



# DOBOT Magician



## Product Overview

The DOBOT Magician is the world's first desktop grade 4-axis robot created by Dobot for university students. It can perform a wide range of tasks such as 3D printing, laser engraving, calligraphy and drawing. It has 13 interface ports to support secondary development, lab projects and robotics curricula.

A variety of application scenarios can be developed through the use of programming software and hardware accessories. The following studies can be taught to different levels of students:

- Robotic systems
- The DH convention
- Control of robot movement
- Robotic programming

## Key Features

Calligraphy and drawing

3D printing

Drag-to-teach

Laser engraving

## Product Highlights

### • Operable by One Person

The portable Magician allows every student to have a hands-on opportunity to personally operate a robot for a better learning experience. The all-in-one design allows it to be controlled and switched freely among different control devices, such as on PC, mobile and other wireless devices.

### • High Expandability with Secondary Development

The Magician has 13 interface ports and a programming button. Users can create new functions using DobotLab's script programming.

### • Combinations with wide accessory choices

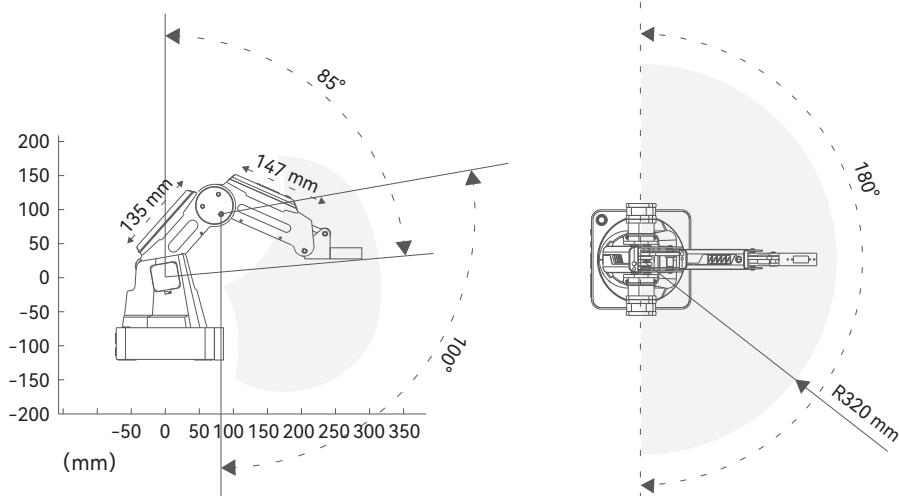
A wide variety of accessories such as rails, conveyor belts, mobility and vision modules are available to realize different tasks.

Script control

Graphical programming

Secondary development

# Product Specifications



## Dobot Magician

Weight	3.4 kg	
Base Dimension	158 mm x 158 mm	
Materials	Aluminum alloy, ABS plastic	
Controller	Dobot integrated controller	
Robot Mounting	Desktop	
Number of Axes	4	
Maximum Payload	500 g	
Maximum Reach	320 mm	
Repeatability	±0.2 mm	
Communication Interface	USB / Wi-Fi / Bluetooth	
Power Supply	100 to 240V, 50/60 Hz	
Power In	12V, 6.5A DC	
Power Consumption	78W Max	
Working Environment	-10° to 60° C	
Axis	Range of Motion	Max Speed (250 g Payload)
J1 - Base	-120° to +120°	320° /s
J2 - Rear Arm	-5° to +90°	320° /s
J3 - Forearm	-15° to +90°	320° /s
J4 - Rotation Servo	-140° to +140°	480° /s

## Applications

Software	DobotLab DobotBlockly DobotStudio Repetier Host GbrlController3.6
SDK (Software Develop Kit)	Communication Protocol Dobot Program Library
Extension Interface	I/O x 10, configurable as analog input or PWM output
	Controllable 12V power output x 4
	Communication Interface UART, Reset, STOP, 12V, 5V and two I/O included
	Stepper x 2

## End Effectors

3D Printer Kit	Dimensions	150 mm x 150 mm x 150 mm
	Materials	PLA
	Resolution	0.1 mm
Laser	Power Consumption	500mW
	Type	405 nm (Blue laser)
	Power	12V, TTL trigger (with PWM Driver)
Pen Holder	Pen Diameter	10 mm
Vacuum Suction Cap	Cap Diameter	20 mm
	Pressure	-35 Kpa
Gripper	Range	27.5 mm
	Drive Type	Pneumatic
	Force	8 N

