UCSC Nucleo I/O Shield Pinout Reference
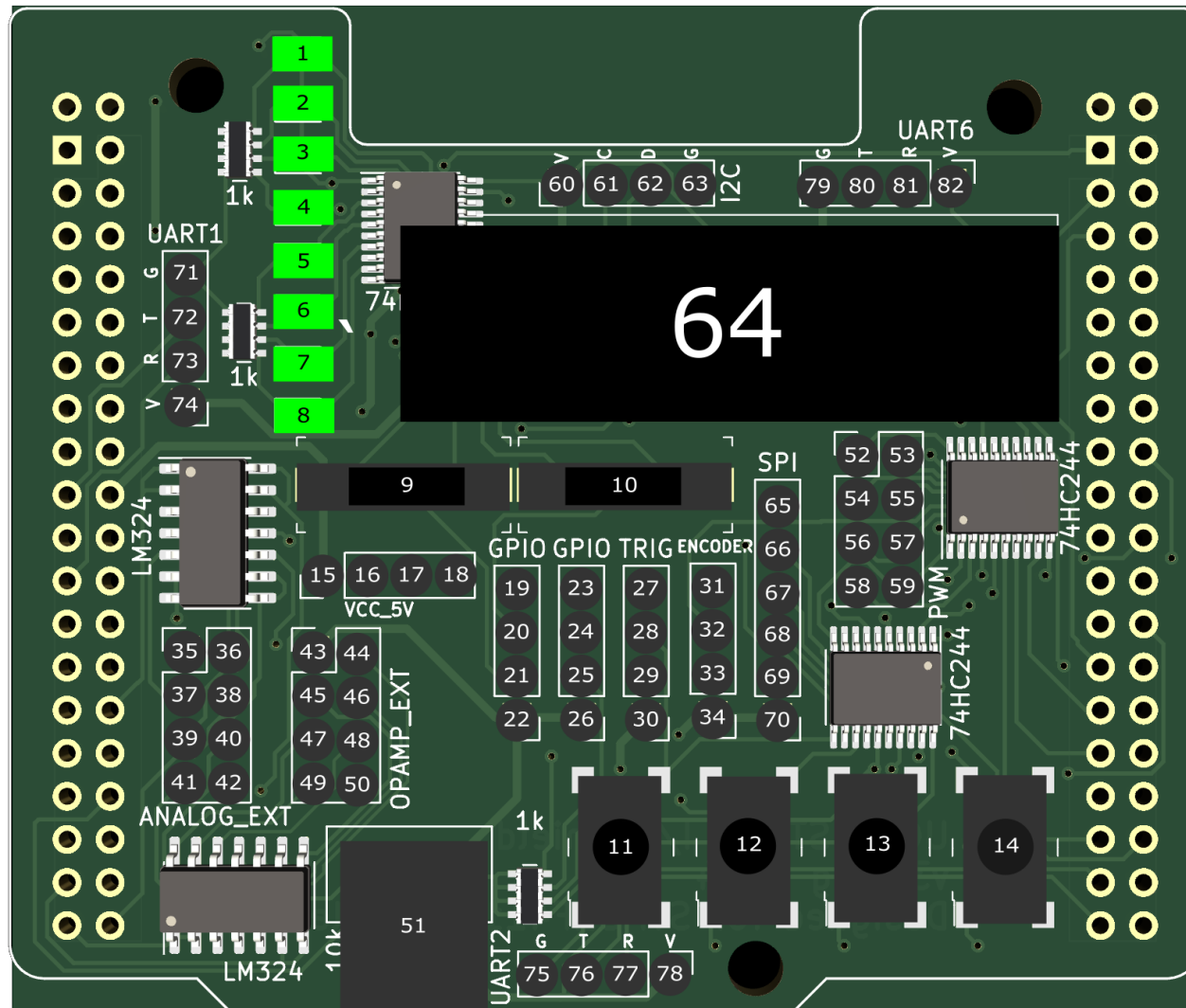
Pin #	Descriptive Name	STM32 Pin Name	IO Capabilities	Library Usage	HAL Port, Pin Reference
1	LD1	PC8	O - LED	Leds	GPIOC, GPIO_PIN_8
2	LD2	PC9	O - LED	Leds	GPIOC, GPIO_PIN_9
3	LD3	PC10	O - LED	Leds	GPIOC, GPIO_PIN_10
4	LD4	PC11	O - LED	Leds	GPIOC, GPIO_PIN_11
5	LD5	PB0	O - LED	Leds	GPIOB, GPIO_PIN_0
6	LD6	PB1	O - LED	Leds	GPIOB, GPIO_PIN_1
7	LD7	PB2	O - LED	Leds	GPIOB, GPIO_PIN_2
8	LD8	PB3	O - LED	Leds	GPIOB, GPIO_PIN_3
9	SW1	PA6	I - Switch	Gpio	GPIOA, GPIO_PIN_6
10	SW2	PA7	I - Switch	Gpio	GPIOA, GPIO_PIN_7
11	BTN1	PC4	I - Button	Gpio, Buttons	GPIOC, GPIO_PIN_4
12	BTN2	PC5	I - Button	Gpio, Buttons	GPIOC, GPIO_PIN_5
13	BTN3	PC12	I - Button	Gpio, Buttons	GPIOC, GPIO_PIN_12
14	BTN4	PD2	I - Button	Gpio, Buttons	GPIOD, GPIO_PIN_2
15	VCC_5V	+5V	-	-	-
16	VCC_5V	+5V	-	-	-
17	GND	GND	-	-	-
18	GND	GND	-	-	-
19	GND	GND	-	-	-
20	GP_IN4	PA7	IO - Digital	Gpio	GPIOA, GPIO_PIN_7
21	GP_IN3	PA6	IO - Digital	Gpio	GPIOA, GPIO_PIN_6
22	VCC_3V3	+3V3	-	-	-
23	GND	GND	-	-	-
24	GP_EXT_IN2	PC12	I - Digital	Gpio, Buttons	GPIOC, GPIO_PIN_12
25	GP_EXT_IN1	PC5	I - Digital	Gpio, Buttons	GPIOC, GPIO_PIN_5
26	VCC_3V3	+3V3	-	-	-
27	GND	GND	-	-	-
28	GP_EXT_IN0	PC4	I - Digital	Gpio, Buttons	GPIOC, GPIO_PIN_4
29	EXT_TRIGGER	PD2	I - Digital	Gpio, Buttons	GPIOD, GPIO_PIN_2
30	VCC_3V3	+3V3	-	-	-
31	GND	GND	-	-	-
32	ENC_B	PB5	I - Digital	Gpio, Qei	GPIOB, GPIO_PIN_5
33	ENC_A	PB4	I - Digital	Gpio, Qei	GPIOB, GPIO_PIN_4
34	VCC_3V3	+3V3	-	-	-
35	VCC_3V3	+3V3	-	-	-
36	ANALOG0	PA0	I - ADC	Adc	GPIOA, GPIO_PIN_0
37	ANALOG1	PA1	I - ADC	Adc	GPIOA, GPIO_PIN_1
38	ANALOG2	PC0	I - ADC	Adc	GPIOC, GPIO_PIN_0
39	ANALOG3	PC1	I - ADC	Adc	GPIOA, GPIO_PIN_1
42	ANALOG4	PC2	I - ADC	Adc	GPIOA, GPIO_PIN_2
41	ANALOG5	PC3	I - ADC	Adc	GPIOA, GPIO_PIN_3
42	GND	GND	-	-	-
43	VCC_3V3	+3V3	-	-	-
44	ANALOG_EXT0_P	-	-	-	-
45	ANALOG_EXT0_OUT	-	-	-	-
46	ANALOG_EXT0_N	-	-	-	-
47	ANALOG_EXT1_OUT	-	-	-	-

Pin #	Descriptive Name	STM32 Pin Name	IO Capabilities	Library Usage	HAL Port, Pin Reference
48	ANALOG_EXT1_P	-	-	-	-
49	ANALOG_EXT1_N	-	-	-	-
50	GND	GND	-	-	-
51	ADC1_POT	PA4	I - ADC/Pot	Adc	GPIOA, GPIO_PIN_4
52	VCC_3V3	+3V3	-	-	-
53	PWM0	PA8	O - PWM	Pwm	GPIOA, GPIO_PIN_8
54	PWM1	PA9	O - PWM	Pwm	GPIOA, GPIO_PIN_9
55	PWM2	PA10	O - PWM	Pwm	GPIOA, GPIO_PIN_10
56	PWM3	PA11	O - PWM	Pwm	GPIOA, GPIO_PIN_11
57	PWM4	PB6	O - PWM	Pwm	GPIOB, GPIO_PIN_6
58	PWM5	PB8	O - PWM	Pwm	GPIOB, GPIO_PIN_8
59	GND	GND	-	-	-
60	VCC_3V3	+3V3	-	-	-
61	SCL	PB10	O - SCL; IO - Digital	I2C, Oled	GPIOB, GPIO_PIN9
62	SDA	PB9	IO - SDA, Digital	I2C, Oled	GPIOB, GPIO_PIN10
63	GND	GND	-	-	-
64	OLED	PB9, PB10	O - OLED	I2C, Oled	-
65	GND	GND	-	-	-
66	SPI_EXT_NSS	PB12	O - SPI NSS, Digital	Spi	GPIOB, GPIO_PIN_12
67	SPI_EXT_CLK	PB13	O - SPI CLK, Digital	Spi	GPIOB, GPIO_PIN_13
68	SPI_EXT_MOSI	PB15	O - SPI MOSI, Digital	Spi	GPIOB, GPIO_PIN_15
69	SPI_EXT_MISO	PB14	I - SPI MISO, Digital	Spi	GPIOB, GPIO_PIN_14
70	VCC_3V3	+3V3	-	-	-
71	GND	GND	-	-	-
72	USART1_TTL_TX	PA15	IO - UART, Digital	Uart, Gpio	GPIOA, GPIO_PIN_15
73	USART1_TTL_RX	PB7	IO - UART, Digital	Uart, Gpio	GPIOB, GPIO_PIN_7
74	VCC_3V3	+3V3	-	-	-
75	GND	GND	-	-	-
76	USART2_TTL_TX	PA2	IO - UART, Digital, PT	Uart, Gpio	GPIOA, GPIO_PIN_2
77	USART2_TTL_RX	PA3	IO - UART, Digital, PT	Uart, Gpio	GPIOA, GPIO_PIN_3
78	VCC_3V3	+3V3	-	-	-
79	GND	GND	-	-	-
80	USART6_TTL_TX	PC6	IO - UART, Digital	Uart, Gpio	GPIOA, GPIO_PIN_6
81	USART6_TTL_RX	PC7	IO - UART, Digital	Uart, Gpio	GPIOA, GPIO_PIN_7
82	VCC_3V3	+3V3	-	-	-