STM32F4 Pinout

STM32F4 Pin	LQFP100	*Project Pin Name and Function*	Notes	Function (1) after reset	Alternate functions (2)								
PA11	70	PA11-OTG_FS_DM		PA11	USART1_CTS	CAN1_RX	TIM1_CH4	OTG_FS_DM					
PA12	71	PA12-OTG_FS_DP		PA12	USART1_RTS	CAN1_TX	TIM1_ETR	OTG_FS_DP					
GND		GND1											
GND		GND2											
VDD		VDD1											
VDD		VDD2											
GND		GND3											
NRST	14	NRST		NRST									
PC1	16	PC1-ADC123_I	5	PC1	ETH_MDC	ADC123_IN11							
PC0	15	PC0-OTG_FS	5	PC0	OTG_HS_ULPI_STP	ADC123_IN10							
PC3	18	PC3-MIC_PDM	5	PC3	SPI2_MOSI	I2S2_SD	OTG_HS_ULPI_NXT	ETH_MII_TX_CLK	ADC123_IN13				
PC2	17	PC2-ADC123_I	5	PC2	SPI2_MISO	OTG_HS_ULPI_DIR	TH_MII_TXD2	I2S2ext_SD	ADC123_IN12				
PA1	24	PA1-USART4_	5	PA1	USART2_RTS	USART4_RX	ETH_RMII_REF_CLK	ETH_MII_RX_CLK	TIM5_CH2	TIMM2_CH2	ADC123_IN1		
PA0-WKUP	23	PA0-WKUP-US	6,5	PA0-WKUP	USART2_CTS	USART4_TX	ETH_MII_CRS	TIM2_CH1_ETR	TIM5_CH1	TIM8_ETR	ADC123_IN0	WKUP	
PA3	26	PA3-USART2_	5	PA3	USART2_RX	TIM5_CH4	TIM9_CH2	TIM2_CH4	OTG_HS_ULPI_D0	ETH_MII_COL	ADC123_IN3		
PA2	25	PA2-USART2_	5	PA2	USART2_TX	TIM5_CH3	TIM9_CH1	TIM2_CH3	ETH_MDIO	ADC123_IN2			
PA5	30	PA5-SPI1_SCK	5	PA5	SPI1_SCK	OTG_HS_ULPI_CK	TIM2_CH1_ETR	TIM8_CHIN	ADC12_IN5	DAC2_OUT			
PA4	29	PA4-I2S3_WS	5	PA4	SPI1_NSS	SPI3_NSS	USART2_CK	DCMI_HSYNC	OTG_HS_SOF	I2S3_WS	ADC12_IN4	DAC1_OUT	
PA7	32	PA7-SPI1_MOS	5	PA7	SPI1_MOSI	TIM8_CH1N	TIM14_CH1	TIM3_CH2	ETH_MII_RX_DV	TIM1_CH1	NRMII_CRS_DV	ADC12_IN7	
PA6	31	PA6-SPI1_MISO	5	PA6	SPI1_MISO	TIM8_BKIN	TIM13_CH1	DCMI_PIXCLK	TIM3_CH1	TIM1_BKIN	ADC12_IN6		
PC5	34	PC5-ADC12_IN	5	PC5	ETH_RMII_RX_D1	ETH_MII_RX_D1	ADC12_IN15						
PC4	33	PC4-ADC12_IN	5	PC4	ETH_RMII_RX_D0	ETH_MII_RX_D0	ADC12_IN14						
PB1	36	PB1-ADC12_IN	5	PB1	TIM3_CH4	TIM8_CH3N	OTG_HS_ULPI_D2	ETH_MII_RXD3	OTG_HS_INTN	TIM1_CH3N	ADC12_IN9		
PB0	35	PB0-ADC12_IN	5	PB0	TIM3_CH3	TIM8_CH2N	OTG_HS_ULPI_D1	ETH_MII_RXD2	TIM1_CH2N	ADC12_IN8			
GND		GND4											
PB2	37	PB2-BOOT1		PB2-BOOT1									
PE7	38	PE7		PE7	FSMC_D4	TIM1_ETR							

PE8	39	PE8		PE8	FSMC_D5	TIM1_CH1N								
PE9	40	PE9		PE9	FSMC_D6	TIM1_CH1								
PE10	41	PE10		PE10	FSMC_D7	TIM1_CH2N								
PE11	42	PE11		PE11	FSMC_D8	TIM1_CH2								
PE12	43	PE12		PE12	FSMC_D9	TIM1_CH3N								
PE13	44	PE13		PE13	FSMC_D10	TIM1_CH3								
PE14	45	PE14		PE14	FSMC_D11	TIM1_CH4								
PE15	46	PE15		PE15	FSMC_D12	TIM1_BKIN								
PB10	47	PB10-I2C2_SCL		PB10	SPI2_SCK	I2S2_CK	I2C2_SCL	USART3_TX	OTG_HS_ULPI_D3	ETH_MII_RX_ER	OTG_HS_SCL	TIM2_CH3		
PB11	48	PB11-I2C2_SDA		PB11	I2C2_SDA	USART3_RX	OTG_HS_ULPI_D4	ETH_RMII_TX_EN	ETH_MII_TX_EN	OTG_HS_SDA	TIM2_CH4			
PB12	51	PB12-SPI2_NSS		PB12	SPI2_NSS	I2S2_WS	I2C2_SMBA	USART3_CK	TIM1_BKIN	CAN2_RX	OTG_HS_ULPI_D5	ETH_RMII_TXD0	ETH_MII_TXD0	OTG_HS_ID
PB13	52	PB13-SPI2_SCK		PB13	SPI2_SCK	I2S2_CK	USART3_CTS	TIM1_CH1N	CAN2_TX	OTG_HS_ULPI_D6	ETH_RMII_TXD1	ETH_MII_TXD1	OTG_HS_VBUS	
PB14	53	PB14-SPI2_MISO		PB14	SPI2_MISO	TIM1_CH2N	TIM12_CH1	OTG_HS_DM	USART3_RTS	TIM8_CH2N	I2S2ext_SD			
PB15	54	PB15-SPI2_MOSI		PB15	SPI2_MOSI	I2S2_SD	TIM1_CH3N	TIM8_CH3N	TIM12_CH2	OTG_HS_DP				
PD8	55	PD8-USART3_TX		PD8	FSMC_D13	USART3_TX								
PD9	56	PD9-USART3_RX		PD9	FSMC_D14	USART3_RX								
PD10	57	PD10		PD10	FSMC_D15	USART3_CK								
PD11	58	PD11-USART3_CTS		PD11	FSMC_A16	USART3_CTS								
PD12	59	PD12-USART3_RTS		PD12	FSMC_A17	TIM4_CH1	USART3_RTS							
PD13	60	PD13		PD13	FSMC_A18	TIM4_CH2								
PD14	61	PD14		PD14	FSMC_D0	TIM4_CH3								
PD15	62	PD15		PD15	FSMC_D1	TIM4_CH4								
NC		NC												
GND		GND5												
GND		GND6												
GND		GND7												
GND		GND8												
5V		5V-1												
5V		5V-2												
3V		3V-1												
3V		3V-2												
PH0	12	PH0-OSC_IN	5	PH0	OSC_IN									
PH1	13	PH1-OSC_OUT	5	PH1	OSC_OUT									
PC14	8	PC14-OSC32_I	3,5	PC14(4)	OSC32_IN									
PC15	9	PC15-OSC32_O	3,5	PC15(4)	OSC32_OUT									

Port	Pin	Name	Additional	I/O	AF0	AF1	AF2	AF3	AF4	AF5	AF6	AF7	AF8
PE6	5	PE6		PE6	TRACED3	FSMC_A22	TIM9_CH2	DCMI_D7					
PC13	7	PC13	3,4	PC13(4)	RTC_AF1								
PE4	3	PE4		PE4	TRACED1	FSMC_A20	DCMI_D4						
PE5	4	PE5		PE5	TRACED2	FSMC_A21	TIM9_CH1	DCMI_D6					
PE2	1	PE2		PE2	TRACECLK	FSMC_A23	ETH_MII_TXD3						
PE3	2	PE3		PE3	TRACED0	FSMC_A19							
PE0	97	PE0		PE0	TIM4_ETR	FSMC_NBL0	DCMI_D2						
PE1	98	PE1		PE1	FSMC_NBL1	DCMI_D3							
PB8	95	PB8		PB8	TIM4_CH3	SDIO_D4	TIM10_CH1	DCMI_D6	OTG_FS_SCL	ETH_MII_TXD3	I2C1_SCL	CAN1_RX	
PB9	96	PB9-I2C1_SDA		PB9	SPI2_NSS	I2S2_WS	TIM4_CH4	TIM11_CH1	OTG_FS_SDA	SDIO_D5	DCMI_D7	I2C1_SDA	CAN1_TX
BOOT0	94	BOOT0		BOOT0	V_{PP}								
VDD		VDD3											
PB6	92	PB6-I2C1_SCL		PB6	I2C1_SCL	TIM4_CH1	CAN2_TX	OTG_FS_INTN	DCMI_D5	USART1_TX			
PB7	93	PB7		PB7	I2C1_SDA	FSMC_NL	DCMI_VSYNC	USART1_RX	TIM4_CH2				
PB4	90	PB4-NJTRST		NJTRST	NJTRST	SPI3_MISO	TIM3_CH1	SPI1_MISO	I2S3ext_SD				
PB5	91	PB5-I2C1_SMBA		PB5	I2C1_SMBA	CAN2_RX	OTG_HS_ULPI_D7	ETH_PPS_OUT	TIM3_CH2	SPI1_MOSI	SPI3_MOSI	DCMI_D10	I2S3_SD
PD7	88	PD7		PD7	USART2_CK	FSMC_NE1	FSMC_NCE2						
PB3	89	PB3-JTDO		JTDO	TRACESWO	JTDO	SPI3_SCK	I2S3_CK	SPI1_SCK	TIM2_CH2			
PD5	86	PD5-OTG_FS_	OverCurrent	PD5	FSMC_NWE	USART2_TX							
PD6	87	PD6		PD6	FSMC_NWAIT	USART2_RX							
PD3	84	PD3		PD3	FSMC_CLK	USART2_CTS							
PD4	85	PD4-AUDIO_RE		PD4	FSMC_NOE	USART2_RTS							
PD1	82	PD1-CAN1_TX		PD1	FSMC_D3	CAN1_TX							
PD2	83	PD2		PD2	TIM3_ETR	UART5_RX	SDIO_CMD	DCMI_D11					
PC12	80	PC12-I2S3_SD		PC12	UART5_TX	SDIO_CK	DCMI_D9	SPI3_MOSI	I2S3_SD	USART3_CK			
PD0	81	PD0-CAN1_RX		PD0	FSMC_D2	CAN1_RX							
PC10	78	PC10-I2S3_CK		PC10	SPI3_SCK	I2S3_CK	UART4_TX	SDIO_D2	USART3_TX	DCMI_D8			
PC11	79	PC11		PC11	UART4_RX	SPI3_MISO	SDIO_D3	DCMI_D4	USART3_RX	I2S3ext_SD			
PA14	76	PA14-JTCK-SWCLK		JTCK-SWCLK	JTCK-SWCLK								
PA15	77	PA15-JTDI		JTDI	JTDI	SPI3_NSS	I2S3_WS	TIM2_CH1_ETR	SPI1_NSS				
PA10	69	PA10-OTG_FS_	ID	PA10	USART1_RX	TIM1_CH3	OTG_FS_ID	DCMI_D1					
PA13	72	PA13-JTMS-SWDIO		JTMS-SWDIO	JTMS-SWDIO								
PA8	67	PA8-I2C3_SCL		PA8	MCO1	USART1_CK	TIM1_CH1	I2C3_SCL	OTG_FS_SOF				
PA9	68	PA9-OTG_FS_	VBUS	PA9	USART1_TX	TIM1_CH2	I2C3_SMBA	DCMI_D0	OTG_FS_VBUS				
PC8	65	PC8		PC8	TIM8_CH3	SDIO_D0	TIM3_CH3	USART6_CK	DCMI_D2				
PC9	66	PC9-I2C3_SDA		PC9	I2S_CKIN	MCO2	TIM8_CH4	SDIO_D1	DCMI_D3	TIM3_CH4	I2C3_SDA		

PC6	63	PC6		PC6	I2S2_MCK	TIM8_CH1	SDIO_D6	USART6_TX	DCMI_D0	TIM3_CH1			
PC7	64	PC7-I2S3_MCK		PC7	I2S3_MCK	TIM8_CH2	SDIO_D7	USART6_RX	DCMI_D1	TIM3_CH2			
GND		GND9											
GND		GND10											

Pin number	Function
PB6	COM1 TX
PB7	COM1 RX
PA2	COM2 TX
PA3	COM2 RX
PD8	COM3 TX
PD9	COM3 RX
PA0	COM4 TX
PA1	COM4 RX
PD5	COM5 TX
PD6	COM5 RX
PC6	COM6 RX
PC7	COM6 TX

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