

1. Description

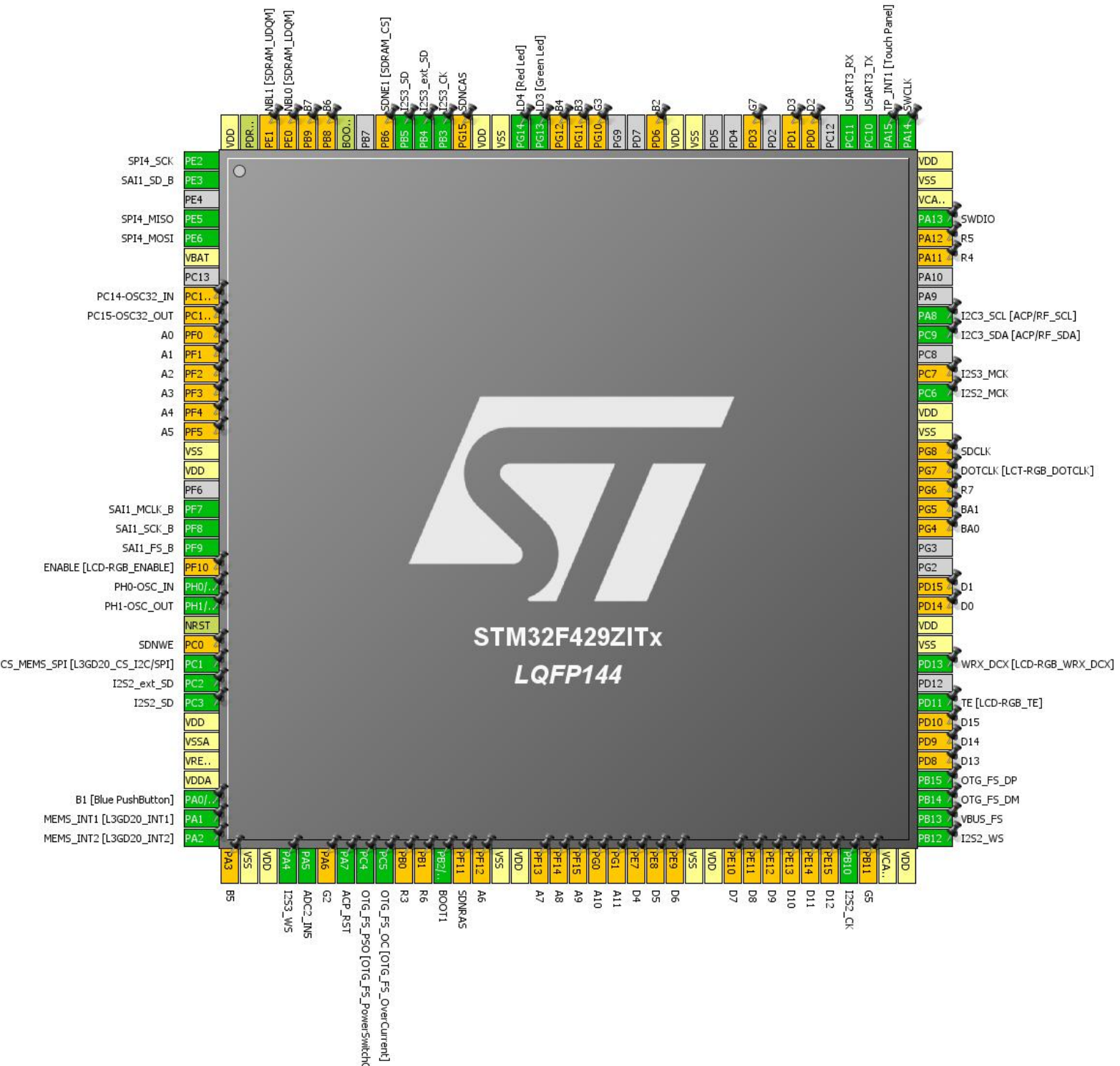
1.1. Project

Project Name	DSM_DEV_DemoInt
Generated with:	STM32CubeMX 4.6.0
Date	02/13/2015

1.2. MCU

MCU Serie	STM32F4
MCU Line	STM32F429/439
MCU name	STM32F429ZITx
MCU Package	LQFP144
MCU Pin number	144

2. Pinout Configuration



3. IPs and Middlewares Configuration

IP	Mode	Fonction	Pin
ADC1	Vbat Channel	N/A	N/A
ADC2	IN5	ADC2_IN5	PA5
I2C3	I2C: I2C	I2C3_SCL	PA8
		I2C3_SDA	PC9
I2S2	Mode: Full-Duplex Master	I2S2_CK	PB10
		I2S2_SD	PC3
		I2S2_WS	PB12
		I2S2_ext_SD	PC2
	Master Clock Output	I2S2_MCK	PC6
I2S3	Mode: Full-Duplex Slave	I2S3_CK	PB3
		I2S3_SD	PB5
		I2S3_WS	PA4
		I2S3_ext_SD	PB4
RCC	High Speed Clock (HSE): Crystal/Ceramic Resonator	RCC_OSC_IN	PH0/OSC_IN
		RCC_OSC_OUT	PH1/OSC_OUT
RNG	Activated	N/A	N/A
SAI1	SAI_B Mode: Master with Master Clock Out	SAI1_SD_B	PE3
		SAI1_SCK_B	PF8
		SAI1_FS_B	PF9
		SAI1_MCLK_B	PF7
SPI4	Mode: Full-Duplex Master	SPI4_MISO	PE5
		SPI4_MOSI	PE6
		SPI4_SCK	PE2
SYS	Debug: Serial Wire Debug (SWD)	SYS_JTCK-SWCLK	PA14
		SYS_JTMS-SWDIO	PA13
USART3	Mode: Asynchronous	USART3_RX	PC11
		USART3_TX	PC10
USB_OTG_HS	Internal Phy: Device_Only	USB_OTG_HS_DM	PB14
		USB_OTG_HS_DP	PB15
	Activate_VBUS	USB_OTG_HS_VBUS	PB13

MiddleWare	Mode
FREERTOS	Enabled
USB_DEVICE	Class For HS IP: Audio Device Class

4. Pins Configuration

Pin	Pos	Function(s)	Label
PE2	1	SPI4_SCK	
PE3	2	SAI1_SD_B	
PE5	4	SPI4_MISO	
PE6	5	SPI4_MOSI	
PC14/OSC32_IN *	8	RCC_OSC32_IN	PC14-OSC32_IN
PC15/OSC32_OUT *	9	RCC_OSC32_OUT	PC15-OSC32_OUT
PF0 *	10	FMC_A0	A0
PF1 *	11	FMC_A1	A1
PF2 *	12	FMC_A2	A2
PF3 *	13	FMC_A3	A3
PF4 *	14	FMC_A4	A4
PF5 *	15	FMC_A5	A5
PF7	19	SAI1_MCLK_B	
PF8	20	SAI1_SCK_B	
PF9	21	SAI1_FS_B	
PF10 *	22	LTDC_DE	ENABLE [LCD-RGB_ENABLE]
PH0/OSC_IN	23	RCC_OSC_IN	PH0-OSC_IN
PH1/OSC_OUT	24	RCC_OSC_OUT	PH1-OSC_OUT
PC0 *	26	FMC_SDNWE	SDNWE
PC1 **	27	GPIO_Output	NCS_MEMS_SPI [L3GD20_CS_I2C/SPI]
PC2	28	I2S2_ext_SD	
PC3	29	I2S2_SD	
PA0/WKUP	34	GPIO_EXTI0	B1 [Blue PushButton]
PA1	35	GPIO_EXTI1	MEMS_INT1 [L3GD20_INT1]
PA2	36	GPIO_EXTI2	MEMS_INT2 [L3GD20_INT2]
PA3 *	37	LTDC_B5	B5
PA4	40	I2S3_WS	
PA5	41	ADC2_IN5	
PA6 *	42	LTDC_G2	G2
PA7 **	43	GPIO_Output	ACP_RST
PC4 **	44	GPIO_Output	OTG_FS_PSO [OTG_FS_PowerSwitchOn]
PC5	45	GPIO_EXTI5	OTG_FS_OC [OTG_FS_OverCurrent]
PB0 *	46	LTDC_R3	R3
PB1 *	47	LTDC_R6	R6
PB2/BOOT1 **	48	GPIO_Input	BOOT1
PF11 *	49	FMC_SDNRAS	SDNRAS
PF12 *	50	FMC_A6	A6
PF13 *	53	FMC_A7	A7

DSM_DEV_DemoInt Project

Pin	Pos	Function(s)	Label
PF14 *	54	FMC_A8	A8
PF15 *	55	FMC_A9	A9
PG0 *	56	FMC_A10	A10
PG1 *	57	FMC_A11	A11
PE7 *	58	FMC_D4	D4
PE8 *	59	FMC_D5	D5
PE9 *	60	FMC_D6	D6
PE10 *	63	FMC_D7	D7
PE11 *	64	FMC_D8	D8
PE12 *	65	FMC_D9	D9
PE13 *	66	FMC_D10	D10
PE14 *	67	FMC_D11	D11
PE15 *	68	FMC_D12	D12
PB10	69	I2S2_CK	
PB11 *	70	LTDC_G5	G5
PB12	73	I2S2_WS	
PB13	74	USB_OTG_HS_VBUS	VBUS_FS
PB14	75	USB_OTG_HS_DM	OTG_FS_DM
PB15	76	USB_OTG_HS_DP	OTG_FS_DP
PD8 *	77	FMC_D13	D13
PD9 *	78	FMC_D14	D14
PD10 *	79	FMC_D15	D15
PD11 **	80	GPIO_Input	TE [LCD-RGB_TE]
PD13 **	82	GPIO_Output	WRX_DCX [LCD-RGB_WRX_DCX]
PD14 *	85	FMC_D0	D0
PD15 *	86	FMC_D1	D1
PG4 *	89	FMC_BA0	BA0
PG5 *	90	FMC_BA1	BA1
PG6 *	91	LTDC_R7	R7
PG7 *	92	LTDC_CLK	DOTCLK [LCT-RGB_DOTCLK]
PG8 *	93	FMC_SDCLK	SDCLK
PC6	96	I2S2_MCK	
PC7 *	97	I2S3_MCK	
PC9	99	I2C3_SDA	I2C3_SDA [ACP/RF_SDA]
PA8	100	I2C3_SCL	I2C3_SCL [ACP/RF_SCL]
PA11 *	103	LTDC_R4	R4
PA12 *	104	LTDC_R5	R5
PA13	105	SYS_JTMS-SWDIO	SWDIO
PA14	109	SYS_JTCK-SWCLK	SWCLK
PA15	110	GPIO_EXTI15	TP_INT1 [Touch Panel]
PC10	111	USART3_TX	
PC11	112	USART3_RX	
PD0 *	114	FMC_D2	D2

Pin	Pos	Function(s)	Label
PD1 *	115	FMC_D3	D3
PD3 *	117	LTDC_G7	G7
PD6 *	122	LTDC_B2	B2
PG10 *	125	LTDC_G3	G3
PG11 *	126	LTDC_B3	B3
PG12 *	127	LTDC_B4	B4
PG13 **	128	GPIO_Output	LD3 [Green Led]
PG14 **	129	GPIO_Output	LD4 [Red Led]
PG15 *	132	FMC_SDNCAS	SDNCAS
PB3	133	I2S3_CK	
PB4	134	I2S3_ext_SD	
PB5	135	I2S3_SD	
PB6 *	136	FMC_SDNE1	SDNE1 [SDRAM_CS]
PB8 *	139	LTDC_B6	B6
PB9 *	140	LTDC_B7	B7
PE0 *	141	FMC_NBL0	NBL0 [SDRAM_LDQM]
PE1 *	142	FMC_NBL1	NBL1 [SDRAM_UDQM]

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

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

5. Power Plugin report

5.1. Microcontroller Selection

Serie	STM32F4
Line	STM32F429/439
MCU	STM32F429ZITx
Datasheet	024030_Rev4

5.2. Parameter Selection

Temperature	25
Vdd	1.8

6. Software Project

6.1. Project Settings

Name	Value
Project Name	DSM_DEV_DemoInt
Project Folder	C:\usr\maxim_audio\software\dsm\STM32F4XX\Build\CubeMX
Toolchain / IDE	MDK-ARM 4.73
Firmware Package Name and Version	STM32Cube FW_F4 V1.4.0

6.2. 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	Yes
Backup previously generated files when re-generating	No
Delete previously generated files when not re-generated	No
Set all free pins as analog (to optimize the power consumption)	No

6.3. Toolchains Settings

Name	Value
Compiler Optimizations	Balanced Size/Speed