

MCU Pins			Board Function												
Main Function	Alternate Functions	LQFP176	VS1063B	LED	FT2232D	ADXL335B	TF-SDIO	USB-OTG	OLED-0.96	P1	P2	P3	P4	BUTTONS	DS3232M
BOOT0		166													
NRST		31	RST		RST							14			
PA0-WKUP	TIM2_CH1/TIM2_ETR, TIM5_CH1, TIM8_ETR, USART2_CTS,UART4_TX, ETH_MII_CRS,EVENTOUT	40										22			
PA1	TIM2_CH2, TIM5_CH2, USART2_RTS,UART4_RX, ETH_MII_RX_CLK/ETH_RMII_REF_CLK,EVENTOUT	41										21			
PA2	TIM2_CH3, TIM5_CH3, TIM9_CH1, USART2_TX, ETH_MDIO, EVENTOUT	42								7					
PA3	TIM2_CH4, TIM5_CH4, TIM9_CH2, USART2_RX, OTG_HS_ULPI_D0, ETH_MII_COL, LCD_B5, EVENTOUT	47				Z-V/L						9			
PA4	SPI1_NSS, SPI3_NSS/I2S3_WS, USART2_CK,OTG_HS_SOF, DCMI_HSYNC,LCD_VSYNC, EVENTOUT	50										12			
PA5	TIM2_CH1/TIM2_ETR, TIM8_CH1N, SPI1_SCK, OTG_HS_ULPI_CK, EVENTOUT	51										11			
PA6	TIM1_BKIN, TIM3_CH1, TIM8_BKIN, SPI1_MISO, TIM13_CH1,DCMI_PIXCLK, LCD_G2,EVENTOUT	52										18			
PA7	TIM1_CH1N, TIM3_CH2, TIM8_CH1N, SPI1_MOSI, TIM14_CH1, ETH_MII_RX_DV/ETH_R, MII_CRS_DV,EVENTOUT	53										17			
PA8	MCO1, TIM1_CH1, I2C3_SCL, USART1_CK, OTG_FS_SOF, LCD_R6, EVENTOUT	119									43				
PA9	TIM1_CH2, I2C3_SMBA, USART1_TX, DCMI_D0, EVENTOUT	120						VBUS			44				
PA10	TIM1_CH3, USART1_RX, OTG_FS_ID, DCMI_D1, EVENTOUT	121						ID			41				

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PA11	TIM1_CH4, USART1_CTS, CAN1_RX, LCD_R4, OTG_FS_DM, EVENTOUT	122						DM							
PA12	USART1_RTS, CAN1_TX, LCD_R5, OTG_FS_DP, EVENTOUT	123						DP							
PA13	JTMS-SWDIO, EVENTOUT	124			JTMS						42				
PA14	JTCK-SWCLK/ EVENTOUT	137			JTCK						39				
PA15	JTDI, TIM2_CH1/TIM2_ETR, SPI1_NSS, SPI3_NSS/I2S3_WS, EVENTOUT	138			JTDI						40				
PB0	TIM1_CH2N, TIM3_CH3, TIM8_CH2N, LCD_R3, OTG_HS_ULPI_D1, ETH_MII_RXD2,EVENTOUT	56				X-VAL				8					
PB1	TIM1_CH3N, TIM3_CH4, TIM8_CH3N, LCD_R6, OTG_HS_ULPI_D2, ETH_MII_RXD3, EVENTOUT	57				Y-VAL				9					
PB2-BOOT1	EVENTOUT	48								24					
PB3	JTDO/TRACESWO, TIM2_CH2, SPI1_SCK, SPI3_SCK/I2S3_CK, EVENTOUT	161			JTDO						12				
PB4	NJTRST, TIM3_CH1, SPI1_MISO, SPI3_MISO, I2S3ext_SD, EVENTOUT	162			JRST						9				
PB5	TIM3_CH2, I2C1_SMBA, SPI1_MOSI, SPI3_MOSI/I2S3_SD, CAN2_RX, OTG_HS_ULPI_D7, ETH_PPS_OUT, FMC_SDCKE1, DCMI_D10, EVENTOUT	163									10				
PB6	TIM4_CH1, I2C1_SCL, USART1_TX, CAN2_TX, FMC_SDNE1, DCMI_D5, EVENTOUT	164											28		
PB7	TIM4_CH2, I2C1_SDA, USART1_RX, FMC_NL, DCMI_VSYNC, EVENTOUT	165											27		
PB8	TIM4_CH3, TIM10_CH1, I2C1_SCL, CAN1_RX, ETH_MII_TXD3, SDIO_D4, DCMI_D6, LCD_B6, EVENTOUT	167											26		

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PB9	TIM4_CH4, TIM11_CH1, I2C1_SDA, SPI2_NSS/I2S2_WS, CAN1_TX, SDIO_D5, DCMI_D7, LCD_B7, EVENTOUT	168											25		
PB10	TIM2_CH3, I2C2_SCL, SPI2_SCK/I2S2_CK, USART3_TX, OTG_HS_ULPI_D3, ETH_MII_RX_ER, LCD_G4, EVENTOUT	79	SCLK							34					
PB11	TIM2_CH4, I2C2_SDA, USART3_RX, OTG_HS_ULPI_D4, ETH_MII_TX_EN/ETH_R MII_TX_EN, LCD_G5, EVENTOUT	80								35					
PB12	TIM1_BKIN, I2C2_SMBA, SPI2_NSS/I2S2_WS, USART3_CK, CAN2_RX, OTG_HS_ULPI_D5, ETH_MII_TXD0/ETH_RMI I_TXD0, OTG_HS_ID, EVENTOUT	92								36					
PB13	TIM1_CH1N, SPI2_SCK/I2S2_CK, USART3_CTS, CAN2_TX, OTG_HS_ULPI_D6, ETH_MII_TXD1/ETH_RMI I_TXD1, EVENTOUT	93								37					
PB14	TIM1_CH2N, TIM8_CH2N, SPI2_MISO, I2S2ext_SD, USART3_RTS, TIM12_CH1, OTG_HS_DM, EVENTOUT	94	SO							38					
PB15	RTC_REFIN, TIM1_CH3N, TIM8_CH3N, SPI2_MOSI/I2S2_SD, TIM12_CH2, OTG_HS_DP, EVENTOUT	95	SI							39					
PC0	OTG_HS_ULPI_STP, FMC_SDNWE, EVENTOUT	32						VBUS		6					
PC1	ETH_MDC, EVENTOUT	33										13			

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PC2	SPI2_MISO, I2S2ext_SD, OTG_HS_ULPI_DIR, ETH_MII_TXD2, FMC_SDNE0, EVENTOUT	34	XDCS/BSYNC									16			
PC3	SPI2_MOSI/I2S2_SD, OTG_HS_ULPI_NXT, ETH_MII_TX_CLK, FMC_SDCKE0, EVENTOUT	35	DREQ									15			
PC4	ETH_MII_RXD0/ETH_RM II_RXD0, EVENTOUT	54										20			
PC5	ETH_MII_RXD1/ETH_RM II_RXD1, EVENTOUT	55										19			
PC6	TIM3_CH1, TIM8_CH1, I2S2_MCK, USART6_TX, SDIO_D6, DCMI_D0, LCD_HSYNC, EVENTOUT	115									47				
PC7	TIM3_CH2, TIM8_CH2, I2S3_MCK, USART6_RX, SDIO_D7, DCMI_D1, LCD_G6, EVENTOUT	116									48				
PC8	TIM3_CH3, TIM8_CH3, USART6_CK, SDIO_D0, DCMI_D2, EVENTOUT	117					DO/DAT0				45				
PC9	MCO2, TIM3_CH4, TIM8_CH4, I2C3_SDA, I2S_CKIN, SDIO_D1, DCMI_D3, EVENTOUT	118					DAT1				46				
PC10	SPI3_SCK/I2S3_CK, USART3_TX, UART4_TX, SDIO_D2, DCMI_D8, LCD_R2, EVENTOUT	139			TXD						37				
PC11	I2S3ext_SD, SPI3_MISO, USART3_RX, UART4_RX, SDIO_D3, DCMI_D4, EVENTOUT	140			RXD						38				
PC12	SPI3_MOSI/I2S3_SD, USART3_CK, UART5_TX, SDIO_CK, DCMI_D9, EVENTOUT	141					CLK				35				
PC13	EVENTOUT	8											13		
PC14	EVENTOUT	9											12		
PC15	EVENTOUT	10											11		
PD0	CAN1_RX, FMC_D2, EVENTOUT	142									36				
PD1	CAN1_TX, FMC_D3, EVENTOUT	143									33				
PD2	TIM3_ETR, UART5_RX, SDIO_CMD, DCMI_D11, EVENTOUT	144					D/CMD				34				

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PD3	SPI2_SCK/I2S2_CK, USART2_CTS, FMC_CLK, DCM1_D5, LCD_G7, EVENTOUT	145	XCS								31				
PD4	USART2_RTS, FMC_NOE, EVENTOUT	146									32				
PD5	USART2_TX, FMC_NWE, EVENTOUT	147									29				
PD6	SPI3_MOSI/I2S3_SD, SAI1_SD_A, USART2_RX, FMC_NWAIT, DCM1_D10, LCD_B2, EVENTOUT	150									30				
PD7	USART2_CK, FMC_NE1/FMC_NCE2, EVENTOUT	151									27				
PD8	USART3_TX, FMC_D13, EVENTOUT	96								40					
PD9	USART3_RX, FMC_D14, EVENTOUT	97								41					
PD10	USART3_CK, FMC_D15, LCD_B3, EVENTOUT	98								42					
PD11	USART3_CTS, FMC_A16, EVENTOUT	99								43					
PD12	TIM4_CH1, USART3_RTS, FMC_A17, EVENTOUT	100								44					
PD13	TIM4_CH2, FMC_A18, EVENTOUT	101								45					
PD14	TIM4_CH3, FMC_D0, EVENTOUT	104								46					
PD15	TIM4_CH4, FMC_D1, EVENTOUT	105								47					
PE0	TIM4_ETR, UART8_RX, FMC_NBL0, DCM1_D2, EVENTOUT	169											24		
PE1	UART8_Tx, FMC_NBL1, DCM1_D3, EVENTOUT	170											23		
PE2	TRACECLK, SPI4_SCK, SAI1_MCLK_A, ETH_MII_TXD3, FMC_A23, EVENTOUT	1											18		
PE3	TRACED0, SAI1_SD_B, FMC_A19, EVENTOUT	2											17		
PE4	TRACED1, SPI4_NSS, SAI1_FS_A, FMC_A20, DCM1_D4, LCD_B0, EVENTOUT	3											16		
PE5	TRACED2, TIM9_CH1, SPI4_MISO, SAI1_SCK_A, FMC_A21, DCM1_D6, LCD_G0, EVENTOUT	4											15		

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PE6	TRACED3, TIM9_CH2, SPI4_MOSI, SAI1_SD_A, FMC_A22, DCMI_D7, LCD_G1, EVENTOUT	5											14		
PE7	TIM1_ETR, UART7_Rx, FMC_D4, EVENTOUT	68								17					
PE8	TIM1_CH1N, UART7_Tx, FMC_D5, EVENTOUT	69								18					
PE9	TIM1_CH1, FMC_D6, EVENTOUT	70								19					
PE10	TIM1_CH2N, FMC_D7, EVENTOUT	73								20					
PE11	TIM1_CH2, SPI4_NSS, FMC_D8, LCD_G3, EVENTOUT	74								29					
PE12	TIM1_CH3N, SPI4_SCK, FMC_D9, LCD_B4, EVENTOUT	75								30					
PE13	TIM1_CH3, SPI4_MISO, FMC_D10, LCD_DE, EVENTOUT	76								31					
PE14	TIM1_CH4, SPI4_MOSI, FMC_D11, LCD_CLK, EVENTOUT	77								32					
PE15	TIM1_BKIN, FMC_D12, LCD_R7, EVENTOUT	78								33					
PF0	I2C2_SDA, FMC_A0, EVENTOUT	16											6		
PF1	I2C2_SCL, FMC_A1, EVENTOUT	17											5		
PF2	I2C2_SMBA, FMC_A2, EVENTOUT	18											4		
PF3	FMC_A3, EVENTOUT	19											3		
PF4	FMC_A4, EVENTOUT	20											2		
PF5	FMC_A5, EVENTOUT	21											1		
PF6	TIM10_CH1, SPI5_NSS, SAI1_SD_B, UART7_Rx, FMC_NIORD, EVENTOUT	24		LED1								2			
PF7	TIM11_CH1, SPI5_SCK, SAI1_MCLK_B, UART7_Tx, FMC_NREG, EVENTOUT	25		LED2								1			
PF8	SPI5_MISO, SAI1_SCK_B, TIM13_CH1, FMC_NIOWR, EVENTOUT	26		LED3								4			

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PF9	SPI5_MOSI, SAI1_FS_B, TIM14_CH1, FMC_CD, EVENTOUT	27		LED4								3			
PF10	FMC_INTR, DCMI_D11, LCD_DE, EVENTOUT	28										6			
PF11	SPI5_MOSI, FMC_SDNRAS, DCMI_D12, EVENTOUT	59								10					
PF12	FMC_A6, EVENTOUT	60								11					
PF13	FMC_A7, EVENTOUT	63								12					
PF14	FMC_A8, EVENTOUT	64								13					
PF15	FMC_A9, EVENTOUT	65								14					
PG0	FMC_A10, EVENTOUT	66								15					
PG1	FMC_A11, EVENTOUT	67								16					
PG2	FMC_A12, EVENTOUT	106										30			
PG3	FMC_A13, EVENTOUT	107										27			
PG4	FMC_A14/FMC_BA0, EVENTOUT	108										28			
PG5	FMC_A15/FMC_BA1, EVENTOUT	109										25			
PG6	FMC_INT2, DCMI_D12, LCD_R7, EVENTOUT	110										26			
PG7	USART6_CK, FMC_INT3, DCMI_D13, LCD_CLK, EVENTOUT	111										23			
PG8	SPI6_NSS,USART6_RTS, ETH_PPS_OUT, FMC_SDCLK,EVENTOUT	112										24			
PG9	USART6_RX, FMC_NE2/FMC_NCE3, EVENTOUT	152									28				
PG10	LCD_G3, FMC_NCE4_1/FMC_NE3, DCMI_D2, LCD_B2, EVENTOUT	153									25				
PG11	ETH_MII_TX_EN/ETH_R MII_TX_EN, FMC_NCE4_2, DCMI_D3, LCD_B3, EVENTOUT	154									26				
PG12	SPI6_MISO, USART6_RTS, LCD_B4, FMC_NE4, LCD_B1, EVENTOUT	155									23				
PG13	SPI6_SCK, USART6_CTS, ETH_MII_TXD0/ETH_RMI I_TXD0, FMC_A24, EVENTOUT	156									13				

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PG14	SPI6_MOSI, USART6_TX, ETH_MII_TXD1/ETH_RMII_TXD1, FMC_A25, EVENTOUT	157									14				
PG15	USART6_CTS, FMC_SDNCAS, DCMI_D13, EVENTOUT	160									11				
PH0	EVENTOUT	29									7				
PH1	EVENTOUT	30									8				
PH2	ETH_MII_CRS, FMC_SDCKE0, LCD_R0, EVENTOUT	43										5			
PH3	ETH_MII_COL, FMC_SDNE0, LCD_R1, EVENTOUT	44										8			
PH4	I2C2_SCL, OTG_HS_ULPI_NXT, EVENTOUT	45										7			
PH5	I2C2_SDA, SPI5_NSS, FMC_SDNWE, EVENTOUT	46										10			
PH6	I2C2_SMBA, SPI5_SCK, TIM12_CH1, ETH_MII_RXD2, FMC_SDNE1, DCMI_D8, EVENTOUT	83								21					
PH7	I2C3_SCL, SPI5_MISO, ETH_MII_RXD3, FMC_SDCKE1, DCMI_D9, EVENTOUT	84								22					
PH8	I2C3_SDA, FMC_D16, DCMI_HSYNC, LCD_R2, EVENTOUT	85								25					
PH9	I2C3_SMBA, TIM12_CH2, FMC_D17, DCMI_D0, LCD_R3, EVENTOUT	86								26					
PH10	TIM5_CH1, FMC_D18, DCMI_D1, LCD_R4, EVENTOUT	87								27					
PH11	TIM5_CH2, FMC_D19, DCMI_D2, LCD_R5, EVENTOUT	88								28					
PH12	TIM5_CH3, FMC_D20, DCMI_D3, LCD_R6, EVENTOUT	89										29			
PH13	TIM8_CH1N, CAN1_TX, FMC_D21, LCD_G2, EVENTOUT	128									24				
PH14	TIM8_CH2N, FMC_D22, DCMI_D4, LCD_G3, EVENTOUT	129									18				
PH15	TIM8_CH3N, FMC_D23, DCMI_D11, LCD_G4, EVENTOUT	130									19				

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PI0	TIM5_CH4, SPI2_NSS/I2S2_WS(6), FMC_D24, DCMI_D13, LCD_G5, EVENTOUT	131									20				
PI1	SPI2_SCK/I2S2_CK(6), FMC_D25, DCMI_D8, LCD_G6, EVENTOUT	132									17				
PI2	TIM8_CH4, SPI2_MISO, I2S2ext_SD, FMC_D26, DCMI_D9, LCD_G7, EVENTOUT	133									16				
PI3	TIM8_ETR, SPI2_MOSI/I2S2_SD, FMC_D27, DCMI_D10, EVENTOUT	134									15				
PI4	TIM8_BKIN, FMC_NBL2, DCMI_D5, LCD_B4, EVENTOUT	173											22		
PI5	TIM8_CH1, FMC_NBL3, DCMI_VSYNC, LCD_B5, EVENTOUT	174											21		
PI6	TIM8_CH2, FMC_D28, DCMI_D6, LCD_B6, EVENTOUT	175											20		
PI7	TIM8_CH3, FMC_D29, DCMI_D7, LCD_B7, EVENTOUT	176											19		
PI8	EVENTOUT	7											10		
PI9	CAN1_RX, FMC_D30, LCD_VSYNC, EVENTOUT	11											9		
PI10	ETH_MII_RX_ER, FMC_D31, LCD_HSYNC, EVENTOUT	12											8		
PI11	OTG_HS_ULPI_DIR, EVENTOUT	13											7		
VBAT													29		
3V3										3/4	5/6/22		30		
GND										1/2/23/50	1/2/49/50				
5V											3/4				
OUTL										49					
OUTR										48					