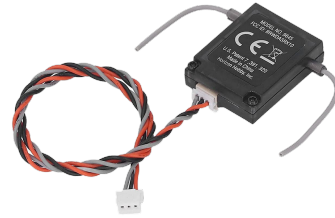


# MBot Control Board Ports & Pinout



For DSM Receiver

Power using either screw terminals or barrel jack 7.5V-12V

PWM6A	UART0_RX	I2C0_SDA	UART_RX	PIN 0
PWM6B	UART0_TX	I2C0_SCL	UART_TX	PIN 1

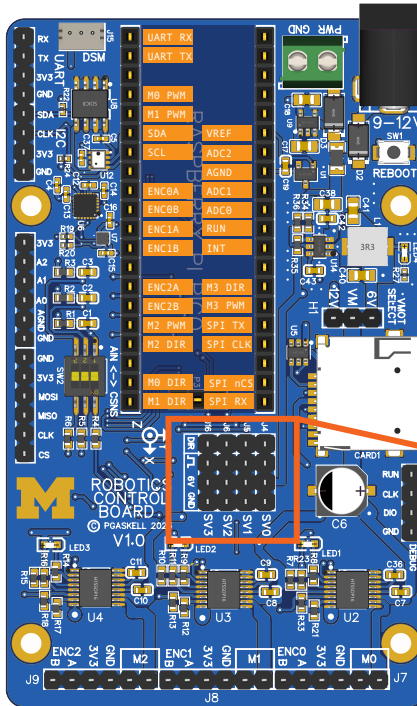
PWM2A	UART1_RX	I2C0_SDA	I2C_SDA	PIN 4
PWM2B	UART1_TX	I2C0_SCL	I2C_SCL	PIN 5

I2C0 also connected to FRAM, IMU & Barometer

PWM6A	ADC2	ADC2	PIN 28
PWM5B	I2C1_SCL	ADC1	PIN 27
PWM5A	I2C1_SDA	ADC0	PIN 26

PWM1B	I2C1_SCL	SPI0_TX	SPI_TX	PIN 19
PWM6A	UART0_TX	I2C0_SDA	SPI0_RX	PIN 16
PWM1A	I2C1_SDA	SPI0_CLK	SPI_CLK	PIN 18
PWM0B	UART0_RX	I2C0_SCL	SPI0_nCS	PIN 17

Select between current sense for M0-M2 and external Analog input.  
The current sense gives 1V/A.  
The ADC reads fullscale at 3.0V



Reboot the Pico without unplugging USB. To enter bootloader hold down both reboot and bootload and then release reboot.

Select Motor voltage 6.5V or VPOWER IN (12V)  
Servo power is always 6.5V

SD Card connected to SPI0  
nCS is multiplexed with M3 DIR

PWM7A	I2C1_SDA	SPI1_CLK	M0_DIR	PIN 14	PIN 2	M0_PWM	I2C1_SDA	SPI1_CLK	PWM1A
PWM7B	I2C1_SCL	SPI1_TX	M1_DIR	PIN 15	PIN 3	M1_PWM	I2C1_SCL	SPI1_TX	PWM1B
PWM6B	I2C0_SCL	SPI1_nCS	M2_DIR	PIN 13	PIN 12	M2_PWM	I2C0_SDA	SPI1_RX	PWM6A
PWM2B	I2C0_SCL		M3_DIR	PIN 21	PIN 20	M3_PWM	I2C0_SDA		PWM2A

PWM5B	I2C1_SCL	I2C1_SDA	PIN 11	PIN 10
PWM6B	I2C0_SCL	I2C0_SDA	PIN 9	PIN 8
PWM6A	I2C0_SCL	I2C0_SDA	PIN 7	PIN 6
PWM3B	PWM3A			

Motor/Encoder Ports match Pololu 25mm gear motors with encoders

or MBot Encoder boards for Pololu 20mm gear motors