



Magician

- Vocational schools, colleges, universities
- Industrial programming:
Scratch, Blockly, Python etc.
- Supports secondary development
(20+ programming languages)
- Industrial entry level robotics learning
(Programming, PLC, Troubleshooting etc.)
- Various add-on kits to enhance learning



Magician

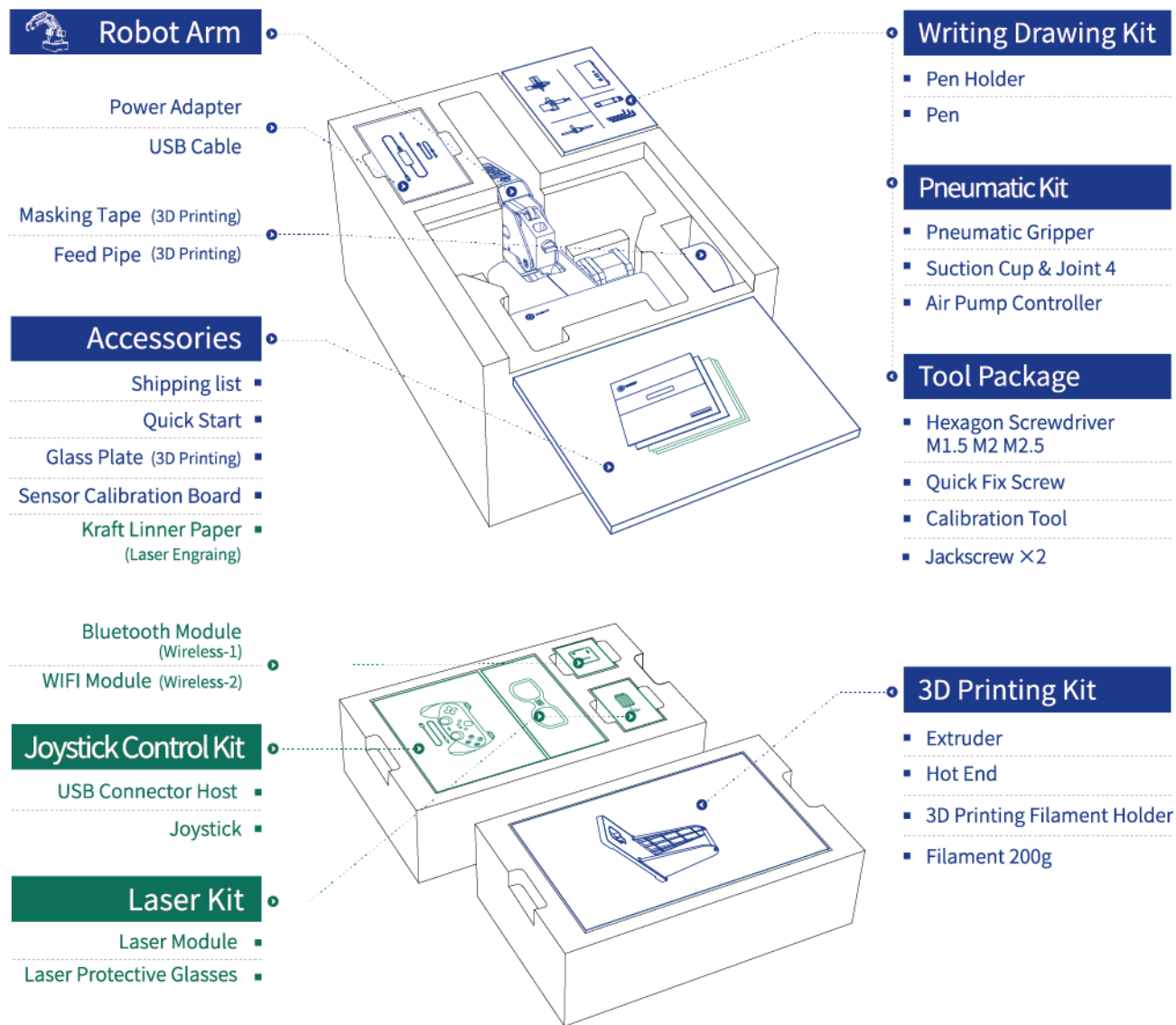
Full Education Solution:

1. Air compressor
2. Pneumatic Gripper (End Tool) – Pick&Place
3. Suction Cup (End Tool) – Pick&Place
4. Pen (End Tool) – Writing&Drawing
5. 3D Printing Module (End Tool) – 3D Printing
6. Laser Engraving Module (End Tool) – Laser Engrave



Magician

Name	Dobot Magician	
Maximum payload	500g	
Maximum reach	320mm	
Motion range	Base	- 90°~+90°
	Rear Arm	0°~85°
	Forearm	- 10°~+90°
	End-effector rotation	- 90°~+90°
Maximum speed (with 250g payload)	Rotational speed of Rear arm, Forearm and base	320°/s
	Rotational speed of servo	480°/s
Repeated positioning accuracy	0.2mm	
Power supply	100V-240V AC, 50/60Hz	
Power in	12V/7A DC	
Communication	USB, WIFI, Bluetooth	
I/O	20 extensible I/O interfaces	
Software	DobotStudio	
Working temperature	-10°C~60°C	



Educational Version

- Parts in Blue and Green colour will be in the package

Basic Version

- Parts in Blue colour ONLY will be in the package



A.I. Teaching Kit

Real Life Scenario-based A.I. Solution Kit

1. **Warehouse Entry**

A.I. Solution: Optical Character Recognition (OCR)

2. **Automated Garbage Classification**

A.I. Solution: Speech & Image Recognition

3. **Automated Restocking**

A.I. Solution: Image Segmentation & Image Recognition

4. **Smart Shopping**

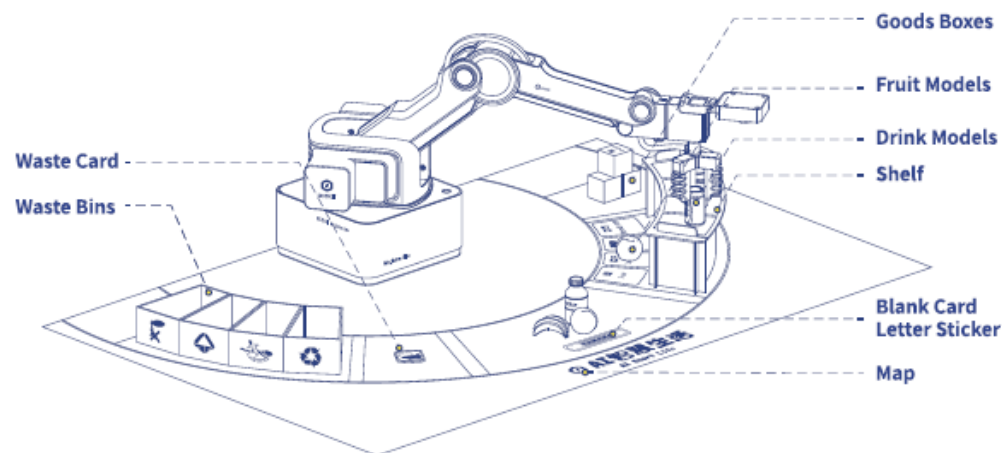
A.I. Solution: Face & Speech Recognition (Robot Teaching)



AI Teaching Kit Shipping List

Introduction

This kit is for the use of Magician Lite robotic arm and contains a wealth of accessories, such as goods boxes, goods models, garbage cards, shelf, and map. Inspired by AI smart life, this kit showcases experimental cases such as automated goods entering warehouse, automated restocking in supermarkets, smart shopping assistant and garbage classification. In the process of completing these experiments, students can learn about OCR Text Recognition, Image Recognition, Voice Recognition, Face Recognition, among other technologies, obtaining a basic understanding of artificial intelligence and its application in real life and work while exploring more ideas.



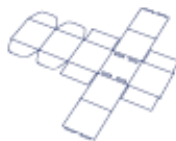
*Note that only main accessories are listed above. To check *Experiment Instruction Guides*, please open the software DobotBlock and go to Tutorial Center>Dobot Magician Lite.

Drink Models



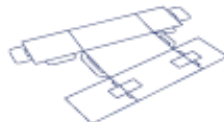
Goods Boxes

- ①Box-Orange ⑤Box-Cola
- ②Box-Pineapple ⑥Box-Coffee
- ③Box-Pear ⑦Box-Water
- ④Box-Strawberry ⑧Box-Milk



Waste Bins

- ①Recyclable Waste Bin
- ②Hazardous Waste Bin
- ③Wet Waste Bin
- ④Dry Waste Bin



Fruit Models



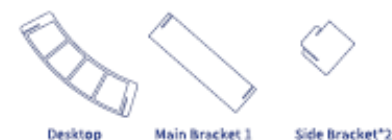
*Images are for reference only, please subject to actual product.

Vegetable Models



*Images are for reference only, please subject to actual product.

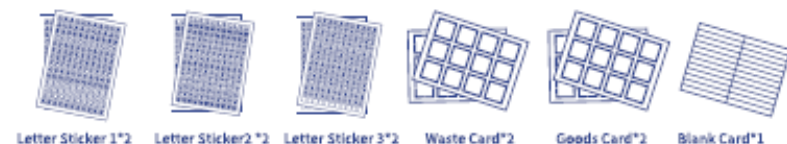
Shelf



Map



Cards



*For details please visit www.dobot.cc

If you have any questions please email support@dobot.cc.

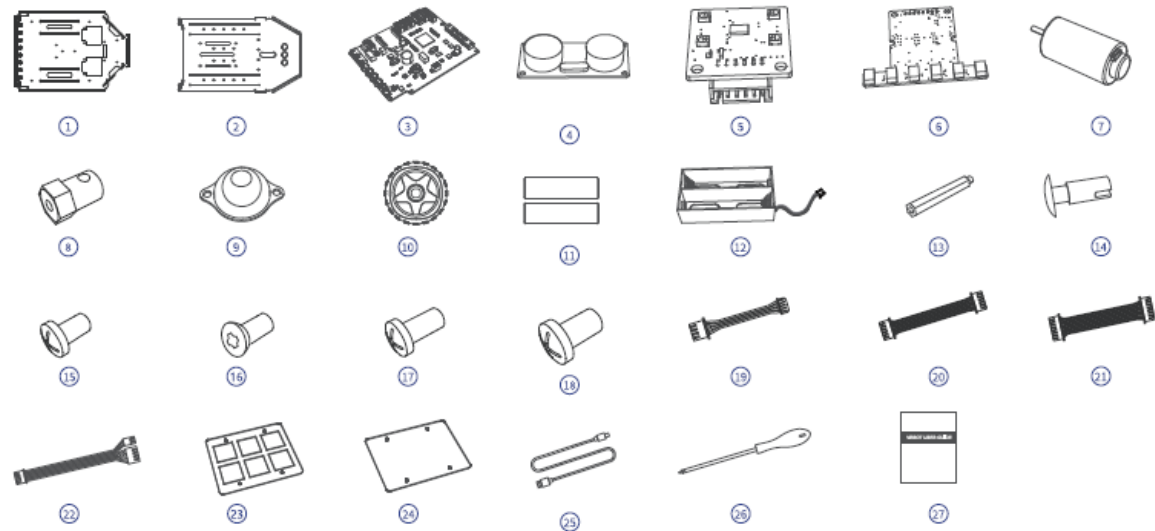


Operating Voltage	7.4V	
Control Board	DuDuino Mega2560 (compatible with Arduino Mega2560)	
MPU :	ATmega2560	
Battery:	18650 Li-ion rechargeable battery (Not Included)	
Ultrasonic Measurement Range :	30mm-1000mm	
AI-Starter Size:	195mm x 172mm x 79mm	
AI-Starter Weight:	810g	
Maximum Load:	500g	
Tire Diameter:	67mm	
Operating Environment:	0°C-40°C	
Programming Software:	Arduino IDE, Mixly	
Communication Interface:	USB communication / Serial communication	
Expansion Interface:	4PIN general I / O interface x 2	
Sensor:	Ultrasonic sensor x 3 / Color sensor x 2 / Infrared sensor / Geomagnetic sensor x 1 / Light sensor x 1	
Motor Parameters :	Reduction ratio:	48:1
	Voltage	7V
	No-load current	150mA
	Stall current	150mA
	Maximum rotate speed:	200r/m
	Encoder resolution ratio:	585pulse/r

A.I. Starter Kit

2. 零件清单

Parts List



底盘 / Chassis X 1

外壳 / Shell X 1

DoDuino Mega 2560 X 1

超声波传感器 / Ultrasonic Sensor X 3

颜色传感器 / Color Sensor X 2

红外巡线传感器 / Infrared Sensor X 1

直流减速电机（带编码器） / DC Gear Motor (with Encoder) X 2

联轴器 / Coupling X 2

万向轮 / Universal Wheel X 1

轮胎 / Tire X 2

18650 可充电锂电池 / 18650 Li-ion Battery x 2 (Not included)

18650 电池盒 / Battery Holder x 1

铜螺柱 / Brass Stud M3*32+3 x 4

R2048 尼龙铆钉 / Nylon Rivet x 10

15 M3*5 圆头十字螺丝 / M3*5 Cross Round Head Screw x 30

16 M3*5 沉头十字螺丝 / M3*5 Cross Countersunk Screw x 4

17 M3*6 圆头十字螺丝 / M3*6 Cross Round Head Screw x 6

18 M4*6 圆头十字螺丝 / M4*6 Cross Round Head Screw x 3

19 4PIN 超声波连接线 / 4PIN Ultrasonic Sensor Cable x 3

20 6PIN 颜色传感器连接线 / 6PIN Color Sensor Cable x 2

21 8PIN Tracking Module Cable / 8PIN 巡线模块连接线 x 1

22 6PIN 电机连接线 / 6PIN Motor Cable x 2

23 亚克力板A / Acrylic Plate A X 1

24 亚克力板B / Acrylic Plate B X 1

25 USB 连接线 / USB Cable X 1

26 十字螺丝刀 / Cross Screwdriver X 1

27 用户手册 / User Guide X 1

超声波传感器：通过超声波测量前方 30mm~1000mm 范围内障碍物的距离。

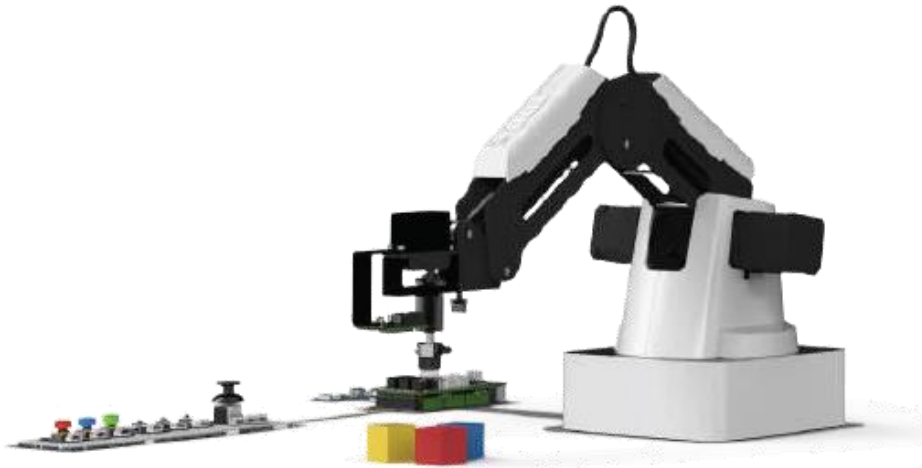
Ultrasonic Sensor: Detect the obstacle ranging from 30mm to 1000mm via ultrasound.

颜色传感器：通过颜色滤波器识别场地中的颜色，使 AI-Start 根据不同的颜色执行不同的任务。

Color Sensor: Identify the color in the field via color filter to execute different tasks.

红外巡线传感器：通过红外对管来识别黑线，以实现自动巡线行驶。

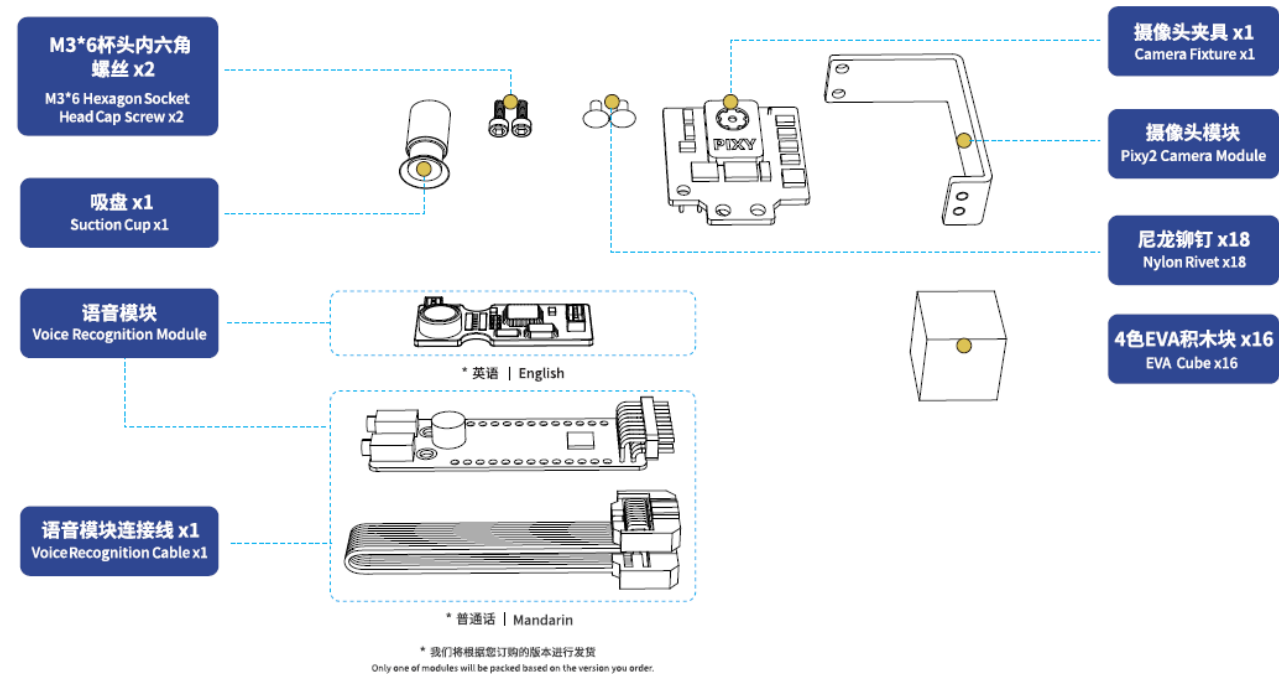
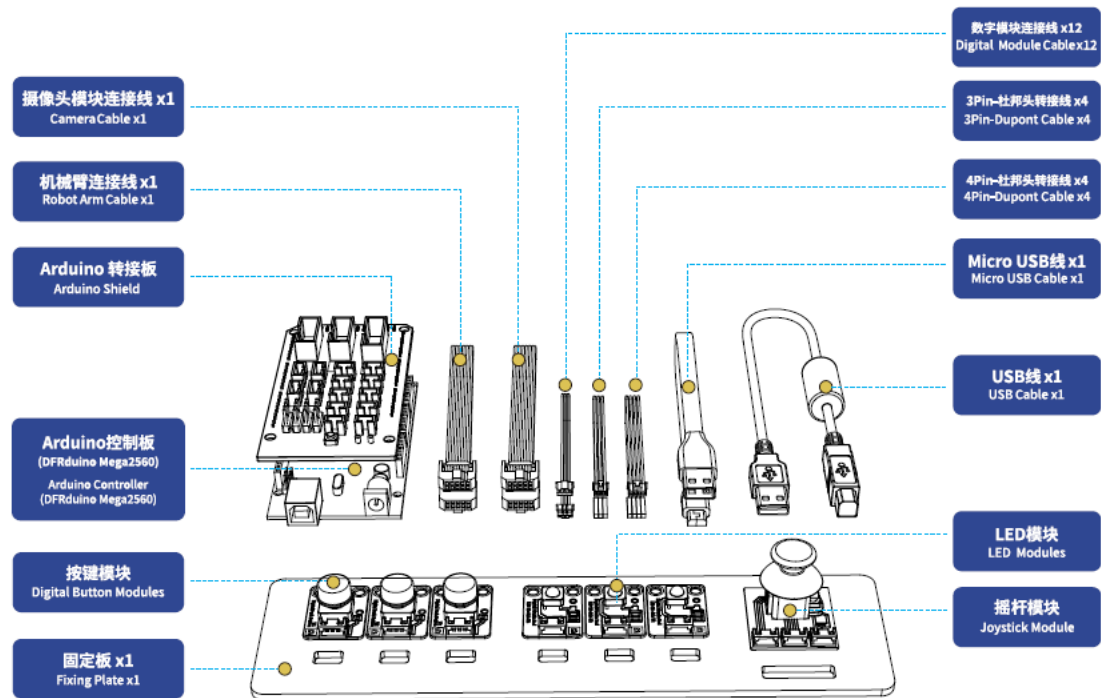
Infrared Sensor: Identify the black line via infrared photomultiplier tube to realize auto-tracking.

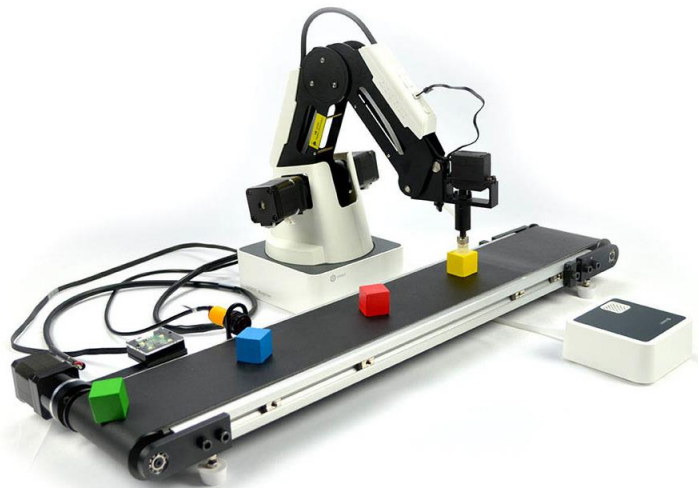


Basic A.I. Kit

DfRduino Mega 2560 V3 (compatible w/ Arduino Mega 2560)	Microcontroller	ATmega2560
	Operating Voltage	5V
	Input Voltage (recommended)	7V - 12V
	Input Voltage (range)	6V - 20V
	Digital I/O Pins	54 (of which 15 provide PWM output)
	Analog Input Pins	16 I/O
	Clock Speed	16MHz
Pixy CUMcam5	Processor	NXP LPC4330, 204MHz, dual-core
	Image Sensor	Omnivision OV9715, 1/4", 1280x800
	Image Sensor:	75 degrees horizontal, 47 degrees vertical
	Lens Type	standard M12 (several different types available)
Digital Button Module	Available Data Outputs	UART serial, SPI, I2C, USB, digital, analog
	Keycap Color	Red, Green, Blue
	Supply Voltage	3.3V - 5V
	Data type	Digital
LED Module	Size	22mm x 30mm
	Color	Red, Green, Blue
	Brightness	2500mcd to 3300mcd Highlight output
	Voltage	3.3V-5V
Joystick	Power Requirements	+3.3-5V
	Analog output	2 axes (X, Y)
	Number Key Output	1 (Z-Axis)
Voice Module (English)	Local Speech Recognition	
	Working Voltage	3.3-5V
	Working Current	3.3V:25-26.5mA,80mA@playing; 5V:25-26.5mA,130mA@playing
	Working Temperature	0°-85°
	Identification Items	22
	Built-in microphone	omnidirectional, SNR: 55d, sensitivity min = -43dB, typical = -40, max = -37dB

Basic AI Kit for Dobot Magician — shipping List



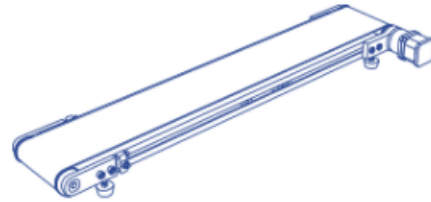


Conveyor Belt	Payload	500 g
	Effective delivering distance	600 mm
	Maximum speed	120 mm/s
	Maximum acceleration	1100 mm/s ²
	Net Weight	4.2 kg
	Weight (including packing)	5.34 kg
	Dimension	700 mm*215 mm*60 mm
Distance measuring sensor unit	Measurable range	20 ~ 150 mm
	Signal	Analog Output
	Input	4.5 - 5.5 V
Color recognizing sensor unit	Input	3~5 V
	Detectable: non-glowing object	
	White LED embedded, on/off controllable	

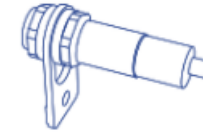
Conveyor Belt Kit

Conveyor Belt Shipping List

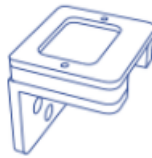
Mini Conveyor Belt



Photoelectric switch



Color Sensor



Toolkit

(1) M4/M5 Hexrench Included X1



Assembly Instructions

- (1) Foam Blocks X40
- (2) Demo Positioning Board X1
- (3) User Manual X1

