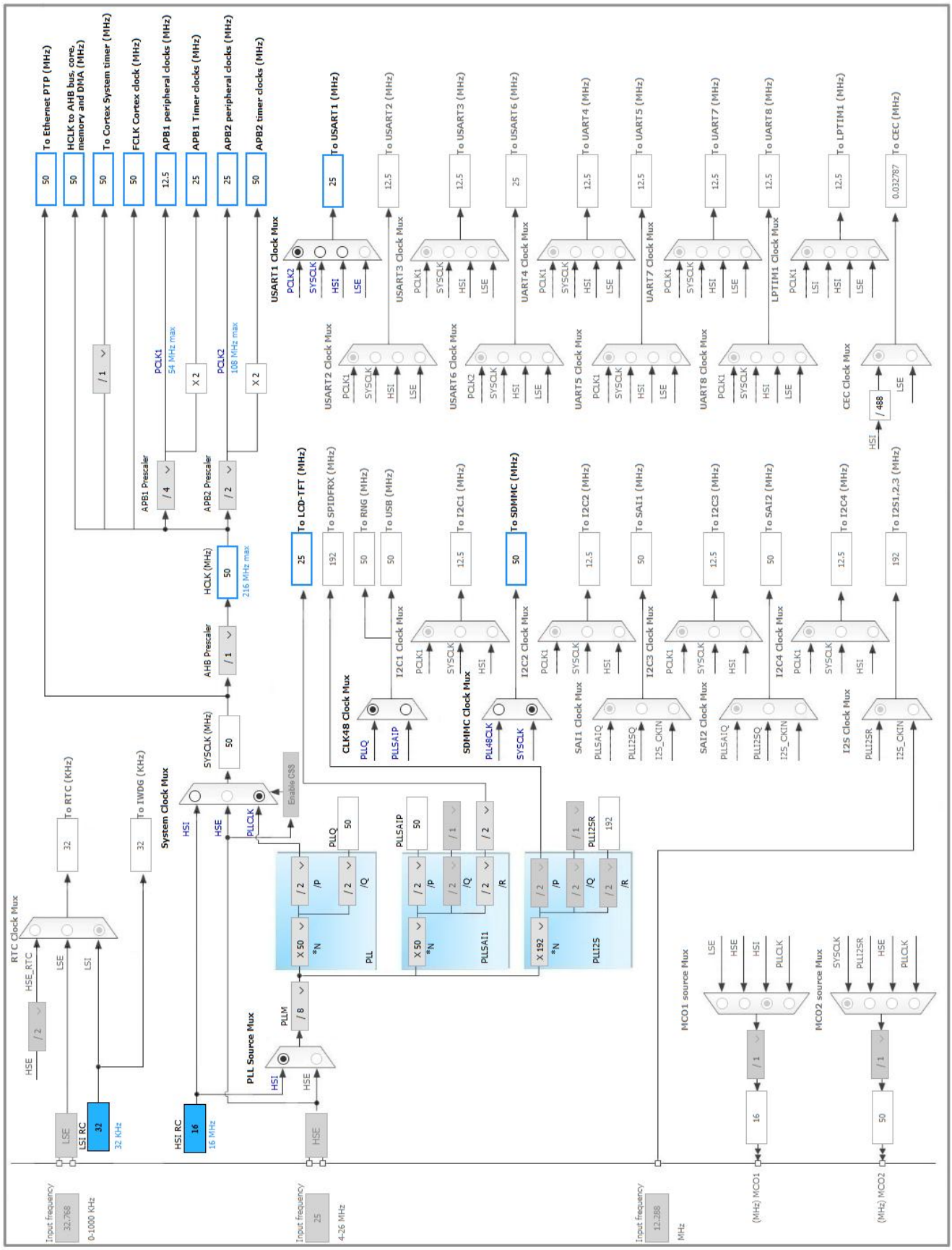
Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
N11	PG5 *	I/O	FMC_BA1	FMC_BA1 [MT48LC4M32B2B5-6A_BA1]
N12	PG4 *	I/O	FMC_BA0	FMC_BA0 [MT48LC4M32B2B5-6A_BA0]
N13	PH7 *	I/O	I2C3_SCL	LCD_SCL [RK043FN48H-CT672B_SCL]
N14	PH9 *	I/O	DCMI_D0	DCMI_D0
N15	PH11 *	I/O	DCMI_D2	DCMI_D2
P1	VREF+	Power		
P2	PA2 *	I/O	ETH_MDIO	RMII_MDIO [LAN8742A-CZ-TR_MDIO]
P3	PA6 *	I/O	DCMI_PIXCLK	
P4	PA5 *	I/O	USB_OTG_HS_ULPI_CK	ULPI_CLK [USB3320C-EZK_CLKOUT]
P5	PC5 *	I/O	ETH_RXD1	RMII_RXD1 [LAN8742A-CZ-TR_RXD1]
P6	PF14 *	I/O	FMC_A8	FMC_A8 [MT48LC4M32B2B5-6A_A8]
P7	PJ2	I/O	LTDC_R3	LCD_R3 [RK043FN48H-CT672B_R3]
P8	PF11 *	I/O	FMC_SDNRAS	FMC_SDNRAS [MT48LC4M32B2B5-6A_RAS]
P9	PE9 *	I/O	FMC_D6	FMC_D6 [MT48LC4M32B2B5-6A_DQ6]
P10	PE11 *	I/O	FMC_D8	FMC_D8 [MT48LC4M32B2B5-6A_DQ8]
P11	PE14 *	I/O	FMC_D11	FMC_D11 [MT48LC4M32B2B5-6A_DQ11]
P12	PB10 *	I/O	USB_OTG_HS_ULPI_D3	ULPI_D3 [USB3320C-EZK_D3]
P13	PH6 *	I/O	TIM12_CH1	ARDUINO PWM/D6
P14	PH8 *	I/O	I2C3_SDA	LCD_SDA [RK043FN48H-CT672B_SDA]
P15	PH10 *	I/O	DCMI_D1	DCMI_D1
R1	VDDA	Power		
R2	PA3 *	I/O	USB_OTG_HS_ULPI_D0	ULPI_D0 [USB3320C-EZK_D0]

Pin Number TFBGA216	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
R3	PA7 *	I/O	ETH_CRS_DV	RMII_CRS_DV [LAN8742A-CZ-TR_CRS_DV]
R4	PB1 *	I/O	USB_OTG_HS_ULPI_D2	ULPI_D2 [USB3320C-EZK_D2]
R5	PB0 *	I/O	USB_OTG_HS_ULPI_D1	ULPI_D1 [USB3320C-EZK_D1]
R6	PJ0 *	I/O	LTDC_R1	LCD_R1 [RK043FN48H-CT672B_R1]
R7	PJ1	I/O	LTDC_R2	LCD_R2 [RK043FN48H-CT672B_R2]
R8	PE7 *	I/O	FMC_D4	FMC_D4 [MT48LC4M32B2B5-6A_DQ4]
R9	PE10 *	I/O	FMC_D7	FMC_D7 [MT48LC4M32B2B5-6A_DQ7]
R10	PE12 *	I/O	FMC_D9	FMC_D9 [MT48LC4M32B2B5-6A_DQ9]
R11	PE15 *	I/O	FMC_D12	FMC_D12 [MT48LC4M32B2B5-6A_DQ12]
R12	PE13 *	I/O	FMC_D10	FMC_D10 [MT48LC4M32B2B5-6A_DQ10]
R13	PB11 *	I/O	USB_OTG_HS_ULPI_D4	ULPI_D4 [USB3320C-EZK_D4]
R14	PB14 *	I/O	SPI2_MISO	ARDUINO MISO/D12
R15	PB15 *	I/O	SPI2_MOSI	ARDUINO MOSI/PWM/D11

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

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

4. Clock Tree Configuration



5. IPs and Middleware Configuration

5.1. ADC3

mode: IN4

mode: IN5

mode: IN6

mode: IN7

mode: IN8

5.1.1. 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 4
Sampling Time	3 Cycles

ADC_Injected_ConversionMode:

Number Of Conversions	0

WatchDog:

Enable Analog WatchDog Mode	false

5.2. LTDC

Display Type: RGB666 (18 bits)

5.2.1. Parameter Settings:

Synchronization for Width:

Horizontal Synchronization Width	8
Horizontal Back Porch	7
Active Width	640
Horizontal Front Porch	6
HSync Width	7
Accumulated Horizontal Back Porch Width	14
Accumulated Active Width	654
Total Width	660

Synchronization for Height:

Vertical Synchronization Height	4
Vertical Back Porch	2
Active Height	480
Vertical Front Porch	2
VSync Height	3
Accumulated Vertical Back Porch Height	5
Accumulated Active Height	485
Total Height	487

Signal Polarity:

Horizontal Synchronization Polarity	Active Low
Vertical Synchronization Polarity	Active Low
Data Enable Polarity	Active Low
Pixel Clock Polarity	Normal Input

BackGround Color:

Red	0
Green	0
Blue	0

5.2.2. Layer Settings:

BackGround Color:

Layer 0 - Blue	0
Layer 0 - Green	0
Layer 0 - Red	0
Layer 1 - Blue	0
Layer 1 - Green	0
Layer 1 - Red	0

Number of Layers:

Number of Layers	2 layers

Windows Position:

Layer 0 - Window Horizontal Start	0
Layer 0 - Window Horizontal Stop	0
Layer 0 - Window Vertical Start	0
Layer 0 - Window Vertical Stop	0
Layer 1 - Window Horizontal Start	0
Layer 1 - Window Horizontal Stop	0
Layer 1 - Window Vertical Start	0
Layer 1 - Window Vertical Stop	0

Pixel Parameters:

Layer 0 - Pixel Format	ARGB8888
Layer 1 - Pixel Format	ARGB8888

Blending:

Layer 0 - Alpha constant for blending	0
Layer 0 - Default Alpha value	0
Layer 0 - Blending Factor1	Alpha constant
Layer 0 - Blending Factor2	Alpha constant
Layer 1 - Alpha constant for blending	0
Layer 1 - Default Alpha value	0
Layer 1 - Blending Factor1	Alpha constant
Layer 1 - Blending Factor2	Alpha constant

Frame Buffer:

Layer 0 - Color Frame Buffer Start Adress	0
Layer 0 - Color Frame Buffer Line Length (Image Width)	0
Layer 0 - Color Frame Buffer Number of Lines (Image Height)	0
Layer 1 - Color Frame Buffer Start Adress	0
Layer 1 - Color Frame Buffer Line Length (Image Width)	0
Layer 1 - Color Frame Buffer Number of Lines (Image Height)	0

5.3. SDMMC1

Mode: SD 4 bits Wide bus

5.3.1. Parameter Settings:

SDMMC parameters:

SDMMCCLK clock divide factor	0

5.4. SYS

Timebase Source: SysTick

5.5. USART1

Mode: Asynchronous

5.5.1. Parameter Settings:

Basic Parameters:

Baud Rate	115200
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

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

5.6. FATFS

mode: SD Card

5.6.1. Set Defines:

Version:

FATFS version	R0.11

Function Parameters:

FS_READONLY (Read-only mode)	Disabled
FS_MINIMIZE (Minimization level)	Disabled
USE_STRFUNC (String functions)	Enabled with LF -> CRLF conversion
USE_FIND (Find functions)	Disabled
USE_MKFS (Make filesystem function)	Enabled
USE_FASTSEEK (Fast seek function)	Enabled
USE_LABEL (Volume label functions)	Disabled
USE_FORWARD (Forward function)	Disabled

Locale and Namespace Parameters:

CODE_PAGE (Code page on target)	Multilingual Latin 1 (OEM)
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_NORTC (Timestamp feature)	Dynamic timestamp
NORTC_YEAR (Year for timestamp)	2015
NORTC_MON (Month for timestamp)	6
NORTC_MDAY (Day for timestamp)	4
WORD_ACCESS (Platform dependent access option)	Byte access
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

5.6.2. IPs instances:

SDIO/SDMMC:

SDMMC instance	SDMMC1

*** User modified value**

6. System Configuration

6.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC3	PF7	ADC3_IN5	Analog mode	No pull-up and no pull-down	n/a	ARDUINO A4
	PF6	ADC3_IN4	Analog mode	No pull-up and no pull-down	n/a	ARDUINO A5
	PF10	ADC3_IN8	Analog mode	No pull-up and no pull-down	n/a	ARDUINO A1
	PF9	ADC3_IN7	Analog mode	No pull-up and no pull-down	n/a	ARDUINO A2
	PF8	ADC3_IN6	Analog mode	No pull-up and no pull-down	n/a	ARDUINO A3
LTDC	PK7	LTDC_DE	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_DE [RK043FN48H-CT672B_DE]
	PK6	LTDC_B7	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B7 [RK043FN48H-CT672B_B7]
	PK5	LTDC_B6	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B6 [RK043FN48H-CT672B_B6]
	PG12	LTDC_B4	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B4 [RK043FN48H-CT672B_B4]
	PJ14	LTDC_B2	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B2 [RK043FN48H-CT672B_B2]
	PI10	LTDC_HSYNC	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_HSYNC [RK043FN48H-CT672B_HSYNC]
	PK4	LTDC_B5	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B5 [RK043FN48H-CT672B_B5]
	PJ15	LTDC_B3	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B3 [RK043FN48H-CT672B_B3]
	PI9	LTDC_VSYNC	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_VSYNC [RK043FN48H-CT672B_VSYNC]
	PK1	LTDC_G6	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G6 [RK043FN48H-CT672B_G6]
	PK2	LTDC_G7	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G7 [RK043FN48H-CT672B_G7]
	PJ11	LTDC_G4	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G4 [RK043FN48H-CT672B_G4]
	PK0	LTDC_G5	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G5 [RK043FN48H-CT672B_G5]
	PI14	LTDC_CLK	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_CLK [RK043FN48H-CT672B_CLK]
	PJ10	LTDC_G3	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G3 [RK043FN48H-CT672B_G3]

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PJ9	LTDC_G2	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G2 [RK043FN48H-CT672B_G2]
	PJ6	LTDC_R7	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R7 [RK043FN48H-CT672B_R7]
	PJ4	LTDC_R5	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R5 [RK043FN48H-CT672B_R5]
	PJ5	LTDC_R6	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R6 [RK043FN48H-CT672B_R6]
	PJ3	LTDC_R4	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R4 [RK043FN48H-CT672B_R4]
	PJ2	LTDC_R3	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R3 [RK043FN48H-CT672B_R3]
	PJ1	LTDC_R2	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R2 [RK043FN48H-CT672B_R2]
SDMMC1	PC12	SDMMC1_CK	Alternate Function Push Pull	No pull-up and no pull-down	Very High	SDMMC_CK
	PC11	SDMMC1_D3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	SDMMC_D3
	PC10	SDMMC1_D2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	SDMMC_D2
	PD2	SDMMC1_CMD	Alternate Function Push Pull	No pull-up and no pull-down	Very High	SDMMC_D0
	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	
USART1	PB7	USART1_RX	Alternate Function Push Pull	*	Low	VCP_RX [STM32F103CBT6_PA2]
	PA9	USART1_TX	Alternate Function Push Pull	*	Low	VCP_TX [STM32F103CBT6_PA3]
Single Mapped Signals	PE4	LTDC_B0	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B0 [RK043FN48H-CT672B_B0]
	PE2	QUADSPI_BK1_IO2	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	QSPI_D2 [N25Q128A13EF840E_DQ2]
	PG14	ETH_TXD1	Alternate Function Push Pull	No pull-up and no pull-down	**Very High** *	RMII_TXD1 [LAN8742A-CZ-TR_TXD1]
	PE1	FMC_NBL1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_NBL1 [MT48LC4M32B2B5-6A_DQM1]
	PE0	FMC_NBL0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_NBL0 [MT48LC4M32B2B5-6A_DQM0]
	PB8	I2C1_SCL	Alternate Function Open Drain	Pull-up	Low	ARDUINO SCL/D15
	PB5	USB_OTG_HS_ULPI_D7	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D7 [USB3320C-EZK_D7]
	PB4	TIM3_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO PWM/D3
	PB3	SYS_JTDO-SWO	n/a	n/a	n/a	SWO

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PD7	SPDIFRX_IN0	Alternate Function Push Pull	No pull-up and no pull-down	Low	SPDIF_RX0 [74LVC1G04SE_4]
	PA15	TIM2_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO PWM/D9
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	SWCLK
	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	SWDIO
	PE5	DCMI_D6	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D6
	PE6	DCMI_D7	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D7
	PG13	ETH_TXD0	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	RMII_TXD0 [LAN8742A-CZ-TR_TXD0]
	PB9	I2C1_SDA	Alternate Function Open Drain	Pull-up	Low	ARDUINO SDA/D14
	PB6	QUADSPI_BK1_NCS	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	QSPI_NCS [N25Q128A13EF840E_S]
	PG15	FMC_SDNCAS	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_SDNCAS [MT48LC4M32B2B5-6A_CAS]
	PG11	ETH_TX_EN	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	RMII_TX_EN [LAN8742A-CZ-TR_TXEN]
	PJ13	LTDC_B1	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_B1 [RK043FN48H-CT672B_B1]
	PD0	FMC_D2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D2 [MT48LC4M32B2B5-6A_DQ2]
	PA12	USB_OTG_FS_DP	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	OTG_FS_P
	PI8	RTC_TS	n/a	n/a	**n/a**	NC1 [TP2]
	PI4	SAI2_MCLK_A	Alternate Function Push Pull	No pull-up and no pull-down	Low	SAI2_MCLKA [WM8994ECS/R_MCLK1]
	PG10	SAI2_SD_B	Alternate Function Push Pull	No pull-up and no pull-down	Low	SAI2_SDB [WM8994ECS/R_ADCDAT1]
	PD3	DCMI_D5	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D5
	PD1	FMC_D3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D3 [MT48LC4M32B2B5-6A_DQ3]
	PA11	USB_OTG_FS_DM	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	OTG_FS_N
	PF0	FMC_A0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A0 [MT48LC4M32B2B5-6A_A0]

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PI5	SAI2_SCK_A	Alternate Function Push Pull	No pull-up and no pull-down	Low	SAI2_SCKA [WM8994ECS/R_BCLK1]
	PI7	SAI2_FS_A	Alternate Function Push Pull	No pull-up and no pull-down	Low	SAI2_FSA [WM8994ECS/R_LRCLK1]
	PI6	SAI2_SD_A	Alternate Function Push Pull	No pull-up and no pull-down	Low	SAI2_SDA [WM8994ECS/R_DACDAT1]
	PG9	DCMI_VSYNC	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_VSYNC
	PI1	SPI2_SCK	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO SCK/D13
	PA10	USB_OTG_FS_ID	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	OTG_FS_ID
	PC14/OSC32_IN	RCC_OSC32_IN	n/a	n/a	**n/a**	RCC_OSC32_IN
	PF1	FMC_A1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A1 [MT48LC4M32B2B5-6A_A1]
	PH14	DCMI_D4	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D4
	PI0	TIM5_CH4	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO PWM/CS/D10
	PC15/OSC32_OUT	RCC_OSC32_OUT	n/a	n/a	n/a	RCC_OSC32_OUT
	PA8	TIM1_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO PWM/D5
	PH0/OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	OSC_25M [NZ2520SB-25.00M_OUT]
	PF2	FMC_A2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A2 [MT48LC4M32B2B5-6A_A2]
	PI15	LTDC_R0	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R0 [RK043FN48H-CT672B_R0]
	PC7	USART6_RX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	ARDUINO RX/D0
	PH1/OSC_OUT	RCC_OSC_OUT	n/a	n/a	**n/a**	
	PF3	FMC_A3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A3 [MT48LC4M32B2B5-6A_A3]
	PH4	USB_OTG_HS_ULPI_NXT	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_NXT [USB3320C-EZK_NXT]
	PJ8	LTDC_G1	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G1 [RK043FN48H-CT672B_G1]
	PG8	FMC_SDCLK	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_SDCLK [MT48LC4M32B2B5-6A_CLK]
	PC6	USART6_TX	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	ARDUINO TX/D1

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PF4	FMC_A4	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A4 [MT48LC4M32B2B5-6A_A4]
	PH5	FMC_SDNWE	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_SDNME [MT48LC4M32B2B5-6A_WE]
	PH3	FMC_SDNE0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_SDNE0 [MT48LC4M32B2B5-6A_CS]
	PJ7	LTDC_G0	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_G0 [RK043FN48H-CT672B_G0]
	PF5	FMC_A5	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A5 [MT48LC4M32B2B5-6A_A5]
	PD15	FMC_D1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D1 [MT48LC4M32B2B5-6A_DQ1]
	PB13	USB_OTG_HS_ULPI_D6	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D6 [USB3320C-EZK_D6]
	PD10	FMC_D15	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D15 [MT48LC4M32B2B5-6A_DQ15]
	PC3	FMC_SDCKE0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_SDCKE0 [MT48LC4M32B2B5-6A_CKE]
	PD14	FMC_D0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D0 [MT48LC4M32B2B5-6A_DQ0]
	PB12	USB_OTG_HS_ULPI_D5	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D5 [USB3320C-EZK_D5]
	PD9	FMC_D14	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D14 [MT48LC4M32B2B5-6A_DQ14]
	PD8	FMC_D13	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D13 [MT48LC4M32B2B5-6A_DQ13]
	PC0	USB_OTG_HS_ULPI_STP	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_STP [USB3320C-EZK_STP]
	PC1	ETH_MDC	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	RMII_MDC [LAN8742A-CZ-TR_MDC]
	PC2	USB_OTG_HS_ULPI_DIR	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_DIR [USB3320C-EZK_DIR]
	PB2	QUADSPI_CLK	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	FMC_A6

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
						[MT48LC4M32B2B5-6A_A6]
	PG1	FMC_A11	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A11 [MT48LC4M32B2B5-6A_A11]
	PF15	FMC_A9	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A9 [MT48LC4M32B2B5-6A_A9]
	PD12	QUADSPI_BK1_IO1	Alternate Function Push Pull	No pull-up and no pull-down	**Very High***	QSPI_D1 [N25Q128A13EF840E_DQ1]
	PD13	QUADSPI_BK1_IO3	Alternate Function Push Pull	No pull-up and no pull-down	**Very High***	QSPI_D3 [N25Q128A13EF840E_DQ3]
	PH12	DCMI_D3	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D3
	PA1	ETH_REF_CLK	Alternate Function Push Pull	No pull-up and no pull-down	**Very High***	RMII_REF_CLK [LAN8742A-CZ-TR_REFCLK0]
	PA0/WKUP	ADC1_IN0, ADC2_IN0, ADC3_IN0	Analog mode	No pull-up and no pull-down	**n/a**	
	PA4	DCMI_HSYNC	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_HSYNC
	PC4	ETH_RXD0	Alternate Function Push Pull	No pull-up and no pull-down	**Very High***	RMII_RXD0 [LAN8742A-CZ-TR_RXD0]
	PF13	FMC_A7	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A7 [MT48LC4M32B2B5-6A_A7]
	PG0	FMC_A10	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A10 [MT48LC4M32B2B5-6A_A10]
	PE8	FMC_D5	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D5 [MT48LC4M32B2B5-6A_DQ5]
	PD11	QUADSPI_BK1_IO0	Alternate Function Push Pull	No pull-up and no pull-down	**Very High***	QSPI_D0 [N25Q128A13EF840E_DQ0]
	PG5	FMC_BA1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_BA1 [MT48LC4M32B2B5-6A_BA1]
	PG4	FMC_BA0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_BA0 [MT48LC4M32B2B5-6A_BA0]
	PH7	I2C3_SCL	Alternate Function Open Drain	Pull-up	**Very High***	LCD_SCL [RK043FN48H-CT672B_SCL]
	PH9	DCMI_D0	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D0

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PH11	DCMI_D2	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D2
	PA2	ETH_MDIO	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	RMII_MDIO [LAN8742A-CZ-TR_MDIO]
	PA6	DCMI_PIXCLK	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA5	USB_OTG_HS_ULPI_CK	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_CLK [USB3320C-EZK_CLKOUT]
	PC5	ETH_RXD1	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	RMII_RXD1 [LAN8742A-CZ-TR_RXD1]
	PF14	FMC_A8	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_A8 [MT48LC4M32B2B5-6A_A8]
	PF11	FMC_SDNRAS	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_SDNRAS [MT48LC4M32B2B5-6A_RAS]
	PE9	FMC_D6	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D6 [MT48LC4M32B2B5-6A_DQ6]
	PE11	FMC_D8	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D8 [MT48LC4M32B2B5-6A_DQ8]
	PE14	FMC_D11	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D11 [MT48LC4M32B2B5-6A_DQ11]
	PB10	USB_OTG_HS_ULPI_D3	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D3 [USB3320C-EZK_D3]
	PH6	TIM12_CH1	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO PWM/D6
	PH8	I2C3_SDA	Alternate Function Open Drain	Pull-up	**Very High ***	LCD_SDA [RK043FN48H-CT672B_SDA]
	PH10	DCMI_D1	Alternate Function Push Pull	No pull-up and no pull-down	Low	DCMI_D1
	PA3	USB_OTG_HS_ULPI_D0	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D0 [USB3320C-EZK_D0]
	PA7	ETH_CRS_DV	Alternate Function Push Pull	No pull-up and no pull-down	**Very High ***	RMII_CRS_DV [LAN8742A-CZ-TR_CRS_DV]
	PB1	USB_OTG_HS_ULPI_D2	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D2 [USB3320C-EZK_D2]
	PB0	USB_OTG_HS_ULPI_D1	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D1 [USB3320C-EZK_D1]
	PJ0	LTDC_R1	Alternate Function Push Pull	No pull-up and no pull-down	Low	LCD_R1 [RK043FN48H-CT672B_R1]
	PE7	FMC_D4	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D4 [MT48LC4M32B2B5-6A_DQ4]
	PE10	FMC_D7	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D7

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
						[MT48LC4M32B2B5-6A_DQ7]
	PE12	FMC_D9	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D9 [MT48LC4M32B2B5-6A_DQ9]
	PE15	FMC_D12	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D12 [MT48LC4M32B2B5-6A_DQ12]
	PE13	FMC_D10	Alternate Function Push Pull	No pull-up and no pull-down	Very High	FMC_D10 [MT48LC4M32B2B5-6A_DQ10]
	PB11	USB_OTG_HS_ULPI_D4	Alternate Function Push Pull	No pull-up and no pull-down	Very High	ULPI_D4 [USB3320C-EZK_D4]
	PB14	SPI2_MISO	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO MISO/D12
	PB15	SPI2_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	Low	ARDUINO MOSI/PWM/D11
GPIO	PE3	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	OTG_HS_OverCurrent [STMPS2151STR_FAULT]
	PJ12	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	OTG_FS_VBUS
	PD6	GPIO_EXTI6	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	Audio_INT
	PD5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	OTG_FS_PowerSwitchOn [STMPS2141STR_EN]
	PI3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	ARDUINO D7
	PI2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	ARDUINO D8
	PC13	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	uSD_Detect
	PK3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LCD_BL_CTRL [STLD40DPUR_EN]
	PD4	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	OTG_FS_OverCurrent [STMPS2141STR_Fault]
	PH15	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	TP3
	PI12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	LCD_DISP [RK043FN48H-CT672B_DISP]
	PH13	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	DCMI_PWR_EN
	PI13	GPIO_EXTI13	**External Event Mode with Rising edge trigger detection ***	No pull-up and no pull-down	n/a	LCD_INT
	PG7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	ARDUINO D4
	PG6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	ARDUINO D2
	PH2	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	NC2
	PG3	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	EXT_RST
	PG2	GPIO_Input	Input mode	No pull-up and no pull-down	n/a	RMII_RXER

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
PVD interrupt through EXTI line 16	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
ADC1, ADC2 and ADC3 global interrupts	unused		
USART1 global interrupt	unused		
SDMMC1 global interrupt	unused		
FPU global interrupt	unused		
LTDC global interrupt	unused		
LTDC global error interrupt	unused		

*** User modified value**

7. Power Consumption Calculator report

7.1. Microcontroller Selection

Series	STM32F7
Line	STM32F7x6
MCU	STM32F746NGHx
Datasheet	027590_Rev4

7.2. Parameter Selection

Temperature	25
Vdd	3.3

8. Software Project

8.1. Project Settings

Name	Value
Project Name	Teun
Project Folder	C:\Users\vera_\Documents\Teun project\STM code\Teun
Toolchain / IDE	MDK-ARM V5
Firmware Package Name and Version	STM32Cube FW_F7 V1.7.0

8.2. Code Generation Settings

Name	Value
STM32Cube Firmware Library Package	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