Color Code

Color	Category
Ground	
Power	
Control Signal	
Status Signal	
RP2350 GPIO	
Radio GPIO	
LED	
Button/Switch	
Motor	
Servo	
Sensor	
I2C (Qwiic)	
Free for User	
Not Connected	

Pinout

XRP Usage	Header	Pin	Pin	Header	XRP Usage
MotorL/3 Current Limit	ML/3 VREF	61	21	GPIO16	Free
MotorL/3 Driver Fault	ML/3 Fault	62	22	GPIO17	Free
GND	GND	63	23	GND	GND
Encoder LA	GPIO30	64	24	GPIO18	Free
Encoder LB	GPIO31	65	25	GPIO19	Free
Motor L IN1	GPIO34	66	26	GPIO20	Motor 3 IN1
Motor L IN2	GPIO35	67	27	GPIO21	Motor 3 IN2
GND	GND	68	28	GND	GND
Encoder 3B	GPIO23	69	29	GPIO22	Encoder 3A
Power Good	PG	70	30	RUN	Reset Button
Motor L Current	GPIO40	71	31	GPIO44	Line L
Motor 3 Current	GPIO41	72	32	GPIO45	Line R
GND	GND	73	33	GND	GND
WS2812 RGB LED	RGB_OUT	74	34	GPIO46	VIN Measure
Servo Power	5V	75	35	VREF	Analog Reference
After Power Switch	VIN	76	36	3V3	System Power
Main Power Switch	VIN_EN	77	37	3V3_EN	3V3 Regulator Enable
GND	GND	78	38	GND	GND
Before Power Switch	VRAW	79	39	VSYS	Before 3.3V Regulator
Battery Power	VBATT	80	40	VBUS	USB Power

Radio Module

XRP Usage	Header	Pin	Pin	Header	XRP Usage
Free	GPIO15	20	60	MR/4 Fault	MotorR/4 Driver Fault
Free	GPIO14	19	59	MR/4 VREF	MotorR/4 Current Limit
GND	GND	18	58	GND	GND
Free	GPIO13	17	57	GPIO33	Motor R IN2
Free	GPIO12	16	56	GPIO32	Motor R IN1
Motor 4 IN2	GPIO11	15	55	GPIO25	Encoder RB
Motor 4 IN1	GPIO10	14	54	GPIO24	Encoder RA
GND	GND	13	53	GND	GND
Servo 2	GPIO09	12	52	WL_IO2	Free
Servo 4	GPIO08	11	51	WL_IO1	Free
Servo 3	GPIO07	10	50	GPIO43	Motor R Current
Servo 1	GPIO06	9	49	GPIO42	Motor 4 Current
GND	GND	8	48	GND	GND
Qwiic0 SCL	GPIO05	7	47	GPIO39	Qwiic1 SCL (IMU)
Qwiic0 SDA	GPIO04	6	46	GPIO38	Qwiic1 SDA (IMU)
Encoder 4B	GPIO03	5	45	IMU INT1	IMU Interrupt 1
Encoder 4A	GPIO02	4	44	IMU INT2	IMU Interrupt 2
GND	GND	3	43	GND	GND
Distance Echo	GPIO01	2	42	BOOTSEL	Boot Button
Distance Trigger	GPIO00	1	41	GPIO36	User Button

USB-C