

Module Stepmotor

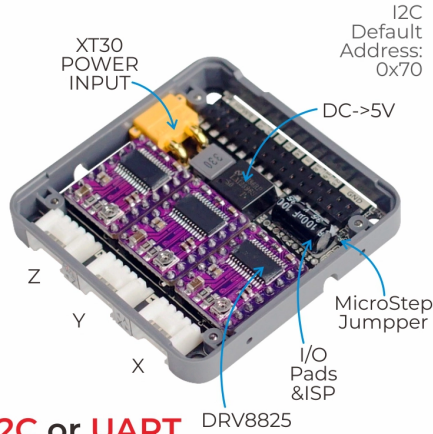
SKU:M012

**MODULE
STEPMOTOR**

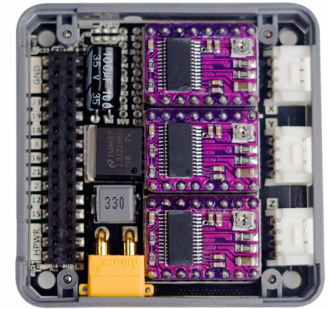


MEGA328P
GRBL_I2C
3 x DRV8825
9V-24V POWER INPUT

Including
 3-AXIS
STEPMOTOR DRIVER



I2C or UART DRV8825



Option



Arduino UNO

I2C	SDA A4 SCL A5 DEFAULT ADDRESS: 0x70	2-> Step 5-> Dir	A4988/DRV8825 MOTOR X
UART	TXD2 D0 RXD2 D1 G17 G16	3-> Step 6-> Dir	A4988/DRV8825 MOTOR Y
5V	13-> SPDIR 12-> SPEN 11-> LimitZ 10-> LimitY 9-> LimitX 8-> Enable	4-> Step 7-> Dir	A4988/DRV8825 MOTOR Z

MEGA 328 (16MHz)

GRBL I2C

Send the GCODE via I2C
SendCommand(0x70, "G1 X10 F400");

Read the Status of GRBL
Wire.requestFrom(0x70, 1);
if(Wire.available() > 0)
Wire.read();

Set Parameter
SendCommand(0x70, "\$I0=100");

Read the Status
SendI2C(0x70, '?');

Read Idle or Busy
SendI2C(0x70, '@');

Description

Module Stepmotor is a stepper motor driver module in the M5Stack stackable module series. This module can drive 3 stepper motors simultaneously using the **GRBL** library, making it ideal for motion control projects. The module is built with an MEGA328P and comes preloaded with **GRBL** firmware, communicating with the M5Core via I2C(0x70). It integrates 3 stepper motor driver boards based on the DRV8825 chip, a simple yet powerful circuit board that can control a bipolar stepper motor and allows microstepping up to 1/32 steps.

Features

- Power Input: 9 ~ 24V
- Controls 3 stepper motors (**X, Y, Z**)

Includes

- 1 x Module Stepmotor

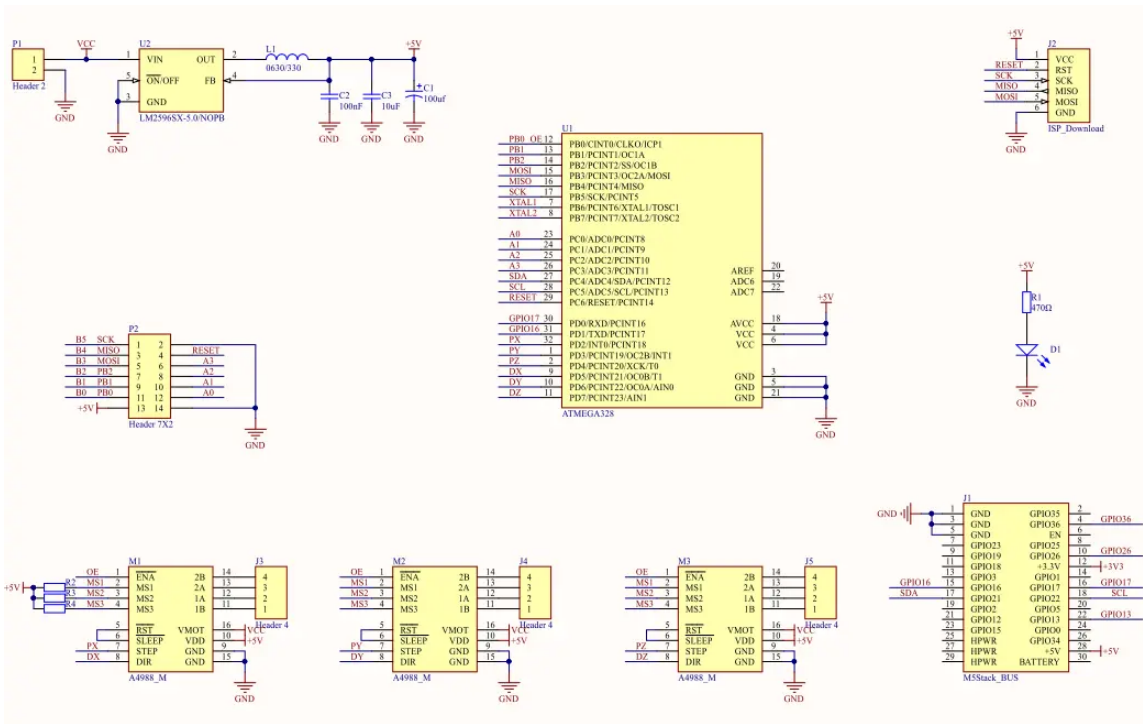
Applications

- DIY 3D Printer
- Building Robotic Arms

Specifications

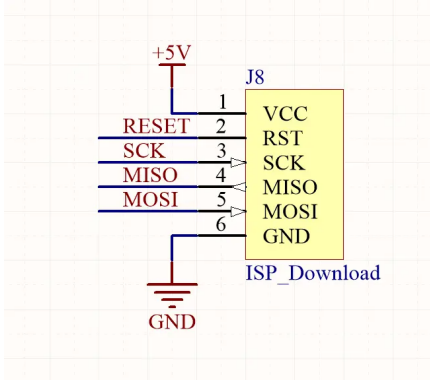
Specification	Parameter
DC Connector Type	XT30
Communication Interface	I2C Communication @0x70
Motor Connector Spec	HY2.0-4P
Net Weight	24g
Gross Weight	34g
Product Size	54.2 x 54.2 x 12.8mm
Package Size	60 x 57 x 17mm

Schematics



PinMap

Mega328 ISP Download Interface Pin Definition



M5-Bus

PIN	LEFT	RIGHT	PIN
GND	1	2	
GND	3	4	
GND	5	6	
	7	8	RS485_TX
	9	10	
	11	12	3V3
	13	14	
STEP_X	15	16	DIR_X
SDA	17	18	SCL
	19	20	
STEP_Y	21	22	DIR_Y
STEP_Z	23	24	DIR_Z
HPWR	25	26	RS485_RX
HPWR	27	28	5V
HPWR	29	30	

Datasheets

- [DRV8825 Datasheet](#)

Softwares

Arduino

- [Module Stepmotor Example with M5Core](#)

UiFlow1

- [Module Stepmotor UiFlow1 Docs](#)

Built-in Firmware

- [Module Stepmotor Internal Firmware](#)

Easyloader

Easyloader	Download Link	Notes
Module Stepmotor Test Easyloader	download	/