Colour Legend

Daughter Board Low Power	GROUND	I/O
Daughter Board High Power	POWER	OTHER

Position	Name	STM Header	Arduino UNO	Type	Attached Device	I/O Structure	Voltage Tol	Signal	Label	Alternate Functions AF0	AF1	AF2	AF3	AF4	AF5	AF6	AF7	AF8	AF9	AF10	AF11	AF12	AF13	ADC	DAC
2	PC13	CN7-1-12		I/O		FT	5 V	GPIO_EXTI13	B1 [Blue PushButton]																
3	PC14	CN7-1-13		I/O		FT	5 V	RCC_OSC32_IN																	
4	PC15	CN7-1-14		I/O		FT	5 V	RCC_OSC32_OUT																	
5	PH0	CN7-1-15		I/O		FT	5 V	RCC_OSC_IN																	
6	PH1	CN7-1-16		I/O		FT	5 V	RCC_OSC_OUT																	
7	NRST	CN7-2-7	Reset	Reset																					
8	PC0	CN7-2-19	A5	I/O	LR_ULTRA_OUT	FT	5 V									SAI1_MCLK_B				USB_OTG_HS_ULPI_STP				ADC123_IN10	
9	PC1	CN7-2-18	A4	I/O	LR_ULTRA_IN	FT	5 V								I2S3_SD/SPI3_M	SAI1_SD_A	I2S2_SD/SPI2_MOSI							ADC123_IN11	
10	PC2	CN7-1-18		I/O		FT	5 V								SPI2_MISO					USB_OTG_HS_ULPI_DIR				ADC123_IN12	
11	PC3	CN7-1-19		I/O		FT	5 V								I2S2_SD/SPI2_MOSI					USB_OTG_HS_ULPI_NXT				ADC123_IN13	
14	PA0	CN7-2-14	A0	I/O	F_ULTRA_IN	FT	5 V				TIM2_CH1/TIM2	TIM5_CH1	TIM8_ETR				USART2_CTS	UART4_TX						ADC123_IN0	
15	PA1	CN7-2-15	A1	I/O	F_ULTRA_OUT	FT	5 V				TIM2_CH2	TIM5_CH2					USART2_RTS	UART4_RX	QUADSPI_BK1_IO3					ADC123_IN1	
16	PA2	CN10-1-18	D1	I/O	Default Serial	FT	5 V	USART2_TX	USART_TX		TIM2_CH3	TIM5_CH3	TIM9_CH1				USART2_TX							ADC123_IN2	
17	PA3	CN10-1-19	D0	I/O	Default Serial	FT	5 V	USART2_RX	USART_RX		TIM2_CH4	TIM5_CH4	TIM9_CH2			SAI1_FS_A	USART2_RX			USB_OTG_HS_ULPI_D0				ADC123_IN3	
20	PA4	CN7-2-16	A2	I/O	LF_ULTRA_IN	TC									I2S1_WS/SPI1_I	I2S3_WS/SPI3_I	USART2_CK					USB_OTG_HS_S	DCMI_HSYNC	ADC12_IN4	DAC_OUT1
21	PA5	CN10-1-6	D13	Output	PYR INTAKE MOTOR	TC		GPIO_Output	LD2 [Green Led]		TIM2_CH1/TIM2	TIM2_ETR	TIM8_CH1N		I2S1_CK/SPI1_SCK					USB_OTG_HS_ULPI_CK				ADC12_IN5	DAC_OUT2
22	PA6	CN10-1-7	D12	I/O	LIFT MOTOR	FT	5 V				TIM1_BKIN	TIM3_CH1	TIM8_BKIN		SPI1_MISO	I2S2_MCK			TIM13_CH1				DCMI_PIXCLK	ADC12_IN6	
23	PA7	CN10-1-8	D11	I/O	DRIVE MOTOR RIGHT	FT	5 V				TIM1_CH1N	TIM3_CH2	TIM8_CH1N		I2S1_SD/SPI1_MOSI				TIM14_CH1					ADC12_IN7	
24	PC4	CN10-2-17		I/O		FT	5 V								I2S1_MCK			SPDIFRX_IN2						ADC12_IN14	
25	PC5	CN10-2-3		I/O		FT	5 V										USART3_RX	SPDIFRX_IN3						ADC12_IN15	
26	PB0	CN7-2-17	A3	I/O	LF_ULTRA_OUT	FT	5 V				TIM1_CH2N	TIM3_CH3	TIM8_CH2N				I2S3_SD/SPI3_M	UART4_CTS		USB_OTG_HS_ULPI_D1		SDIO_D1		ADC12_IN8	
27	PB1	CN10-2-12		I/O	LIMIT_SW_2 LIFT DOWN	FT	5 V				TIM1_CH3N	TIM3_CH4	TIM8_CH3N							USB_OTG_HS_ULPI_D2		SDIO_D2		ADC12_IN9	
28	PB2	CN10-2-11		I/O	LIMIT_SW_1 LIFT UP	FT	5 V				TIM2_CH4					SAI1_SD_A	I2S3_SD/SPI3_MOSI		QUADSPI_CLK	USB_OTG_HS_ULPI_D4		SDIO_CK			
29	PB10	CN10-1-13	D6	I/O	UART3, RX IR SHROUDED REAR	FT	5 V				TIM2_CH3			I2C2_SCL	I2S2_CK/SPI2_S	SAI1_SCK_A	USART3_TX			USB_OTG_HS_ULPI_D3					
33	PB12	CN10-2-8		I/O		FT	5 V				TIM1_BKIN			I2C2_SMBA	I2S2_WS/SPI2_I	SAI1_SCK_B	USART3_CK		CAN2_RX	USB_OTG_HS_ULPI_D5		USB_OTG_HS_ID			
34	PB13	CN10-2-15		I/O		FT	5 V				TIM1_CH1N				I2S2_CK/SPI2_SCK		USART3_CTS		CAN2_TX	USB_OTG_HS_ULPI_D6					
35	PB14	CN10-2-14		I/O		FT	5 V				TIM1_CH2N		TIM8_CH2N		SPI2_MISO		USART3_RTS		TIM12_CH1			USB_OTG_HS_DM			
36	PB15	CN10-2-13		I/O	LIMIT_SW_3 CHECK PYR	FT	5 V			RTC_REFIN	TIM1_CH3N		TIM8_CH3N		I2S2_SD/SPI2_MOSI				TIM12_CH2			USB_OTG_HS_DP			
37	PC6	CN10-2-2		I/O		FTf	5 V					TIM3_CH1	TIM8_CH1	FMPI2C1_SCL	I2S2_MCK			USART6_TX				SDIO_D6	DCMI_D0		
38	PC7	CN10-1-10	D9	I/O		FTf	5 V					TIM3_CH2	TIM8_CH2	FMPI2C1_SDA	I2S2_CK/SPI2_S	I2S3_MCK	SPDIFRX_IN1	USART6_RX				SDIO_D7	DCMI_D1		
39	PC8	CN10-2-1		I/O		FT	5 V			SYS_TRACED0		TIM3_CH3	TIM8_CH3				UART5_RTS	USART6_CK				SDIO_D0	DCMI_D2		
40	PC9	CN10-1-1		I/O		FT	5 V			RCC_MCO_2		TIM3_CH4	TIM8_CH4	I2C3_SDA	I2S_CKIN		UART5_CTS		QUADSPI_BK1_IO0			SDIO_D1	DCMI_D3		
41	PA8	CN10-1-12	D7	I/O		FT	5 V			RCC_MCO_1	TIM1_CH1			I2C3_SCL			USART1_CK			USB_OTG_FS_SOF					
42	PA9	CN10-1-11	D8	I/O	CLAW SLIDE SERVO	FT	5 V				TIM1_CH2			I2C3_SMBA	I2S2_CK/SPI2_S	SAI1_SD_B	USART1_TX						DCMI_D0		
43	PA10	CN10-1-17	D2	I/O	UART1, RX IR UNSHROUDED FR	FT	5 V				TIM1_CH3						USART1_RX			USB_OTG_FS_ID			DCMI_D1		
44	PA11	CN10-2-7		I/O		FT	5 V				TIM1_CH4						USART1_CTS		CAN1_RX	USB_OTG_FS_DM					
45	PA12	CN10-2-6		I/O		FT	5 V				TIM1_ETR						USART1_RTS		CAN1_TX	USB_OTG_FS_DP					
46	PA13	CN7-1-7		I/O		FT	5 V	SYS_JTMS-SWD	TMS	SYS_JTMS-SWDIO															
49	PA14	CN7-1-8		I/O		FT	5 V	SYS_JTCK-SWC	TCK	SYS_JTCK-SWCLK															
50	PA15	CN7-1-9		I/O		FT	5 V			SYS_JTDI	TIM2_CH1/TIM2	TIM2_ETR		CEC	I2S1_WS/SPI1_I	I2S3_WS/SPI3_N	SS	UART4_RTS							
51	PC10	CN7-1-1		I/O		FT	5 V									I2S3_CK/SPI3_S	USART3_TX	UART4_TX	QUADSPI_BK1_IO1			SDIO_D2	DCMI_D8		
52	PC11	CN7-2-1		I/O		FT	5 V									SPI3_MISO	USART3_RX	UART4_RX	QUADSPI_BK2_NCS			SDIO_D3	DCMI_D4		
53	PC12	CN7-1-2		I/O		FT	5 V							I2C2_SDA		I2S3_SD/SPI3_M	USART3_CK	UART5_TX				SDIO_CK	DCMI_D9		
54	PD2	CN7-2-2		I/O		FT	5 V					TIM3_ETR						UART5_RX				SDIO_CMD	DCMI_D11		
55	PB3	CN10-1-16	D3	I/O	CLAW GRIP SERVO	FT	5 V	SYS_JTDO-SWO	SWO	SYS_JTDO-SWO	TIM2_CH2			I2C2_SDA	I2S1_CK/SPI1_S	I2S3_CK/SPI3_SCK									
56	PB4	CN10-1-14	D5	I/O		FT	5 V			SYS_JTRST		TIM3_CH1		I2C3_SDA	SPI1_MISO	SPI3_MISO	I2S2_WS/SPI2_NSS								
57	PB5	CN10-1-15	D4	I/O		FT	5 V					TIM3_CH2		I2C1_SMBA	I2S1_SD/SPI1_M	I2S3_SD/SPI3_MOSI			CAN2_RX	USB_OTG_HS_ULPI_D7			DCMI_D10		
58	PB6	CN10-1-9	D10	I/O	DRIVE MOTOR LEFT	FT	5 V					TIM4_CH1	CEC	I2C1_SCL			USART1_TX		CAN2_TX	QUADSPI_BK1_NCS			DCMI_D5		
59	PB7	CN7-1-11		I/O		FT	5 V					TIM4_CH2		I2C1_SDA			USART1_RX	SPDIFRX_IN0					DCMI_VSYNC		
60	BOOT0	CN7-1-4		Boot		B																			
61	PB8	CN10-1-2	D15	I/O	I2C1	FT	5 V				TIM2_CH1/TIM2	TIM4_CH3	TIM10_CH1	I2C1_SCL					CAN1_RX			SDIO_D4	DCMI_D6		
62	PB9	CN10-1-3	D14	I/O	I2C1	FT	5 V				TIM2_CH2	TIM4_CH4	TIM11_CH1	I2C1_SDA	I2S2_WS/SPI2_I	SAI1_FS_B			CAN1_TX			SDIO_D5	DCMI_D7		