
STM32
CubeMX

1. Description

1.1. Project

Project Name	test_g473_blink
Board Name	custom
Generated with:	STM32CubeMX 6.9.0
Date	07/26/2023

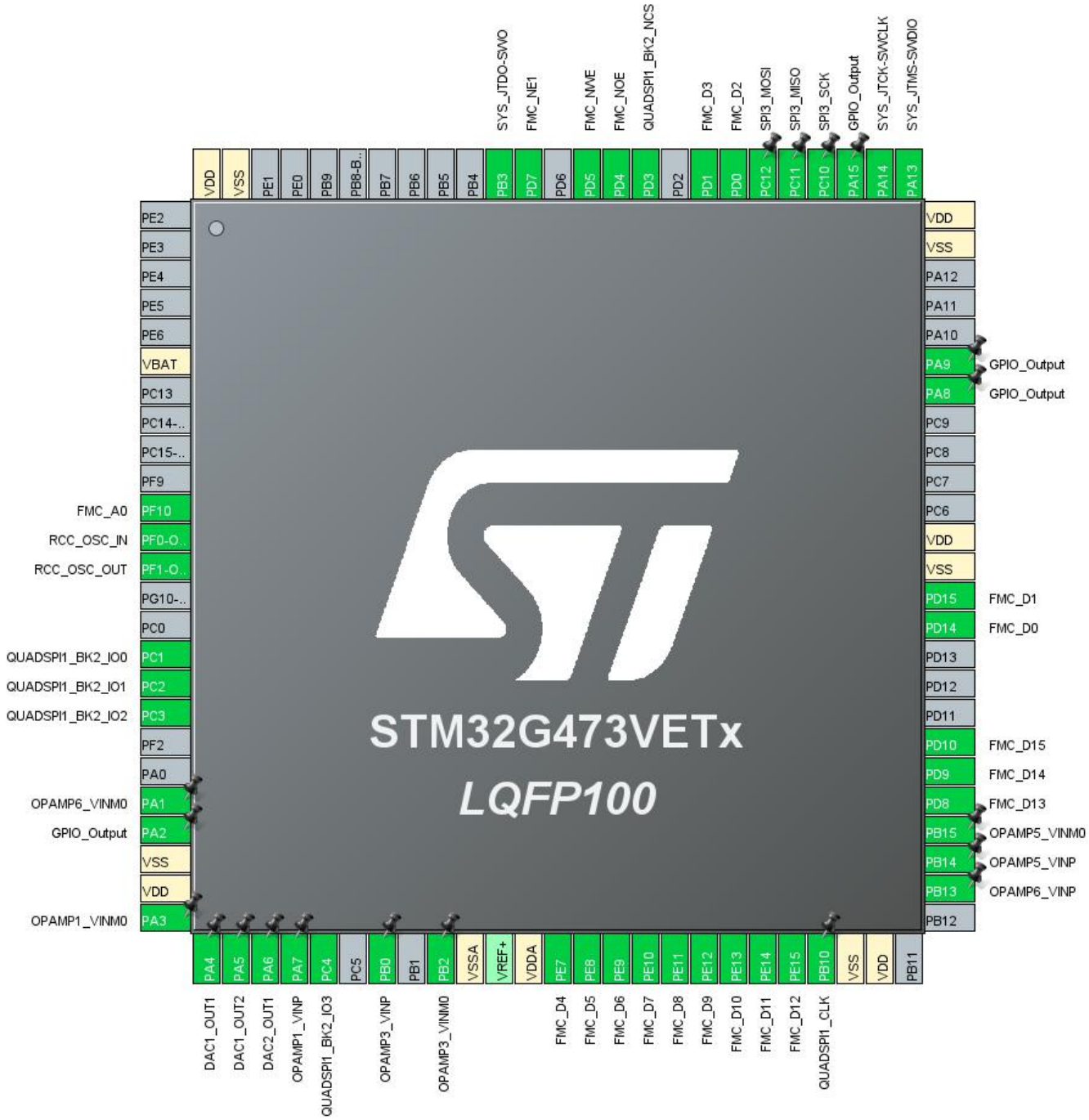
1.2. MCU

MCU Series	STM32G4
MCU Line	STM32G4x3
MCU name	STM32G473VETx
MCU Package	LQFP100
MCU Pin number	100

1.3. Core(s) information

Core(s)	ARM Cortex-M4

2. Pinout Configuration



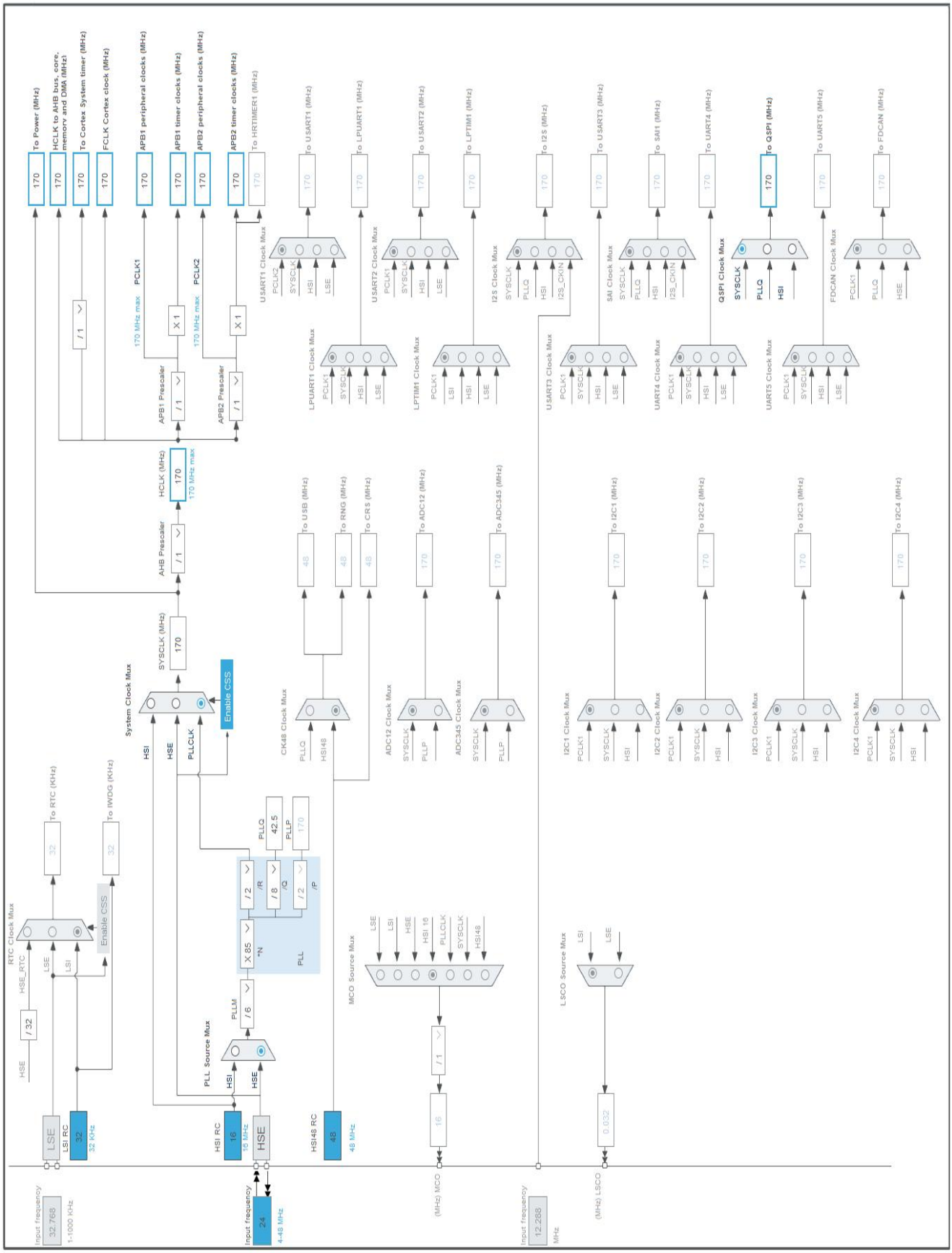
3. Pins Configuration

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
6	VBAT	Power		
11	PF10	I/O	FMC_A0	
12	PF0-OSC_IN	I/O	RCC_OSC_IN	
13	PF1-OSC_OUT	I/O	RCC_OSC_OUT	
16	PC1	I/O	QUADSPI1_BK2_IO0	
17	PC2	I/O	QUADSPI1_BK2_IO1	
18	PC3	I/O	QUADSPI1_BK2_IO2	
21	PA1	I/O	OPAMP6_VINM0	
22	PA2 *	I/O	GPIO_Output	
23	VSS	Power		
24	VDD	Power		
25	PA3	I/O	OPAMP1_VINM0	
26	PA4	I/O	DAC1_OUT1	
27	PA5	I/O	DAC1_OUT2	
28	PA6	I/O	DAC2_OUT1	
29	PA7	I/O	OPAMP1_VINP	
30	PC4	I/O	QUADSPI1_BK2_IO3	
32	PB0	I/O	OPAMP3_VINP	
34	PB2	I/O	OPAMP3_VINM0	
35	VSSA	Power		
37	VDDA	Power		
38	PE7	I/O	FMC_D4	
39	PE8	I/O	FMC_D5	
40	PE9	I/O	FMC_D6	
41	PE10	I/O	FMC_D7	
42	PE11	I/O	FMC_D8	
43	PE12	I/O	FMC_D9	
44	PE13	I/O	FMC_D10	
45	PE14	I/O	FMC_D11	
46	PE15	I/O	FMC_D12	
47	PB10	I/O	QUADSPI1_CLK	
48	VSS	Power		
49	VDD	Power		
52	PB13	I/O	OPAMP6_VINP	
53	PB14	I/O	OPAMP5_VINP	
54	PB15	I/O	OPAMP5_VINM0	

Pin Number LQFP100	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
55	PD8	I/O	FMC_D13	
56	PD9	I/O	FMC_D14	
57	PD10	I/O	FMC_D15	
61	PD14	I/O	FMC_D0	
62	PD15	I/O	FMC_D1	
63	VSS	Power		
64	VDD	Power		
69	PA8 *	I/O	GPIO_Output	
70	PA9 *	I/O	GPIO_Output	
74	VSS	Power		
75	VDD	Power		
76	PA13	I/O	SYS_JTMS-SWDIO	
77	PA14	I/O	SYS_JTCK-SWCLK	
78	PA15 *	I/O	GPIO_Output	
79	PC10	I/O	SPI3_SCK	
80	PC11	I/O	SPI3_MISO	
81	PC12	I/O	SPI3_MOSI	
82	PD0	I/O	FMC_D2	
83	PD1	I/O	FMC_D3	
85	PD3	I/O	QUADSPI1_BK2_NCS	
86	PD4	I/O	FMC_NOE	
87	PD5	I/O	FMC_NWE	
89	PD7	I/O	FMC_NE1	
90	PB3	I/O	SYS_JTDO-SWO	
99	VSS	Power		
100	VDD	Power		

* The pin is affected with an I/O function

4. Clock Tree Configuration



5. Software Project

5.1. Project Settings

Name	Value
Project Name	test_g473_blink
Project Folder	C:\git\black_scope\software\test_g473_blink
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_G4 V1.5.1
Application Structure	Advanced
Generate Under Root	Yes
Do not generate the main()	No
Minimum Heap Size	0x200
Minimum Stack Size	0x400

5.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	Copy only the necessary library files
Generate peripheral initialization as a pair of '.c/.h' files	Yes
Backup previously generated files when re-generating	No
Keep User Code when re-generating	Yes
Delete previously generated files when not re-generated	Yes
Set all free pins as analog (to optimize the power consumption)	No
Enable Full Assert	No

5.3. Advanced Settings - Generated Function Calls

Rank	Function Name	Peripheral Instance Name
1	SystemClock_Config	RCC
2	MX_GPIO_Init	GPIO
3	MX_DMA_Init	DMA
4	MX_QUADSPI1_Init	QUADSPI1
5	MX_ADC1_Init	ADC1
6	MX_DAC2_Init	DAC2
7	MX_OPAMP1_Init	OPAMP1
8	MX_DAC1_Init	DAC1
9	MX_ADC3_Init	ADC3
10	MX_ADC4_Init	ADC4
11	MX_ADC5_Init	ADC5

Rank	Function Name	Peripheral Instance Name
12	MX_OPAMP3_Init	OPAMP3
13	MX_OPAMP5_Init	OPAMP5
14	MX_OPAMP6_Init	OPAMP6
15	MX_FMC_Init	FMC
16	MX_SPI3_Init	SPI3
17	MX_TIM1_Init	TIM1
18	MX_TIM2_Init	TIM2
19	MX_TIM3_Init	TIM3

1. Power Consumption Calculator report

1.1. Microcontroller Selection

Series	STM32G4
Line	STM32G4x3
MCU	STM32G473VETx
Datasheet	DS12712_Rev0

1.2. Parameter Selection

Temperature	25
Vdd	3.0

1.3. Battery Selection

Battery	Li-SOCL2(A3400)
Capacity	3400.0 mAh
Self Discharge	0.08 %/month
Nominal Voltage	3.6 V
Max Cont Current	100.0 mA
Max Pulse Current	200.0 mA
Cells in series	1
Cells in parallel	1

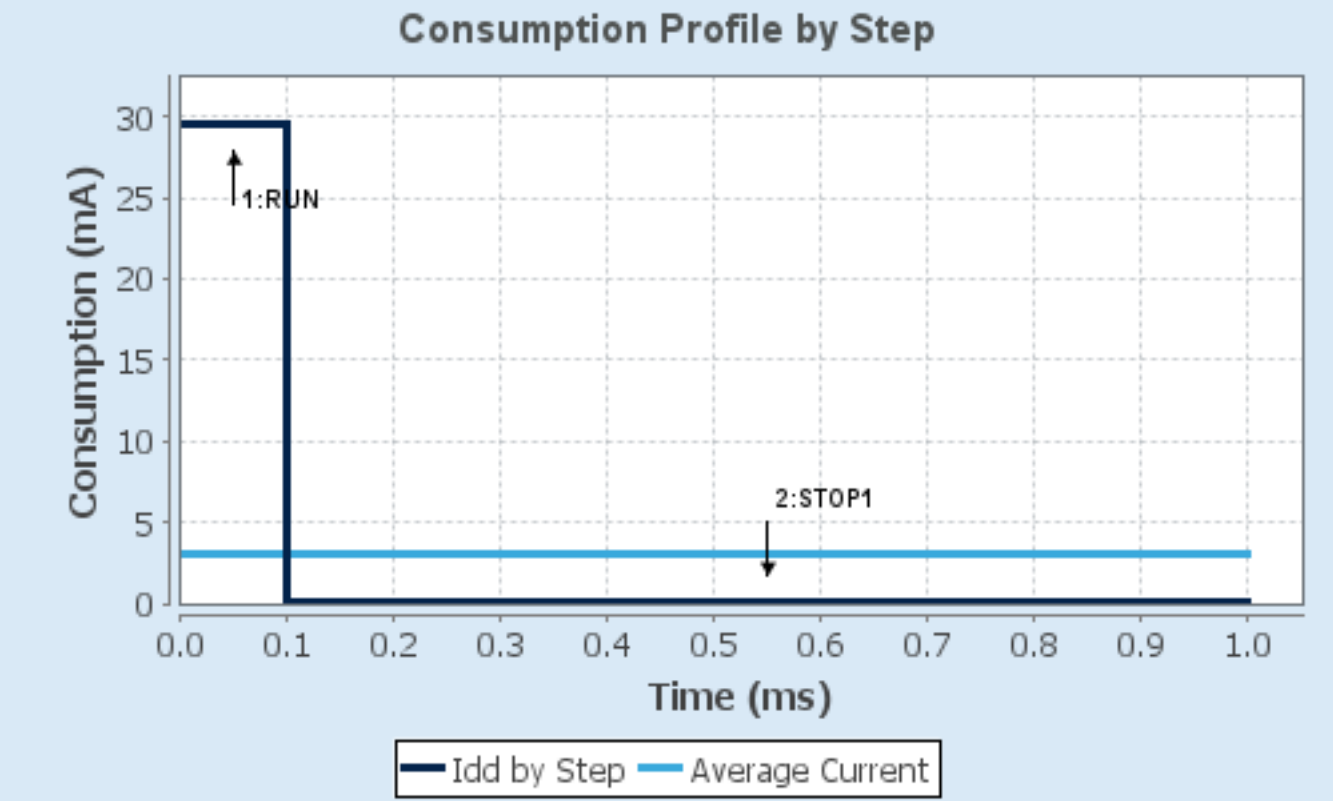
1.4. Sequence

Step	Step1	Step2
Mode	RUN	STOP1
Vdd	3.0	3.0
Voltage Source	Battery	Battery
Range	Range1-Boost	NoRange
Fetch Type	FLASH/DualBank/ART	NA
CPU Frequency	170 MHz	0 Hz
Clock Configuration	HSE BYP PLL	ALL CLOCKS OFF
Clock Source Frequency	4 MHz	0 Hz
Peripherals		
Additional Cons.	0 mA	0 mA
Average Current	29.5 mA	80.5 µA
Duration	0.1 ms	0.9 ms
DMIPS	213.0	0.0
Ta Max	123.27	129.98
Category	In DS Table	In DS Table

1.5. Results

Sequence Time	1 ms	Average Current	3.02 mA
Battery Life	1 month, 16 days, 9 hours	Average DMIPS	212.5 DMIPS

1.6. Chart


Consumption Profile by Step
Consumption (mA)
30
25
20
15
10
5
0
1:RUN
2:STOP1
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Time (ms)
Idd by Step
Average Current

2. Peripherals and Middlewares Configuration

2.1. ADC1

mode: VOPAMP1 Channel

2.1.1. Parameter Settings:

ADCs_Common_Settings:

Mode	Independent mode

ADC_Settings:

Clock Prescaler	Synchronous clock mode divided by 4
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Gain Compensation	0
Scan Conversion Mode	Disabled
End Of Conversion Selection	End of single conversion
Low Power Auto Wait	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	**Enabled ***
Overrun behaviour	Overrun data preserved

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Enable Regular Oversampling	Disable
Number Of Conversion	1
External Trigger Conversion Source	**Timer 1 Trigger Out event ***
External Trigger Conversion Edge	Trigger detection on the rising edge
Rank	1
Channel	Channel Vopamp1
Sampling Time	2.5 Cycles
Offset Number	No offset
Monitored by	**Analog Watchdog 2 ***

ADC_Injected_ConversionMode:

Enable Injected Conversions	Disable

Analog Watchdog 1:

Enable Analog WatchDog1 Mode	**true ***
Watchdog Mode	Single regular channel
Analog WatchDog Channel	Channel Vopamp1
High Threshold	**4095 ***
Low Threshold	**2048+768 ***
Interrupt Mode	**Enabled ***

Filtering	None

Analog Watchdog 2:

Enable Analog WatchDog2 Mode	**true ***
Watchdog Mode	**Single channel ***
High Threshold	**2048+768 ***
Low Threshold	0
Interrupt Mode	**Enabled ***

Analog Watchdog 3:

Enable Analog WatchDog3 Mode	false

2.2. ADC3

mode: VOPAMP3 Channel

2.2.1. Parameter Settings:

ADCs_Common_Settings:

Mode	Independent mode

ADC_Settings:

Clock Prescaler	Synchronous clock mode divided by 4
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Gain Compensation	0
Scan Conversion Mode	Disabled
End Of Conversion Selection	End of single conversion
Low Power Auto Wait	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	**Enabled ***
Overrun behaviour	Overrun data preserved

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Enable Regular Oversampling	Disable
Number Of Conversion	1
External Trigger Conversion Source	**Timer 1 Trigger Out event ***
External Trigger Conversion Edge	Trigger detection on the rising edge
Rank	1
Channel	Channel Vopamp3
Sampling Time	**24.5 Cycles ***
Offset Number	No offset

ADC_Injected_ConversionMode:

Enable Injected Conversions	Disable

Analog Watchdog 1:

Enable Analog WatchDog1 Mode	false

Analog Watchdog 2:

Enable Analog WatchDog2 Mode	false

Analog Watchdog 3:

Enable Analog WatchDog3 Mode	false

2.3. ADC4

mode: VOPAMP6 Channel

2.3.1. Parameter Settings:

ADCs_Common_Settings:

Mode	Independent mode

ADC_Settings:

Clock Prescaler	Synchronous clock mode divided by 4
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Gain Compensation	0
Scan Conversion Mode	Disabled
End Of Conversion Selection	End of single conversion
Low Power Auto Wait	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	**Enabled ***
Overrun behaviour	Overrun data preserved

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Enable Regular Oversampling	Disable
Number Of Conversion	1
External Trigger Conversion Source	**Timer 1 Trigger Out event ***
External Trigger Conversion Edge	Trigger detection on the rising edge
Rank	1
Channel	Channel Vopamp6
Sampling Time	**24.5 Cycles ***
Offset Number	No offset

ADC_Injected_ConversionMode:

Enable Injected Conversions	Disable

Analog Watchdog 1:

Enable Analog WatchDog1 Mode	false

Analog Watchdog 2:

Enable Analog WatchDog2 Mode	false

Analog Watchdog 3:

Enable Analog WatchDog3 Mode	false

2.4. ADC5

mode: VOPAMP5 Channel

2.4.1. Parameter Settings:

ADC_Settings:

Clock Prescaler	Synchronous clock mode divided by 4
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Gain Compensation	0
Scan Conversion Mode	Disabled
End Of Conversion Selection	End of single conversion
Low Power Auto Wait	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	**Enabled ***
Overrun behaviour	Overrun data preserved

ADC_Regular_ConversionMode:

Enable Regular Conversions	Enable
Enable Regular Oversampling	Disable
Number Of Conversion	1
External Trigger Conversion Source	**Timer 1 Trigger Out event ***
External Trigger Conversion Edge	Trigger detection on the rising edge
Rank	1
Channel	Channel Vopamp5
Sampling Time	**24.5 Cycles ***
Offset Number	No offset

ADC_Injected_ConversionMode:

Enable Injected Conversions	Disable

Analog Watchdog 1:

Enable Analog WatchDog1 Mode	false

Analog Watchdog 2:

Enable Analog WatchDog2 Mode	false

Analog Watchdog 3:

Enable Analog WatchDog3 Mode	false

2.5. DAC1

OUT1 mode: Connected to external pin only

OUT2 mode: Connected to external pin only

2.5.1. Parameter Settings:

DAC Out1 Settings:

Mode selected	Normal Mode
Output Buffer	Enable
DAC High Frequency	Mode Automatic
DMA Double Data	Disable
Signed Format	Disable
Trigger	**Timer 3 Trigger Out event ***
Trigger2	None
Wave generation mode	Disabled
User Trimming	Factory trimming

DAC Out2 Settings:

Mode selected	Normal Mode
Output Buffer	Enable
DAC High Frequency	Mode Automatic
DMA Double Data	Disable
Signed Format	Disable
Trigger	**Timer 3 Trigger Out event ***
Trigger2	None
Wave generation mode	Disabled
User Trimming	Factory trimming

2.6. DAC2

OUT1 mode: Connected to external pin only

2.6.1. Parameter Settings:

DAC Out1 Settings:

Mode selected	Normal Mode
Output Buffer	Enable
DAC High Frequency	Mode Automatic

DMA Double Data	Disable
Signed Format	Disable
Trigger	None
Trigger2	None
User Trimming	Factory trimming

2.7. FMC

NOR Flash/PSRAM/SRAM/ROM/LCD 1

Chip Select: set

Memory type: LCD Interface

LCD Register Select: A0

Data: 16 bits

2.7.1. 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	15
Data setup time in HCLK clock cycles	**15 ***
Data hold time in HCLK clock cycles	0
Bus turn around time in HCLK clock cycles	15

2.8. OPAMP1

Mode: PGA Internally connected_IO0_BIAS

2.8.1. Parameter Settings:

Basic Parameters:

Power Mode	Normal
PGA Gain	2 or -1
User Trimming	Disable

2.9. OPAMP3

Mode: PGA Internally connected_IO0_BIAS

2.9.1. Parameter Settings:

Basic Parameters:

Power Mode	Normal
PGA Gain	2 or -1
User Trimming	Disable

2.10. OPAMP5

Mode: PGA Internally connected_IO0_BIAS

2.10.1. Parameter Settings:

Basic Parameters:

Power Mode	Normal
PGA Gain	2 or -1
User Trimming	Disable

2.11. OPAMP6

Mode: PGA Internally connected_IO0_BIAS

2.11.1. Parameter Settings:

Basic Parameters:

Power Mode	Normal
PGA Gain	2 or -1
User Trimming	Disable

2.12. QUADSPI1

QuadSPI Mode: Bank2 with Quad SPI Lines

2.12.1. Parameter Settings:

General Parameters:

Clock Prescaler	**6 ***

Fifo Threshold	1
Sample Shifting	No Sample Shifting
Flash Size	**23 ***
Chip Select High Time	1 Cycle
Clock Mode	Low
Flash ID	Flash ID 2
Dual Flash	Disabled

2.13. RCC

High Speed Clock (HSE): Crystal/Ceramic Resonator

2.13.1. Parameter Settings:

System Parameters:

VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Disabled
Data Cache	Enabled
Flash Latency(WS)	4 WS (5 CPU cycle)

RCC Parameters:

HSI Calibration Value	64
HSE Startup Timout Value (ms)	100
LSE Startup Timout Value (ms)	5000

Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1 boost

Peripherals Clock Configuration:

Generate the peripherals clock configuration	TRUE

2.14. SPI3

Mode: Full-Duplex Master

2.14.1. Parameter Settings:

Basic Parameters:

Frame Format	Motorola
Data Size	**8 Bits ***
First Bit	MSB First

Clock Parameters:

Prescaler (for Baud Rate)	**128 ***

Baud Rate	**1.328125 MBits/s ***
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	**Disabled ***
NSS Signal Type	Software

2.15. SYS

Debug: Trace Asynchronous Sw

VREFBUF Mode: External voltage reference

Timebase Source: SysTick

2.16. TIM1

Clock Source : Internal Clock

2.16.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**85-1 ***
Counter Mode	Up
Dithering	Disable
Counter Period (AutoReload Register - 16 bits value)	**2-1 ***
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	**Update Event ***
Trigger Event Selection TRGO2	Reset (UG bit from TIMx_EGR)

2.17. TIM2

Clock Source : Internal Clock

Channel1: Output Compare No Output

2.17.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**85-1 ***
Counter Mode	Up
Dithering	Disable
Counter Period (AutoReload Register - 32 bits value)	**2*512-1 ***
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)

Clear Input:

Clear Input Source	Disable

Output Compare No Output Channel 1:

Mode	Frozen (used for Timing base)
Pulse (32 bits value)	**2*512-1 ***
Output compare preload	Disable
CH Polarity	High

2.18. TIM3

Clock Source : Internal Clock

2.18.1. Parameter Settings:

Counter Settings:

Prescaler (PSC - 16 bits value)	**85-1 ***
Counter Mode	Up
Dithering	Disable
Counter Period (AutoReload Register - 16 bits value)	**2-1 ***
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	**Update Event ***

*** User modified value**

3. System Configuration

3.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
DAC1	PA4	DAC1_OUT1	Analog mode	No pull-up and no pull-down	n/a	
	PA5	DAC1_OUT2	Analog mode	No pull-up and no pull-down	n/a	
DAC2	PA6	DAC2_OUT1	Analog mode	No pull-up and no pull-down	n/a	
FMC	PF10	FMC_A0	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	
	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	
OPAMP1	PA3	OPAMP1_VINM0	Analog mode	No pull-up and no pull-down	n/a	
	PA7	OPAMP1_VINP	Analog mode	No pull-up and no pull-down	n/a	
OPAMP3	PB0	OPAMP3_VINP	Analog mode	No pull-up and no pull-down	n/a	
	PB2	OPAMP3_VINM0	Analog mode	No pull-up and no pull-down	n/a	
OPAMP5	PB14	OPAMP5_VINP	Analog mode	No pull-up and no pull-down	n/a	
	PB15	OPAMP5_VINM0	Analog mode	No pull-up and no pull-down	n/a	
OPAMP6	PA1	OPAMP6_VINM0	Analog mode	No pull-up and no pull-down	n/a	
	PB13	OPAMP6_VINP	Analog mode	No pull-up and no pull-down	n/a	
QUADSPI1	PC1	QUADSPI1_BK2_IO0	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PC2	QUADSPI1_BK2_IO1	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PC3	QUADSPI1_BK2_IO2	Alternate Function Push Pull	No pull-up and no pull-down	Low	

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PC4	QUADSPI1_BK2_IO3	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB10	QUADSPI1_CLK	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PD3	QUADSPI1_BK2_NCS	Alternate Function Push Pull	No pull-up and no pull-down	Low	
RCC	PF0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PF1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SPI3	PC10	SPI3_SCK	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PC11	SPI3_MISO	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PC12	SPI3_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	Low	
SYS	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
	PB3	SYS_JTDO-SWO	n/a	n/a	n/a	
GPIO	PA2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA8	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA9	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	
	PA15	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	

3.2. DMA configuration

DMA request	Stream	Direction	Priority
QUADSPI	DMA2_Channel3	Memory To Peripheral	Low
ADC1	DMA1_Channel1	Peripheral To Memory	Low
DAC1_CH1	DMA2_Channel1	Memory To Peripheral	Low
DAC1_CH2	DMA2_Channel2	Memory To Peripheral	Low
ADC3	DMA1_Channel2	Peripheral To Memory	Low
ADC4	DMA1_Channel3	Peripheral To Memory	Low
ADC5	DMA1_Channel4	Peripheral To Memory	Low

QUADSPI: DMA2_Channel3 DMA request Settings:

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

ADC1: DMA1_Channel1 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Half Word
Memory Data Width:	Half Word

DAC1_CH1: DMA2_Channel1 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	**Word ***
Memory Data Width:	Half Word

DAC1_CH2: DMA2_Channel2 DMA request Settings:

Mode:	**Circular ***

Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	**Word ***
Memory Data Width:	Half Word

ADC3: DMA1_Channel2 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Half Word
Memory Data Width:	Half Word

ADC4: DMA1_Channel3 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Half Word
Memory Data Width:	Half Word

ADC5: DMA1_Channel4 DMA request Settings:

Mode:	**Circular ***
Peripheral Increment:	Disable
Memory Increment:	**Enable ***
Peripheral Data Width:	Half Word
Memory Data Width:	Half Word

3.3. NVIC configuration

3.3.1. NVIC

Interrupt Table	Enable	Preenmption Priority	SubPriority
Non maskable interrupt	true	0	0
Hard fault interrupt	true	0	0
Memory management fault	true	0	0
Prefetch fault, memory access fault	true	0	0
Undefined instruction or illegal state	true	0	0
System service call via SWI instruction	true	0	0
Debug monitor	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	0	0
DMA1 channel1 global interrupt	true	0	0
DMA1 channel2 global interrupt	true	0	0
DMA1 channel3 global interrupt	true	0	0
DMA1 channel4 global interrupt	true	0	0
ADC1 and ADC2 global interrupt	true	0	0
TIM2 global interrupt	true	0	0
DMA2 channel1 global interrupt	true	0	0
DMA2 channel2 global interrupt	true	0	0
DMA2 channel3 global interrupt	true	0	0
QUADSPI global interrupt	true	0	0
PVD/PVM1/PVM2/PVM3/PVM4 interrupts through EXTI lines 16/38/39/40/41	unused		
Flash global interrupt	unused		
RCC global interrupt	unused		
TIM1 break interrupt and TIM15 global interrupt	unused		
TIM1 update interrupt and TIM16 global interrupt	unused		
TIM1 trigger and commutation interrupts and TIM17 global interrupt	unused		
TIM1 capture compare interrupt	unused		
TIM3 global interrupt	unused		
ADC3 global interrupt	unused		
SPI3 global interrupt	unused		
TIM6 global interrupt, DAC1 and DAC3 channel underrun error interrupts	unused		
TIM7 global interrupt, DAC2 and DAC4 channel underrun error interrupts	unused		
ADC4 global interrupt	unused		
ADC5 global interrupt	unused		
FPU global interrupt	unused		

3.3.2. NVIC Code generation

Enabled interrupt Table	Select for init sequence ordering	Generate IRQ handler	Call HAL handler
Non maskable interrupt	false	true	false
Hard fault interrupt	false	true	false
Memory management fault	false	true	false
Prefetch fault, memory access fault	false	true	false
Undefined instruction or illegal state	false	true	false
System service call via SWI instruction	false	true	false
Debug monitor	false	true	false
Pendable request for system service	false	true	false
System tick timer	false	true	true
DMA1 channel1 global interrupt	false	true	true
DMA1 channel2 global interrupt	false	true	true
DMA1 channel3 global interrupt	false	true	true
DMA1 channel4 global interrupt	false	true	true
ADC1 and ADC2 global interrupt	false	true	true
TIM2 global interrupt	false	true	true
DMA2 channel1 global interrupt	false	true	true
DMA2 channel2 global interrupt	false	true	true
DMA2 channel3 global interrupt	false	true	true
QUADSPI global interrupt	false	true	true

*** User modified value**

4. System Views

4.1. Category view

4.1.1. Current

5. Docs & Resources

Type	Link
BSDL files	https://www.st.com/resource/en/bsdl_model/stm32g4_bsdl.zip
IBIS models	https://www.st.com/resource/en/ibis_model/stm32g4_ibis.zip
System View Description	https://www.st.com/resource/en/svd/stm32g4_svd.zip
Presentations	https://www.st.com/resource/en/product_presentation/microcontrollers_stm32g4_series_product_overview.pdf
Presentations	https://www.st.com/resource/en/product_presentation/stm32-stm8_embedded_software_solutions.pdf
Presentations	https://www.st.com/resource/en/product_presentation/stm32_eval-tools_portfolio.pdf
Presentations	https://www.st.com/resource/en/product_presentation/stm32_stm8_functional-safety-packages.pdf
Presentations	https://www.st.com/resource/en/product_presentation/stm32-usb-c-pd-solutions-presentation.pdf
Presentations	https://www.st.com/resource/en/product_presentation/stm32-stm8_software_development_tools.pdf
Brochures	https://www.st.com/resource/en/brochure/products-and-solutions-for-plcs-and-smart-i-os.pdf
Flyers	https://www.st.com/resource/en/flyer/flstm32g4.pdf
Flyers	https://www.st.com/resource/en/flyer/flstm32nucleo.pdf
Flyers	https://www.st.com/resource/en/flyer/flstm32trust.pdf
Flyers	https://www.st.com/resource/en/flyer/fldpstpfc11120.pdf
Application Notes	https://www.st.com/resource/en/application_note/an1181-electrostatic-discharge-sensitivity-measurement-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an1709-emc-design-guide-for-stm8-stm32-and-legacy-mcus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an2606-stm32-microcontroller-system-memory-boot-mode-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an2639-soldering-

	recommendations-and-package-information-for-leadfree-ecopack-mcus-and-mpus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an2834-how-to-get-the-best-adc-accuracy-in-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an3126-audio-and-waveform-generation-using-the-dac-in-stm32-products-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an3155-usart-protocol-used-in-the-stm32-bootloader-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an3156-usb-dfu-protocol-used-in-the-stm32-bootloader-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4013-stm32-crossseries-timer-overview-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4221-i2c-protocol-used-in-the-stm32-bootloader-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4229-how-to-implement-a-vocoder-solution-using-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4232-getting-started-with-analog-comparators-for-stm32f3-series-and-stm32g4-series-devices-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4277-using-stm32-device-pwm-shutdown-features-for-motor-control-and-digital-power-conversion-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4286-spi-protocol-used-in-the-stm32-bootloader-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4296-use-stm32f3stm32g4-ccm-sram-with-iar-embedded-workbench-keil-mdkarm-stmicroelectronics-stm32cubeide-and-other-gnubased-toolchains-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4566-extending-the-dac-performance-of-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4635-minimization-of-

	power-consumption-using-lpuart-for-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4655-virtually-increasing-the-number-of-serial-communication-peripherals-in-stm32-applications-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4750-handling-of-soft-errors-in-stm32-applications-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4759-using-the-hardware-realtime-clock-rtc-and-the-tamper-management-unit-tamp-with-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4776-generalpurpose-timer-cookbook-for-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4803-highspeed-si-simulations-using-ibis-and-boardlevel-simulations-using-hyperlynx-si-on-stm32-mcus-and-mpus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4894-eeprom-emulation-techniques-and-software-for-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4989-stm32-microcontroller-debug-toolbox-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5027-interfacing-pdm-digital-microphones-using-stm32-mcus-and-mpus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5036-thermal-management-guidelines-for-stm32-applications-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5093-getting-started-with-stm32g4-series--hardware-development-boards-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5224-stm32-dmamux-the-dma-request-router-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5225-usb-typec-power-delivery-using-stm32-mcus-and-mpus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5306-operational-amplifier-opamp-usage-in-stm32g4-series-stmicroelectronics.pdf

Application Notes	https://www.st.com/resource/en/application_note/an5310-guideline-for-using-analog-features-of-stm32g4-series-versus-stm32f3-series-devices-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5315-stm32cube-firmware-examples-for-stm32g4-series-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5346-stm32g4-adc-use-tips-and-recommendations-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5405-fdcan-protocol-used-in-the-stm32-bootloader-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5543-enhanced-methods-to-handle-spi-communication-on-stm32-devices-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5690-vrefbuf-peripheral-applications-and-trimming-technique-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5738-stm32g4-series-lifetime-estimates-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4760-quadspi-interface-on-stm32-microcontrollers-and-microprocessors--stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4899-stm32-microcontroller-gpio-hardware-settings-and-lowpower-consumption-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5612-esd-protection-of-stm32-mcus-and-mpus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5156-introduction-to-stm32-microcontrollers-security-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an2548-using-the-stm32f0f1f3cxgxlx-series-dma-controller-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4991-how-to-wake-up-an-stm32-microcontroller-from-lowpower-mode-with-the-usart-or-the-lpuart-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4838-introduction-to-memory-protection-unit-management-on-stm32-mcus-

	stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5325-how-to-use-the-cordic-to-perform-mathematical-functions-on-stm32-mcus-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an5348-introduction-to-fdcan-peripherals-for-stm32-product-classes-stmicroelectronics.pdf
Application Notes	https://www.st.com/resource/en/application_note/an4230-random-number-generation-validation-using-nist-statistical-test-suite-for-stm32-microcontrollers-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an1202_freertos_guide-freertos-guide-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an1602_semihosting_in_truestudio-how-to-do-semihosting-in-truestudio-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an1801_stm32cubeprogrammer_in_truestudio-installing-stm32cubeprogrammer-in-truestudio-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/atollic_editing_keyboard_shortcuts-atollic-editing-keyboard-shortcuts-stmicroelectronics.pdf
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Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/stm32cubemx_installation_in_truestudio-stm32cubemx-installation-in-truestudio-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an4435-guidelines-for-obtaining-ulcsaiec-607301603351-class-b-certification-in-any-stm32-application-stmicroelectronics.pdf
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for related Tools & Software	inapplication-programming-iap-using-the-usart-stmicroelectronics.pdf
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Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5054-secure-programming-using-stm32cubeprogrammer-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5056-integration-guide-for-the-xcubesbsfu-stm32cube-expansion-package-stmicroelectronics.pdf
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Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5360-getting-started-with-projects-based-on-the-stm32mp1-series-in-stm32cubeide-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5361-getting-started-with-projects-based-on-dualcore-stm32h7-microcontrollers-in-stm32cubeide-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5394-getting-started-with-projects-based-on-the-stm32l5-series-in-stm32cubeide-stmicroelectronics.pdf
Application Notes for related Tools	https://www.st.com/resource/en/application_note/an5418-how-to-build-a-simple-usbpd-sink-application-with-stm32cubemx-stmicroelectronics.pdf

& Software	
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5426-migrating-graphics-middleware-projects-from-stm32cubemx-540-to-stm32cubemx-550-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5464-position-control-of-a-threephase-permanent-magnet-motor-using-xcubemcsdk-or-xcubemcsdkful-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5496-buck-voltage-mode-with-the-bg474edpow1-discovery-kit-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5497-buck-current-mode-with-the-bg474edpow1-discovery-kit-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5564-getting-started-with-projects-based-on-dualcore-stm32wl-microcontrollers-in-stm32cubeide-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5698-adapting-the-xcubestl-functional-safety-package-for-stm32-iec-61508-compliant-to-other-safety-standards-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5731-stm32cubemx-and-stm32cubeide-threadsafe-solution-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5785-boost-voltage-mode-on-bg474edpow1-discovery-kit-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an5788-stm32-digital-power-pid-and-iir-filters-for-smps-control-design-and-comparison-on-bg414edpow1-discovery-kit-stmicroelectronics.pdf
Application Notes for related Tools & Software	https://www.st.com/resource/en/application_note/an4502-stm32-smbuspmbus-expansion-package-for-stm32cube-stmicroelectronics.pdf
Errata Sheets	https://www.st.com/resource/en/errata_sheet/es0430-stm32g471xx473xx474xx483xx484xx-device-errata-stmicroelectronics.pdf
Datasheet	https://www.st.com/resource/en/datasheet/dm00528822.pdf

Programming Manuals	https://www.st.com/resource/en/programming_manual/pm0214-stm32-cortexm4-mcus-and-mpus-programming-manual-stmicroelectronics.pdf
Reference Manuals	https://www.st.com/resource/en/reference_manual/rm0440-stm32g4-series-advanced-armbased-32bit-mcus-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1163-description-of-wlcsp-for-microcontrollers-and-recommendations-for-its-use-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1204-tape-and-reel-shipping-media-for-stm32-microcontrollers-in-bga-packages-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1205-tape-and-reel-shipping-media-for-stm8-and-stm32-microcontrollers-in-fpn-packages-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1206-tape-and-reel-shipping-media-for-stm8-and-stm32-microcontrollers-in-qfp-packages-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1207-tape-and-reel-shipping-media-for-stm8-and-stm32-microcontrollers-in-so-packages-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1208-tape-and-reel-shipping-media-for-stm8-and-stm32-microcontrollers-in-tssop-and-ssop-packages-stmicroelectronics.pdf
Technical Notes & Articles	https://www.st.com/resource/en/technical_note/tn1433-reference-device-marking-schematics-for-stm32-microcontrollers-and-microprocessors-stmicroelectronics.pdf