

1. Which end-effector does Dobot Magician have?

Dobot Magician end effectors include suction cup, pen holder, laser, gripper and 3D printing kit. Just change the end effectors , thus achieving functions of suction, drawing & writing, laser engraving & gray engraving, picking up and 3D printing.

2. How many packages are there for Dobot Magician?

The package of basic version contains robot arm, suction cup, gripper, drawing & writing, 3D printing and Bluetooth module.

The educational version adds laser kit (laser engraving & gray engraving), WIFI module, stick controller kit, and LEAP MOTION based on basic version.

3. What is Teach & Playback ?

Teach & Playback, a function of teaching robot a position (multiple positions actually) and then play it back. Teach means recoding the current XYZ coordinates of Dobot Magician and forming into the sequence of point-to-point. Playback indicates repeating action designed by users.

4. What is the high point of drawing & writing?

Users can use gel pen, ink brush, fountain pen and other kinds of pens, at the same time, our new software can support PLT、BMP、SVG、DXF and other forms , which has a repeatability position accuracy of $\pm 0.2\text{mm}$.

5. What is hand-guide teaching?

One can make Dobot Magician memorize movements by simply pressing the button and dragging it, and make it repeat by one click. One can also customize its movements by more accurately setting parameters on its PC software, where the playback list can be manually edited.

6. What is laser engraving? What kind of material can be engraved on?

Laser engraving is applied to high precision of robot and the latest advanced 405nm 500mW laser tube of blue-violet emission, which gets larger output power and wider engrave range. What is more, users can engrave personalized patterns on various material like leather, kraft liner board, wood and so on. Also, the latest laser kit can control laser output power to engrave via PWM.

7. What is shade laser engraving?

Dobot Magician can engrave not just lines, it can also sketch images with shades. For example, one can engrave a picture with gray scale variation of black-white on wood.

The figure shown as below:



8. What is 3D printing? What is the material it support, the software it used and the format it applied to?

3D printing, a kind of rapid prototyping technology, which uses powder metal or plastic and other adhesive materials on the basis of digital model files, fabricates objects through layer-by-layer printing. Dobot Magician is compatible with mainstream open-source 3D printing software, Repetier Host

One can download the latest version from official website:

<https://www.repetier.com/>

Users can build one' s own 3D model and transfer it into STL file, also, one can search free models to import them directly.

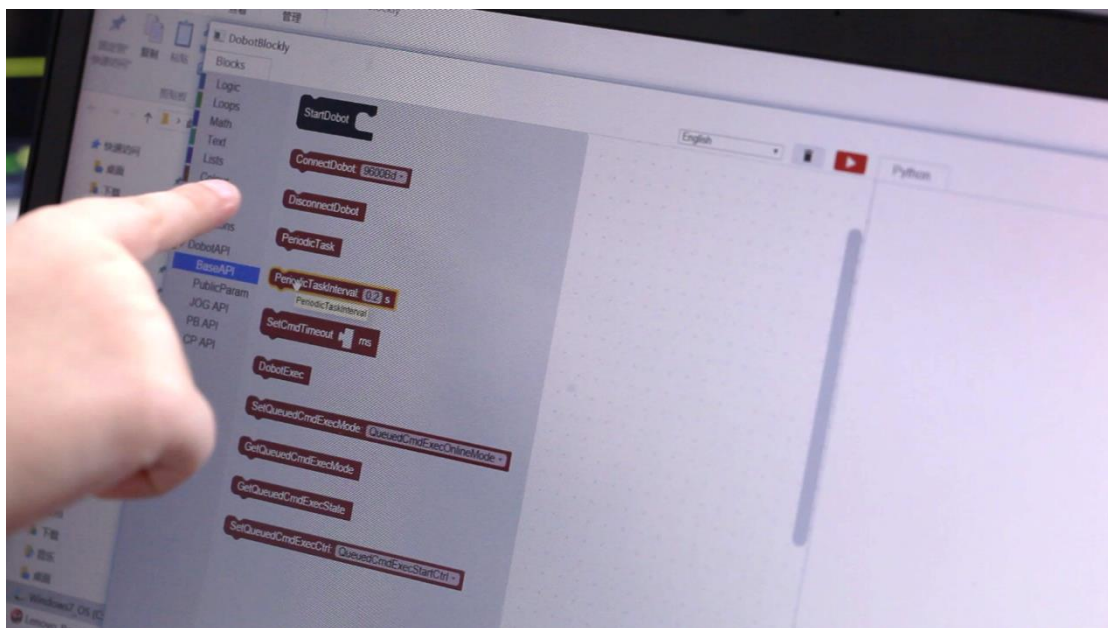
9. What are the highlights of Dobot Magician 3D printing?

Dobot Magician is an extensible desk-top 3D printing. Not only it can reserve the

integrity of function, but also develop more other applications, such as laser engraving, drawing & writing besides the basic demand of 3D printing. Because of its extensible 3Dprinting without restrictions of structure, it can also do double color.

10. What is visualized programming? What kind of visualized platform does Dobot Magician employ?

Visualized programming, a system using patterned procedure codes where users combine a set of executive programs as their wish, can be realize complicated operation by Dobot Magician. It is very easy to learn comparing with traditional program learning. Dobot Blockly is a visualized programming environment developed for Dobot Magician, based on Google' s open-source platform Google Blockly. On Dobot Blockly one can program by simply putting puzzles together, it is intuitive and highly readable. It also integrated exclusive API for Dobot Magician, one can use them right away.



11. What updates does Dobot Magician controller have? Which interface? How to use?

Dobot updates the latest ARM controller, thus enhancing the processing capacity of microcontroller. And users can access to new sensor, controller and something like others through serial port communication. Dobot Magician has 13 extension ports where users can connect them to external modules and program them to work together, realizing more advanced features.

12. What is secondary development?

See Dobot Magician as a platform, do what you want it to do by offered SDK and called API using Python, Java, C++ and other main language to program. If what user used development language is outside the scope of SDK, or one want to expand it into other platforms like PC, PLC and any other control system to control Dobot, one can use the underlying communication protocol to communicate with Dobot Magician directly, achieving advanced and customized development of application function.

13 . What is Multi-Dobot Cooperation?

Through WIFI connection or connecting both machines to an external board, one can control multiple Dobot Magicians all at once. This not only saves one controlling devices, but also improved efficiency in operating and calibrating.

14、 What is offline mode?

Dobot Magician has internal storage for commands. Users can upload their own playback list or codes and let it run on its own without connecting to any device.