

AI & IoT Robot Education Kit

Smart Camera incl.: ✓
Mainboard: mCore
Sensors: RJ25



What is AI & IoT Robot Education Kit?

The AI & IoT Robot Education Kit includes an mBot robot and comes with 10+ electronic modules and accessories. The Smart Camera included is a camera that can learn, calculate and detect objects. The kit is designed to expose students to AI applications and enable them to use electronic modules to DIY fun AI projects. Suitable for teaching AI and robotics and hands-on practice through auto drive and racing projects using the Smart Camera module.



Computer science classes
信息技术课堂



After-school clubs
综合实践活动



Robotics competitions
机器人赛事

Smart Camera Add-on Pack

- SP 1: Easy-to-use, fast-learning (10s) AI vision sensor
- SP 2: Able to learn and track objects, read barcode, follow lines, and detect road intersection
- SP 3: Works with RJ25 electronic modules, mBuild series, mBot and Halocode
- SP 4: Programmable in block-based, Python and Arduino languages
- SP 5: Simultaneously recognizes 7 colored objects and 6 barcodes

Suitable for:

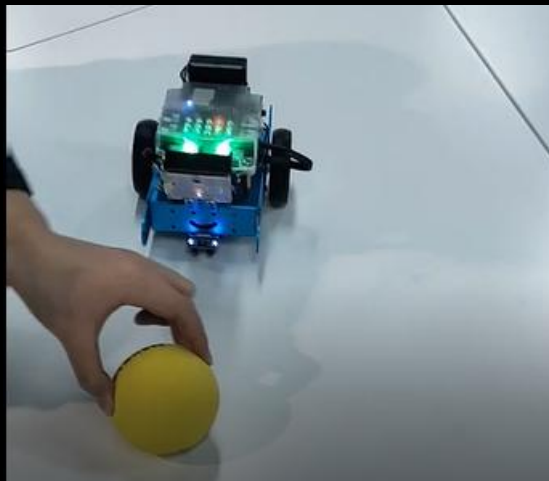
- Grade 3 or above+
- MakeX Starter players
- Recommended solutions:
 - Solution A: Large-group teaching
 - 4 students share a kit, 10 kits for a classsize of 40 students
 - Solution B: Small-group teaching
 - 2 students share a kit

Smart Camera function



Object learning

Recognizes and learns single-colored objects or those in bright colors. A brighter color often means a higher accuracy. Balls and objects in bright colors are easy to recognize.



Object tracking

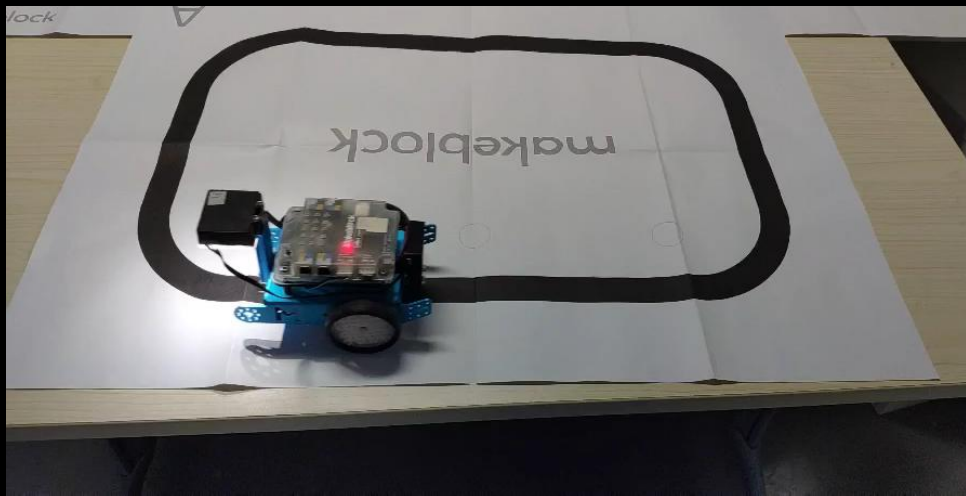
Able to track an object after learning it. Locate the object whenever and wherever it moves.



Barcode recognition

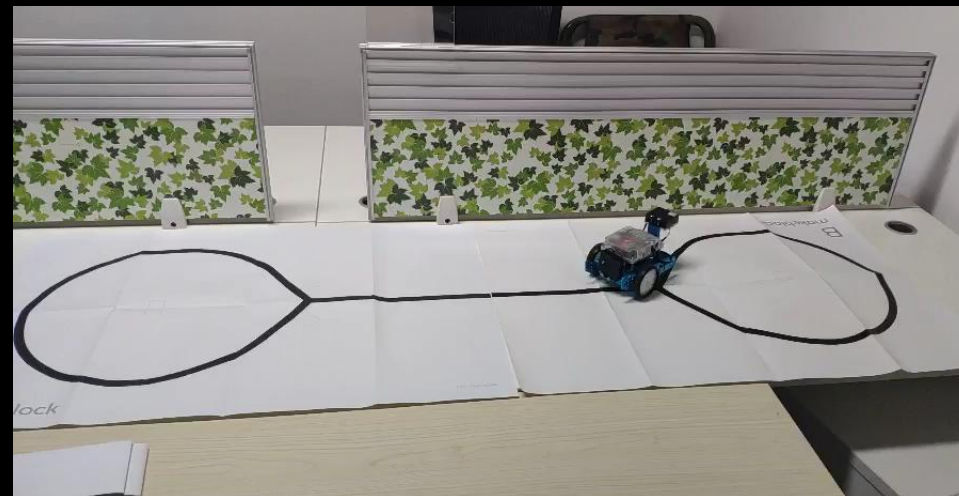
Once the Barcode Recognition mode is on, Smart Camera can read any barcode. Try to program with the barcode block ,and you can use 6 barcode simultaneously.

Smart Camera function



Line following

Able to track black or white lines. Detects in a high accuracy at line-following.



Intersection detection

Besides following lines, also able to identify intersections and numbers of side paths, and return necessary information (coordinates, direction, etc.). Automatically identifies pre-set direction, realizing auto-driving.

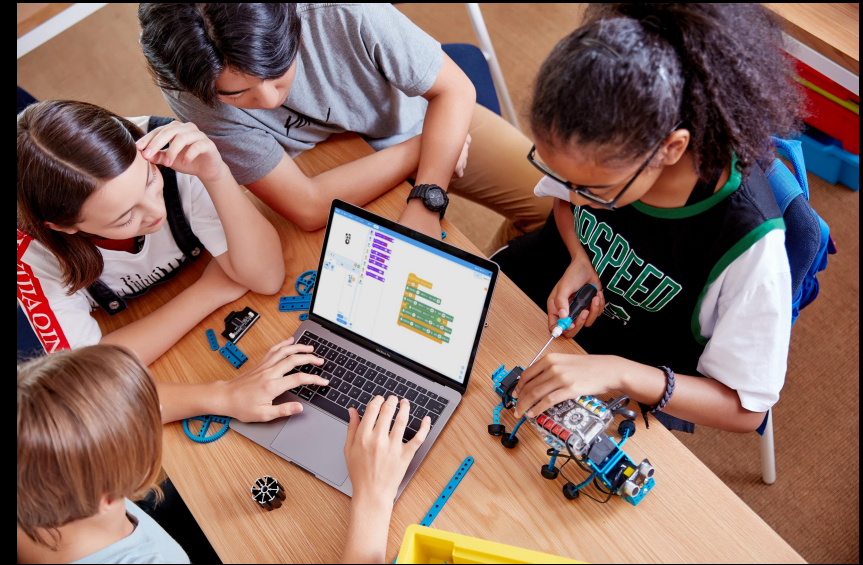
AI & IoT Robot Education Kit

- SP 1: Smart Camera module enables AI themed teaching, learning offline and more efficient in-class teaching;
- SP 2: Supports Scratch & Arduino, allowing programming in different languages;
- SP 3: Works with mBlock's Extension Center to create engaging AI & IoT projects;
- SP 4: Compatible with MakeX, and works with event specific add-on packs for MakeX Starter;
- SP 5: Come with Curriculum (Expected to complete the course in March 2020)

AI & IoT Robot Education Kit

Suitable for

- Grade 5 - Grade 9
- Makex Starter
- Recommended solutions:
 - Solution A: Large-group teaching
 - 4 students share a kit, 10 kits for a classsize of 40 students
 - Solution B: Training institutions
 - 2 students share a kit



AI & IoT Robot Education Kit

Stage	Course Title	Units	Summary	Recommended grades	Suitable for
Advanced	AI Robot	Robots Workshop	Learn about what AI is and its applications in daily life; Learn about the components of mBot and mBlock, exposing students to programming basics of mBlock.	Grade 5 - Grade9	After-class clubs Workshops School-based curriculum
		AI Powered Robots	Students understand the learning ability and application of artificial intelligence in the field of robotics, such as speech recognition, machine learning and emotion recognition.		
		Rpbots Smart Camera	Students will learn to use the Smart Camera module, and about visual recognition, tracking and line-following.		
		Robots Lab	Students are exposed to auto driving and racing through project based learning.		

Comparison

Kit	AI & IoT Creator Add-on Pack	AI & IoT Scientist Add-on Pack	AI & IoT Education Toolkit Add-on Pack
Positioning	Suitable for teaching robotics and programming. Combined with Halocode to build projects like Line-following Auto Car, Smart Parking Lot	Suitable for teaching robotics, programming and natural science. Combined with Halocode to build projects like Intelligent Farm and Smart Greenhouse ;	Including Smart Camera module and a complete series of mBuild electronic modules. Suitable for teaching AI, robotics and programming
Price (\$)	199.99	229.99	419.99
Kit	AI & IoT Robot Education Kit	Smart Camera Add-on Pack	
Positioning	Suitable for teaching AI and robotics and hands-on practice through auto drive and racing projects using the Smart Camera module.	Easy to use, fast-learning (10s), entry-level AI vision sensor; Works with mBot for MakeX Starter	
Price(\$)	319.99	89	

More details at : <https://shimo.im/sheets/6jX68PdqDWVTRcyj/>