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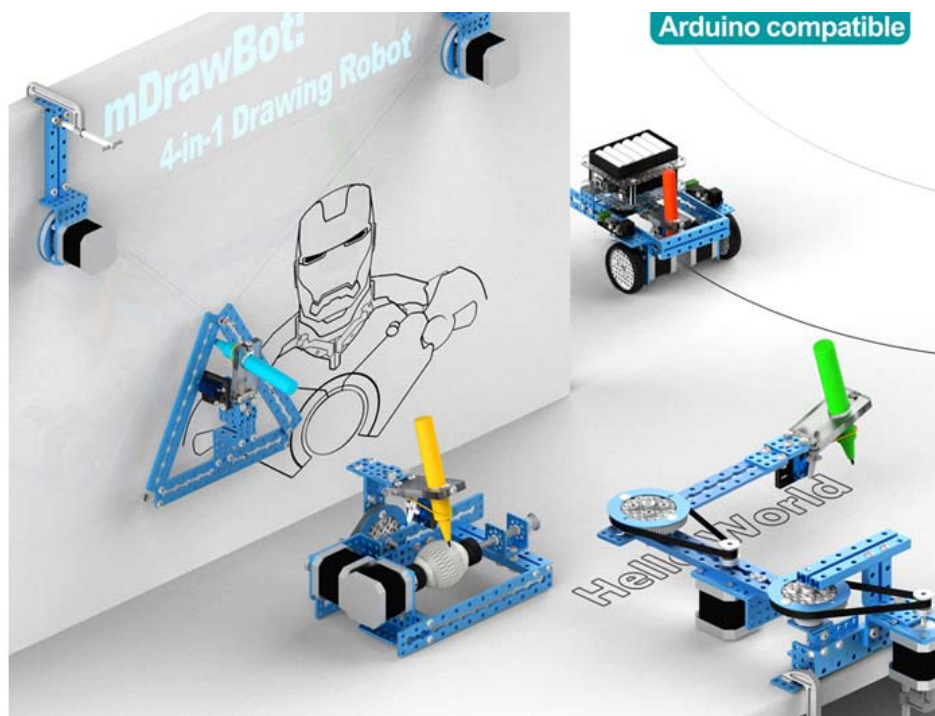
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# mDrawBot: 4-in-1 Drawing Robot

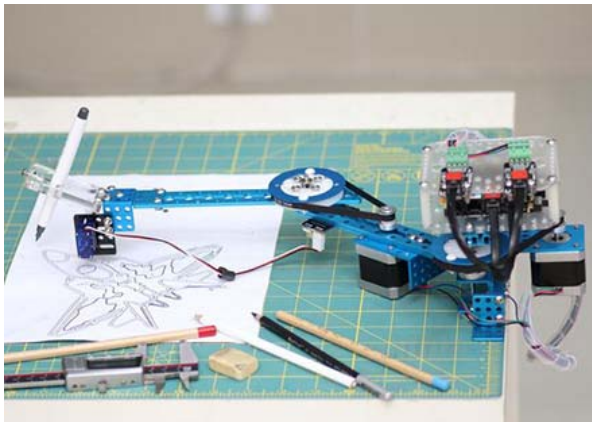
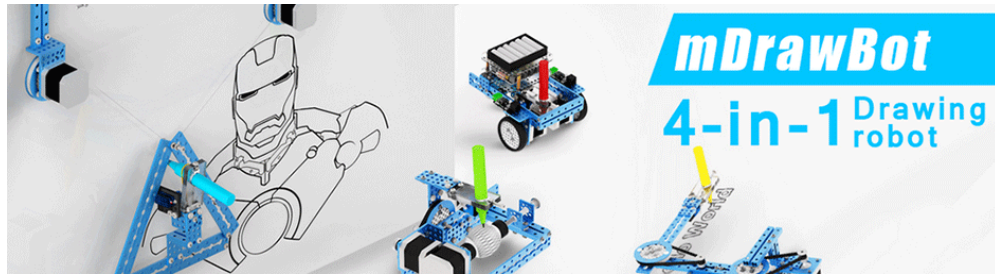
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## What is mDrawBot?

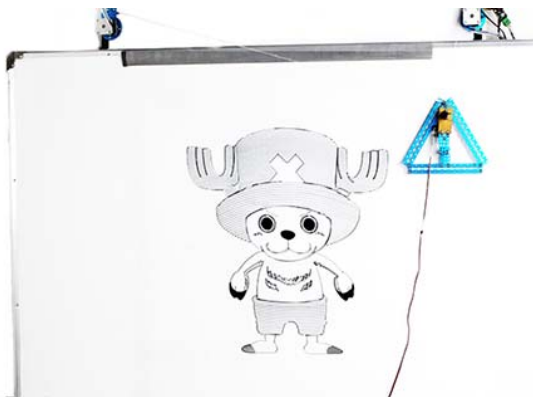
DrawBot is a 4-in-1 drawing robot kit, it can be assembled into 4 different configuration drawing robots: **mScara**, **mSpider**, **mEggBot** and **mCar**. This kit consists of over 60 components, including beams, brackets, motor, etc. And comes with a specially-designed software named mDraw to control these robots.





### **mScara**

mScara is a SCARA (Selective Compliance Articulated Robot Arm) driven by stepper motors. Adding a pen on mScara, it can draw pictures on a flat surface. You can also turn mScara into a desktop laser engraver replacing the pen with a laser diode.



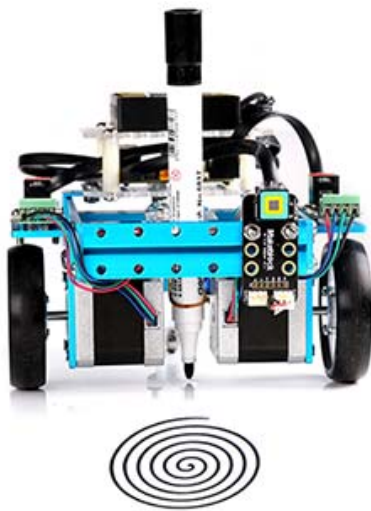
### **mSpider**

mSpider is a drawing robot which can draw pictures on a wall or a white board. Two stepper motors control the movement of mSpider through strings. Theoretically, its drawing range can be expanded by increasing the length of the strings.



### **mEggBot**

mEggBot is designed to draw on things that are improbable to print on, such as eggs or ping-pong balls. It can be used to write letters, draw expressions on spheroid, or draw Easter eggs.



### **mCar**

mCar is a three-wheel robot car, which contains two stepper-motor-drive wheels and a ball-caster wheel. It can draw its own movement tracks on flat surface. Installing a chalk instead of a pen, it can draw on the floor.

## How to Use mDrawBot ?

### • Assembly

Each mDrawBot kit can be assembled into any of the 4 different configurations. We provide the detailed assembling instructions and you can build any configuration in an hour. The assembly instructions can be downloaded

here:<https://github.com/Makeblock-official/mDrawBot>.

### • Software

After installing the mDraw software, you can import images and make the robot draw them. mDraw is a powerful software designed for mDrawBot. Here are some features:

- Support mScara, mSpider, mEggBot, mCar, XY
- Support both pen drawing and laser engraving
- Support custom settings of motor direction, drawing range, etc
- Support saving parameters
- Support SVG. file
- Support conversion from BMP to SVG
- Support zooming, rotating, mirroring, and moving the SVG graphics
- Support Windows7 or later. (Will be available in Mac OS X, Linux soon.)

mDraw is an open source project hosted on Github. Fork it

here:<https://github.com/Makeblock-official/mDrawBot>.

## SPECIFICATIONS

### • Frame: Anodized Aluminum

	mScara	mSpider	mEggBot	mCar
Working Area (mm <sup>2</sup> )	120° of an annulus (exradius 208mm, inradius 168mm)	/	Cylinder with LxD=60× (10-60)	/

**• Power Supply:**

	Voltage	Current	Frequency
Input	AC 100-240 V	0.6A	50-60 Hz
Output	DC 12 V	2.0 A	/

**• Main Controller: Makeblock Orion (Arduino UNO compatible)**

**• Software: mDraw**

**• Connection: USB or Bluetooth**

**• Supported File Types: .Plain SVG, .BMP etc.**

**• Supported OS: Windows7 or later. (Will be available in Mac OS X, Linux soon.)**

**• Package Contains:**

- • Aluminum Extrusion Parts
- • Plastic Timing Pulley 90T
- • Timing Pulley 18T
- • Pen Lift Mechanism
- • Makeblock Orion(Controller)
- • Stepper Motors
- • Stepper Motor Drivers
- • 9g Micro Servo Pack
- • Cables
- • Other Hardware and Accessories

## PART LIST

1 x Beam 0824-032	1 x Threaded Shaft 4x39mm	50 x Nut M4
2 x Beam 0824-096	1 x Circle Shaft D4x80mm	4 x Nylon Stud M4x30
3 x Beam 0324-184	2 x Shaft Collar 4mm	2 x Plastic Ring 4x8x1mm
3 x Bracket 3x3	5 x Flange Bearing 4x8x3mm	8 x Plastic Ring 4x7x3mm
3 x Plate 3x6	1 x Square Nut M4	4 x Plastic Ring 4x7x10mm
1 x Bracket U1	3 x Nylon Cap Nut M4	2 x Plastic Rivet R4060
4 x Timing Pulley Slice 90T	1 x Polyester Thread(8m)	4 x Plastic Rivet R40120
2 x 42BYG Stepper Motor Bracket	2 x Timing Belt 112MXL	1 x 9g Micro Servo Pack
2 x Plastic Timing Pulley 90T	10 x Nylon Cable Tie 2 x100	2 x 42BYG Stepper Motor
2 x Tire 90T B	1 x Rubber Bank	2 x Base Bracket
1 x Caster Wheel	1 x Cross&2.5mm HEX Screwdriver	1 x Battery Holder
2 x Rubber Blanket	1 x HEX Key 1.5mm	1 x Makeblock Orion
2 x Shaft Connector 4mm	1 x Wrench 5mm&7mm	2 x Me Stepper Motor Driver
2 x Timing Pulley 18T	26 x Screw M4x8	1 x RJ25 Adapter
1 x Pen Holder and V Clamp	42 x Screw M4x16	1 x AC/DC Adapter 12V/2A
2 x 2 Inch G Clamp	5 x Screw M4x22	1 x 9g Servo Extension Cord
1 x Plastic Hinge	1 x Screw M4x35	2 x 6P6C RJ25 Cable-20cm
1 x Plastic Hinge Gasket	6 x Headless Set Screw M3x5	1 x 6P6C RJ25 Cable-35cm
1 x Spring 0.6x6x50	8 x Countersunk Screw M3x8	1 x Micro USB Cable

### Technical Details

Weight	G.W 2712g
Battery	Exclude