

DOBOT Magician Lite



Product Overview

The DOBOT Magician Lite is a multi-functional lightweight intelligent robotic arm. It is one of the core products in Dobot's education line up. Students can interact with the Magician Lite using software, hardware and expansion interfaces to maximize their creative freedom.

Through the process of building and playing, students can learn how AI and robots work. They will be also introduced to the world of robotics and how robots can be applied in the real world.

Key Features

Calligraphy and drawing

Drag-to-teach

Voice recognition

Graphical programming / Scripting

Facial recognition

Offline control

Product Highlights

Made for K12 Education

- Weighs only 2.4 kg, easy for students to carry around.
- Satisfies education scenarios with ± 0.2 mm repeatability and 0.25 kg payload.
- With a maximum reach of 340 mm, it can be placed on ordinary desks.

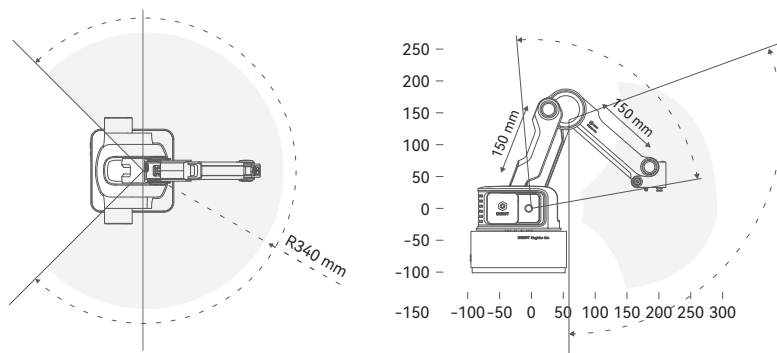
Wide Variety of Accessories

- A vibrant ecosystem of accessories consists of flexible grippers, suction cups, pen holders and other end effectors to enable drawing, grabbing and transporting tasks.

Safe and Easy to Use

- Made with eco-friendly industrial plastic and aircraft grade aluminum alloy. Equipped with collision detection feature to ensure students' safety.
- Plug and play end effectors for fast switching.
- End effector connection includes supply for electricity and air flow. Easily and safely switch between grippers with no additional wiring.
- Comes with a game controller for young students and beginners.

Basic Dimension for DOBOT Magician Lite



DOBOT Magician Lite

Degree of Freedom	4
Maximum Load	250 g
Maximum reach	340 mm
Repeatability	±0.2 mm
Voltage	100V~240V AC, 50/60 Hz
Power Input	12V ~ 5A DC
Working Environment	-5° C ~ 45° C
Power	60W Max
Communication	USB Virtual Serial Port / Serial Port
Software	DobotStudio/DobotLab
Weight	2.4KG
Rear Arm / Forearm	150 mm
Base Size	146 mm × 146 mm

AI Camera Kit

Dimensions	50mm*44mm*25mm
CMOS	1/4inch
Image pixels	1M
Image Format	YUV/MJPEG
Data Format	240*320, 640*480, 1280*720
Maximum Image Transfer Rate	1280*720@30fps
Camera Control	Saturation, Contrast, Acutance
White balance	Auto
Exposure	Auto
Working Temperature	0°C to +50°C
Operating voltage	DC 5V
Interface	USB2.0
Voice input	Integrated microphone
Feature	All-in-one design, integrated microphone, distortion-free lens
Camera working angle	0°-135°
Function	Face recognition, image recognition, OCR text recognition, speech recognition, etc.

Magic Box

MCU	ARM 32-bit Cortex-M4
Main Frequency	168MHz
Voltage	100V~240V AC, 50/60Hz
Power Input	12V ~ 5A DC
Working Environment	-5° C ~ 45° C
Power	60W Max
Communication	USB Virtual Serial Port/Serial Port/Bluetooth
Programming Language	MicroPython
Software	DobotStudio/DobotLab
Weight	98g
Size	95mm×80mm×21.5mm

Expansion Interface

Power Interface	x2	4PIN, 12V-3A DC
Multi-Functional Communication Interface	x2	10PIN, Serial Communication Interface
I/O Interface	x6	Green Port, 4PIN, 3.3V/5V-I/O, 5V 1A-VCC, Multi-functional Interface, User-Defined I/O, AD, PWM Output, I2C, etc.
Stepper Motor Interface	x2	Yellow Port, 4PIN, 2-Phase Stepper Motor, 16 Subdivision, 12V 1A
12V Power Interface	x2	Red Terminal, 2PIN, 12V, 3A Max

Axis Motion

Axis 1- Base	-135° to +135°
Axis 2- Rear Arm	-5° to +80°
Axis 3- Forearm	-10° to +85°
Axis 4- End Tools	-135° to +135°
J1-J3 Max speed	300°/s
J4 Max speed	200°/s

End Tools

Pen Holder	Pen Diameter: 8-12 mm
Suction Cup	Built-in air pump drive works under negative pressure, with suction cup diameter of 10mm, 20mm
Soft Gripper	Built-in air pump drive works under positive and negative pressure, with maximum opening and closing distance of 50mm



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