

IO	Used by	ADC	DAC	Timer 1/8/9/10	Timer 2/3/4/5	USART	I2C	SPI	I2S	OPA	USB	CAN	SDIO	Ethernet	DVP	Other	Ramap
PA0		ADC_IN0		TIM8_ETR		USART2_CTS				OPA4_OUT0				ETH_MII_CRS ETH_RMII_RXD0		Wakeup	TIM2_CH1_2 TIM2_ETR_1 TIM8_ETR_1
PA1		ADC_IN1			TIM2_CH2 TIM8_ETR	USART2_RTS				OPA3_OUT0				ETH_MII_RX_CLK ETH_RMII_REF_CLK ETH_RMII_RXD1			TIM2_CH2_2 TIM9_BKIN_1
PA2	W25Q32V	ADC_IN2		TIM9_CH1 TIM9_ETR	TIM2_CH3 TIM3_CH3	USART2_TX				OPA2_OUT0				ETH_MII_MDIO ETH_RMII_RXD0 ETH_RMII_TXD0			TIM2_CH3_1 TIM9_CH1_1 TIM9_ETR_1
PA3		ADC_IN3		TIM9_CH2	TIM2_CH4 TIM5_CH4	USART2_RX				OPA1_OUT0				ETH_MII_CRS ETH_RMII_TXEN			TIM2_CH2_1 TIM9_CH2_1
PA4		ADC_IN4	DAC_OUT1	TIM9_CH3		USART2_CK		SPI1_NSS							DVP_HSYNC		SPI1_NSS_1 I2S3_WS_1 TIM5_CH3_1
PA5	W25Q32V	ADC_IN5	DAC_OUT2					SPI1_SCK		OPA2_CH1N					DVP_VSYNC		TIM10_CH1N_1 USART1_CTS_2 USART1_CK_3
PA6	W25Q32V	ADC_IN6		TIM9_BKIN	TIM3_CH1			SPI1_MISO		OPA1_CH1N					DVP_PCLK		TIM2_BKIN_1 USART1_TX_3 USART1_TX_1 TIM10_CH1N_1
PA7	W25Q32V	ADC_IN7		TIM9_CH3N	TIM3_CH2			SPI1_MOSI		OPA2_CH1P				ETH_MII_RX_DV ETH_RMII_CRS_DV ETH_RMII_TXD0			TIM4_CH1N_1 USART1_RX_3 USART1_RX_1 TIM10_CH1N_1
PA8				TIM1_CH1		USART1_CK										MCO	USART1_CK_1 USART1_RX_2 TIM1_CH1_1
PA9				TIM1_CH2		USART1_TX					OTG_FS_VBUS				DVP_D0		USART1_RTS_2 TIM1_CH2_1 USART1_CK_2
PA10				TIM1_CH3		USART1_RX					OTG_FS_ID				DVP_D1		TIM1_CH3_1 USART1_CTS_1
PA11	USB1			TIM1_CH4		USART1_CTS					OTG_FS_DN	CAN1_RX					TIM1_CH4_1 USART1_CTS_1
PA12	USB1			TIM1_ETR TIM10_CH3N		USART1_RTS					OTG_FS_DP	CAN1_TX					USART1_RTS_1 TIM1_ETR_1
PA13	WCH-LiM6			TIM10_CH3N												SWDIO	PA13 TIM10_CH3N_1 USART1_TX_2
PA14	WCH-LiM6			TIM10_CH3N												SWCLK	PA14 TIM10_CH3N_1 USART1_TX_1 USART1_TX_2
PA15	Red LED																TIM2_CH1_1 TIM2_CH1_3 TIM2_ETR_1 TIM2_ETR_3 SPI1_NSS_1 TIM9_BKIN_1 USART1_RX_1
PB0		ADC_IN8		TIM8_CH2N	TIM3_CH3					OPA1_CH1P				ETH_MII_RXD2 ETH_RMII_TXD3			TIM1_CH2N_1 TIM1_CH3_1 TIM9_CH1_1 USART1_TX_1
PB1		ADC_IN9		TIM8_CH3N	TIM3_CH4					OPA4_CH0N				ETH_MII_RXD3 ETH_RMII_TXD0N			TIM1_CH3N_1 TIM2_CH4_1 TIM9_CH1N_1 USART1_TX_2
PB2	Note: Not tested and shown									OPA3_CH0N						BOOT1	TIM9_CH1N_1 TIM2_CH2_1 TIM2_CH2_3 SPI1_SCK_1 TIM10_CH1_1
PB3	USB push button							SPI3_SCK	I2S3_CK								TIM2_CH2_2 SPI1_SCK_1 TIM10_CH1_2
PB4	Blue LED							SPI3_MISO									TIM2_CH1_2 SPI1_MISO_1 USART1_TX_1 TIM10_CH2_1
PB5							I2C1_SMBA	SPI3_MOSI	I2S3_SD					ETH_MII_PPS_OUT ETH_RMII_PPS_OUT			TIM2_CH2_2 SPI1_MISO_1 CAN2_RX_1 TIM10_CH3_1 USART1_RX_1
PB6	USB2				TIM4_CH1		I2C1_SCL				USBFS_DM USBHS_DM					DVP_D5	USART1_TX_1 CAN2_TX_1 TIM9_CH2_1
PB7	USB2				TIM4_CH2		I2C1_SDA				USBFS_DP USBHS_DP						USART1_RX_1 TIM9_CH3_1
PB8					TIM10_CH1	TIM4_CH3							SDIO_D4	ETH_MII_TXD3	DVP_D6		I2C1_SCL_1 CAN1_RX_2 USART1_TX_1 TIM9_CH2_1
PB9					TIM10_CH2	TIM4_CH4							SDIO_D5		DVP_D7		I2C1_SDA_1 CAN1_TX_2 USART1_RX_1 TIM9_BKIN_1
PB10	FT24C32A					USART3_TX	I2C2_SCL			OPA2_CH0N				ETH_MII_RX_ER			TIM2_CH2_2 TIM2_CH3_1 TIM10_BKIN_1
PB11	FT24C32A					USART3_RX	I2C2_SDA			OPA1_CH0N				ETH_MII_TX_EN ETH_RMII_TX_EN			TIM2_CH4_2 TIM2_CH3_2 TIM10_ETR_1
PB12					TIM9_BKIN	USART3_CK	I2C2_SMBA	SPI2_NSS	I2S2_WS	OPA4_CH0P		CAN2_RX		ETH_MII_TXD0 ETH_RMII_TXD0 ETH_RMII_MDC			ETH_MII_TXD1 ETH_RMII_TXD1 ETH_RMII_RXD0
PB13					TIM1_CH1N	USART3_CTS		SPI2_SCK	I2S2_CK	OPA3_CH0P		CAN2_TX					USART3_CTS_1
PB14					TIM1_CH2N	USART3_RTS		SPI2_MISO		OPA2_CH0P							USART3_RTS_1
PB15					TIM1_CH3N	USART3_TX		SPI2_MOSI	I2S2_SD	OPA1_CH0P							USART3_TX_2
PC1	Ethernet	ADC_IN10		TIM9_CH3N		UART6_TX								ETH_RMII_BNC ETH_MII_MDC ETH_RMII_RXD0			
PC2	Ethernet	ADC_IN11		TIM9_CH3N		UART6_RX								ETH_MII_TXD2 ETH_RMII_RXD0			
PC3		ADC_IN12		TIM9_CH3N		UART7_TX				OPA2_CH1N				ETH_MII_TX_CLK ETH_RMII_RXD0			
PC4		ADC_IN13		TIM10_CH3		UART7_RX				OPA4_CH1N				ETH_MII_RXD0 ETH_RMII_RXD0			USART1_CTS_3
PC5		ADC_IN14		TIM9_CH4		UART8_TX				OPA4_CH1P				ETH_MII_RXD0 ETH_RMII_RXD0			
PC6		ADC_IN15		TIM9_BKIN		UART8_RX				OPA3_CH1P				ETH_MII_RXD1 ETH_RMII_RXD1 ETH_RMII_TXD2			USART1_RTS_3
PC6	Ethernet			TIM8_CH1									SDIO_D6	ETH_RXP			TIM2_CH3_2
PC7	Ethernet			TIM8_CH2									SDIO_D7	ETH_RXN			TIM2_CH3_3
PC8	Ethernet & Micro-SD			TIM8_CH3									SDIO_D0	ETH_TXP	DVP_D2		TIM2_CH3_3
PC9	Ethernet & Micro-SD			TIM8_CH4									SDIO_D1	ETH_TXN	DVP_D3		TIM3_CH4_3
PC10	Micro-SD			TIM10_ETR		UART4_TX							SDIO_D2		DVP_D8		USART3_TX_1 SPI3_SCK_1 I2S3_CH1_1
PC11	Micro-SD			TIM10_CH4		UART4_RX							SDIO_D3		DVP_D4		USART3_TX_1 SPI3_MISO_1
PC12	Micro-SD			TIM10_BKIN		UART5_TX							SDIO_CK		DVP_D9		USART3_CK_1 SPI3_MOSI_1 I2S3_SD_1
PC13																TAMPER_RTC	TIM9_CH1_1
PC14	32.768 kHz crystal															OSC32_IN	
PC15	32.768 kHz crystal															OSC32_OUT	
PD0	8 MHz crystal															OSC_IN	CAN1_RX_3 TIM10_ETR_2 TIM10_ETR_3
PD1	8 MHz crystal															OSC_OUT	CAN1_TX_3 TIM2_ETR_2 TIM10_CH2_3
PD2	Micro-SD				TIM1_ETR	UART5_RX							SDIO_CMD		DVP_D11		TIM2_ETR_2 TIM10_ETR_3
PD3																	USART2_CTS_1 TIM10_CH2_2 TIM10_CH2_3
PD4																	USART2_RTS_1 USART2_TX_1
PD5																	TIM10_CH2_3 TIM10_CH3_3
PD6															DVP_EIO		USART1_RX_1 USART2_CK_1 TIM10_CH2_2
PD7	Micro-SD																USART1_RX_1 TIM10_CH2_2 TIM10_CH3_3
PD8																	USART3_TX_3 TIM9_CH2N_2 TIM9_CH2N_3 ETH_MII_RX_DV_1 ETH_RMII_CRS_DV_1
PD9																	USART1_RX_3 TIM2_CH1_3 TIM2_ETR_3 TIM9_BKIN_1 ETH_RMII_RXD0_1
PD10																	USART1_CK_2 USART3_CK_3 TIM9_CH2N_2 TIM9_CH2N_3 ETH_MII_RXD1_1 ETH_RMII_RXD1_1
PD11																	USART3_CTS_2 USART3_CTS_3 TIM2_CH2_2 TIM2_CH2_3 ETH_MII_RXD2_1
PD12																	TIM4_CH1_1 TIM9_CH1N_2 USART3_RTS_2 USART3_RTS_3 ETH_MII_RXD0_1
PD13																	TIM2_CH1_1 TIM2_CH1_3 TIM4_CH1_1
PD14																	TIM4_CH1_1 TIM9_CH2N_2 TIM9_BKIN_2 TIM9_BKIN_3
PD15																	TIM4_CH4_1 TIM9_CH2N_2 TIM9_CH4_3
PE0					TIM4_ETR												TIM4_ETR_1 USART4_TX_3 USART4_RX_2 USART4_RX_3
PE1																	TIM10_BKIN_2 TIM10_BKIN_3
PE2																	TIM10_BKIN_2 TIM10_BKIN_3
PE3																	TIM10_BKIN_2 TIM10_BKIN_3
PE4																	TIM10_BKIN_2 TIM10_BKIN_3
PE5																	TIM10_BKIN_2 TIM10_BKIN_3
PE6																	TIM10_BKIN_2 TIM10_BKIN_3
PE7										OPA3_OUT1							TIM10_ETR_3
PE8										OPA4_OUT1							TIM10_CH1N_3 UART5_TX_3 USART3_TX_3
PE9																	TIM10_CH1_3 UART5_RX_2 USART3_RX_3
PE10																	TIM10_CH1N_3 UART6_TX_2 UART6_TX_3
PE11																	TIM10_CH1_3 UART5_RX_1 UART6_RX_3
PE12																	TIM10_CH1N_3 UART7_TX_2 UART7_TX_3
PE13																	TIM10_CH1_3 UART7_RX_2 UART7_RX_3
PE14										OPA2_OUT1							TIM10_CH4_3 UART5_TX_2 UART6_TX_3
PE15										OPA1_OUT1							TIM10_BKIN_3 UART6_RX_2 UART6_RX_3

Pin names in **bold face** are 5V tolerant.