

Component	Pin #	Pin Name	Pin Configuration	Pin Net	Note
STM32F411 (U2)	14	PA0	Timer2; Encoder	encoder_B	encoder signal B
U2	15	PA1	Timer2; Encoder	encoder_A	encoder signal A
U2	16	PA2	GPIO; INPUT	button3	button 3
U2	17	PA3	N/A	N/A	N/A
U2	20	PA4	N/A	N/A	N/A
U2	21	PA5	GPIO; INPUT	encoder_button	encoder button
U2	22	PA6	N/A	N/A	N/A
U2	23	PA7	N/A	N/A	N/A
U2	41	PA8	N/A	LEDDAT3.3_2	Enable resistor NOT installed
U2	42	PA9	N/A	LEDCLK3.3_2	Enable resistor NOT installed
U2	43	PA10	SPI5; data	LEDDAT3.3_2	Enable reistor INSTALLED
U2	44	PA11	USB; D-	D-	N/A
U2	45	PA12	USB; D+	D+	N/A
U2	46	PA13	SWD; DIO	SWDIO	for programming
U2	49	PA14	SWD; CLK	SWCLK	for programming
U2	50	PA15	GPIO; INPUT	tempAlert1	temperature alert for temperature sensor; PCB
U2	26	PB0	SPI5; Clock	LEDCLK3.3_2	Enable Resistor INSTALLED
U2	27	PB1	N/A	N/A	N/A
U2	28	PB2	N/A	N/A	N/A
U2	55	PB3	GPIO; INPUT	Motor_FG	Motor speed output
U2	56	PB4	GPIO; INPUT	tempAlert2	temperature alert for temperature sensor; LED Board
U2	57	PB5	N/A	N/A	N/A
U2	58	PB6	N/A	LEDCLK3.3	Enable resistor NOT installed
U2	59	PB7	N/A	LEDDAT3.3	Enable resistor NOT installed
U2	61	PB8	I2C1; Clock	SCL_3.3V	I2C
U2	62	PB9	I2C1; Data	SDA_3.3V	I2C
U2	29	PB10	SPI2; Clock	LEDCLK3.3	Enable Resistor INSTALLED
U2	33	PB12	N/A	N/A	N/A
U2	34	PB13	N/A	N/A	N/A

U2	35	PB14	N/A	N/A	N/A
U2	36	PB15	N/A	N/A	N/A
U2	8	PC0	N/A	N/A	N/A
U2	9	PC1	GPIO; INPUT	button1	button 1
U2	10	PC2	GPIO; INPUT	button2	button 2
U2	11	PC3	SPI2; Data	LEDDAT3.3	Enable Resistor INSTALLED
U2	24	PC4	N/A	N/A	N/A
U2	25	PC5	N/A	N/A	N/A
U2	37	PC6	N/A	N/A	N/A
U2	38	PC7	N/A	N/A	N/A
U2	39	PC8	N/A	N/A	N/A
U2	40	PC9	N/A	N/A	N/A
U2	51	PC10	GPIO; INPUT	OpticalSwitchBuffOut	Optical sensor signal
U2	52	PC11	N/A	Motor_PWM	Incorrect Connection (fail)
U2	53	PC12	GPIO; OUTPUT	Motor_Direction	Use to select motor direction
U2	2	PC13	N/A	N/A	N/A
U2	3	PC14	N/A	N/A	N/A
U2	4	PC15	N/A	N/A	N/A
U2	5	PH0	Crystal; PH0	16Mhz Crystal	crystal for stm32
U2	6	PH1	Crystal; PH1	16Mhz Crystal	crystal for stm32
I2C Connections					
I2C Connections	Address	Voltage	Note		
U6	1101000	5V	RTC		
U5	1001000	5V	Temp Sensor 1		
U9	1001001	5V	Temp Sensor 2		
LED Board I2C	1001100	5V	Temp Sensor 3 (LED Board)		
U7	1010010	3.3V	BLDC Motor Driver		